REASSEMBLING PRACTICE: A RELATIONAL APPROACH TO ONLINE LEARNING IN HIGHER EDUCATION

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# Table of Contents

**REASSEMBLING PRACTICE: A RELATIONAL APPROACH TO ONLINE LEARNING IN HIGHER EDUCATION** ......................................................................................................................... i  
**ACKNOWLEDGEMENTS** ................................................................................................................... vi  
**LIST OF ABBREVIATIONS** ........................................................................................................ vii  
**LIST OF TABLES** .......................................................................................................................... viii  
**LIST OF FIGURES** .................................................................................................................... ix  
**LIST OF INTERVIEW EXTRACTS** .......................................................................................... ix  
**TRANSCRIPT CODES** ................................................................................................................ x  
**SUMMARY** .................................................................................................................................... xi  
**STATEMENT OF AUTHORSHIP** .......................................................................................... xii  

1. **Background and Key Issues** .......................................................................................... 1  
   1.1 Research question and argument ................................................................................. 1  
   1.2 Structure of this thesis ................................................................................................. 3  
   1.3 Rationale for this enquiry ............................................................................................. 7  
   1.4 Potential contribution to knowledge ........................................................................... 7  
   1.5 The approach of this thesis ....................................................................................... 9  
   1.6 Publications arising from this thesis ......................................................................... 10  
   1.7 Terminology ........................................................................................................... 10  

2. **Reviewing online learning: The sociotechnical breakdown of practice** ............ 13  
   2.1 Learning and technology: Convergence or collision .............................................. 13  
   2.2 Conceptions and discourses of online learning ....................................................... 17  
      Conceptions of online learning ........................................................................... 19  
      Discourses of online learning .......................................................................... 21  
      Networked technology: radical transformation or gradual change ................... 23  
   2.3 The shift to networks: lifeworld on the virtual ......................................................... 25  
      The push to online spaces .................................................................................. 26  
      Questions of technology .................................................................................... 27  
      Shifting to the virtual ......................................................................................... 28  
      Embodiment in the virtual ................................................................................... 31  
      Problematising the virtual: Establishing a (virtual) community of learners ....... 32  
   2.4 Controversies in online learning: Reviewing the literature ..................................... 36  
      Level 1: “Impact” of networked technologies on learning ................................... 36  
      Level 2: Integration and implementation of technology ...................................... 37  
      Level 3: Discourses of technology in institutional strategy ................................... 38  
      Levels of controversy ......................................................................................... 39  
   2.5 Research aim and scope of the enquiry ..................................................................... 39  
      Research aims ....................................................................................................... 39  
      Scoping the enquiry ............................................................................................. 41  
   2.6 The theoretical approach: a relational analysis ....................................................... 42  

3. **A methodology for interpreting practice** ................................................................... 47  
   3.1 Rationale: Problematising online learning ............................................................... 47  
      Investigating online learning or just learning .................................................... 48
# Table of Contents

Framing a research design ................................................................. 49

3.2 Bringing an interpretive approach to practice ................................... 51
   Accounting for practice ................................................................. 53
   The dialogic perspective ................................................................. 56
   The relational perspective ................................................................. 58

3.3 Designing a strategy of enquiry ...................................................... 61
   Selecting methods: analysing practice ............................................. 62
   3.4 Trusting the methodology: Using interviews as data ..................... 65
   The stability of interview data ......................................................... 68
   What emergent analytical methods bring to a study of practice ........... 69

3.5 Producing cases: building relevant and useful knowledge about practice ......................................................... 71

4. Talking practice: how discourses shape online learning ....................... 75
   4.1 Translating practice into data .................................................... 75
   Data obtained during the thesis ....................................................... 76
   Identifying participants ................................................................. 78
   Mapping the contexts of practice ................................................... 80
   Negotiating the researcher/interviewer role ..................................... 83
   Establishing trustworthy findings of experiential accounts ................. 87

4.2 Core categories and discourse patterns in online learning practice ...... 91
   Content analysis ............................................................................. 91
   Coding, categories and discourses of practice .................................. 95

4.3 From controversies to cases: constructing new knowledge about practice .......................................................... 114
   Limitations of this enquiry ............................................................. 118

5. Case Study 1. Shaping online learning: Practices, dilemmas and technologies ................................................................. 123
   5.1 Introduction: Academic development as a hybrid practice ............... 124
   5.2 Methodology: Investigating dilemmas of practice .......................... 126
      The research setting and participants .......................................... 126
      Identifying themes and interpretative repertoires .......................... 128
   5.3 Analysis: Accounting for practice ............................................... 128
      Theme 1: Developing courses or developing staff .......................... 129
      Theme 2. Implementing or adapting institutional strategy .............. 130
      Theme 3. Drawing together – systems or community ................. 133
      Theme 4. Reframing technology or reframing the user ................. 135
   5.4 Discussion ................................................................. 138

6. Case study 2. The disoriented practitioner: Engaging the multiple “student” online ................................................................. 143
   6.1 Shifting engagement online ...................................................... 143
      Reconsidering the student online ............................................... 145
      Relational perspectives on student engagement ......................... 146
   6.2 The study ............................................................................. 148
   6.3 Ways of talking about students ............................................... 149
   6.4 Engagement that is flexible ....................................................... 158
   6.5 Disorienting practice: encountering an aporia ............................ 161
   6.6 The student as multiple .......................................................... 164
      Variation in practitioner accounts ............................................... 166

7. Case Study 3. Breaking down online teaching: Innovation and resistance .... 169
   7.1 Legacies of innovation and breakdown ...................................... 170
Table of Contents

A relational perspective on technology and practice ........................................ 172
Action at a distance ...................................................................................... 175
Comparing analytical perspectives ............................................................... 176

7.2 Why does a successful innovation in online teaching fail? ......................... 177
7.3 How is practice negotiated in a shift to mass online learning? ................... 180
7.4 Discussion .............................................................................................. 183


8.1 Introduction: Building a picture of practice ............................................. 189
8.2 Ambiguous effects: The “impact” of technologies on learning ................. 191
The historical progression of online learning .............................................. 193
8.3 Negotiating the gap: the learning technologist ....................................... 195
8.4 Discourses of implementation: from strategies to technologies ............... 197
 Repertoires of strategy: visions of technologised learning .............................. 197
 Repertoires of the meso-level: The learning technologists’ dilemma .......... 201
8.5 Discussion: Bridging the gap .................................................................. 209
Delegating agency to technology ............................................................... 210
Delegating agency to learning ................................................................... 213

9. Conclusion: Recovering agency – Technologies in practice ...................... 215

9.1 Revisiting the research enquiry ............................................................. 215
9.2 Enacting online learning ....................................................................... 219
 Online learning is an outcome of the institution ........................................ 219
 Enactments in the case studies ................................................................. 221
 Version control: competing enactments of online learning ....................... 224
9.3 Agency in the socio-technical assemblage .............................................. 228
 The effects of distant actors ..................................................................... 228
 Separating the social and technological .................................................... 232
 The contest over agency .......................................................................... 234
9.4 Approaching online learning as sociotechnical relations ......................... 237
 Criticisms of actor network theory .......................................................... 239
9.5: Reassembling practice for online learning ............................................. 240
 Shaping online learning futures ............................................................... 244

Appendices .................................................................................................. 249

Appendix 3.1: Interview questions .................................................................. 250
Appendix 4.1: Artefacts and projects of online learning .................................. 251
Appendix 4.2: Example of introductory communication ................................ 254
Appendix 4.3: Keyword frequencies for participants ...................................... 256
Appendix 4.5: Coding notes for Victor .......................................................... 262
Appendix 4.6: Categories for Victor, Fran and Lia: ........................................ 266
 Categories for Victor ................................................................................ 266
 Categories for Fran .................................................................................. 267
 Categories for Lia .................................................................................... 268
Appendix 4.7: Provisional categories by role (samples) .................................. 270
 1. Academic developers .......................................................................... 270
 2. Manager academics ............................................................................ 271
 3. Academics ......................................................................................... 274
Appendix 4.8: Categories and emerging discourses for each practitioner role 279
Appendix 4.9: Categories and repertoires (samples) ..................................... 281
 Overall Summary .................................................................................... 281
Table of Contents

3. Academics ........................................................................................................... 282
4. Online Support ................................................................................................. 284
5. VET teachers ..................................................................................................... 285

Appendix 5.1: Emerging themes for academic development .................................. 286
   1. Initial grounded theory coding ...................................................................... 286
   2. Comparison of individual themes of academic development ..................... 286
   3. Developing academic development themes ................................................ 287

Appendix 6.1: Practitioners' responses on student engagement ............................ 288

Appendix 7.1: Coding Notes for Jack .................................................................. 293

Appendix 8.1: LCMS pilot – Extract of interview with Tom ................................ 297

Supplementary Appendix: Confidential references ............................................. 301

Bibliography .......................................................................................................... 303
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My wife Dr Bronwyn Cran, for her valuable advice, and for the support essential for finishing the thesis.
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATN</td>
<td>The Australian Technology Network is one of three current strategic groupings of Australian universities, representing approximately 20% of Australia’s student population. See <a href="http://www.atn.edu.au/">http://www.atn.edu.au/</a> (Retrieved 10 May 2010)</td>
</tr>
<tr>
<td>EAL</td>
<td>English as Another Language</td>
</tr>
<tr>
<td>EDU</td>
<td>Educational Development Unit (pseudonym for the academic development unit in University B, in Chapter 5.</td>
</tr>
<tr>
<td>LCMS</td>
<td>Learning Content Management System, a database system for managing modules of content in digital form</td>
</tr>
<tr>
<td>LMS</td>
<td>Learning Management System, systems adopted by universities to manage and organise units of study on an online platform within the institution</td>
</tr>
<tr>
<td>OUA</td>
<td>Open Universities Australia is an online higher education provider through which 18 Australian universities offer distance education</td>
</tr>
<tr>
<td>SOE</td>
<td>Standard Operating Environment, the set of software that is standard to an institution and supported by an information technology unit</td>
</tr>
<tr>
<td>VET</td>
<td>Vocational Education and Training, a term which describes programs with the Technical and Further Education sector of mainly post-secondary education in Australia</td>
</tr>
<tr>
<td>VLE</td>
<td>Virtual learning environment, a term that can be read as the UK equivalent to LMS, the term for managed online learning systems in Australian universities.</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

- **Table 1.1**: Sequence of chapters showing development of the enquiry ........................................ 4
- **Table 3.1**: Analytical perspectives on technology ........................................................................... 60
- **Table 4.1**: Research methods and analysis .................................................................................... 75
- **Table 4.2**: Studies of online learning conducted during this thesis ........................................ 77
- **Table 4.3**: The sample of participants and their roles ................................................................. 79
- **Table 4.4**: Progression of data collection by interview ............................................................... 82
- **Table 4.5**: Participants by institution ......................................................................................... 82
- **Table 4.6**: Mean uses of key terms ......................................................................................... 93
- **Table 4.7**: Mean uses of key terms by role groups ................................................................. 94
- **Table 4.8**: Translations of data by analysis from interviews to repertoires .............................. 96
- **Table 4.9**: Extract of Coding notes for Victor (Appendix 4.5) .................................................. 99
- **Table 4.10**: Mapping Victor’s practice .................................................................................... 102
- **Table 4.11**: Categories for academic managers ...................................................................... 104
- **Table 4.12**: Emerging discourses for each practitioner group (Appendix 4.8) ..................... 108
- **Table 4.13**: Arrival at holistic core categories ........................................................................ 110
- **Table 4.14**: Interpretative repertoires of practice for all practitioners .................................. 112
- **Table 4.15**: Controversies around learning technologies .................................................... 116
- **Table 4.16**: Case studies emerging from discourse-based controversies .............................. 117
- **Table 5.1**: Practitioners from educational development units in three universities ........ 127
- **Table 5.2**: Emerging themes for academic development ....................................................... 129
- **Table 6.1**: Distribution of comments on students .................................................................... 148
- **Table 6.2**: Practitioners’ talk about student engagement in online learning ...................... 149
- **Table 6.3**: Contrasting repertoires of practice in online teaching and learning ...................... 159
- **Table 7.1**: Actor network “moments” .................................................................................... 175
- **Table 7.2**: Analytical perspectives on innovation in online teaching ...................................... 176
- **Table 7.3**: The wiki assemblage ..................................................................................... 178
- **Table 7.4**: The shift to online teaching of a large class ............................................................ 181
- **Table 7.5**: Actors in the wiki assemblage .............................................................................. 185
- **Table 8.1**: Contrasting repertoires of learning technologies .................................................. 201
- **Table 8.2**: Practitioners in educational development units across three universities ....... 203
- **Table 9.1**: Interpretative repertoires identified in the case studies ........................................ 222
- **Table 9.2**: Orientations of interpretative repertoires to online learning .............................. 225
- **Table 9.3**: Potential readings of case studies ...................................................................... 241
- **Table 9.4**: Contrasting paradigms of practice .................................................................... 242
LIST OF FIGURES

Figure 1.1: Sequence of chapters showing development of the enquiry .........................3
Figure 1.2: Development from analysis of data to case studies ....................................4
Figure 2.1: Levels of controversy for online learning ...................................................39
Figure 2.2: Collis & Moonen's (2001) “four key components of flexible learning” ............42
Figure 3.1: Strategy of enquiry: Analytical methods ....................................................63
Figure 3.2: Strategy of enquiry: Synthesis of data and case selection ............................65
Figure 4.1: Collis & Moonen’s (2001) model mapped against practitioners’ roles ..........81
Figure 4.2: Practitioners and their contexts of practice .............................................83
Figure 4.3: Methodological progression: collecting data to producing case studies ......91
Figure 4.4: Frequencies of key terms .........................................................................93
Figure 4.5: Extract of Fran’s categories and codes ...................................................103
Figure 4.6: Provisional categories for all participants ..............................................106
Figure 4.7: Online learning in the organisation .......................................................116
Figure 5.1: Educational developers’ interpretative repertoires ..................................140
Figure 6.1: Accounts of students’ engagement with technologies and with learning ....159
Figure 7.1: The wiki teaching and learning environment ..........................................177
Figure 8.1: LCMS interface and integration with Blackboard ....................................206
Figure 8.2: Sample from the Metadata template for LCMS .......................................207
Figure 9.1: A relation approach to investigating practice ..........................................217
Figure 9.2: Online learning practice at levels of the institution ..................................219

LIST OF INTERVIEW EXTRACTS

Extract 4.1: Segment 3 of Victor’s transcript .................................................................97
Extract 5.1: I’d probably have to check out the formal policy .....................................131
Extract 5.2: Guide people in certain directions ..............................................................133
Extract 5.3: An early phase of their evolution ...............................................................137
Extract 6.1: It’s much easier just to get four of them in the room ...............................151
Extract 6.2: There are not the non-verbal cues and shared expectations .....................152
TRANSCRIPT CODES

The following transcripts codes are selected from Fitzgerald (2003, p. x) as a means to represent the interview accurately, and convey a speaker’s intention and tone:

{ddd} for words and phrases not clearly heard by the transcriber. For example:

you really need to develop very good skills about how you communicate {across} with technology,

(you) for overlapping turns in conversation. For example,

John: Okay, this makes it protracted (one to one)
Fran: (it's been very protracted), it's been one to one, one to two,

[xxx] for (i) elaboration, for example, “ROI [return on investment] “ means the speaker stated the term “ROI”, which was glossed in square brackets.

for (ii) de-identification, for example, in the statement “supporting academic staff in their use of [UniCnet]”, the term in square brackets substitutes the adopted pseudonym for the university’s learning management system.

^ for an increase in tone by the speaker. For example:

there’s been no take-up, or no attempt to measure something I’d take up from stakeholders^

(2.0) pauses are marked by a full stop . or by seconds. For example:

Yeah contract short stuff (2.0) But, but . I think that’s an excuse to a large extent

Some transcripts were recorded professionally, so that transcriptions do not reflect these codes. Where a passage was quoted in the thesis, the audio recording was checked, and the codes inserted where relevant to the meaning of the transcripts.
SUMMARY

This thesis sets out to investigate the transformative effects of networked technologies on work and sociality through an enquiry into the practice of online learning in higher education. It develops and documents a critical approach to the deployment of technologies in practice. The research enquiry of the thesis locates online learning within the context of technological change in the “network society” (Castells, 1996), and challenges many existing arrangements under which technologies are implemented in educational institutions. The thesis proposes a relational approach, with its origins in actor-network theory (Latour, 1987; Law, 2000), in which people, objects and technologies are viewed as having significance not in themselves, but in their social and material relations.

In this investigation, I focus on practice in terms of material effects of activities organised around a set of shared understandings and discourses. Practice, therefore, is analysed as action-oriented and not as intentional and human-centred. For evidence, the thesis draws on the experience of practitioners, and also addresses practitioners as its audience. Its goal is formative (Scriven, 1991): to improve and recover practice in the complex field of online learning. I attempt to meet this goal through two approaches: an ethnomethodological study of how a sample of practitioners across three universities negotiate their practice, and through a relational analysis of practice contexts in the form of case studies. The approach I develop for this enquiry takes as its object of study the sociotechnical assemblages of learning, and applies the relational principle of heterogeneity to all constituent elements – human, technological, material and discursive – tracing their associations in the expression of agency. The thesis argues that a relational analysis can act as an intervention, an opening of blackboxes, a reassembling of how agency is delegated, ordered and claimed through its institutional actors: people, discourses, and technologies.
STATEMENT OF AUTHORSHIP

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis for any other degree or diploma.

No other person's work has been used without due acknowledgment in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

All research procedures reported in the thesis were approved by the relevant Ethics Committees in the three universities in which interviews were conducted.

Candidate's signature: ________________________________
Chapter 1

1. Background and Key Issues

1.1 Research question and argument
This thesis develops a critical analysis of online learning in the field of higher education, and describes an approach to practice in that field which challenges many existing arrangements under which networked technologies are implemented in educational institutions. The thesis proposes a relational analysis (Law, 2009; 2000), with its origins in actor-network theory, in which people, objects and technologies are viewed as having significance not in themselves, but in their social and material relations. Practice, therefore, in a sphere of activity such as online teaching and learning is not analysed as intentional and human-centred, but as material effects of its relations in that sphere. This analysis seeks to account for these effects in the controversies (Callon, 1986) that arise from the relations configured by networked technologies.

This thesis differs from the tradition of research which seeks to test hypotheses in order to build theories concerning the field under study, nor does it not seek to discover new facts or make generalised claims about practice. Rather, it proposes a method which problematises the configuration of technologies into practice, and develops and documents a critical approach to the deployment and evaluation of networked technologies for the purpose of improving practice in online learning. It locates online learning within the context of the transformative effects of technology in the network society (Castells, 1996), and as part of the uncertainty associated with the increasing complexity of the contemporary higher education sector (Lewis, Marginson & Snyder, 2005; Barnett, 2004; 2000). The thesis develops the relational approach in order to meet this complexity as it arises in actual contexts of practice, and produce in-depth descriptions of its articulation and enactment. These descriptions apply the theoretical perspective of relationality in the sense described by Law (2009) as “a toolkit for telling interesting stories about, and interfering in, those relations” (p. 141).

With this investigative focus on practice, the thesis both draws on the experience of practitioners and also addresses practitioners. Its goal is critical and formative (Scriven, 1991): to improve and recover practice in the complex field of online teaching and learning. The thesis attempts to meet this goal first by an analysis of the sociotechnical factors constituting online learning, then by the application of a relational analysis to situated contexts of practice in the form of case studies.

The thesis originates from evidence that online learning is a globalised field marked by immense investment and multiple interests from governmental, higher education and
private sectors, all of which converge on the practice of teaching and learning. A result of these competing interests is poor integration of institutional technologies, uncertain outcomes and recurring breakdowns in practice. With such large-scale projects, online learning is customarily implemented and integrated into higher education institutions guided by business and information technology perspectives, which frame a particular relationship between learning technologies and practice. This framing draws on a tradition which separates technological concerns, or “technology”, from the concerns of the social world of practice, producing a reductionist configuration which is unable to respond to the complex and changing contexts of teaching and learning, particularly the interaction enabled by the Internet and Web 2.0 social software. A more responsive and effective practice in online learning, it is argued, requires the construction of a radically different relationship between technologies and practice, one that views the social and technological “actors” in a practice context as a set of heterogeneous relations, and that does not privilege a human-centred perspective.

The thesis commences with two central questions to address this argument:

1. How effective are existing approaches to online learning in higher education, and what factors account for the effectiveness of approaches to online learning?

2. How it is possible to implement networked technologies in higher education teaching and learning, and design their use in a way that supports good practice?

These questions lead to other research questions that draw on evidence, literature and theoretical perspectives: what the constituents of a practice context are, how learning technologies are integrated into organisations, and how agency and control occur in online learning of practice contexts.

Establishing validity based on criteria for verifying objective reality is problematic in a study of a social reality of practice (Denzin & Lincoln, 2008. p. 33). Instead, this enquiry establishes qualitative criteria suited to a world of social reality, based on principles for establishing trustworthiness and transparency of experiential accounts and “ecological” (Judd, 1996) principles for validity.

The research questions were answered descriptively and ostensively: (i) by an examination of the literature on online learning in higher education, (ii) through an analysis of empirical data from a sample of practitioners in their contexts of practice, and (iii) through the application of the theoretical perspective of a relational analysis.
1.2 Structure of this thesis

The thesis is divided into two parts:

Part 1 consists of the groundwork for the thesis, data collection and a holistic analysis: I defined the purpose of the enquiry, conducted a literature review, scoped the field of study scoped and framed research questions. Then I designed an methodology using mainly qualitative approaches to gathering empirical data (Chapters 1 to 3), followed by an analysis of the corpus of data from the study.

Part 2 consists of in-depth descriptions in the form of case studies which were developed from the holistic analysis, followed by the discussion of their implications for the enquiry. The development of the enquiry is presented in Figure 1.1.

The thesis also includes appendices which consist of documentary material from the corpus of data, or elaboration of analytical processes, particularly in the development of the holistic analysis in Chapter 4.

The central focus of this enquiry was practice, which was analysed as a social reality that is constituted materially and discursively. Evidence and data were derived from interview accounts of practitioners and associated artefacts of the activities of practice. In the analysis stage in Chapter 4, actual practitioner contexts of online learning were problematised and analysed through discourse analysis. The emerging controversies of practice represented the key issues of concern for practitioners from the corpus of data, and were the focus for four case studies for a relational analysis and in-depth description
Chapter 1: Background and key issues

in subsequent chapters. The analysis and focus for the case studies is summarised in Figure 1.2.

Figure 1.2: Development from analysis of data to case studies

<table>
<thead>
<tr>
<th>Analysis of corpus of data</th>
<th>Focus of case studies:</th>
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<tbody>
<tr>
<td>Controversies emerging from problematising practice</td>
<td>Strategy</td>
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<td></td>
<td>Students</td>
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<td></td>
<td>Teaching</td>
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<td>Implementation</td>
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The progression between chapters and the narrative focus of the enquiry, from groundwork, to analysis, and case studies, is presented in Table 1.1.

Table 1.1: Sequence of chapters showing development of the enquiry

<table>
<thead>
<tr>
<th>Chapter topic</th>
<th>Narrative focus</th>
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</thead>
<tbody>
<tr>
<td>1. Background and key issues</td>
<td>Overview of the enquiry into practice</td>
</tr>
<tr>
<td>2. Reviewing online learning: A sociotechnical breakdown of practice</td>
<td>Scope, historical context and literature review, a theoretical perspective and research questions for the enquiry.</td>
</tr>
<tr>
<td>3. A methodology for interpreting practice</td>
<td>Establishing a strategy of enquiry: methodological approach and qualitative methods</td>
</tr>
<tr>
<td>4. Talking practice: Discourses of online learning</td>
<td>Findings and analysis of the corpus of data, identification of discourses of online learning practice</td>
</tr>
<tr>
<td>5. Case study 1: Shaping online learning – Practices, dilemmas and technologies</td>
<td>Academic development in online learning: Discourses arising from applying institutional strategies for online learning</td>
</tr>
<tr>
<td>6. Case study 2: Disorienting spaces – Engaging the multiple “student” online.</td>
<td>Engaging students online: Discourses shaping interaction in learning online</td>
</tr>
<tr>
<td>7. Case study 3: Breaking Down Online Teaching – Innovation and Resistance</td>
<td>Case study 3: Dilemmas for teaching online: Impact of institutional discourses on teaching staff</td>
</tr>
<tr>
<td>8. Case study 4: Managing technologies and pedagogies – How goals conflict.</td>
<td>Case study 4: Dilemmas for managers and online support staff: Managing implementation and pedagogies with technologies</td>
</tr>
<tr>
<td>9. Conclusion: Recovering agency – Technologies in practice</td>
<td>Discussion and review of analysis and cases: A relational approach for analysis of human-technology interaction in online learning</td>
</tr>
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A summary of the chapters and how they develop the thesis follows.

In this thesis, I describe a relational approach to technologies and apply it to issues and problems that arise in practices of online learning. In order to do so, I first lay the groundwork for the enquiry as Part 1 of the thesis. Starting with Chapter 2, I set out the
current debates and discussions in online learning in higher education and located these within a historical tension between humans and technology. These tensions pass from the history of human-technology relations to shape contemporary instantiations of networked technologies, and these relations, I suggest, emerge as breakdowns and poor outcomes which recur in institutional implementations of online learning. I argue that networked communication technologies establish a different space of sociality, and that a different approach, a “sociotechnical alternative” (Arnold et al., 2006, p. 11), is required to understand the practices mediated through them.

For the structure of the enquiry, I drew on two foundations:

1. A conceptual model for an investigation of online learning in universities consisting of four inter-related dimensions, by Collis and Moonen (2001), namely, institutional strategies, implementation, technology and pedagogy

2. Theoretical perspectives from studies of technology, practice and online learning to frame a research strategy, to be applied to a diverse sample of practice settings.

In order to apply the relational approach, I describe the development of a qualitative methodology for an enquiry into a bounded social reality, based on experiential accounts and artefacts from practitioners and organisations. In Chapter 3, I discuss the difficulties in locating an observer external to a study of social reality, and establish methods suitable for studying activities which are constructed within an organisational reality. I adopted a set of interpretive methods to investigate actual contexts of online learning practice, and designed a strategy of enquiry for the production of trustworthy and authentic data for analysis and case studies.

After the groundwork was completed, the results and holistic analysis from the corpus of data produced in the enquiry are presented in Chapter 4. Methods based on grounded theory and discourse analysis are applied systematically to identify the controversies that emerged from the data, and the clusters of shared understandings analysed to identify specific discourses constitutive of online learning practice. How these discourses combine or conflict is the basis for a series of case studies of how practice is constituted anew through networked technologies. These were taken up as four cases, reflecting the Collis and Moonen’s four dimensions of online learning (above), presented in the following chapters.

Part 2 of the thesis comprises the case studies and review chapters. The first case study is based on one of the controversies emerging from the broad analysis, presented in Chapter 5, concerning the gap between online learning related policy and practice. The institutional perspective of academic developers is the lens through which a focus is brought to the intersection between institutional policy and pedagogical practice. This
Chapter 1: Background and key issues

case study investigates the effects of institutional strategies on the deployment of technologies applied to teaching and learning contexts. Academic developers working at this intersection made visible the process by which pressures deriving from institutional, technological and pedagogical discourses are negotiated and accommodated. In the articulation of these discourses, I propose initial steps to an approach that describes a dialogic engagement with technologies for learning.

After this description of how policy on online learning circulates and is managed in practice in the organisation, the next case study explores the destination of such policies in actual contexts of teaching and learning. I drew on a controversy arising from the deployment of technologies to pedagogy that was expressed in attempts to engage students online. Chapter 6 describes the use of networked communication technologies by students through accounts of its disruptive effect on teaching staff, reflecting a mismatch of expectations in teaching-learning relations. This case study traces the enactment of a different sociality and identity by students in the online spaces of learning in ways not anticipated in the curriculum. Recognising the multiple ways in which students engage over online spaces can offer a basis to review approaches for engaging students.

The case studies then shift from learner engagement with technologies to teaching, as a controversy emerged from the tension between institutional imperatives for online learning and pedagogical needs. Chapter 7 is a case study of institutional breakdown through two instances of teaching online, and its analysis is relational: it describes the assemblage of the social and technological entities comprising the online learning contexts, and how these entities align. I describe the relational process for tracing breakdowns beyond the technologies involved and encompass social, material and discursive entities.

The organisational dimension of online learning is the focus in the last case study in Chapter 8, which considers the implementation of institutional online learning. In several instances, I analyse the effects of organisational discourses of technology through their managers, their institutional strategies, and support staff, or learning technologists. The case study reveals the discursive effects in the delegation of agency from practitioners to technologies and institutional processes.

Finally, I review the controversies raised in the holistic analysis and the case studies and describe patterns emerging from the case studies. Chapter 9 discusses how these patterns index the critical issues for practice in higher education online learning as they unfold as part of the history of human-technology relations, and indicate potential trajectories for its practice in institutional contexts. The proposal for a relational approach to online learning is revisited and recommendations for improving practice are made.
Chapter 1: Background and key issues

1.3 Rationale for this enquiry

This enquiry arose from the convergence of two fields of practice in my professional experience. First, it was informed by my experience in education over 15 years, in roles that included teaching in two sectors, higher education and vocational education and training (VET), and working in educational design and academic development. Second, through my engagement in media and multimedia production, I was a participant and observer in the shift of work to the virtual spaces enabled by digital networks. As an participant and observer of the global shift from analogue to digital networks in media and higher education, I sensed there was too little reflection and understanding of the implications of this shift for changing work practices.

A constant element in my professional experience has been the production of media content for the electronic screen: initially I worked outside the field of education, in pre-digital, analogue video production for broadcast. An “old-form” production was a government sponsored video on cross-cultural communication that was the basis of a Masters thesis (Hannon, 1997). During the 1990s, my mode of production shifted to digital content, in online media and multimedia forms, through video production and experiments in online learning using the early World Wide Web, then as part of an educational design team producing material for the vocational sector in CDROM and web formats, and finally in my own online teaching using institutional learning management systems (LMS).

This personal trajectory positioned me as a witness and participant in the spread of networked technologies throughout organisations and fields of professional practice, in higher education learning and management, the health sector, and elsewhere. Networked technologies brought their own investment, their own professions, languages, discourses, and their own goals. Yet my observation was that the decisions concerning the deployment of technologies in a field of practice tended to be presented as already made, the controversies already taken care of, and presented as issues of human deficit, reflecting a need for technology training and buying in expert know-how. It became my view that there was need for an investigation into how technologies are imbricated in a field of practice, what the ramifications are, and whether a different orientation to technologies in such practices was warranted.

1.4 Potential contribution to knowledge

Online learning can be considered as a set of arrangements and practices for teaching and learning that have emerged in recent decades from the rapid transformation of higher education learning by networked technologies. Its practices take place in hybrid forms of the virtual and concrete, where online spaces are fluid, mutable, and uncertain, yet are referenced to the physical world, its organisations and people. In this sense,
online learning is necessarily linked to infrastructures, official documents, administration, institutional contexts, and may include elements of learning that occur in physical settings. The manner in which these hybrid forms are constituted in online learning exemplifies an existing problematic relationship between humans and technologies, heightened by the extended reach and global practices enabled by networked communication technologies.

Implementations of online learning produce complex interactions between social, technological and institutional contexts, which bring unforeseen and unintended consequences. Online learning has been accompanied by large-scale, costly projects that fall short of their promises (Conole, 2007; Hedberg, 2006; Gibbs & Gosper, 2006; Warzyński, 2006). Despite the groundswell of change challenging institutional arrangements with networked technologies, particularly with the emergence of Web 2.0 technologies (McLoughlin, & Lee, 2008a), many of these activities are narrowly focused on comparative studies of the evaluation of the efficacy of particular technologies (Goodyear & Ellis, 2008). Literature on online learning in higher education indicates the need for more integrated and contextualised research in technology of teaching and learning (Price & Oliver, 2007a; Hemmi, Bayne & Land, 2009; Bluic, Goodyear & Ellis, 2007).

This thesis seeks to address the complexities of the engagement with learning technologies in higher education that are still not well understood, and approach the issue of integration of technologies into practice and their transformative effects. It brings a theoretical perspective to online learning which references the philosophy of technology as well as the field of higher education, and locates online learning as an expression of the long and conflicted history of human-technology relations. The purpose is twofold: first, to understand and describe why online learning fails to deliver on its promises, that is, why it persistently breaks down in practice, why its implementations are less effective than intended, and why its return on investment has been so poor; second, to recommend an improved approach to teaching and learning practice with institutional networked technologies.

This enquiry uses a problematising approach to challenge the standard procedure for institutional implementation of technology systems, in which the technological arrangements are pre-given and assumed as external to the social world of practice and interaction. Goodyear and Ellis (2008) call for research which addresses issues of complexity through “holistic or ecological perspectives” (p. 142). Similarly, Walker and Creanor (2009) argue that complexity of sociotechnical interaction is captured by an ecological approach which is “deliberately looking beyond the affordances of the technology or the narrow relationships between participants and artefacts in a particular
network” (p. 306), to the contexts of everyday practice. Hence the intended contribution to knowledge in the field of higher education is to offer a grounded alternative to the normative assumptions of technology implementation into higher education organisations, to respond to calls in the literature to issues of integration of institutional learning technologies, in particular those that arise in discussions of the “impact” of networked technologies, and apply the relational approach to open up transformative possibilities of practice in online teaching and learning. This thesis identifies a need for a better analysis of institutional online learning, seeks to offer an account of the controversies of practice that offer its practitioner audience “potential for learning” (Stake, 2008, p. 121), and recommends productive approaches and improved practice in use of networked learning technologies.

1.5 The approach of this thesis

In one sense, this thesis is about method. Latour (2005) in his book “Reassembling the social” proposed an approach to the description of sociality by asking, “[t]hrough which procedures is it possible to reassemble the social not in a society but in a collective?” (p. 16). Latour’s process was to enquire into the social without assuming a society. In a similar way, the relational approach I develop for this enquiry takes as its object of study particular arrangements of the social and technical in contexts of learning, without assuming pre-existing, inherent perspectives or adopting resident expert terminologies. In this approach I bring a theoretical perspective to the deployment of networked technologies, and apply a set of procedures that problematises existing sociotechnical assemblages. These procedures comprise an interpretive research strategy in which I adopt emergent methods of analysis to explore and build knowledge from local and situated contexts to broader, constitutive discourses of practice.

As a result, the writing of this thesis does not follow the style expected for a linear path of enquiry in which a methodology proceeds from hypotheses about the world it investigates and tests a state of affairs. This thesis explores actual contexts of practice involving people, technologies, policies, standard procedures, institutions, and arrangements. Researching practice, if it is to be true to its context of enactment, means engaging with the messy details that constitute data (Law, 2004), and its exploration and analysis is a project of discovery. This thesis, therefore, follows an emergent trajectory, building the enquiry from instances of practice to the ramifications of their effects, traced through their assemblages. The metaphor for the argument is one of pattern-making, rather than assembling building blocks.

The argument in this thesis, therefore, builds knowledge recursively by exploring both holistic and local contexts of practice, sometimes revisiting and extending a prior analysis
in the manner of a snowball effect, and finally drawing together separate analyses into a thesis on practice in online learning.

1.6 Publications arising from this thesis
At the time of completion of this thesis, several peer-reviewed papers have been published in journals, presented at conferences, or published as a book chapter. The publication of material from this enquiry was part of the process of establishing the trustworthiness of qualitative data through peer review (discussed in Chapter 4.1). The following papers comprise significant elements of the following chapters:

- Hannon (2008), on applying policies for adoption of learning technologies (Chapter 5)
- Hannon (2009a), on dilemmas for practitioners in approaches to teaching online. This paper received an Outstanding Paper Award at the Ascilite conference in 2008, and was published in 2009 (Chapter 7)
- Hannon (2009b), on mismatches in engagement over online spaces between teaching staff and students (Chapter 6).

Other peer-reviewed papers were published with a co-author, drawing in some part on the data and analysis for this thesis:

- Hannon and Bretag, (2010), on negotiating competing discourses of learning technologies
- Bretag and Hannon , (2009) on student approaches to online communication
- Hannon and D’Netto, (2007) on intercultural engagement by students with online learning. This paper was a recipient of the Outstanding Paper Awards 2008 by Emerald Group Publishing.

1.7 Terminology
A range of terms are used to conceptualise and describe modes of learning based on networked technologies in education. These circulate in scholarly literature, government communications, and information technology descriptions of software, and tend to be defined in general terms. A discussion of the purposes for which some of these terms are deployed can be found in Chapter 2 (2.1), however, for this thesis, the term online learning can be distinguished from other terms in use, listed below:

- e-Learning (electronic learning) refers to computer-enhanced learning, web-based teaching materials, CD-ROMs, web sites, discussion boards, collaborative software, e-mail, blogs, wikis, text chat, mobile technologies. A definition is given by the OECD (2005), “E-learning refers to the use of information and communications technology (ICT) to enhance and/or support learning in tertiary education”. This term can include
digital media which is off-line, such as CDROMs, and content from the instructional
design tradition (O’Neil, 2008; Reiser, 2001).

- **blended learning** generally refers to combinations of modes and technologies of
  learning, and a body of research argues that the mix of face-to-face and online brings
  new approaches and improved outcomes for learning (Normand & Littlejohn 2006; 
  Abraham 2007; Bonk & Graham 2006; Garrison & Kanuka 2004; Bretag & Hannon 2008). A definition is provided by Heinze and Proctor (2004):

  learning that is facilitated by the effective combination of different modes of delivery,
  models of teaching and styles of learning, and founded on transparent communication
  amongst all parties involved with a course

- **flexible learning** is defined vaguely, and according to Casey and Wilson (2006), citing
  Nunan (1996), “there is no single definition” (p. 5). The term “is used synonymously
  with other approaches, including ‘open learning’, ‘distance learning’ and ‘e-learning’ “
  (Casey & Wilson, 2006, p. 5). It tends to refer to the flexibility of its constituent
  elements: strategies, platforms and technologies of learning to meet the diverse
  needs of students regarding the location and time of study.

- **networked learning** is a term constructed by Steeples and Jones (2002) to refer to
  “learning in which information and communication technology (C&IT) is used to
  promote connections: between one learner and other learners, between learners and
  tutors; between a learning community and its learning resources” (p. 2). This term
  focusses on the network as both technological and social, drawing on the notion of
  the “networked society” of Castells (1996, p. 468), whereby information technology
  underpins a “networking logic” of social organisation that pervades society.

The term **online learning** has multiple uses and is potentially ambiguous. It may refer to
contexts other than traditional, off-line, face-to-face learning, and it may refer to hybrid
arrangements for learning in face to face contexts that involve a component of networked
technologies. Lefoe and Hedberg (2006) noted that “predictions of wholesale moves to
totally online degrees, greeted initially with enthusiasm, and by some with total
scepticism, have proved elusive” (p. 325). Discussion and research in learning with
technologies is shifting beyond studies of contrasting approaches to learning with or
without technologies, or “simplistic comparisons” (Goodyear & Ellis, 2008). However, the
combination of technologies with face-to-face contexts, or blended learning approaches,
is becoming common to the extent that even the description “blended” may become
superfluous. The standard approach to teaching and learning that is becoming prevalent
is one that entails elements of learning enabled by networked technologies.

For this thesis, the term **online learning** will not indicate the absence of face-to-face or
offline learning contexts, but will encompass contexts in which networked technologies
are a component of the assemblage or configuration of learning. It will be adopted for the following reasons: the term has broad currency in the university sector, its inclusiveness (or vagueness) allows it to encompass hybrid arrangements of face-to-face learning incorporating technologies, and its meaning is broad enough to apply to all contexts of learning afforded by the Internet, yet specific enough to exclude off-line, computer-based learning that are included in the broader term e-learning. While the term networked learning effectively evokes the connection and interaction between participants in learning, online learning captures the breadth of use of the term in the contexts of this thesis. The sense of “online” invokes the effects of digital networks, and is critical to this enquiry, since the virtuality of online spaces is where the transformative effects occur.
2. Reviewing online learning: The sociotechnical breakdown of practice

This chapter sets out the critical issues for online learning in higher education, and locates these issues within debates on human-technology relations in modern society. These debates present a story of these relations as ambiguous, conflicted and political, and these relations are reflected in how teaching and learning are shaped by networked technologies and organisational change in higher education. I will draw on literature from online learning and studies of technology to build the theoretical framework for an qualitative enquiry into practice, and as part of this perspective, bring a relational analysis to practice involving networked technologies in organisational contexts. Finally, I will set out the purpose and scope of the thesis, and present the research questions for the enquiry.

2.1 Learning and technology: Convergence or collision

The origins of online learning are traced by Feenberg (1999a) to the early nineteen eighties, when the traditional correspondence course was adapted to the affordances of the Internet, offering institutions an efficient distribution network and economies of scale. Networked communication technologies opened up two important trajectories or models in the potential for “online distance learning” (Feenberg, 1999a). One model built on the Internet to shape online learning as an “automated system”, offering a more rapid, even synchronous, form of distance learning. The other model was based on the face-to-face interaction and discussion of the traditional classroom, and modified elements of curriculum to the communicative possibilities of the Internet and the interactive affordances of the Web.

These two models express a binary that pervades the literature and institutional practice of online learning. Feenberg’s (2005) contrast between “automated online learning” (p. 59) and learning through interaction and text based discussion (also Feenberg, 1989), is similarly identified by others, for example, Weller (2007) compares “broadcast and discussion viewpoints” (p. 6); and Sfard (1998) identifies metaphors that are present in discourses of learning, the metaphors of acquisition and participation (Sfard, 1998).

The tensions for online learning arising from this binary are intensified with the advent of Web 2.0 (O’Reilly, 2005; Gillmor, 2004; World Wide Web Consortium, 2006), otherwise known as social software or the “read/write” Web, as communication technologies become available to the non-technical user, and “anyone with a computer and Internet connection could own a press” (Gillmor, 2004, p. 24). Indeed their increasing use has the potential to disintermediate the online teaching-learning connection at the expense of
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

Institutional learning management systems (Barr, Burns & Shar, 2005, p. 54), that is, reduce the need for an intermediary technologies such as expert systems to manage learning mediate between teacher and learner online.

Social software, then, can be seen as an example of a “disruptive technology”, defined by Christensen (1997, cited in Barr, Burns & Shar, 2005, p. 30), as a technology able to produce innovation which can undermine established business practices. The disruptive nature of social software - its global reach, its user autonomy, its collaborative potential - highlights the potency and flux of the development of communications over the network of the Web. It is a part of the longer period of growth of the Internet which has had “a profound impact” on learning (Jones & Steeples, 2002, p. 1), bringing a shift in the development of online learning towards networks rather than computers.

Evaluating “impact” is a primary concern in research into learning and assessment (Conole & Oliver, 2007; Price & Oliver, 2007b; Wilson & Stacey, 2003; Jones & Steeples, 2002; Rust, 2002), and a key means that researchers bring to understanding an amorphous notion such as “online learning”. Yet how this impact occurs, at what precise point it can be evaluated, and even what it is, is less clear in discussions of the transformative effects of networked technologies on learning. Price and Oliver (2007b) note that the complexity of practice and the “multiple influences affecting practice” (p. 17-18) makes the evaluation of a particular technology in terms of cause and effect quite problematic. Rather than a focus on impact, a useful starting point for identifying the significance of technologies on higher education teaching and learning can be a focus on contexts of learning, in actual settings of practice, since it is in specific contexts that there is a convergence of interests and stakeholders involved in the technologies of online learning in higher education. Factors which shape online learning in universities include institutional policies on teaching and learning, information technology units and their procedures, faculty and disciplinary interests, and external players such as software companies with contracts with the organisation. The confluence of technologies, organisational goals and practitioner interests onto the institutional technological infrastructure makes implementation a contested issue, as these diverse stakeholders and players act on the sites of online teaching and learning practice, and leave traces in the contexts of learning and in the relations between teaching staff and students. Attempts to evaluate the impact of technology mask the multiplicity of factors shaping an online learning context, and may obscure issues of who the evaluation is for, and what is the (normative) entity being impacted upon, and what is at stake. Where technologies are implemented on a large scale and at significant cost, interests collide, decisions are made, and politics intrudes.

Nevertheless, online learning literature suggests that a concern with the evaluation of
technological impact on teaching and learning as a recurring issue for institutions investing resources into online learning, and who seek to measure their return. Huge investments raise questions for organisations concerning the promised benefits that networked technologies bring to learning. There is evidence of a gap or mismatch between the rhetoric and claims concerning online learning, and its practices; between the design of technologies for learning, and their actual uses in learning, (Price & Oliver, 2007b; Collis, & Moonen, 2008; Conole, de Laat, Dillon & Darby, 2008; Sims, 2008; Hedberg, 2006; Oliver, 2005; Hamilton & Feenberg, 2005; Weisenberg & Stacey, 2005). Sims (2008) observes a recurring cycle such that “[f]or 30 years we have been assured technology will engage our learners, but we have yet to consistently see that promised outcome” (p. 155).

Yet the trajectory of online learning as potentially transformative is prominent in the literature. That networked communication technologies have transformative effects on higher education is overwhelmingly stated in the literature on online education, and was declared as “commonplace” in by Pollock (2000) a decade ago. Many commentators claim that the technologisation of education marks a profound transformative phase for teaching and learning (Siemens and Tittenberger, 2009; McLoughlin & Lee, 2008a; Bigum & Rowan, 2008; Sims, 2008; Alexander, B., 2006; Gibbs & Gosper, 2006; McMullin, 2005). Some have argued that the Internet brings “the most radical transformation” (Siegel, 2008), or effects that amount to an education “revolution” (Castells, 1996; Kellner, 2003; Harasim, 2000). Feenberg (2000a) suggested that such claims overstate the case, “[i]t is ludicrous to compare it with the industrial revolution, which pulled nearly everyone off the farm and landed them in a radically different urban environment.” The transformations of the Internet, for Feenberg (also Lazerson, Wagener & Shumanis, 1999; McMullin, 2005), are contiguous processes in society: there is no radical break. Yet there is transformation.

The transformative elements of online learning were articulated by Harasim (2000), who described online education as “a paradigm shift in learning”. She traced innovations and developments in networked technologies through the history of post-secondary online education that shape a form of collaborative learning that “will alter global civilization” (p. 42). Online learning can be distinguished from, say, distance education, not so much by the technology, but through the potential it affords for learning, “the critical differentiating factor is that online education is fundamentally a group communication phenomenon” (p. 49-50).

The critical issues for online learning that concern this thesis emerge from two preoccupations in the literature: there is, on the one hand, the “high degree of scepticism and concern” (Oliver, 2005, p. 173) over the lack of clear evidence for the improvement
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

of learning through the use of networked technologies; on the other, there is the potential for transformation of teaching and learning practice through engagement and interaction. For Harasim, the transformative shift derives from the collaborative affordances of networked technologies which underpin the potential for online education as “a new learning domain” (2000, p. 49) in a “unique environment” (p. 50). This transformative potential can be contrasted with the alternative trajectory of online learning as an industrial form of commodification or automation of learning (Hamilton & Feenberg, 2005), to be discussed later in this chapter.

This disparity between the promised transformative potential and actual outcomes is a theme which has been present in my own practice, and the thesis in part develops from my own experience with online technologies in the areas of teaching, academic development and educational design. My experience spans online learning from the early days of the Web in the mid-nineties, and reflects the stages or gradations described by Sloman (2009): from computer based training (CBT), to Internet, to Web 2.0 (for two typical, static, sponsored resources that exemplify the second of these stages, see Hannon & Atkins, 2002; Atkins & Hannon, 2002). In this progression, online learning approaches began to shift from “instructor-led” to “self-directed” learning (Sloman, 2009, p. 16), reflecting a parallel paradigm shift in pedagogical discourse, from teacher-centred to student-centred learning (Rust, 2002). Yet indications are that this shift, in practice, is partial at best, and that institutional teaching and learning reflect a diversity of approaches which extend to perspectives on technologies for learning (Jones & Muldoon, 2007; Malikowski, Thompson & Theis, 2006; Coates, 2005). In my online learning related roles, I have encountered distinct orientations in the same institution, in which individuals articulate particular goals, uses, terminology, and even “worldviews” according to their role and responsibilities: the perspectives of a technologist reflect an information technology background, a teaching academic may reflect a disciplinary background, a Faculty manager, or a student, may deploy terms and descriptions that reflect a particular discourse of technology use. Further, the resultant arrangement or practice of online learning may result from the interplay between these perspectives and discourses, a negotiation of institutional politics, histories of practice and situated contingencies. Online learning, it appeared, entailed distinct orientations to technology as well as to learning.

The research on “impact” of learning technologies raises the question: impact on what or on whom? A research study may answer this question with different foci: on the effectiveness of a technology, the efficiency goals for the institution, or on how technologies are applied and integrated into contexts of use. Goodyear and Ellis (2008) caution against research into learning technologies that is based on “simplistic comparisons” (p. 141). They contrast in vitro and in vivo studies (p. 144), that is, studies
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

under controlled conditions, and studies of activities occurring in actual settings that reflect "everyday or mundane reality" (Judd, 1996). The authors call for a holistic approach which focusses on the learning context, rather than separating a technology and setting up comparative studies that are modelled on laboratory experiments. Studies of technology in education as an “add-on”, based on measurement, they suggest, are problematic and contested.

This thesis adopts the approach that research into online learning requires its expression in actual contexts, that is, through its practices and effects. This approach is consistent with the engagement with the complexity of learning indicated by Goodyear & Ellis (2008), and others, which avoids a “simplistic” approach and acknowledges the complex relations that constitute online learning (also Krause & McEwen, 2009a; Price & Oliver, 2007b). In recognising this complexity for this thesis, the task of evaluating impact becomes one of evaluating practice and its constituents. The thesis has two considerations: (i) online learning is relational, in that it encompasses interactions between multiple participants that are institutional, individual, discursive and technological; and (ii) these relations are enacted in practice, that is, in contextual settings where these relations are arranged into a specific set of practices.

Central to this thesis is the problem of how to understand technology in the life of work and culture. In seeking to evaluate online learning, this research enquiry focusses on its instantiations in actual contexts of practice. Yet networked technology, by definition, extends beyond local contexts, both through its technical networks and through its cultures of practice. In researching a bounded domain of activity identified as online learning, the scope of this thesis is not confined to the specifications of the tradition of educational research, but sets out to explore online learning as a practice underpinned by the rise of networked technologies, bringing practices from other fields and a history of contention from beyond the field of higher education.

2.2 Conceptions and discourses of online learning

Despite the widespread acceptance of the transformative effects of online learning technologies in higher education, less seems to be understood in a consistent way of how they are taken up and integrated throughout institutions (Goodyear & Ellis, 2008; Georgina & Olson, 2008; Price & Oliver, 2007b; Conole, White & Oliver, 2007; Riley, 2007). A literature review of flexible learning programs by Normand and Littlejohn (2006) suggested that, “the literature contains little hard, empirical evidence concerning programmes that increase learners’ choice and improve learning through the introduction of flexible learning” (p. 9). A review of 695 articles from 5 “prominent” journals on distance education by Zawacki-Richter, Baeker & Vogt (2009) concluded that research at the meso level was “dreadfully neglected”, that is, “leadership in distance education
and strategy, management of change and innovation, costs, organizational development and infrastructure for online student and faculty support, professional development, and quality assurance” (p. 44).

The deployment of institutional learning technologies, while widespread, has not brought much insight on their effectiveness. The paucity of statistical information on their use may reflect the difficulty of gathering consistent data about institutional deployment of LMS, or, possibly more likely, the complexity within universities of how networked technologies and LMS are adopted and used by teaching staff and students, made it difficult to capture quantitatively and comparatively. Nevertheless, Coates, James & Baldwin (2005) cited a study from 2002 which found that over 75% of higher education institutions in Australia, UK and Canada use the proprietorial learning management systems (LMS), Blackboard or WebCT (formerly two companies, now merged). Further, they found that while 54% of subjects contained an online component, there was a lack of large-scale use by students and staff. A survey of over 500 staff and 20,000 students across five universities by Alexander (2005) found that “On average, 53% of the respondents saw e-learning as the provision of information only” (Hedberg, 2006).

External pressures and global imperatives have demanded an institutional response to provide online learning (Hannon & Bretag, 2010; Lewis, Marginson & Snyder, 2005), yet the benefits are unclear (Normand & Littlejohn, 2006; Casey & Wilson, 2006; Cornelius & Gordon, 2008), and the very flexibility it purports to bring to student learning may build inflexibilities for students and teachers (Willems, 2007; Gibbs & Gosper, 2006). From the literature, there is a sense in which online learning is dynamic and innovative, but also in flux and still unresolved, or, to use Poster’s (2001) term, “overdetermined”, in the sense that digital objects are continually modified and transformed, and overdetermined by “being structured through multiple contradictory practices” (p. 18). Over several decades now, online learning has assumed the status of an unresolved project, eschatological, its arrival always pending.

Online learning in higher education, therefore, is a complex of interests, technologies, and practices which add to the existing complexity of university learning within the field of higher education. Bourdieu defined a field as “a network, or a configuration, of objective relations between positions” (Bourdieu & Wacquant, 1992, p. 97). The field of higher education is described by Bourdieu (1993) as a structured hierarchy with a relatively high degree of autonomy, and incorporates both consensus and conflict in the relations between agents. Considering this field through the prism of networked technologies, online learning can be characterised as reflecting multiple interests and objective relations between agents of business, institutional and government policy, technology implementations, and pedagogical imperatives, to form an independent “subfield” of
higher education, with “its own logic, rules and regularities” (Bourdieu & Wacquant, 1992, p. 104). Participants position themselves within this subfield to reflect distinct notions, assumptions, terminology and orientations concerning the goals and expectations of online learning in an organisation. These “position takings” (Bourdieu, 1993, p. 35) of participants can be seen to generate tensions, whether dynamic and innovative, or competing and in conflict, that are consistent with Bourdieu’s sense of struggle and contested boundaries within the field. Hence I shall consider online learning as a subfield of or a set of practices within the field of higher education, with its own distinct relations, agents and values in circulation.

**Conceptions of online learning**

The various descriptions of learning over networked technologies suggest its conceptions are fluid and tailored for multiple purposes: flexible learning, distance learning, blended learning, and e-learning (Normand, Littlejohn & Falconer, 2008, p. 26; Oliver & Trigwell, 2005; Nunan, 1996). They appear in government and institutional policy documents, in the procedural statements of information technology units, and in scholarly research on pedagogical practice. They carry meanings that are contingent on the context of use by educators, educational designers, technologists, university managers, software vendors, and so on, each with their own lexicon and purposes. The lack of clear definition of e-learning was noted by Brown, Anderson & Murray (2007), in an analysis of e-learning policy over 10 countries. They suggested that this may in fact be useful since it provides some degree of freedom to align with various policy initiatives (p. 78), nevertheless, they also note a lack of debate and an uncritical stance across policy texts (p. 81).

A critical approach to the terminology of learning online follows these terms from their use as abstractions to their use in practice: it means asking what is the conception of “learning” entailed by the term, who the learning in question is intended for (Casey & Wilson, 2006, p. 4), and how the antecedent, qualifying word or prefix (“e-learning”) reflects implicit agendas contingent on particular goals or interests (Normand & Littlejohn, 2006, p. 5). For instance, a term such as “blended learning” tends to be less useful, according to Goodyear & Ellis (2008, p. 141), since its refers to the context of delivery of learning, rather than learning.

Definitions and statements of online learning tend to cluster around two orientations: tool-centred or learning-centred. In the first orientation, online learning is phrased in terms of information technologies as tools or applications that enable or deliver, exemplified in the example of blended learning above, and in the following two definitions:

- E-learning refers to the use of information and communication technology (ICT) in the delivery of education and training (Australian Flexible Learning Framework [AFLF], 2008).
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

E-learning refers to the use of information and communications technology (ICT) to enhance and/or support learning in tertiary education (Organisation for Economic Co-operation and Development [OECD], 2005).

In both these examples, technology is framed as an external to learning, obviating its transformative potential. In the second type or orientation, a perspective is adopted in which learning is the central focus. Mayes and De Freitas (2004), in their Review of e-learning theories, frameworks and models for a JISC-funded study in the United Kingdom, stated, “there are really no models of e-learning per se – only e-enhancements of models of learning” (p. 4). This perspective was summarised by Terry Anderson (2004), observing that "online learning is a subset of learning" (p. 34), as a more critical approach to learning technologies that attempted to recontextualise online learning away from a technology or institutional delivery focus, to an approach to collaborative knowledge construction derived from a Vygotskyian social constructivist articulation of pedagogy (p. 39). Others offer a similar critical orientation by disconnecting or erasing the “e” from “e-learning” (Goodyear & Ellis, 2008, p. 141; Sims, 2008; Holt & Challis, 2007).

This learning-centred orientation is captured by the term “networked learning”, an approach proposed and adopted by a number of commentators and researchers (Jones and Steeples, 2002, p. 2; Goodyear, Banks, Hodgson & McConnell, 2004, p. 1). The focus of networked learning is on interaction with other people and resources online:

- learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners; between learners and tutors; between a learner community and its learning resources.

In this understanding of online learning, technology connects rather than delivers. This definition specifies what these connections are, and extends the possibilities of learning by reflecting the networked communication of the Internet. Networked learning shares theoretical ground with approaches that draw on Vygotsky’s (1978) social constructivism and focus on relations, for example, the “community of inquiry” model of learning (Anderson, 2004; Garrison, Anderson & Archer, 2000); and George Siemens’ (2004a) theory of connectivism, which focusses on the connections between ideas, people, knowledge and technologies (see also Strong & Hutchins, 2009).

The term online learning is adopted for this research enquiry, as discussed in Chapter 1 (1.6). Despite the pedagogical commitment of networked learning, the imprecision of online learning captures the ambiguity of its use in discourses in the field of higher education: it can apply to both face-to-face and disaggregated learning contexts, and it

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1 The Joint Information Systems Committee (JISC) was formed for projects for the UK Further Education and Higher Education
can encompass both the reductive implications of the tool-centred orientation to
technology, and the learning focus of “networked learning” and the “community of
inquiry” model.

**Discourses of online learning**

These two orientations to online learning indicate contested approaches and the
adoption of particular goals. The first orientation focused on technology as functional,
and can be linked to a discourse of information technology systems as a means of
delivery. Such a discourse was described by Pollock (2000) in his account of the
implementation of a new information system brought to a university, in which a relational
database stored information on people and processes in the university. This new system
provided both data and a “new informational model” (p. 351) with which “to represent the
actual university” (p. 351). For Pollock, the consequence was a shift to a redefinition of
the university in terms of information management, supplanting prior or “old” models of
governance.

A conception of e-learning which reflects the discourse of the “informational model” is
common in the texts of management and the software industry. In such cases, online
learning is translated into a tool metaphor of technology as delivery, support or
application, as in the AFLF definition above, where “e-learning refers to the use of
information and communication technology”. According to Cornford and Pollock (2003),
such an informational orientation reflects an absence of bodies in an institution, a “lack of
physical co-presence” (p. 26) which does not address the social and organisational
aspects of implementation. Online learning comes to be seen in terms of the distribution
and delivery of information (p. 40), or key affordances of technological systems such as
flexibility (Roberts, 2007). Online learning as information management deploys the
language of functionality: delivery, content, flexibility, application, scalability, functions
which are underpinned by the digital network of the Internet. A conception of learning
based on a model of information arguably has a proper role in a complex institution, but
becomes problematic when it excludes alternative conceptions.

This reductive effect of the discourse of the information model was foreshadowed by
Lyotard (1984), who articulated the effects of information technology on knowledge. He
noted that the dominance of cybernetics on computers and telecommunications on
information machines has a considerable impact on the nature of knowledge, such that
knowledge “can fit into the new channels, and become operational, only if learning is
translated into quantities of information” (p. 4). If not, he states, it will be abandoned, with
the effect of “a thorough exteriorisation of knowledge with respect to the ‘knower’” (p. 4).
The consequence of this translation is the exclusion of that which cannot be processed
informationally.
Yet the Internet enables vast manifestations of sociality, and the infrastructure of networked technologies underpinning the information model can be seen as entailing far more than the adoption of a business or information technology model. The material infrastructure of the Internet, consisting of cables, computer nodes and servers, communication protocols, and so on, can be distinguished from the social and cultural communication potential of cyberspace, to use Gibson’s (1984) spatial metaphor, which is enabled by this infrastructure. Richard Edwards (2003) noted the sociotechnical nature of infrastructure (p. 188), its knowledge through experience he described as a “form of life” (p. 190), adopting Wittgenstein’s (1953) term to describe the social contexts enabled by language.

There is a language effect of cyberspace that disrupts the tool or delivery metaphor of technology that underpins the informational model. In talk and rhetoric about activities conducted in cyberspace, the signifier/referent binary starts to break down, so that activities and meanings online do not necessarily match a counterpart in the material world. To describe activities and practices online, metaphors from the material world are deployed – desktops, folders, surfing, the Net, discussion, chat, and so on – that have come to bear a closer resemblance to a terminology of cyberspace than to their embodied correspondences. Edwards, Nicoll, Solomon & Usher (2004) point out that the metaphors and signifiers of cyberspace have no stable referent or representation in the physical world, and despite the prior meaning of terms like desktop, files, surfing, site, net and web, “we cannot communicate about ICT outside of the different rhetorical practices through which it is fabricated. … cyberspace is its metaphors” (p. 75). One cannot, for online or flexible learning, to “stipulate a universal meaning” (p. 75), and the discourse itself becomes the reality. Despite the use of familiar terms from the physical world to describe life online, there is greater uncertainty and fewer shared understandings (Price and Oliver, 2007b, p. 24). Social life takes place over digital networks, as Andrew Feenberg (1989) notes, through a “written world” of textual communication, with new complexities and unfamiliar possibilities.

In higher education, the various stakeholders in online learning, whether organisational, technological or pedagogical, reflect their interests through their own discourses, which may be used as though the readers and authors share a common perspective. Wise & Quealy (2006) found variations in discourses around online learning across boundaries, not only across disciplines, but also across “areas of educational practice, professional practice, technology and management” (p. 900). They identified the lack of “shared terminology” between pedagogical practice and the institutional e-learning framework, in particular that pedagogical approaches do not match “the implicit instructional design agenda” (p. 901).
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

The picture of online learning in higher education discussed in this section reflects competing terminologies and understandings, mismatching perspectives and approaches, and use of learning technologies that do not produce their intended effects. Foucault (1972) described concepts in terms of discourses, which did work in structuring social relations. These discursive effects can be seen in two distinctions have emerged in this discussion of online learning: one concerns what constitutes technology online; the other concerns the use of technologies in practice.

The online/offline distinction: approaches to learning may be contrasted between those that take place online and those that occur offline, that is, in traditional physical settings. This distinction appears in qualifiers and prefixes such as online, flexible, distance, blended and the “e” for e-learning. As online learning reflects the terminology of familiar, traditional environments, teaching academics and tutors may experience online learning as a welcome or unwelcome shift from the physical settings of teaching and learning.

The delivery/participation distinction in learning technologies: online learning is viewed either as a use of technologies for delivery, or for connecting people and things. This distinction recalls Sfard’s (1998) descriptions of learning in terms of the orientations or metaphors of acquisition, in the sense of accumulation and possession of knowledge, versus participation in a community or in a practice. Sfard makes the case that in theorising learning one cannot be free of either of these metaphors, nor should research hold to one metaphor.

Both these distinctions raise the question of how different learning, and sociality, is in online spaces compared to physical spaces: whether online learning is achieved by transposing practices from one mode to another, or whether an entirely different configuration is required for practice in online spaces. The transformative potential of networked technologies is frequently raised in the literature on online learning, yet it is not clear in what ways networked technologies transform learning. In order to build a research approach to online learning, the question that needs to be addressed is how distinctive, how transformative and how radical is practice in online spaces?

**Networked technology: radical transformation or gradual change**

As networked technologies have come to pervade educational organisations, they are a critical factor in the process which is reshaping higher education, “impinging on both organisational structures and individual functions” (Conole, 2004, p. 5). It is a paradox, then, that in higher education, online technologies are spoken of both as a tool to be simply applied and as transformative for the sector.

Despite the literature, commentary and rhetoric that herald the transformative potential of networked learning technologies, something different occurs in the realm of practice. Transmission of files is the most common use of “course management systems"
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

(Malikowski, 2008, p. 85), the uses of which tend to be oriented towards traditional, instructionist pedagogies (Mayes & de Freitas, 2004, p. 17; Wise & Quealy, 2006, p. 901). The notion of technology as a tool, at hand and ready to apply for a required purpose, is part of the rhetoric of government policy and commonsense notions of the neutrality of technology (Feenberg, 2002, p. 5). Information technologies are likened to objects and artefacts that are functional devices, and the discourse of technologies as “just tools” has been present in online education since it began (Bigum & Rowan, 2004, p. 218). The notion is also drawn on in technology training, including online learning systems, and used by marketers and software companies. As Latour (2005) puts it, “tools are never ‘mere’ tools to be applied: they always modify the goals you had in mind” (p. 143).

The shift online in higher education can be seen as one manifestation of work shifting to the virtual realm of cyberspace, which brings a conceptual release from the constraints of matter, such that learning settings, texts, and teaching practice are no longer bounded by instantiation as fixed objects and physical locations. This opens up choices about how learning occurs in cyberspace, and also opens up learning to reconfiguration by organisational interests, such as opportunities for managerialist and business models to be applied to online learning (Coates, 2005; Hamilton & Feenberg, 2005; Cornford & Pollock, 2003, p. 70). These are frequently based on a seamless (and cost-neutral) transfer from face-to-face settings to online ones. In this model, content and pedagogies that apply in one mode can be unproblematically transferred to the other, with a view to managing the massification of teaching and learning (McFarlane, 2004, p. 12), and the construction of the devolved, globalised “virtual university” (Land, 2004; Cornford & Pollock, 2003, p. 6; Lewis et al., 2005). The deployment of institutional learning management systems (LMS) reflects not transformative learning but an instrumental view which renders online learning as “a concatenation of tools” (Hamilton & Feenberg, 2005, p. 98) to be applied to a waiting, passive environment. The majority of institutional online learning follows the tool metaphor of application, a utilitarian, training or distance model of accessing pre-packed content (Jones & Muldoon, 2007; Coates, 2005; Lynch & Collins, 2001). Following this business model, time pressed and under-resourced educators deploy the online environment as a content repository (Malikowski, Thompson & Theis, 2006).

While the notion that the shift to learning online brings transformative change is widespread in both literature in higher education and organisational change, the instrumental application of networked technologies is still pervasive. It acts to separate the social from the technical, an outcome of the exteriorisation of knowledge described by Lyotard (1984), and any complications or breakdowns then become an issue for the users (Goodyear & Ellis, p. 143). The “culture of instrumentality” (Poster, 2001, p. 2)
structures the arrangements for implementation and training in learning technologies, which are premised on the application of technologies as tools, and promotes the transfer of pedagogies from physical learning settings to online ones. Networked technologies, however, set up a different human-technology relationship, “information machines in particular resist instrumental framing” (Poster, 2001, p. 37), and since networked technology is not embodied in material objects, the inflexible relationships of human to industrial machine from the 19th and 20th century that inspired Heidegger’s dystopian enframing of the lifeworld can be avoided. Nonetheless, great efforts are made to do just this, I would suggest, through the “intellectual technologies” of discourses (Edwards, R., 2003), rather than through the structure of networked technologies themselves.

Mark Poster (1990) and Shoshana Zuboff (1988) described the arrival of electronically mediated communication and digital machines as a historical break, marking a disruptive moment in the process of industrialisation, and one which brings profound and political effects. They argue that to postulate a gradualism in the effect of networked technologies, to accept a continuous view of evolution from past to present is to bring “a familiarity effect, an ideological haze of false recognition” (Poster, 1990, p. 19-20). Poster urged recognition of this disruption, “I choose discontinuity over continuity” (p. 20) by proposing a theory of “the mode of information” to account for a periodic shift in character and scope similar to Marx’s theory of the mode of production. Poster described this shift in which, “a new order of machines increasingly populate human societies, machines that have their effects not upon matter but upon symbols” (2001, p. 22). A radical break was also described by Zuboff (1988; 1985), between the organisation of industrial labour and “the informated organisation” based on “information machines” which “generate, transmit, and store text, images and sound” (1988, p. 22).

Poster argued that the networked informational nature of the Internet breaks the Cartesian dichotomies of the human-technology relationship that underpin the tool metaphor. A discourse of technology as tool likens technology to a hand wielding a hammer, distorting and coercing the flows of information and communication so that, “configurations of space/time, body/mind, subject/object – patterns that are essential components of enframing – are each reconstituted in new, even unrepresentable forms” (2001, p. 37). Rather, the realm of cyberspace is instantiated in language and metaphor. Both Poster and Feenberg reject this Heideggerian view of enframing nature and humans, the “despair in the face of the triumph of technology” (Feenberg, 2002, p. 14).

2.3 The shift to networks: lifeworld on the virtual

Central to this thesis is the issue of how to understand technology. Castells’ (1996) account of the rise of networked technologies in the late twentieth century and its
“penetration of all domains of human activity” (p. 31) is also played out in the rhetoric and commentary of online learning, that technologies bring a transformation or a paradigm shift to learning (see 2.1). Given the interests in how networked technologies are deployed in universities that extends to government and private sectors (Hamilton & Feenberg, 2005), an understanding of online learning is required beyond discussions of teaching approaches and pedagogy. In this section I will explore the “online” aspect of online learning in order to understand the factors that shape the current debates and controversies of online learning. The research enquiry, then, can be scoped within the historical debates of technologies in modern society.

The push to online spaces
The commitment to online learning by universities has its origins in economic imperatives and the potential of networked technologies for distributed learning and its massification (Goodyear & Ellis, 2008, p. 141; Lewis et al., 2005; Marginson, 2003; Pollock & Cornford, 2002). Consequently, institutional strategies for teaching and learning may be accompanied by rhetoric that heralds the efficacy of learning technologies, and their presence as an implicit good. The assumption that education mediated by networked technologies is inherently beneficial has antecedents in the narrative of progress and utopian rhetoric of the Internet, adopted by government and university administrations (Hamilton & Feenberg, 2005), and identifiable in corporate models of university management (Reid, 2009; Blackmore, 2009; Lewis et al., 2005; Cornford & Pollock, 2003, p. 41; Blackmore, 2001). This “push” for online and flexible learning (Willems, 2005; Lynch & Collins, 2001) has complicated practice as it has become shaped by competing orientations or trajectories: towards managed technology systems or pedagogical approaches. This bifurcation for online learning is nothing new, and Feenberg (1999a), in his description of the early development of online education pointed to the conflict between “automated” approaches and the realisation that low-technology, text based discussion afforded the critical element of Socratic dialogue, the latter approach being less attractive to merchants of automation. A rhetorical sleight of hand is embedded in the rhetoric of the online learning “push”, that draws on the affordances of networked technologies to shift learning to new modes over distributed locations and hence increase institutional capacity: the argument is constructed that learning technologies enhance and augment the already existing face-to-face learning, that it is “an extension of the university” (Hamilton & Feenberg, 2005). There is an allure in the sweeping metaphors that associate online learning with increased capability and cutting-edge technology, where the discourse of goals of software applications reflect the language of management and information technology units, and “the rhetorical strategies at play where certain things are constructed as facts” (Edwards et al, 2004, p. 27). For example, that online learning is a natural good. A consequence of this rhetoric is the
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

potential for the substitution or reduction of pedagogical approaches based on student interaction with the more economical technology-led instructional models (Hamilton & Feenberg, 2005; Romiszowski, 2004).

These dual trajectories of online learning need not necessarily be opposed in practice, and practitioners adapt their teaching and learning approaches with respect to one or both. However, the trajectories reflect distinct conceptions and practices of online learning, deploy different terminology, different theoretical and pedagogical underpinnings, and a different set of supporters and participants. The question arises with institutional commitment: to what extent does one trajectory foreclose the other, and what learning practices can be built for one or other trajectory. Ultimately, the issue is how practices are shaped by and for a configuration of networked technology, that is, how learning adapts to the shift from “territorialized spatial relations” (Poster, 2001, p. 14) of modernist education to “de-territorialised cultural flows” (Castells, 1996) of the virtual university.

Questions of technology

The contentious issues for online learning have parallels with and are informed by debates concerning the rise of technology in the Industrial Revolution. A discussion, for instance, of whether online learning should be supported as situated, localised action, or be institutionally managed, has resonances with Habermas’ (1987) framing of the tension between “lifeworld” and “system”, where the lifeworld is the realm everyday communicative action constituted by language and culture, an insider view in which “society is conceived from the perspective of acting subjects” (Habermas, 1987, p. 113). In contrast, a system view of society is an observer’s perspective in which “each action has a functional significance” (p. 113) contributing to the operations of institutions, markets and administration. This tension, in turn, can be seen as an expression of a historical debate over technology and culture. Feenberg (2002) distinguished two views of technology: the instrumentalist view, in which technologies are neutral instruments, or tools, to be applied by human to an object; and the substantive or autonomous view in which technology “constitutes a new cultural system that restructures the entire social world as an object of control” (p. 6). The substantive view of technology derives from Ellul (1964), Heidegger (1977), Weber, and the Frankfurt school theorists, for example Habermas (1987) and Marcuse (1968), who broadly take the view that modern technology has become a force of cultural domination. In Heidegger’s terms, the rise of industrial technology breaks the traditional, intimate relationship of humans with technology that was based on the artisan, and replaces this with modern technology which enframes and structures the world for instrumental action, leading to concealment of our relation to being. The effect is totalising and acts to colonise the lifeworld. Heidegger, Ellul and Marcuse, were described Don Idhe (2002) as “the technophobic
godfathers” (p. 113), who “portrayed technologies as Technology, a sort of transcendental dimension that posed a threat toward culture, created alienation, and even threatened a presumed essence of the human” (p. 113). The narrative of colonisation and domination extends to the commodification of the Internet, in which a virtual “commons” is progressively enclosed and privatised (Bollier, 2002). Both instrumentalist and substantive perspectives are expressions of a determinist view, in which technology is alienated from its human creators, and while many commentators and practitioners have moved beyond such views, both perspectives offer an underlying discourse or are convenient allies in many understandings of technology.

Dystopian narratives of technology expressed in literature, for example, *Frankenstein* (Shelley), *We* (Zamyatin), *The Machine Stops* (Forster) follow a history of unintended consequences, an Othering of technology. Counterpoint utopian narratives, for example, *The Shape of Things to Come* (H. G. Wells) and other works by Wells and Jules Verne, have passed on their utopian spirit to contemporary times through the marketing of new technologies. Feenberg (2000a) pointed out that the utopian/dystopian debates of the 19th and early 20th century “were attempts to understand the fate of humanity in a radically new kind of society in which most social relations are technically mediated.” The forms of life enabled by the flows of networked technology gave rise to the posthuman worldview, in which “conscious agency has never been ‘in control’” (Hayles, 1999, p. 288). William Gibson’s *Neuromancer* was an early fictionalisation of a posthuman world that extended into “cyberspace”.

**Shifting to the virtual**

Behind the rhetorical strategies, the economic forces and the agendas of the “push” to online learning, there is the larger question of what happens to learning, to work and to social life, in the shift to the cultural spaces of communication emerging from the Internet. Mark Poster captured the implications of these possibilities:

> What began as a Cold War effort to speed up communications has become cyberspace, an electronic geography that reterritorializes preexisting geographies, opening new social and cultural worlds that are only beginning to be explored but that quite probably are already redefining what it means to be human (De Landa 1997). (Poster, 2001, p. 37).

Poster opens up the question of the nature of activity on these “new social and cultural worlds”. The question becomes, using an expression of Wittgenstein: how are “forms of life” constituted and performed in cyberspace? Even in the learning context described above by Feenberg (1999a), in which there was a high level of interaction and Socratic dialogue taking place online, the question arises as to what the important differences are

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2 Forms of life can be defined as “the constitutive embeddedness of human practice within concrete and local contexts” (Hansen, 2000, p. 2)
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice between practice in physical settings compared to online settings.

The language and metaphors for online learning frequently draw on traditional, physical settings of learning (Price & Oliver, 2007b, p. 24), inviting an understanding based on a comparison between physical and online settings. Through such a contrast, there is a risk that online learning may be described in terms of operational activities rather than the practices involved, for example, adding a discussion topic in the LMS, or checking students' participation through a monitoring function. Technology becomes “added on” to pre-existing arrangements for learning (Goodyear & Ellis, 2008, p. 149). Edwards' (P., 2003) distinction between the material substrate of networked technologies, and the “forms of life” that take place in the social worlds of cyberspace is useful here. In many discussions, this realm of activity is called the virtual, and implicitly or explicitly opposed to the physically “real”.

There is a strong view of the difference between the physical and virtual worlds, which argues that interaction via networked technologies is an attenuated version of face-to-face interaction, and provides an impoverished experience in comparison (Dreyfus, 2001; Borgmann, 1992). For Dreyfus, the convenient or “commodious form of virtual community is a poor substitute for the arduous reality” (Feenberg & Bakardjieva, 2004, p. 9). Communication at a distance over a network lacks full presence and constitutes a lesser actuality or “disembodied telepresence” (Dreyfus, 2001, p. 50). In his description of seven levels of learning, he states that distance education can never go beyond teaching "competence" and achieve the level of "mastery", which requires face-to-face contact (pp. 27-49). Learning at all seven levels could only be achieved at a distance if that which is “essential about bodily presence” is attained (p. 49).

Dreyfus' perspective on networked technology resonates with the dystopian views of Heidegger, Marcuse and Ellul who see modern technology as a form of control and domination, culminating in the apocalyptic view of Virilio (1994; 1993) who foreshadowed the collapse of space and time brought about by instantaneous flows of information. In formulating interaction online as the binaries of face-to-face/online and embodied/disembodied presence, Dreyfus reproduces the Cartesian dualism that divides a “real” world from an online or “virtual” world. With the virtual interaction of online interaction and online learning equated with technology, one is led to a “life without meaning” (p. 7), in contrast to the real world of “embodied vulnerable human beings” (55). This Habermasian separation of technology from the lifeworld offers only the choice of submission or resistance to Technology, which remains unchallenged and determined.

In response to Dreyfus, Nicholas Burbules (2002) argues that the dichotomy of online and virtual versus embodied and real is unproven and possibly circular, and that Dreyfus overstates the role of the Internet in his critique of “information-driven” education,
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

blaming the technology rather than the organisational and political factors which shape this approach (p. 389). In reviewing definitions of the virtual, Burbules (2004a) identifies the equation of the virtual with the technological as a characteristic assumption that the virtual is something other than reality:

this bifurcation of the synthetic and the real obscured a deeper understanding of what is changing in the ways that we make and explore our worlds, mediated by and through new technologies. Very rarely, if ever, is there a "direct perception" of anything. ... The world we perceive is always already a world we 'make' to some extent (p. 165).

Aligning the virtual with technology is to frame the virtual as illusory, undetermined or not yet realised. Such reductionism does not acknowledge the centrality of communication at a distance and its salience in our lives, using such technologies as the early telephone, the telegraph, and even the postal system and books (Feenberg, 2003a). In an everyday sense, the virtual did not arrive with the Internet. Indeed, the issue of how fixed our location is in the world of embodied action is put into question by Hakim Bey (2001), who says of those who inhabit the developed "First World":

we can no longer see (or feel or smell) around us very much evidence of a physical world. Our architecture has become symbolic, we have enclosed ourselves in the manifestations of abstract thought (cars, apartments, offices, schools), we work at “service” or information-related jobs, helping in our way to move disembodied symbols of wealth around an abstract grid of Capital, and we spend our leisure largely engrossed in Media rather than in direct experience of material reality. (Bey, 2001, p. 118).

Critics of naïve realism argue that the connection between people and their objects is mediated symbolically and linguistically. Meyer and Land (2003) note the “inherently arbitrary and non-referential nature of language” (p. 9), and cited Eagleton’s (1983) comment that language is not a structure of signifiers matched to signifieds, but more a “sprawling limitless web where there is a constant interchange and circulation of elements”. Baudrillard (1985) commented that interaction has shifted to “the era of networks, to the narcissistic and protean era of connections, contact, contiguity, feedback and generalized interface that goes with the universe of communication” (p. 127). Humans have perennially lived with meaning and involvement in a symbolic world through the use of language and the technology of writing, including physical interaction and at a distance in space and time. The spaces opened up by networked technologies can only be seen as part of the structure of human use, a realm of the virtual which entails “the ‘potentialities’ of the technical lifeworld” (Feenberg 2000b). By this term, Feenberg posits a technological sociality that is surplus to the rationality of the informational model, such that the relations of technology can incorporate ethical, aesthetic and social values.
Embodiment in the virtual
To understand the “technical lifeworld” and how cultural practices and forms of life are enacted in cyberspace, it is necessary to clarify two terms used here: the virtual and embodiment. In everyday use, the virtual has the sense of *almost*, or *in effect*. Its dictionary meaning is “that is such for practical purposes” (Tulloch, 1997), as, for example, a virtual office is effectively though not actually an office. This common sense understanding of the virtual as not the real is reframed by Pierre Levy (1998), who pointed out that its derivation is from the Latin *virtualis*, and *virtus*, meaning strength or power, such that “virtuality and actuality are merely two different ways of being” (p. 23). For Deleuze (1994), “[t]he virtual is opposed not to the real but to the actual” (p. 208). He posited the virtual with the real, “the virtual must be defined strictly as part of the real object” (p. 209). The virtual, then, is “fully real”, and Levy poses the virtual as a problematic, with the example of the seed for whom the problem is the growth of a tree. “The virtual is a kind of problematic complex, the knot of tendencies and forces that accompanies a situation, event, object, or entity, and which invokes a process of resolution: actualization” (Levy, 1998, p. 24). Thus the virtual can be actualised in multiple ways.

Levy also considered this movement in reverse, from the actual to the virtual, which he defined as virtualisation (p. 26). He gave examples of virtualised entities which become indefinite, ontologically displaced, and problematised, such as the move from text to hypertext, or a virtual community. In these cases, “rather than being defined principally through its actuality (a solution) the entity now finds its essential consistency within a problematic field” (p. 27). Virtualisation detaches an individual or information from fixed temporal and spatial reference points. Digital objects, via their interfaces, reshape and reconstitute the relations with the subject.

The movement described by Levy as virtualisation, the shift to the virtual that occurs using the Internet, is “a shock to the traditional narrative” (p. 29), and shapes a new human-technology relationship which is not founded on the instrumental view based on the tool metaphor. Virtualisation, then, brings a detachment, a “not there” modality in which the virtual object is dispersed, intangible, fluid and nomadic, where actualisations of the virtual object are ephemeral and unstable.

But what does this detachment mean for embodied involvement in teaching and learning when it takes place as virtual interaction? Katherine Hayles (1999) took up the issue of embodiment in relation to the interface between human and computer. In *How We Became Posthuman*, Hayles defined virtuality as “the cultural perception that material objects are interpenetrated by information forms” (p. 13). She rejects the human-technology separation implicit in the instrumental view, since technology “has co-evolved
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice throughout millennia with human beings", and is also human nature (Hayles, 2005, p. 144). The information flows of cyberspace are anchored to the body, and so that information needs to be embodied, it “must always be instantiated in a medium” (1999, p. 13). Hence, for Hayles, “abstracting information from a material base is an imaginary act” (p. 13), giving rise to an “embodied virtuality” from the interface between digital technologies and the body.

Ray Land (2004a) also argued that there was always “a body attached” to cyberspace (p. 532). He analysed Dreyfus’ anchoring of embodiment to face-to-face interaction as an “incorporeal fallacy”, a Cartesian dualism that suggests the disembodied activity of cyberspace constitutes something similar to a Baudrillardian simulacrum, in which online learning is a “representation of reality” (p. 531), a type of disembodied pedagogic Disneyland whose veracity was therefore doubtful. Land draws on anti-Cartesian critiques of “mind” separate from the body, and questions how unmediated and trustworthy face-to-face interaction is, arguing that it is integrated into systems of signifiers and language which are independent of the physical setting, just as a written text is. Rather, Land proposes “a relational approach” to embodiment as a mutual shaping of learners by technologies and artefacts, in which “we become constituted within and reconstituted by forms of embodiment and the various articulations they involve with other subjects, objects and artefacts” (p. 536). Issues of veracity that are raised in online encounters, then, are no different from those in any social encounter (p. 537). There are no unmediated relations.

The virtual, then, is not a realm of activity restricted to or impoverished, Dreyfus-like, by online interaction, but is a part of the embodied life of being human. Rob Shields (2003) notes that “the virtual has always existed in its ‘traditional’ ritualised forms” (p. 38), and lives have always been lived with the virtual as well as the concrete. Yet the virtual does not exist free of embodied relations. As Levy noted, a consequence of the saturation of our lives with ICTs is to shift the lifeworld to the virtual.

Learning, therefore, is more usefully considered in terms of practices rather than the physical coordinates of its participants, and practices of learning will consist of embodied relations constituted with technologies, both traditional and digital, artefacts, knowledge and people.

**Problematising the virtual: Establishing a (virtual) community of learners**

The shift of learning to the virtual spaces of online learning generates many anxieties and controversies. The notion of community in higher education learning is an instance in which a familiar concept in the social world acts in a different way online. How the concept of community is reconstituted in online learning can offer insights into the shift to the virtual through cyberspace.
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

The establishment and verification of online communities is a key issue that recurs in discussions of online learning, and arises in the literature in a range of terms: a community of inquiry (Lipman, 1991; Garrison & Anderson, 2003), a community of learners (Garrison, Anderson & Archer, 2001), and communities of practice (Wenger, 1998). The concept of community was identified previously (see 2.2) as offering a model of online learning alternative to the pedagogies of information transmission of learning, and provided a learning-centred focus to conceptions of online learning (Bretag and Hannon, 2008).

Community is a term that has acquired complexity through centuries of historical development (Williams, 1988, p. 76), and in attempts at understanding the use of the term 94 definitions were identified in the 1950s (Brint, 2001, p. 5). Stephen Fox (2005) drew on Benedict Anderson’s critique of nation as an “imagined community” to describe the “fictive” nature of community, that is to do with “world making” (p. 99). This idea or “ideal” of community (Burbules, 2000, p. 326) has been used in public discourse to draw contrasts, and Raymond Williams (1988) distinguished the “significant relationships of community” with the “more formal, more abstract and more instrumental relationships of state, or of society in its modern sense” (p. 76). Etzioni (2004) also distinguished the community in decline as described by Tonnies’ in the historical shift in social relations from Gemeinschaft (community) to Gesellschaft (society) (p. 225).

While there can be objective definitions of community, notably Gordon Graham’s (1999) “community proper” requiring an “objective interest, subjective interest and defining authority” (p. 134), many understandings of the idea of community centre on meaning, mutuality and shared engagement. This intrinsic identification is inherent in its derivation from the Latin communis (common, shared). Many communities define themselves on the basis of a shared interest, and the virtual communities as defined by Howard Rheingold are based on “webs of personal relationships in cyberspace” (quoted in Flew, 2005, p. 62). Graham, like Dreyfus, found that while online communities do exist, such interest groups may be fleeting and based on superficial relationships, and are therefore an impoverished form of community. Etzioni (2004) excluded the simple interest groups that were encompassed by Rheingold’s idea of virtual communities, and set two conditions for the social entities called communities: one is that there are “strong affective bonds”, the other is “forming a shared moral culture” (p. 227). While the first is met often both offline and online, the second, he suggests, is met less often. In Etzioni’s review of virtual communities based on these conditions, he found that while meaningful interactions were common online (p. 232), there was little evidence of “full-fledged, purely online communities” (p. 229). Nevertheless, he found that the conditions for their formation were present, but that the issue was whether the Internet could sustain durable community formation.
In rejecting Dreyfus' impoverished view of life online, both Burbules and Land question the privileging of the face-to-face interaction: Burbules (2000) refers to Erving Goffman's (1959; 1981) work on talk and self-presentation to suggest it is "a cultural myth to imagine the more immediate interactions are always the most honest, open and intimate ones" (Burbules, 2000, p. 329). For Land (2004a), the "incorporeal fallacy" can be seen in terms of Derrida's (1988) "metaphysics of presence" (p. 111), in which the veracity and reality appears to reside with the embodied presence of the speaker, undermining the veracity and reality of the author of mediated and textual communication.

The disruption brought by online education to the tradition of the "modernist project of education" (Land, 2004a), delineated by its physical spaces since its medieval origins, has led objectors like Dreyfus to an equation of the virtual with online technology. Yet the virtual has a longer history, and encompasses the intangible, the real in effect (Shields, 2006, p. 284), including the effects of action at a distance. The extensions to the body brought by technologies include artefacts, such as Merleau-Ponty's blind man and his cane, the body can act at a distance through a technology such as the telephone or email (Ihde, 2002; Feenberg, 2003a).

Like the extended body of the blind man and his cane described by Merleau-Ponty, the body can act at a distance through a technology such as the telephone or email (Ihde, 2002; Feenberg, 2003a; McLuhan, 1962). The actions and communicative accomplishments of participants are what constitute Williams' (1988) "significant relationships of community", and where their veracity and reality reside. Poster (1995) argues that "what makes a community vital to its members is 'their treatment of communications as meaningful and important'." (p. 82).

Nonetheless, despite the critics of Dreyfus, (Burbules, 2004; Land, 2004a; Feenberg, 2003), there is an anxiety about online interaction and community, its authenticity, and its salience. The literature on online education reflects extensive publication concerned with identification and objective measurement of online learning communities. A significant development in research on teaching and learning online is the model of "community of inquiry" (Garrison, Anderson & Archer, 2000), based on Wenger's (1998) theory of the community of practice, a mode of organisation that arises through negotiated meaning and a shared undertaking (1998, p. 73), and which developed as an alternative to accounts of organisations derived from scientific management approaches. Garrison et al.'s (2000) community of inquiry model posits the significance of online (and remote) "presence" in its constitution and measurement. Since online communities are primarily mediated by text based interaction, such investigation aimed to identify factors enabling educators to recognise or create the conditions for an online learning community, and build rubrics for identifying the efficacy of text-based discussion (for examples, see the
Great efforts have been made to identify, describe and measure online communities, in part as a response to instructivist approaches that have their origins in the individuating effects of distance learning and correspondence education (Lee, 2008). Goodfellow (2005) noted that much research and development of virtual learning spaces not only emphasises the salience of remote presence, but may result in a “deliberately engineered ‘performance’ of community” (p. 114). Finding “objective” measures of community is problematic due to its status as an idea or ideal, and the inherent and self-reflexive nature of its efficacy. What constitutes the achievement of an online learning community may be arrived at by reflexively measuring participants’ “sense of community” (Rourke et al., 1999; Shea, 2006)\(^3\), that is, community is an emergent phenomenon that grows out of local and socially constructed understandings associated with Wenger’s community of practice model. These and other efforts to define and delineate online community in a learning context contrast with the relatively taken-for-granted nature of community in the traditional, physical world, and highlight the unbounded, textual basis of the virtual world.

This anxiety over online learning communities can perhaps be viewed as a response to the experience of the virtual community as a Derridean absence. Derrida (1976) holds that there is a binary opposition to a dominant concept or prior term, for which a positive representation rests on a negative “opposite”. As the term “community” in the physical, face-to-face setting, is an ideal that invokes a nostalgic good, its absence has shifted from the modern industrial individual to the intangible virtual identity, bringing associated prior connotations of alienation and dislocation. Hence the research and development focus is on interaction in online environments in an effort to humanise its underlying data flows.

The prevalence of research on interaction, or of the “discourse of communication-as-community” in the online learning literature (Goodfellow, 2005, p. 120), obscures other contextual and organisational contributing factors. Goodfellow identifies a conflation between communication and virtual community, “a focus on online learning activity as personal interaction rather than as social practice” (p. 124). Analysis of online interaction within the duration of a semester unit of study constitutes a limited basis for evaluating community, and the emphasis on participation and affect can create conditions for exclusion from emerging communities (Goodfellow, 2005, p. 120; Willems, 2005).

Literature on online communities of learning tends not to raise the potential for communities to exclude and discriminate, and Introna and Brigham (2007) argue for a

\(^3\) For further references, see Community of Inquiry (2007).
reconception of the debate on community, to a “concept of community away from dominant approaches that emphasise calculative reciprocity and inculcation”, towards an approach based on ethical involvement with the stranger, the “Community as Other” (p.176).

The notion of community and its accomplishment is one issue which is critical in discussions of pedagogies of online learning, and its establishment and evaluation become controversial when brought into practice in the social worlds of virtuality. The extensive discussions of online learning communities in scholarly literature exemplify how a familiar concept becomes problematised when translated into complex social and technological configurations of cyberspace, and indicates the need for a different analysis of online sociality. A research approach will be shaped to engage with this and other controversies in order to gain insight into approaches to practice in online learning.

2.4 Controversies in online learning: Reviewing the literature

Online learning emerges from its literature as complex, polysemous, and contested. While online learning is articulated by stakeholders according to their own conceptions, terminology and programs, the realisation of online learning is a negotiation of relations between multiple participants and perspectives. It is at the point of these realisations, during the messy process of putting plans and designs into practice in situ, that the controversies of online learning arise.

These controversies form the starting point for this enquiry into online learning. The issues and concerns that emerged in the above account of the research literature can be clustered into three types or levels of controversy: the “impact” of networked technologies on learning, its implementation and integration in institutions, and its discourses in institutional strategy and virtual sociality.

Level 1: “Impact” of networked technologies on learning

An issue of widespread concern in the literature on online learning can be grouped under the topic of the effects or “impact” of technologies on learning. Economic pressures on universities have brought significant investment in institutional managed learning systems for unclear results or benefits (Malikowski, Thompson & Theis, 2007; Coates, James & Baldwin, 2005; Friesen, 2004). Oliver (2005) concludes that there is a “lack of empirical evidence for learning enhancement” for managed systems, and such systems are associated with technological breakdown, failure, and poor learning outcomes (Cronje, 2008; Siemens, 2006; Wise & Quealy, 2006; Warzynski, 2006; Bacsich, 2005; Romiszowski 2004, Zemsky & Massy, 2004; Hamilton & Feenberg, 2005; Feenberg, 2000a).
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

Investment in institutional information technology was frequently based on orthodox, hierarchical and normative approaches to management and organisational change, described as “the planning approach”, by Alvesson and Sveningsson (2008), that is aimed at “accomplishing managerially planned organizational change programmes” (p. 19). These programs are reported to have implementation problems and a failure rate up to 70% (p. 27). This low rate of success or institutional return on investment tends to be reflected in projects in organisational and technological change in universities (Warzynski, 2006, p. 1).

Studies of “impact” of learning technologies have also been conducted in relation to staff and students. The extent of the uptake of managed learning (LMS) by academic staff and students does not match the transformative rhetoric of institutions and its enthusiasts. Despite becoming mainstream, the main use of LMS is the “transmissive” use of file transfer (Malikowski, Thompson & Theis, 2006), or basic functions of access to files (Benson & Palaskas, 2006; Garrote & Pettersson, 2007; Leask, 2004). Studies also indicate significant pedagogical constraints in the structure of proprietorial LMS technologies (Wise & Quealy, 2006; Coates, James & Baldwin, 2005; Gibbs & Gosper, 2006; Siemens, 2006; Sessums, 2006; Lynch & Collins, 2001). Studies of engagement and retention of students in online learning offer a measure of impact, particularly at first year level (Krause & McEwen, 2009a; Tyler-Smith, 2006; Department of Communications, Information Technology and the Arts [DCITA], 2002)

The emergence of social software and Web 2.0 has offered fresh debate on the deployment of managed systems for online learning, with new possibilities offered by adaptive and “personalised learning environments” (PLE) (Siemens, 2006), an “e-learning 2.0 model” (Wise & Quealy, 2006), and alternative approaches to institutionalised LMS (JISC, 2009; McLoughlin & Lee 2008a; 2008b; Collis & Moonen, 2008; Alexander, B., 2006). However, the use of such fluid, mutable communication technologies makes it impossible to separate technologies from their use in text-based interaction, rendering measures of “impact” methodologically problematic.

**Level 2: Integration and implementation of technology**

The issue of how networked learning technologies are integrated and implemented in institutions is a discussion which extends globally throughout the higher education literature, encompassing developing countries (Marshall & Taylor, 2009), and reflects widespread concern with the effectiveness of institutional configurations of technologies into teaching and learning practice. Issues of concern include: the integration of technologies into learning (Goodyear & Ellis, 2008; Fox, 2007; Price & Oliver, 2007b; Riley, 2007; Gibbs & Gosper, 2006; Lynch & Collins, 2001), the conceptions and beliefs of staff about online learning (Al-Mahmood & McLoughlin, 2004; Sharpe, Benfield &
Francis, 2006), and the diverse nature of student experiences of online learning (Kennedy et al., 2008; Conole et al., 2006). These studies confirm the variation in engagement and the disparate expectations associated with networked communication technologies. The range of potential technologies is such that the practices, understandings, and terminology for an online learning environment are necessarily selected and organised in a manner specific to a particular institution, perhaps in that institution’s “standard” learning environment. Price and Oliver (2007b) point out that in contrast to physical learning environments, there tends to be a lack of shared understanding or set of practices for online learning environments across the sector, nor can a similarity between institutional online environments be assumed (p. 24). A consequence is the need to expend staff time and institutional resources in order to set up staff training in the use of a diverse range of specific technologies. As a consequence of this commitment of resources, the technological how may come to shape the pedagogical what. A focus on training in a set of functions instils a “default pedagogy” (Goodyear & Jones 2003, p. 40) in the technology. At issue is whether there is an alternative to the constant “training tool” orientation of complex software and its application, rather than the practices that the ubiquitous Internet may afford.

The critical literature on breakdown and failure in online learning reflects concern at the institutional “push” for a “solutions” approach to online learning, in which the complexity of teaching and learning practice is shifted from working with the contingencies of learners and curriculum to a pre-designed set of technological functions (Lane, 2009; Bayne, 2008).

**Level 3: Discourses of technology in institutional strategy**

At the level of discourse, controversies arise from the constructed nature of interaction online. Sociality in cyberspace is enacted through Feenberg's (1989) “written world”, where even access to image and media is through modes of interaction wrapped in text. In this dynamic, fluid realm, artefacts remain mutable or unfinished (Poster, 2001, p. 16), boundaries and identities are more fluid (Land, 2004a, p. 530), and interaction occurs through an individuated orientation to a screen interface. As exemplified by the discussion above on online communities, the shift of practices to cyberspace may render them unfamiliar, requiring new configurations of objects and people, and new determinants of efficacy.

This reconfiguration extends to conceptions of online learning that reflect power interests and institutional agendas. The gap between the rhetoric and practices of online learning identified in the literature (see 2.1) is enacted at the level of institutional strategy. Particular goals inherent in institutional policies and implementation processes will be reflected in discourses of technology, that is, the talk and text about uses of
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice technologies, and these in turn may shape associated contexts of teaching and learning practice.

**Levels of controversy**

These issues in the literature of online learning can be broadly grouped into three levels of controversy in relation to practice, as shown in Figure 2.1.

*Figure 2.1: Levels of controversy for online learning*

At the level of "impact", issues arising from actual cases and evidence of learning technologies on practice can be located. At the level of integration and implementation, issues concerning how learning technologies are selected, planned and implemented on a local or institutional basis. Finally, the level of discourse raises issues of implicit theories and assumptions that arise with institutional strategies for online learning, and are also inherent in the other two levels.

At issue is how institutions manage the potentiality of the virtual spaces of online learning. Do these controversies indicate that existing models of technology and management belong to a pre-digital era and need to be challenged? And is a new type of approach required for practices of online learning? This research approach will enquire into the forms of life that embody these controversies, and investigate online learning in its instantiations in practice contexts that embody the complex arrangements of people, places, technologies, and institutional constraints.

**2.5 Research aim and scope of the enquiry**

**Research aims**

This research enquiry sets out to investigate the transformative effects of technologies on the lifeworld of sociality and work through an enquiry into the practices of online learning in higher education. The focus is on practice associated with instantiations of networked technologies, as indicated by the controversies arising from the shift in practice to virtual spaces. It follows from the preceding discussion of these controversies that a new approach to online learning needs to be articulated.
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

The aim of the enquiry is to account for the controversies arising from the uncertain effects of networked technologies on higher education practice, to challenge the standing arrangements for institutional online learning, and theorise an alternative perspective and approach to practice. The thesis will:

(i) develop a theoretical perspective which accounts for the complex social, material and technological interactions that constitute online learning practice,

(ii) document and develop a critical analysis of the controversies of online learning, and produce relevant and transportable case studies that offer an alternative, relational approach that focusses on practices.

The analysis and production of case studies grounds the enquiry in experiential accounts and artefacts of practice. Practice cases entail specificity and application, and provide a basis for adaptable examples and models of practice for practitioners. The use of case studies to provide models of practice is common in higher education literature, including large-scale case study comparisons. Some examples of the case study approach in online learning are: JISC studies in the UK, (JISC, 2009; 2007), Conole (2009; 2007), Krause & McEwen (2009b), Fitzgerald and Steele (2008), UNESCO case studies (D’Antoni, 2006), De Freitas & Oliver, 2005), Bacsich, (2005), and Crook (2002).

Two preliminary central questions will be addressed by this approach:

1. How do approaches to online learning in higher education fail or break down? Can the poor outcomes reported in the literature be understood and described as a systematic or recurring pattern.

2. How are networked technologies implemented in higher education teaching and learning, and how does this implementation configure teaching and learning practice?

Given the complexity of online learning that is enacted in practice contexts through its multiple participants and agendas, the central research question can be stated:

*What are the social, discursive, material and technological arrangements which shape or constitute practice in online learning in higher education institutions?*

This question identifies the elements that are embodied in a field of practice that is acutely determined by a range of interacting factors. These can be summarised by the term sociotechnical, that is, the hybrid social and technical arrangements that act as a whole in an organisation (Walker & Creanor, 2009; Bigum & Rowan, 2008, p. 250). From these elements, a set of secondary questions based on the controversies in Figure 2.1 follow that can provide a direction for scoping the enquiry:

*Practice: How is practice constituted in online learning? Who and what are its*
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

participants, and how are they assembled?

Effects/"Impact": What are the factors which account for the effectiveness of online learning? What are the controversies of practice and how are they produced?

Integration: How is the agency of practice organised between the human, technological and institutional constituents of online learning?

Discourse: How is online learning shaped by discourses of technology?

To enquire into these questions requires an interrogation of established practices and instantiations of online learning in institutions through its controversies. In other words, a re-evaluation of “the way things are” with technologies in learning.

Scoping the enquiry

The requirements of a research approach based on these aims and questions are that the scope of the enquiry encompass the range of expressions of online learning in higher education institutions, yet provide a focus for designing a methodology. This focus can be provided by enquiring into effects, that is, enquiring into practice as a social, material and shared activity (Schatzki, 2001, p. 3). Following the three levels of controversy in Figure 2.1, online learning can be understood as being enacted or performed in multiple points in an institution: at the level of policy and formulation of an online learning strategy (discourse), as an implementation project involving information technology units and faculties (integration), and at level of teaching and learning practice (effects). Moreover, these levels interact: the pervasiveness of networked technologies has the consequence that pedagogical practices are opened to institutional processes. The arrival of the “network organisation” (Lewis et al., 2005) brings the potential for new pressures and changes to work practices in higher education (Marginson, 2000, p. 26). Networked technologies intensify the interactions between administrative and policy processes of the institution and the individual teaching and learning contexts that were hitherto shielded by the physical constraints of classroom teaching and student-teacher relationships.

Implementation of online teaching and learning through the institution produces tensions between different sections or levels of the organisation. De Freitas & Oliver (2005) pointed out the flaws in online learning strategies that are either “top-down”, management driven change, and “bottom-up”, individual projects (p. 86). They concluded that an e-learning policy that contributed to effective pedagogical practices is a complementary, negotiated process, and emphasised the need to balance initiatives at each of these levels (p. 94). This balance is reflected in calls for integration between organisational, technological, cultural and pedagogical factors (Conole, 2004), also Valcke (2004), Casey and Wilson (2006), Collis & Moonen (2001), Hannon & D’Netto
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice (2007), and attention to context specificity in implementation (Parchoma, 2006, p. 238).

The challenge of integration of online learning is represented by Collis & Moonen’s (2001) “components of flexible learning”, listed as “technology, pedagogy, implementation strategies, and institutional framework” (p. 223), in Figure 2.2.

*Figure 2.2: Collis & Moonen’s (2001) “four key components of flexible learning”*

Each component reflects different enactments of flexible learning in the organisation, and tensions between them\(^4\). In this model, Collis and Moonen (2001):

\[
\text{... attempt to define the term flexible learning in a way that can be made concrete in terms of the institutional framework that will shape and steer it, implementation strategies that will make it happen, pedagogical approaches that will give it learning value, and technology that serves as its tool (p. 229).}
\]

In this enquiry, I will adopt this model to identify aspects of online learning in concrete terms within institutional contexts. I will take a further step to identify the relations between these components that constitute practices involving people, technologies, documents and arrangements into a *sociotechnical assemblage* (Latour, 1992, p. 172; 1999b, p. 198; 1986; 2005), that is, a hybrid entity in which there is no hierarchical distinction between social and technical factors. This model will form the basis for designing a methodology for analysis of how these components take effect and are expressed according to the levels of controversy.

**2.6 The theoretical approach: a relational analysis**

The research approach adopted for this thesis entails the possibility of technology that is different from the delivery and informational models of technology discussed in 2.2 above, and is able to challenge the discourse of the managerial “planning approach” (Alvesson & Sveningsson, 2008, p. 19) to technological change in organisations that is common in business and information technology sectors. The thesis argues that analyses of controversies based on these perspectives provide an inadequate understanding of a field and lead to systemic breakdown in practice.

\(^4\) Casey and Wilson (2006) offer a similar model of how flexible learning works in terms of four interrelated “building blocks”, or perspectives (p. 21): pedagogy, technology, organisation and strategy.
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

The effects of networked technologies on teaching and learning is one of the central concerns of this enquiry. However, much of the extant literature identifies effects as “impact”, a concept which is problematic to measure, and define, on the basis of comparative studies or the evaluation of a technological intervention. There are several factors which bring complexity to technology studies. With networked technologies now interwoven into learning and social life, an instance of online learning is not easily distinguished from learning that is “not” online, and studies framed on that basis may have limited usefulness. An attempt to bracket off technology from the social is likely to be methodologically problematic and contrived. Further, adoption of online learning opens up the institution to different types of students, different arrangements for student access, and new configurations of teaching such as international and distance programs. Hence the variables for any comparative study tend to multiply. From a practice perspective, a research method which attempts to establish “facts” and ascertain truth in the realm of social practice risks a naïve realism.

A relational analysis approaches online learning as experiential, in vivo contexts of practice, viewed as a sociotechnical assemblage of entities in which relations are analysed rather than entities in themselves. Verbeek (2005) describes this perspective as an alternative to the view of technology as separate from human sociality and existence, but as a view in which technology “mediates the relation between humans and world, and this co-shapes their experience and existence” (p. 199).

This distinction is also described by Mark Poster (2001) as the difference between understanding technology in a functional way, like a hammer, through which the world is seen in terms of potential nails:

… as long as we understand the Internet as a hammer, we will fail to discern the way it is like Germany. The problem is that modern perspectives tend to reduce the Internet to a hammer. In this grand narrative of modernity, the Internet is an efficient tool of communication, advancing the goals of its users, who are understood as preconstituted instrumental identities (p. 177).

Poster is more interested in aspects of the Internet “which instantiate new forms of interaction and which pose the question of new kinds of relations of power between participants” (p. 177). In this view, technology and indeed infrastructures are sociotechnical in nature, and can be viewed as co-constructing society and technology, while at the same time their discourses hold them apart.

Relational approaches encompass a range of perspectives: actor network theory (Law, 2009; Latour, 1987), activity theory (Murphy & Rodriguez-Manzanares, 2008; Knight, Tait & Yorke, 2006; Engeström, 2001), and phenomenography (Marton & Booth, 1997), and types of discourse analysis that connect situated contexts with broader (Foucauldian)
effects (Potter, 1996; Fairclough, 1995). In broad terms, these approaches move away from “atomistic” conceptions of people, objects, policies, technologies and learning (Goodyear & Ellis, 2008, p. 150). The relational analysis that derives from actor network theory has been deployed for this thesis for its recognition of technologies as entailed in the social, and its refusal to privilege the human over the nonhuman (Callon, 1986).

According to John Law (2000), “elements have no significance except in relation to their neighbours, or the structure of the system as a whole.” (p. 4). The complex, and complicated arrangements of implementations of online learning encompass elements that are local, technological, institutional, discursive, and beyond the institutional, from government and industry sectors, and academic disciplines. This tradition enables an approach that views online learning as a network of relations between apparently disparate entities.

This approach does not test hypotheses nor seek comparisons according to an assumed theory or model, and therefore avoids presuming a state of affairs. The relational approach challenges established normative processes, and problematises a phenomenon through its disruptions and dissonances. In order to explore those relations of online learning, a problematisation approach is deployed to investigate particular contexts of practice and identify their emergent controversies. Alvesson & Deetz (2000) state that this method “is about making the familiar foreign (Entfremdung, defamiliarization), about problematizing the self-evident and pointing out that future realities need not be a reproduction of what currently exists’ (p. 171).

Since this enquiry is premised on the complex and problematic issues concerning the effects of online learning, the problematisation approach and method of defamiliarisation can be applied to contexts in which institutional online learning consists of normative technological implementations that are relatively consistent and comparable across the field of practice of higher education. The goal of this type of research is not to verify or establish “facts”, not to measure “impact”, but to describe relational effects, to interrogate the systemic issues in an established state of affairs, for the purpose of improving and even reclaiming practice. The goal of this type of research is not to verify or establish “facts”, but to interrogate the systemic issues in an established state of affairs, for the purpose of improving and even reclaiming practice. This research proposes a fresh analytical approach based on a “radical relationality” (Law, 2000), which emphasises connection over object or person. This approach has its origins in actor network theory (Callon 1986; Latour 1987; Law 2000) and is adopted for this enquiry as a methodology (Law, 2004, 2009) for descriptions, and which may have ontological implications that make statements about the constitution of social reality and practice.

The goal of this thesis, therefore, has a double aspect: a critical approach to
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice

problematisation of phenomena, and a formative intent (Scriven, 1991, p. 168). This thesis has a purpose of improvement, in this case, of the way networked technologies are integrated into an institution and enacted in practice, and as formative research it speaks to its own field of practice in online learning. References to improvement or effective practice in this enquiry, then, can be understood in terms of actions that are consequential and renegotiate practice to set the conditions to avert failure and breakdown, that contribute to the body of online teaching and learning practice.

The formative goal of improvement, however, need not be restricted to the sense of modification or repair of an existing state of affairs, but may encompass the potential for transformative work, in a call for a theoretical or paradigm shift in approaches to technologies. This intent can also be phrased by borrowing the notion of “troublesome” knowledge (Perkins, 1999), or “knowledge that is ‘alien’, or counter-intuitive or even intellectually absurd at face value” (p. 4). Although Perkins applied the term to student learning, it can be applied to this enquiry’s potential contribution to knowledge, to bring to a field of practice a “transformed internal view of subject matter, subject landscape, or even world view” (Meyer & Land, 2006, p. 3). This term captures the aim of the thesis, to bring “troublesome” knowledge to certain normative institutional practices in online teaching and learning.

Roberts (2007) urges the reader to recognise these ambiguities of networked technologies in online education and deploy a “problematising methodology” in our approach to curriculum:

- to discover how to reconstruct what is educationally possible in a field radically transformed by the network of novel possibilities represented by and enabled through learning technologies.
Chapter 2: Reviewing online learning: The sociotechnical breakdown of practice
Chapter 3: A methodology for interpreting practice

Chapter 3

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In chapter 2, online learning was discussed as a complex, unfolding project in which sociality is constituted through networked communication technologies, and practices are in a state of flux, renewal and further determinations. I argued that these determinations and movements are not converging towards an identifiable or agreed form, and that the multiple factors which configure online learning do not act in congruence. I presented literature and examples that suggested that the effectiveness of online learning at an institutional level is unpredictable and problematic, that there are inherent conflicts and tensions in the field, and that its practices are contested and not well understood.

This chapter develops the methodology for this enquiry into practice in three parts, by:

1. Framing an investigation of online learning in the context of a globalised practice of higher education
2. Developing an interpretive approach for the application of two theoretical perspectives, the dialogic and relational, and
3. Designing a strategy of enquiry for the application of trustworthy methods for analysis and the production of case studies.

3.1 Rationale: Problematising online learning

The effects of globalisation have brought increasing complexity to higher education organisations, and the changed conditions in which they operate is related to the rise of networked communication technologies (Barnett, 2000, 2004; Castells, 1996; Cornford & Pollock, 2003; Marginson, 2000). This change and complexity has brought a reconfiguration of learning in both a technological and political sense. The sheer scale and level of investment in online learning (Bacsich, 2005; Conole, 2007b; Conole & Oliver, 2007; Cornford & Pollock, 2003) indicates its strategic importance to universities. Complexity also arises from the multiple interests, viewpoints and claims on the selection and implementation of technologies to be deployed and supported through an organisation.

This complexity affects the design of a methodology: how does the researcher approach this domain of practice in higher education learning, and what is the starting point? Should research commence with an investigation of the pedagogies used for online learning, or the technological implementations in use, or focus on the effects and responses of students and staff involved? Networked technologies have reconfigured learning in the organisation, shifting practice from the plans of practitioners and the
bounded locations of classrooms and lecture theatres, to the distributed arrangements of institutional online environments (discussed in Chapter 2.3; Casey & Wilson, 2006; Normand & Littlejohn, 2006). A study of practice, therefore, must recognise practice as distributed through the organisation.

The broad aims of this enquiry are to arrive at a better understanding of online learning in the higher education context, to provide an analytical approach that can be applied to the controversies, breakdowns and effects of online learning practice, and provide an alternative approach to teaching and learning practice using networked technologies.

Two preliminary questions concerning the nature of online learning in higher education can inform a research strategy. (i) Are there significant differences between online learning and “traditional” learning? If online learning is a distinct or new form of pedagogy that merits a new domain of practice, the enquiry will take a different shape compared to a study of how existing pedagogy and practices take place “online”. And (ii) are there established research approaches for online learning? If so, how do they address the issues of efficacy of online learning discussed in Chapter 2, the poor institutional outcomes, the inconsistent response and low levels of adoption of technologies by staff?

**Investigating online learning or just learning**

The structural basis of online learning in networked communication technologies opens up an extended space of practice, with new possibilities and constraints (Feenberg, 1989; Hamilton & Feenberg, 2005). It also locates learning at the intersection of several traditions or worldviews, opening up practice to new arrangements involving interested participants and stakeholders. The development of the “networked university” (Lewis, Marginson & Snyder, 2005) brings the traditions of university learning together with business and information technology models of the organisation, which in turn overlap with the democratic approaches to participation enabled by the Internet.

The tradition of learning in higher education, in a modern sense, draws on a tradition of the university which can be traced to John Henry Newman’s *The Idea of a University*, written in 1854, in which Newman described the university as “a place of teaching universal knowledge” (Newman, 1959, p. ix) (italics in original). Newman distinguished the university’s purpose in terms of teaching students, as distinct from the work of the church or of scientific discovery. Teaching had a fundamental place in the tradition of the university, indeed, the “object” of the university was “the diffusion and extension of knowledge rather than the advancement” (ix). His notion of teaching was more than simply transmission and acquisition of information, it concerned the formation of the intellect, “to have a connected view or grasp of things” (xvii). While such ideas of the university persist in determining the mission and structure of the university, they co-exist with contrasting and even contradictory organisational cultures: four organisational
models of the university are described by McNay (1995): collegial, bureaucratic, managerial and corporate (see; Land, 2001a). The impact of the corporate and managerialist models on university learning are intensified by the afforances of networked technologies (Lewis et al., 2005, p. 63), and bring new opportunities to appropriate learning (Cornford & Pollock, 2003; Hamilton & Feenberg, 2005; Jacob & Hellström, 2003, p. 52). At the same time, these technologies have brought the possibility of Newman’s “connected view”, for instance, in community-centred approaches to online learning (Feenberg & Bakardjieva, 2004; Anderson, 2004).

The literature on online education does not offer a distinct pedagogy or theory of online learning distinct from those of learning, “There are really no models of e-learning per se – only e-enhancements of models of learning” (Mayes & de Freitas, 2004, p. 4).

Pedagogical approaches in higher education tend to be described as derivations from several traditions: prominent traditions are behaviourism, cognitivism, and constructivism (Carlile & Jordan, 2005; Ally, 2004). While networked technologies enable pedagogical approaches based on each of these pre-digital traditions, they are sometimes expressed in terms such as transmissive, instructivist or constructivist. Nevertheless, for all these approaches, the literature anticipates profound and transformative effects by technologies on teaching and learning in universities (see Chapter 2.1).

**Framing a research design**

The multiple interests and factors that technologies bring to higher education learning raise issues for methodological design. A recurring issue from the literature concerns the “integration” of networked technologies into institutional learning (see Chapter 2.4), sometimes expressed as a mismatch between the implementation strategies and practices in situated contexts (Conole et al., 2008; Weisenberg & Stacey, 2005, p. 401).

A research design, according to Denzin & Lincoln (2008), needs to “describe a flexible set of guidelines that connect theoretical paradigms first to strategies of inquiry and second to methods for collecting empirical material” (p. 36). For a research design into practice, such a set of guidelines needs to meet two requirements: scope the enquiry, and identify the data of practice. Since practice is shaped from different components and interest groups within an organisation, the scope of the enquiry needs to encompass these perspectives. A useful means to orient to practice in organisations is through its perceived levels: the macro-level of strategy and policy; the meso-level of implementation, administration and technological support; and the micro-level contexts of teaching and learning, students and teaching staff (Valcke, 2001). The focus for methods of gathering data on practice can be identified in the convergence of online learning onto settings of practice, as activities involving teaching academics, tutors, students and technologies. Hence an enquiry into practice seeks particularities: individuals, documents, artefacts, events, projects, and effects. Online learning has an actuality:
practices can be identified as embodied activities and instances of engagement, whether face-to-face or in cyberspace.

Practice expressed as online activity, therefore, can have material effects. Land (2004a) critiques the assumption that holds online learning as distinct from, or less (authentic, or salient) than face-to-face learning, as the “incorporeal fallacy” which holds that cyberspace is a disembodied space of engagement. He describes a relational view of embodiment, which recognises embodiment as constituted by our relations with participants, artefacts and technologies. The risks, uncertainties and possibilities of social encounters apply in all spaces of interaction (see the discussion by Land (2004a) and Dreyfus (2001) in Chapter 2.3).

In the higher education context, the “online” in online learning establishes a hybrid form, reconstituting the domains of university learning with networked technologies. An investigation into practice cannot make online learning a special case, and separate activities and interactions that occur online from their organisational context and relations. Two examples of contrasting contexts that shape practice arise in the literature. In the first, practice in academic work is undergoing transformation through processes of institutional change in universities mediated through networked technologies (Lewis et al., 2005; Marginson & Considine, 2000). The recent shifts in institutional strategy were noted by Blackmore (2001), who observed that Newman’s “liberal education discourse is being supplanted by discourses of instrumentalism”, as universities become corporate and “technologized” (p. 355). The second context is the rhetoric of transformation that technologies bring to university learning (Chapter 2.2). Newman’s (1959) formulation of teaching and learning broadly concurs with current notions of university teaching as transformative, of knowledge as “troublesome” (Perkins, 1999, p. 8) and as concerned with “conceptual change” in students (Biggs & Tang, 2007, p. 21). Given that online learning is fluid rather than fixed, its boundaries blurred, its practices still in determination, these competing contexts of the university are powerful factors shaping its practice in the institutional context.

The research design for this enquiry needs to encompass the hybridity of online learning, accommodating the traditions of learning including the interests and practices from domains alien to the Newman idea of education. It is this hybridity in practice, its constituents and expression from multiple influences, that concerns this enquiry. The research design, therefore, is concerned in part with what learning occurs, but in greater part with how it is constituted with and through networked technologies. These questions concern: how transformative goals of practice become interactions online, how practices take effect, and how its material and human participants are arranged and ordered into a social, material and technological assemblage. A research design, therefore, is required
which locates situated practice as the focal point for data collection, and provides evidence to identify and investigate patterns, tensions, effects, and controversies in online learning.

3.2 Bringing an interpretive approach to practice

Framing this research enquiry around how practices occur brings a sensibility to the disruptions, tensions and controversies that arise in the actual work of enacting practice. This sensibility is broad: it acknowledges the problematic history of online learning (Feenberg, 1999a), its legacy of innovation, competing agendas, achievements, breakdowns, and unexpected outcomes, with traces of the dystopian and utopian portrayals of technology (Chapter 2.2).

The tradition of empiricist research aims to form theories and methods, test hypotheses and scope a field of research with controlled variables. The Durkheimian tradition of sociological theory brings a functional perspective to the social world, in which “social facts” comprise the norms and structures of social order, which in turn act on an individual as a generalised, external constraint (Durkheim (1982. p. 50). A contrary perspective is offered by Schwandt (1999), who argues that to understand the actions and practices of daily life, there can be no “absolute account of reality” (p. 454). He reminds the reader:

> Empiricist theory aims to trump our lived experience — our everyday understandings of actions and utterances — by getting to the bottom of things, providing the last word, discovering the real structure of human behavior and consciousness that is thought to somehow lie beneath the terms of everyday life (p. 453).

Such an approach does not offer a methodology that can analyse the *in vivo* contexts and everyday sociality that comprise teaching and learning practice (Chapter 2.1). A methodology based on a normative, nomothetic or objective paradigm that seeks explanatory facts underlying social activity, and places the observer outside the world of the enquiry, may not be equipped to account for the experiential nature of practice. In a study of practical, lived experience, epistemologically, knowledge about practice cannot easily be evaluated in terms outside the processes of its production, and ontologically the researcher cannot be separated from the fluid and dynamic reality under enquiry. Latour (2005) offers the example of studying a religious community. Rather than view them as people who take invisible beings as real, and bracketing off their reality, “[w]hy not take seriously what members are obstinately saying?” (p. 235), and study their reality on their own terms.

This enquiry, in Schwandt’s (1999) terms, “takes the turn to the *lebenswelt* — to the practical and communal life of persons, to dialogue and language” (p. 453). Qualitative approaches are drawn upon for this enquiry: no claims are made as to the “last word” or
Chapter 3: A methodology for interpreting practice

the existence of underlying structures, nor presumptions about social reality. Investigating the lifeworld means adopting methods to study phenomena as emergent, a process described by Orlikowski (2000) in which “[s]tructures grow out of recursive interactions between people, technologies, and social action” (quoted in Jones et al., 2006. p. 39).

This developmental and formative aspect of the enquiry distinguishes this research from other approaches. In his typology of research purposes, Patton (2002, p. 224, 5) lists five types of research along a continuum: basic and applied research, summative and formative evaluation research, and action research. The aims of basic research to “discover truth”, and of applied research to “understand the nature and sources of human and societal problems” (p. 224), are arguably problematic for a study of social practices, since they assume that the social has an accessible “nature”, and a truth to be discovered. The final type, action research, is based on problem-solving in a local context and a participant-researcher interdependence (Kemmis and McTaggart, 2008, p. 272). While this type does not fit with the goal of enquiry into a globalised field of practice, an autoethnographic approach (Patton, 2002, p. 86) drawing on action research traditions is deployed as part of the case study in chapter 8, as a means of connecting personal experiences of research with institutional policies on online learning.

This enquiry meets Patton’s continuum of research types at two points. First, it meets his description of applied research in seeking to provide a grounded account of social practices. This account can be distinguished from the empiricist aim of producing an abstracted account of the nature or truth of a reality, “[r]ather, it is the truth of the best account possible. It is the truth that is disclosed by the better—the more perspicuous, the more coherent, the more insightful—of competing interpretations” (Schwandt, 1999, p. 454).

The developmental approach of this enquiry is the second point at which it meets Patton’s typology, the goal of improvement and usefulness in formative research, albeit with some qualification. Scriven (1967) makes a distinction between summative and formative evaluation research, where a summative evaluation “is primarily concerned with determining the effectiveness of a treatment or planned interventions” (Clarke, 1999, p. 9), and formative evaluation is concerned “to identify ways in which a social programme or intervention might be improved” (p. 9). The latter description of an improvement purpose fits the enquiry aim of this thesis, with the qualification that the formative evaluation is not confined to any specific program or context under study, but extends to contexts of online learning that are expressions of a globalised set of practices in higher education, and entails a critical and theoretical evaluation of existing arrangements. The enquiry aims to improve practice in online learning, to open up new
Chapter 3: A methodology for interpreting practice
directions rather than foreclose them. The research addresses a global practice community in higher education, and the outcomes will be productive rather than definitive, “summative evaluations tend to be conclusion-oriented whereas formative evaluations tend to be action-oriented” (Patton, 1986, p. 66).

Accounting for practice
The activity of practice provides a focus for this enquiry and a source for its data, through its active agents, through practitioners, technologies, discourses and institutions that are ordered and arranged into expressions of practice. Action-orientation brings a focus on contexts of practice, on actual participants and technologies which are deployed in settings that enact the convergence of pedagogies, technologies, institutional policies and processes. The sociality of practice brings to the enquiry a focus on interaction, on how the mutable objects of practice become lived reality: spoken and written accounts, documents, policies, technologies, and discourse. The social flux that constitutes organisational life and practice make it difficult to locate an external observer using a deductive mode of explanation: “organizational reality is not objectively determined, but it is the result of a social construction” (Scherer, 2003, p. 320).

This orientation to research fits Denzin & Lincoln’s (2008) paradigm of “constructivist-interpretive paradigm” (p. 31), which they broadly distinguish from three other paradigms: positivist and post-positivist, critical (Marxist), and feminist-poststructural. In the constructivist-interpretive paradigm, the observer engages with the world naturalistically, as it is encountered, and while empirical methods are used, understanding can be co-constructed by researcher and participant. The researcher is able to approach heuristically settings of everyday practices in their organisational contexts. Denzin and Lincoln (2008) describe qualitative research as:

> a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self (p. 4).

This interpretive orientation to the world breaks from the objectivist, outsider perspective on knowledge, and is a trajectory arising from the critical “moments” of crisis for social science. Denzin & Lincoln (2008) recount this “triple crisis” (p. 26) for qualitative researchers, whereby hitherto stable foundations for science came into question: the assumed basis for representation (Geertz, 1973), legitimation of knowledge (Lyotard, 1984), and praxis. They can be summarised by the questions, “what is the nature of knowing, what is the relationship between knower and known, how do we share what we know and with what effect?” (Holman Jones, 2005, p. 766). These crises are still played out in controversies concerning “evidence-based research” (Denzin, 2009; Cheek.
Garnham & Quan, 2006), in which disputes have arisen more as a matter of politics than
as matters of good or poor research. Interpretive theories include phenomenology,
ethnomethodology, critical and grounded theories, all of which adopt an epistemology
which rejects the objectivist notion that meaning exists in the world independently of our
encounters with it. This rejection locates the researcher uncomfortably between
perspectives: from the status of the privileged observer reporting a reality “out there”, to a
position of reporting encounters within an interactional, social world to produce a
pluralistic, emic, experiential account based on multiple realities. A resolution of this
disagreeable location is a shift to a focus on writing texts. Writing research is no longer
directed to a commitment to the discovery of universal knowledge, but to the construction
and interpretation of texts (Clifford & Marcus, 1986; Geertz, 1973; 1983), to that is, to
writing about local contexts and offering accounts of problems which address an “insider”
reader. The specificity of writing about experiential contexts, the “thick descriptions” of
particular cases, produces case study reports which “assist readers in the construction of
knowledge” (Stake, 2008, p. 134).

This enquiry, then, adopts Denzin & Lincoln’s “constructive-interpretive” orientation, or
simply “interpretive”, in the sense of Clifford Geertz’s approach to providing an
interpretive account of the world. The phenomena of the social world are rendered into a
“thick description” (Geertz, 1973; Denzin & Lincoln, 2008, p. 437), in which the plurality of
culturally specific interpretations is accounted for, as a means to “penetrate an unfamiliar
universe of symbolic action” (Geertz, 1973, p. 24). An interpretive approach that
produces thick descriptions is suited to the interactional world of events and activities
situated in organisational settings of practice, providing an analysis “that makes the world
visible” (Denzin & Lincoln, 2008, p. 4).

The focus on providing an account of practice follows Schatzki (2001), who described a
materialist approach to the phenomena of interaction, avoiding individualistic or
structuralist perspectives which bring theoretical preconceptions and constructs to the
field of enquiry. This approach “conceives of practices as embodied, materially mediated
arrays of human activity centrally organized around shared practical understanding” (p.
2). This analysis posits no underlying structures or universal truths, but focusses on
action and its effects which occur within an organisational lifeworld. Schatzki locates
action within practice:

Actions, for instance, are embedded in practices, just as individuals are constituted within
them. Language, moreover, is a type of activity (discursive) and hence a practice
phenomenon (Schatzki, 2001, p. 3)

How should an action-oriented analysis of practice be developed for this methodology?
Practice is an organised, shared process which entails consensus and difference.
Chapter 3: A methodology for interpreting practice

Barnes (2001) notes, in reference to the practice of scientists, that practitioners may disagree on theory and ideas, yet agree on the collective status of their practice, and operate “on the basis of a shared paradigm” (p. 18). A study of practice is likely to reveal a mix of shared understandings, actions, objects, and discursive activities within a professional community that become materialised in diverse ways in institutional contexts. Practice entails several features: it is action-oriented and embodied in practical human activity, it is material in its effects and behaviour, and it involves shared understandings and sense-making (Schatzki, 2001; Alvesson & Deetz, 2000, p. 67). Practice is embodied in data, and interpretive methods selected to contend with “messy, uncertain, multivoiced texts” (Denzin & Lincoln, 2008, p. 35).

Two theoretical perspectives are drawn upon in this enquiry to frame a practice-oriented research design and provide suitable analytic methods:

1. The dialogic approach (Deetz, 1996; Alvesson & Deetz, 2000, p. 36), is used to draw on discourse analytic approaches to written texts and interviews (Holstein & Gubrium, 2008; Potter & Wetherell, 1987).

2. The relational approach, based on actor network theory (Callon 1986; Latour 1987; Law, 2002; 2000; 1999), to describe assemblages involving technologised practice.

Each perspective has different theoretical origins, yet they have a common approach: each reflects an interactional or action-orientation, each deploys emergent methods without bringing preconceived categories to analysis of social interaction, and each is concerned with analysing empirical data in the form of effects. The action orientation that underpins formative evaluation is met in both approaches: in the dialogic perspective, discourse has an actional as well as descriptive function. The term “action orientation” (Potter and Wetherell, 1987, p. 183), is described as an “essential and inescapable” feature of discourse (Heritage 1984, cited in Wetherell & Potter, 1988, p. 168), in which a description is oriented to action, or is used to accomplish an action or result (Potter, 1996, p. 108). Action orientation is also integral to actor network theory, where “actors”, a term which encompasses both human and nonhuman participants in a state of affairs, are “entities that do things” (Latour, 1992, p. 163).

The dialogic and relational perspectives provide the theoretical basis to design a set of analytic methods to apply to the study of practice in online learning.
The dialogic perspective

A dialogic perspective (Deetz, 1996, p. 193) attends to “the constitutive moves of discourse in organizations” (p. 193), rather than seeking norms or theories of behaviour in organisations. Dialogic perspectives focus on the situatedness, the fluidity and “the constructed nature of people and reality” (Alvesson, 2000, p. 36), and are described by Scherer (2003), drawing on Habermas (1990), as based on processes of interpretation "where meaning is constituted in a symmetrical communicative process between the researcher and the acting (and speaking) subject" (p. 320). This description is consistent with Bakhtin’s (1986) dialogic, that is, his characterisation of discourse as multivocal, emergent (conceptual understandings are not pre-given), and contingent on the cultural context, in contrast with monologic discourse as uni-vocal, authoritative assumption of “truth”. The dialogic perspective engages with the ambiguities and incommensurability of different points of view that arise in studies of organisations (p. 335). It enables an analysis which is not constrained by the boundaries of situated practice, but can relate local activities to the organisational factors shaping those practices. In contrast to the objectivist methodology of analysing data as representations of an external world, the dialogic perspective, as described by Deetz (1996), acknowledges the fluidity and multiplicity of groups and identities, and the data of research as “socially shared, historically produced” objects arising from the “presumed external world” (p. 195). The dialogic approach articulates a commitment to the social world through a strategy of problematisation, bringing a “focus on the fragmentation and potential disunity in any discourse” with the intention to “reclaim conflict” (p. 203).

The question for this enquiry into online learning is: which analytical methods can be applied to bring the dialogic perspective to a study of practice? I will discuss three related methods that meet this requirement, and apply an approach that combines some elements and deploys the strategy of problematisation.

Holstein and Gubrium (2008) describe an “analytics of interpretive practice” (p. 185) which attempts to engage with the complementarity between “social systems” and social interaction. They call for:

a new, hybridized analytics of reality construction at the crossroads of institutions, culture, and social interaction – an analytics that “misreads” and co-opts useful insights from established traditions in order to appreciate the possible complementarity of analytic idioms (p. 185).

Holstein and Gubrium attempt to situate interaction and “real-time talk” (p. 184) with the constituting discursive practices at the institutional level. They set out “to explore and extend the discursive and interactional terrain emerging at the intersection of ethnomethodology and Foucauldian discourse analysis” (2008, p. 173). Their method of
“analytical bracketing” involves a distinction and separation between enquiring into the ethnomethodological hows from the constitutive, Foucauldian whats of reality construction. Thus participants’ accounts may be analysed alternatively as products, or as resources for reality construction (p. 190). Their analysis “centers on the interplay, not the synthesis” (p. 196) of these two orientations, and seeks to ground the broader discourses of institutions in local contexts.

A similar dialogic perspective is deployed by Alvesson and Karreman (2000) in their two key dimensions of discourse and “Discourse” (authors’ italics). This analysis is described by Cooren, Matte, Taylor & Vasquez (2007) as an attempt to relate “long-range versus close-range approaches”, and link “the actional and eventful character of discourse”, with a Foucauldian notion of Discourse as structuring meaning and exerting power over “ways of talking and writing” (p. 154). Tokens of discourse acquire power by becoming durable and transportable: they are “immutable mobiles” (Latour, 1987, p. 227; Law, 1992) that establish and maintain relations in a network.

The third method applies the dialogic perspective and connects the two dimensions of discourse and Discourse, the hows and whats of practice. The discourse analysis approach of interpretative repertoires (Gilbert & Mulkay, 1984; Potter & Wetherell, 1987; Wetherell & Potter, 1988; Potter, 1996) attempts to connect local contexts to broader institutional contexts. This technique was developed by Potter and Wetherell (1987) to explore the emerging issues and incongruities that arise from the meanings and interpretations expressed by participants in a discourse setting. Drawing on the ethnomethodological tradition (Garfinkel, 1967), this type of analysis takes a disinterested stance on the representations of discourse, and focusses on how speakers “are constantly engaged in interpretive work to accomplish the meaning of utterances” (p. 23). Interpretative repertoires are “a lexicon or register of terms and metaphors fallen upon to characterize and evaluate actions and events” ( Potter & Wetherell, 1987, p. 138). They are deployed by speakers and authors to construct their social world, through talk and texts, in order to achieve certain ends. Two examples of repertoires illustrate their rhetorical purpose. In the first, talk of “community” can be identified as a cultural resource which an analyst can identify in various phrases and terms that recur in certain contexts. The “classic repertoire” of community, according to Wetherell & Potter (1988, p. 172) was used by various agencies to characterise practices of de-institutionalisation and evaluate them in a positive light, and offer an account of a program that was acceptable to the public (p, 170). In the second example, a set of terms has arisen around engagement with digital technologies that comprise a repertoire of generational talk, such as “digital immigrants” and “digital natives”, that construct age-based distinctions that can be used to cast doubt on the technological proficiency of an older demographic (Kennedy et al., 2008a; Sheely, 2008).
Potter and Wetherell (1987) describe the use of repertoires as an analytical tool used to identify how individuals resolve issues, controversies or contextual dilemmas, and the specific rhetorical devices and tropes they deploy to do this (p.155). They give the example of a study of scientists’ discourse by Gilbert and Mulkay (1984), in which the contextual features and inconsistencies in speakers’ accounts were explained by the use of two distinct repertoires: the “empiricist repertoire” for formal research contexts, and the “contingent repertoire” for informal interviews (Potter & Wetherell, 1987, p. 149). These repertoires accounted for a variability within individual scientists’ accounts of their work.

All three methods draw on a local, ethnomethodological focus and connect this with broader, Foucauldian discourses. For this enquiry, I deploy the technique of identifying repertoires for the analysis of interview data, to “study the resources from which an account is constructed” (Wetherell & Potter, 1988, p. 177), and provide a way to understand how participants bring meaning to issues in their practice, and account for inconsistencies and variations that arise. Interpretative repertoires identify patterns of discourse across a range of practice contexts by comparison and contrast of data from interviews and texts. Repertoires can also be examined for their broader effects, as powerful “immutable mobiles” in the form of discourses and artefacts shape practice across contexts.

**The relational perspective**

The concept of the relational was brought to this enquiry in order to frame a study of complex interactions in a networked organisation. I will draw on three relational orientations to develop an approach that applies to institutional settings of practice: the relationship between structure and agency in social activity; the analysis of social phenomena by “practice theory” (Schatzki, 2001, p. 3); and the actor network theory approach to descriptions of the social world.

The longstanding “agency/structure dilemma” (Reed, 1999; 2003, p. 289) frequently frames discussions of interaction and the structure relations in organisations. The dilemma can be expressed by opposing views: on the one hand, reductionism, in which organisations and collectives are considered as “aggregated outcomes” of individual behaviour (p. 291); on the other hand, determinism, in which “subjects are puny and structural forms control” (p. 295). In organisational studies, Reed (2003) proposes a “relationism” to bring a “radical alternative” (p. 299) to the either/or presentation of the debate. He proposes a recognition of a “double constitution” (2003, p. 300), such that the “creative and constraining components of both agency and structure are equally recognized” (300). His analysis aims to reformulate the separation as a dialectic, to bring an understanding of where and how creativity, innovation and agency in organisations emerges.
There have been various endeavours to address this binary, in various ways, notably by Feenberg (2002; 2000; 1999), Foucault (1972), Giddens (1984), Lyotard (1984), and Latour (1999b). Nevertheless, the dilemma persists where issues arise concerning social practice in organisations. Reed's approach resonates with other attempts to bridge these opposing views or bring alternative approaches to various historical dualisms, including the subjective/objective distinction (Deetz, 1996), the insider/outsider distinction (Geertz, 1983), the nomothetic/idiographic dichotomy (Bourdieu & Wacquant, 1992, p. 75), and the macro/micro dualism in social and institutional spheres of activity, mentioned above in relation to bridging local and Foucauldian discourse (Holstein & Gubrium, 2008; Alvesson & Karreman, 2000).

In the practice approach, phenomena in the social world are analysed through the practical, social activity that is organised in a shared manner (Schatzki, 2001; Bourdieu, 1993, 1977). A conception of practice was proposed by Knorr-Cetina (2001) in terms of a “relational dynamics” in which objects and technologies of everyday life “define the flow of practice” (p. 176). Knorr-Cetina argues for a posthuman view of practice, against Bourdieu’s (1984) notion of “habitus” based on human dispositions. For her, material or nonhuman entities are incorporated into social practices, displacing the centrality of the mind and the person. This conception suggests a deep involvement in objects, and a “notion of practice that is more dynamic, creative, and constructive” (Knorr-Cetina 2001, p. 187). The activity of practice, in this view, shifts agency away from human intentionality.

Finally, John Law builds on actor network theory to propose a “radical relationality” (2000) which emphasises connection rather than the object or person, in which “elements have no significance except in relation to their neighbours, or the structure of the system as a whole”. The actor network perspective explores and traces relations between social and technological entities by applying its core principle of heterogeneity: the symmetry of the human and nonhuman, such that one is not privileged nor takes agency over the other in any analysis. What is important is the extent of strong and weak ties that make up the network, or the sociotechnical assemblage (Latour, 1986), which “hybridizes the social and the technical” (Arnold, 2007). The entities that need to be brought into the assemblage may be uncooperative and offer resistance.

The term “assemblage” is adopted in this enquiry to describe the arrangement of human and nonhuman actors, that is, the social, material and discursive entities that comprise a context of practice, instead of a description in terms of a structure or network, since it brings fewer preconceptions, and it conveys the sense of contingency and fragility of the connections that comprise the set of relations under analysis. Latour (1999b) notes that actor network theory itself, by definition, is also a perspective on the agency/structure
debate (p. 16), in which actor and network stand for agency and structure, and he sought to collapse the dualism by focussing on the relations between entities, rather than the characteristics of the actors, or the size or scope of the assemblage. Latour also cautions that the sense of the word “network” has become distorted, since its presence in “actor network theory” was framed before the Internet became part of everyday life, and carries the metaphorical sense of the network as connectivity. This sense of the network was described by Brett (1994) as “the points themselves offer no resistance to the flows between them”. For Latour, “the word network, like Deleuze’s and Guattari’s (1987) term rhizome, clearly meant a series of transformations – translations, transductions” (Latour, 1999b, p. 15), rather than a sense similar to Brett’s, of instantaneous access to information, transmission, “transport without deformation” (p. 15-16).

This contrast is exemplified in two perspectives on technologies in practice. The first is the “informational model” (Pollock, 2000), discussed in the previous chapter (Chapter 2.2), in which all objects and participants in an organisational setting are seen in informational terms, “actors themselves – and their relation to each other – are similarly constructed in terms of information” (p. 358). The contrasting views on how technology fits with social reality is shown in Table 3.1.

### Table 3.1: Analytical perspectives on technology

<table>
<thead>
<tr>
<th>Informational model of technology</th>
<th>Technology is viewed as a tool or application which is implemented through a process of resource allocation and costing, in which all participants are translated into information, in order to achieve specified project goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relational approach of technology</td>
<td>Technology is viewed as a sociotechnical assemblage of people, technologies, objects, directives, and arrangements, in which relations between entities are negotiated and aligned in order to reach stabilisation of the assemblage</td>
</tr>
</tbody>
</table>

Networked technologies are used in the information model to render all entities in practice as data: to be identified, categorised, stored, and distributed for project goals. The information view is functional (Law, 2000), in the sense of providing an understanding that is subject to "a logic of function", such that, "every system becomes a more or less (un)successful functional arrangement".

The relational approach identifies the entities in a sociotechnical assemblage as heterogeneous, in which actors from the social and natural worlds are treated equally, as “an effect of the webs of relations within which they are located” (Law, 2009, p. 141). Actors may include “objects, subjects, human beings, machines, animals, ‘nature’, ideas, organisations, inequalities, scale and sizes, and geographical arrangements” (p. 141). The method of relational enquiry follows the alignments and translations between actors
in order to understand what constitutes a stable assemblage, or how an assemblage is made unstable.

A relational perspective does not imply a relativist ontology, in which the world is seen as a human construction, and “constructions are not more or less ‘true’, in any absolute sense” (Guba & Lincoln, 1994, p. 111). Relationality, in Law’s sense, simply attends to the relations between entities, whether human or nonhuman, and how relations are expressed as hybrid entities. A key characteristic of the relational perspectives outlined above is that social action and the exercise of power in social contexts take place or are mobilised through relations between entities, rather than through any inherent characteristics of individuals or organisations. Such an orientation potentially short-circuits the forces generating dualisms such as agency/structure, local/global, individualism/collectivism (Reed, 1999), and what Deetz (1996) terms “The Boring and Misleading Subjective-Objective Problem” (p. 193). Deetz characterises the last of these as rhetorical moves in a political game, “a system of justification rather than a useful descriptive label” (194).

The dialogic and relational approaches respectively locate such dualisms as constituted in discursive moves and arrangements within sociotechnical assemblages. The issue, or test, as Deetz (1996) puts it, is not whether one perspective is superior – say, the dialogic approach compared to one that divides and privileges objectivist views over subjective ones – but which perspective has more to offer, or is “a more interesting way to talk about what is happening” (p. 193), in this case, concerning practice.

Deetz makes a radical break in distinguishing research orientations as dialogic “local/emergent” and objectivist “elite/a priori” one (p. 195). I argue that such a break is necessary to reframe the engagement of technologies with practice. This methodology may indeed be radical when applied to technologised contexts of practice, such as rethinking implementations based on an information model, and raise alternative trajectories and agencies for how technologies are integrated into practice.

3.3 Designing a strategy of enquiry

A strategy of enquiry, according to Denzin & Lincoln (2008), “comprises a bundle of skills, assumptions, and practices that the researcher employs as he or she moves from paradigm to the empirical world” (p. 34). For a strategy of enquiry able to encounter complex arrangements of technologies, institutions and pedagogies, specific methods based on the dialogic and relational approaches were deployed to investigate and analyse contexts of practice (the empirical world).

The methods that enact this paradigm, including interpretative repertoires, analytical bracketing, Reed’s relationism, Latour’s immutable mobiles, Law’s relationality, all
attempt to provide accounts of situated practice that connect them to broader contexts and discourses. This connection can be summarised by the concept of “action at a distance” (Edwards, Nicoll, Solomon & Usher, 2004, p. 130; Fairclough, 2003, p. 34), in which texts and discourses have interactional effects over both local and global contexts. Discourses are transported across contexts as “tokens of text or talk” (Cooren et al., 2007, p. 155) as relatively fixed and durable textual entities, and become, in actor network terms, immutable mobiles (Latour, 1987). The identification of “action at a distance” as a discursive effect of practice is a strategy arising from the action-oration of the dialogic and relational perspectives, and will be brought to the methodology to connect spheres of practice. Such a strategy offers, in Deetz’s phrase, “a more interesting way” to account for the dynamic and contested state of practice in online learning.

**Selecting methods: analysing practice**

A mixed methods approach (Patton, 2002, p. 13) was assembled to investigate local contexts of practice through its participants and their engagement within the academic context of online learning. In order to gather data to build a holistic account of institutional practice, a sample of participants was selected across a range of engagements and contexts.

The practitioner interview was the primary source of empirical data in the strategy of enquiry, and provided the focus on the empirical nature of practice as an organised and shared process involving “arrays of human activity” (Schatzki, 2001, p. 2). Practitioners offered a key point of access to the worlds of practice, and they could be expected to embody activities in actual practice settings, and be able to give an account of their issues that arose in online learning. The sources of data were context specific: they consisted of transcripts of practitioner interviews in practice contexts or projects, with associated documents, artefacts and products made available to the researcher. The strategy was to collect a corpus of data that was comparable and durable, by extending the scope spatially and temporally: obtaining robust, rich data both in a lateral sense, across different contexts; and in a longitudinal sense, over the life of the practitioner project. The aim was to produce an analysis that reflected coherence and “generalizability” (Miles and Huberman, 1984, p. 37), that is, “to know something about the relevance or applicability of our findings to other similar settings, to transcend ‘radical particularism’” (p. 173).

Interview participants were sought over diverse locations and practice roles in order to obtain variation in experiences and orientations to practice, and arrangements were made for follow-up contact to revisit projects to confirm or disconfirm features of practitioners’ accounts. Two sampling strategies were used: “intensity” type purposeful
Chapter 3: A methodology for interpreting practice

sampling (Patton, 2002, p. 234), in which participants are selected on the basis of their expressed commitment to learning technologies; and “stratified purposeful sampling” (p. 240), where participants are selected based on their roles (technical support, manager, teaching academic, academic developer). The initial engagement of participants was based on a heuristic model, in which the researcher’s role as a participant in the field was foregrounded, and the interview framed as a shared enquiry seeking common ground on the basis of the “experience of others who also experience this phenomenon intensely” (Patton, 2002, p. 108).

The strategy of enquiry into practice consisted of a staged sequence of three interpretive methods for analysis of empirical data from interviews and associated documents: first, coding and categorising interview transcripts and records following the grounded theory process; second, discourse analysis of transcripts to identify patterns and features of discourse; and finally the relational approach, to describe the sociotechnical assemblage of practice contexts. The sequence is shown in Figure 3.1.

In the strategy of enquiry, empirical data was analysed progressively through each stage:

1. **Grounded theory**: Initial analysis involved coding and categorisation of data based on the grounded theory process (Strauss & Corbin, 1998; Charmaz, 2006), in order to discover meaning and structure from experiential accounts of individuals across the corpus of data, and from their associated artefacts (for example, documents and technologies). grounded theory follows the phenomenological tradition which focusses on “the very nature of a phenomenon” (Patton, 2002, p. 104). However, Patton distinguishes a phenomenological study, which focusses on individuals’ experience, from a phenomenological perspective, which focusses on methods of investigating people’s experience (p. 107). The current enquiry follows the latter strategy: it does not seek to identify or discover characteristics of the experience of participants, but deploys grounded theory coding processes as a method of capturing and synthesising accounts of practice across multiple contexts (for other studies in this strategy, see Al-Mahmood & McLoughlin, 2004; Jones, Asensio & Goodyear, 2000). Only the initial procedures of grounded theory, coding and categorisation, were deployed for this enquiry.

2. **Discourse analysis**: After a set of core categories were developed from the data, the strategy of enquiry shifted to discourse analysis. A preliminary content analysis of interview transcripts was performed in order to cluster the frequency of use of key
terms among speakers. Content analysis provided an early marker of the issues of concern for practitioners. Then followed an ethnomethodologically-based discourse analysis using the technique of interpretative repertoires, which focused on the management and organisation of spoken and textual accounts, and provided an analysis of the rhetorical strategies used by speakers to accomplish particular goals (Potter & Wetherell, 1987, p. 63). This technique was used to (i) explore variation between and within speakers' accounts, and (ii) identify the uncertainties and dilemmas for speakers arising from their accounts. The identification of interpretative repertoires offered an analysis of how practitioners attempted to resolve competing discourses and their own dilemmas of practice.

3. *The relational approach:* From analysis of the discursive patterns over the range of contexts in the enquiry, a set of “controversies” (Callon, 1986) was identified from the interpretative repertoires. The strategy of enquiry then returned to a focus on local contexts, and developed case studies based on these controversies. In the relational approach, cases studies of practice were produced by focussing on practice as a sociotechnical assemblage (Latour, 1986), that is, a heterogeneous arrangement of material and technological artefacts, humans and discourses. The principles of the relational perspective, summarised in Table 3.1, were applied to the social and technological arrangements of an online learning context in order to unmask and describe how the relations are configured. With practice viewed as action oriented in relational analysis, discursive activity was also an actor. In particular, discursive effects which shape practice, such as “action at a distance” (Edwards et al., 2004), were able to be identified.

This strategy of enquiry applied two analytical lenses to the corpus of data: a holistic, wide angle view, then a set of narrow, close-up views. First, the categorisation and discourse analysis performed a holistic analysis of the data of transcripts and artefacts. The discourse analysis provided the method for problematising practice, or “problem-oriented social research” (Wodak, 2008, p. 2), in which the corpus of data was synthesised to produce categories and interpretative repertoires, from which a set of controversies emerged. These formed the basis for the second lens, the construction of case studies. The emergent controversies were analysed by the relational approach to produce a series of “thick” descriptions, or case studies (Stake, 2008, p. 128; Merriam, 1988, p. 11). The cases consist of analytical descriptions of how particular controversies in practice were assembled. They act to explore “the epistemology of the particular” (Stake, 2008, p. 133), and therefore enable comparison with other cases and contexts in the field of practice. The analytical lenses are represented in Figure 3.2.
The categorisation and discourse analysis were a result of comparing and contrasting data from the practice contexts. There is no isomorphic correspondence between the practice contexts and cases as shown in Figure 3.2. The controversies that emerged from the synthesis of data provided the basis for the case studies, and these in turn returned to the contexts of practice in the primary data to articulate a controversy.

3.4 Trusting the methodology: Using interviews as data

The research interview was central data source for the strategy of enquiry. However its manner of conduct differed from traditional approaches: in the research tradition of “reality oriented inquiry” (Patton, 2002, p. 91), methodologies are constructed based on an objective/subjective distinction, and phenomena viewed as either exterior or interior. In this objectivist approach, an interview is normally deployed to compile factual data. By way of contrast, in a phenomenographic approach interviews can be used to record experiential phenomena for an individual (Patton, 2002, p. 104; Jones et al., 2000, p. 19). Where interpretive approaches are adopted by a researcher, the interviewer is not assigned an objective status, and the dialogues that arise in interviews are “interactionist” and offer access to self-reflexive accounts (Miller & Glassner, 2004, p. 130). In this tradition, “interview subjects construct not just narratives, but social worlds” (p. 126). It follows that the interviewer’s participation in the dialogue is also included in the discourse analysis. A set of questions for a semi-structured interview were submitted and approved from University Ethics Committees in three universities (Appendix 3.1). These questions were given to participants prior to interview to provide contextual information, and to encourage a shift from the traditional interview form to a dialogue.

While interpretive approaches to research followed the crises of representation, objectivity and legitimation in the social sciences arising in the late 20th century (discussed above), the traditional criteria for validity and reliability came to be seen as inadequate to account for the plurality of perspectives in accounts of social worlds, and
Chapter 3: A methodology for interpreting practice

the privileged status of the objective observer was considered as untenable. Qualitative research, it was argued, could study phenomena in ways not possible by quantitative research methods (Silverman, 2007, p. 82). For example, quantitative approaches could investigate phenomena but cannot describe “how that phenomena is locally constituted” (p. 83). There followed calls for new approaches to validity, reliability and objectivity in qualitative research (Denzin & Lincoln, 2008, p. 33). For Lincoln and Guba (1985), and Altheide and Johnson (1994), empirical validity as evaluated against an objective reality was not usefully applied to “naturally occurring contexts” (p. 489). They called for an adoption of an analytic realism, where “the social world is an interpreted world, not a literal world” (p. 489). Replacement criteria were developed (Golafshani, 2003; Altheide & Johnson, 1994; Lincoln & Guba, 1985) which brought a shift from validity to “an emphasis on trustworthiness and authenticity, by being balanced, fair, and conscientious in taking account of multiple perspectives, multiple interests, and multiple realities” (Lincoln & Guba, 1985, p. 575). As a counterpart to the quantitative criteria of internal and external validity, reliability and objectivity, Lincoln & Guba put the case that qualitative analysis needs to persuade audiences that the analysis is worthwhile, and must establish trustworthiness by meeting specified criteria, elaborated as credibility, such as sustained or prolonged engagement and multiple sources of evidence; dependability of procedures which were transparent to the reader, such as a traceable “inquiry audit”; transferability, that is, methods that could be transferred to other contexts; and confirmability, or evidence that the procedures actually occurred (pp. 296-318). For research into a world that is interpreted rather than represented as a reality, “the question is which is the better frame to view the world, rather than the issues of accuracy or truth” (Alvesson & Deertz, 2000, p. 42).

For the current enquiry, these criteria can be applied to the analysis of the researcher/interviewee encounter and analytical methods of the corpus of data. In order to build confirming sources of evidence and transparency, interview data was analysed contextually in relation to participants’ online learning engagements with associated artefacts and related participants, and longitudinally with follow-ups and checking. Trustworthiness criteria, however, cannot be completely satisfied, they can “at best persuade” (p. 329). Authenticity is also necessary, and the task of research lies in interpreting multiple constructions and distinct realities of the contexts under investigation, that is, in “reconstructing the constructions people hold” (Agostinho, 2005, p. 5), in order to ensure that the analytical methods have “represented those multiple constructions adequately” (Lincoln & Guba, 1985, p. 296). The point at which analysis of a context has arrived and authenticity established through verification is the criterion of redundancy (p. 265) or, in grounded theory, saturation, in which further analysis brings only confirmatory findings (Strauss & Corbin, 1998, p. 101).
Despite building processes that satisfy the trustworthiness criteria, and analysing contexts and cases that are demonstrably authentic, the interview encounter with participants needs to be approached carefully. Silverman (2004) cautions against adopting the “romantic auspices of some interview studies” (p. 360), and identifying accounts of “experience” as authentic in research into organisations. He described two pitfalls: “the assumption of a stable reality or context (e.g. the ‘organisation’) to which people respond” (p. 360); and the gap “between what people say and what they do (p. 361). He further cautions researchers against the “charge of anecdotalism” (p. 362), in which samples and cases are selected to fit an analytical argument.

For the study of actual contexts of practice, a useful overarching notion for establishing authenticity may be ecological validity, in which “a more ecologically valid study is one in which subjects seem to be doing things that they normally do outside of the laboratory” (Judd, 1996). Studying in vivo contexts, as part of an everyday social world, also builds potential relevance to research issues of practice.

These cautions are useful to alert the researcher against slipping too far into an insider, subjective stance. The interpretive approach used in this enquiry does not take a position on the duality of emic/etic perspectives: there is no assumption of, nor indeed, pursuit of an organisational reality distinct from the multiple practices embodied by its participants. The key focus for this enquiry is practice, and as an enquiry into practice, the assumption is that practice is constituted materially, actively and dynamically, is “centrally organized around shared practical understandings” (Schatzki, 2001, p. 3), and accessible through interview accounts, documentation and the effects of those practices. Practice, in this view, is described by Annemarie Mol (2002; 1999; also Law, 2004, p. 54) as enactment, in which practices are enacted in performances. Practice, for Mol and Law, does not express an underlying structure or inherent reality, nor does it exist in the abstract, but in material processes which need to be enacted.

By following materiality and action-orientation of practice, or its effects, there is no matching of experiential accounts by participants against a separate, authentic world. The interpretive approach focuses on how practice is constituted in its accounts and effects, bringing a stance of what Garfinkel and Sacks (1970) term “ethnomethodological indifference” (Holstein & Gubrium, 2008, p. 175), in which researchers suspend judgement on attitudes, perspectives and versions of the world, and focus on how participants enact their social reality. The question of what practice is may arise in the coding process, but is a secondary finding, used to organise the data.
The stability of interview data

The interview as a reflective dialogue contrasts with the interview as a structured questionnaire. The latter was criticised by Potter (2002) and Speer (2002), as a “contrived” encounter, a form of interaction which does not produce “naturally occurring” data (Speer, 2002, p. 513). Potter (2002) points out that the “traditional” interview is a procedure to “generate interesting data” (p. 541), and is not concerned with the interactional aspects. The analysis of practitioners’ accounts in this enquiry focusses on the interactional and discursive organisation of the interview as a co-constructed text. The dialogic interview offers such constructions of social worlds for examination, constructions which have significance in relation to other accounts, and across the broad field of practice.

There is, however, a danger in treating interview accounts as stable and persistent descriptions which represent the views of participants. Abell & Myers (2008) suggest there are limitations in phenomenological approaches to discovering what is said in interviews, “all such coding assumes that for each question the meaning stays the same in each interview because the context of utterance stays the same…” (p. 146). From the dialogic perspective, to consider interview participants as representing accurately the world of practice is epistemologically problematic. Holstein & Gubrium (2004) describe the shift of perspective for the interview from an objectivist to a dialogic perspective:

Respondents are not so much repositories of knowledge – treasuries of information awaiting excavation – as they are constructors of knowledge in association with interviewers. Interviews are collaborative accomplishments” (p. 141)

Research interviews, whether of open or closed construction, cannot be assumed to produce static texts. A sceptical position in relation to statements made by interviewees was discussed in Jones et al. (2000), where the status of claims made in interviews was in question, since such accounts may be “versions” which fit the particular interview. Rather than evaluate the accounts against other sources, Jones et al. suggest that viewing interviews as situational helps address the sceptical position, and agree with a constructionist view put by Richardson (1999), in which “conceptions of reality are discursive practices, which may be used as resources in particular communication encounters, rather than psychological entities that reside in the minds of individuals” (Jones, et al., p. 21). These resources, or conceptions of reality, function in a manner similar to interpretative repertoires, as rhetorical strategies and “persuasive justifications” (Potter, 2004, p. 205) deployed by speakers and authors.

The active agency of participants in knowledge construction during research interactions means that bias, or variation in accounts is, therefore, “unavoidable and pervasive” (Speer, 2002, p. 511), and in a dialogic approach, “[r]esearch contexts are thoroughly
Chapter 3: A methodology for interpreting practice

social, interactional occasions” (Speer, 2002, p. 511). Interpretative repertoires, therefore, are useful for identifying variations in accounts and the dilemmas that these variations point to, by revealing how particular accounts are strategically organised and constructed, and what such organising may achieve (Potter & Wetherell, 1987, p. 64). This requires an analysis which reads or listens both for and against what is said. A way of listening to interview accounts is suggested by Alvesson (2002), on “the importance of not understanding the conversations the researcher engages in and overhears in empirical situations to be unproblematic providers of ‘facts’ and ‘truths’.” (p. 78).

Mundane and ordinary details of talk are relevant here, including hesitations, clichés, and techniques such as “waving the red flag” (Strauss and Corbin, 1998, p. 97), in which a closer look is taken at terms such as “never”, “always”, “that’s the way its done”.

Akerlind’s analysis of phenomenographic research (2005) argued that the validity of experiential accounts cannot be established through correspondence to a “reality”. The interpretive process cannot be assessed for how well it represents an objective world, but through the clarity of its documentation, “the focus of research quality shifts to ensuring that the research aims are appropriately reflected in the research methods used” (p. 330). The interpretive approach brings “a focus on discourse to mean that the concern is with talk and texts as parts of social practices” (Potter, 1996, p. 105). While evidence of practice resides abundantly in material traces of activity, decisions, policies and implementations in institutions, the reality they constitute is social, but no less potent and real in effect.

Hence this enquiry, through its focus on actual contexts of practice, aims to provide “insight and praxis” (Deetz, 1996, p. 197), by analysis of both discourses and their effects: discourses in the action-orientation of interview accounts, through asking what is accomplished by a particular statement and what competing or supporting discourses constitute this practice; and effects through a process of tracing relations, and checking the antecedents and trajectories (potential and actual consequences) that are associated with a statement or artefact.

What emergent analytical methods bring to a study of practice

In designing the strategy of enquiry for this thesis, I applied discourse and relational analyses to investigate practice phenomena as emergent, dynamic and indicative of patterns and connections in a field of practice. These approaches bring a constructionist view of reality (Jones et al., 2000; Potter, 1996; Hacking, 1999), in which social reality is seen as constituted by its discourses. Potter (1996) describes a constructionist approach in which:

reality enters into human practices by way of the categories and descriptions that are part of those practices. The world is not categorized by God or nature in ways that we are all
forced to accept. It is constituted in one way or another as people talk it, write it and argue it” (p. 98).

I adopted this orientation to reality as a methodological strategy rather than an ontological stance. It was not necessary to adopt a strong constructionist worldview, such as one described by Hacking (1999), “the doctrine that only what is talked about exists” (p. 24) in order to describe practices and challenge existing institutional arrangements involving technologies, even with radical intentions of disrupting existing orientations to practice. Reality, for this enquiry, is not in contention, there just may be more involved in its description. My strategy was to adopt Garfinkel and Sacks’ (1970) “ethnomethodological indifference” for the analysis of accounts of social reality, taking the view that “talk is action and not communication” (Edwards, 1995, p. 580, quoted in Silverman, 2007, p. 7). When technologies become embedded in practice, the multiple participants in that technology – its designers, its procurers, interested parties and stakeholders – enter into its implementation and use. The possibility that interview participants, and indeed the interviewer, may speak for technological implementations associated with particular institutional stakeholders – whether managerial, pedagogical or technological – or speak in the terms of those interests, need to be analysed as a constructed rather than a given understanding, making the connection to whom or what is spoken for, and in whose or what interest.

I applied the three emergent methods: the grounded theory process, discourse analysis and the relational approach (see Figure 3.1), as a means to engage with a “mess” of data (Charmaz 2006, p. 119; Law, 2004) in the form of interview transcripts and related texts. This process avoided hypothesising or bringing preconceived assumptions to the analysis of social phenomena, and sought to produce emergent and robust analysis of social reality through cross-comparison and verification over time (Strauss & Corbin, 1998, p. 89). The grounded theory destination of theory building, however, was not a component in this enquiry, nor was the phenomenological path of discovering essential meanings. Its deployment for systematic coding and categorisation developed core conceptual categories for the whole configuration of online learning practice in the three universities.

The discourse focus on the constructedness of talk and text brought an approach to interviews as events in which individuals “are continually ‘doing’ social life in the very actions they take to communicate and make sense of it” (Holstein & Gubrium, 2008, p. 178). The technique of interpretative repertoires was a means to analyse the organisation of talk and text, and has the advantage of providing a systematic, transparent and visible method, sufficiently versatile in its ability to analyse specific
contexts of interaction, and make connections to other contexts of practice, whether near or at a distance.

I selected interpretative repertoires over alternative discourse approaches as a method that was the best fit for this enquiry into practice. Two instances are: conversational analysis (Sacks, Schegloff & Jefferson, 1974; Schegloff, 2007), which has a more narrow focus that is contained within the local, interactional context of conversation; and critical discourse analysis (Fairclough, 2003; 1993), which is an approach suited to a purpose of unmasking domination in texts, which is arguably less suited to the goal of formative research. A further approach is the Foucauldian perspective on power relations and the constitutive effects of discourses (Potter, 1996, p. 105), which is also a form of discourse analysis that acts across contexts. While a Foucauldian discourse approach can be brought to analysis of institutional practices and their determinants, it is less able to focus on specific interactional contexts. Interpretative repertoires, in comparison, according to Edley (2001), are “less monolithic” (p. 202). Interpretative repertoires are able to link discourses from local settings to broader, institutional discursive practices with global reach. In this enquiry, interpretative repertoires exhibit the “transportation effects” (Cooren et al., 2007, p. 157) which are materialised in practice.

3.5 Producing cases: building relevant and useful knowledge about practice

The final method in the strategy of enquiry was the production of case studies. Case study research is a form of research design and enquiry in itself, with a history and applications in a range of qualitative research traditions (Stake, 2008; Merriam, 1988; Yin, 2009). It is primarily specific, constituting the study of a “bounded system” (Merriam, 1988, p. 9), and focusses on “a particular situation, event, program, or phenomenon” (p. 11). Their value as research, according to Stake (2008), is in their specificity and their intrinsic purpose, “to optimize understanding of the case rather than to generalize beyond it” (p. 120).

Merriam (1988) describes four “essential properties of a qualitative case study” (p. 11): they are “particularistic”, focussing on specific problems and their contexts; “descriptive” in the sense of offering thick descriptions (p. 11), developing the issues and interpretations within the world of the case (Stake, 2008, p. 128); “heuristic” (Merriam, 1988, p. 13), offering illumination and new perspectives to the reader on the phenomenon; and “inductive”, generating “new relationships, concepts, and understanding” (p. 13) from the case data.

Merriam's properties meet the formative orientation of the goals of this enquiry. The suitability of case studies as a major product in this research is expressed by Yin (2009) as their “distinctive place in evaluation research” (p. 15). Case study methods, according
Chapter 3: A methodology for interpreting practice

to Yin (2009), are able to respond to “the desire to understand complex social phenomena”, and “allow investigators to retain the holistic and meaningful characteristics of real-life events” (p. 4). They bring versatility in working with many types of evidence and interpretations, including interviews, artefacts, and documents.

The production of interpretative repertoires and case studies from this enquiry raises a final evaluative criteria for this study: this can be summarised in terms of the relevance (Stake, 2008), and usefulness (Agostinho, 2005, p. 11; Berg, 2001) of the products of the research. The issue is whether insights arising from research into phenomena from local contexts can be relevant outside those contexts, and in what way the analysis of discourses of practice, and the ensuing case studies, contribute to knowledge of the field. The particularity of much case study research and their small sample sizes make it unlikely that analytical results can be confidently generalised in the sense of making what Stake calls “propositional, lawlike” claims (Lincoln & Guba, 1985, p. 120). The goal of generalisability, however, is not what case studies aim to achieve, nor is this the paradigm of an interpretive perspective.

An interpretive analytical approach has an overall aim to understand phenomena in the social world, in contrast to the predictive aim of empiricist research, which seeks to produce universal findings and nomothetic generalisations (Denzin, 2009, p. 142). Interpretive approaches make claims to relevance and usefulness for a practitioner audience. Two perspectives which support such claims follow, one on discourse analytic findings and case studies by Perakyla (2004), and one on case studies by Stake (2008).

Studies on interaction in organisational and institutional settings are “very restricted” in their capacity to achieve the traditional “distributional” notion of generalisability (Perakyla, 2004, p. 296-7). However, generalisability can be approached in a different sense, using the concept of “possibility”, or “social practices that are possible” (p. 297), in which “the possibility of various practices can be considered generalisable even if the practices are not actualised in similar ways across similar settings” (p. 297). In this sense, accounts of practices are able to open up possibilities, offer new perspectives and innovations that have relevance to the audience of practitioners in the field. Examples can be found in fields such as law, criminology, medicine, sociology and business, where case studies are used to refine theory (Stake, 2008, p. 140), and develop practice through its link with theoretical knowledge (Berg, 2001, p. 225-6).

Stake (2008) suggests that the value of a case study is in its particularity, “the intrinsic study of a valued particular” (p. 125). Case studies have the ability to produce an emic, insider account of experiential knowledge, and reflectively counterpoint and challenge the outsider perspective. Its strength is in “designing the study to optimize understanding of the case rather than to generalize beyond it” (p. 120). The case develops and works
Chapter 3: A methodology for interpreting practice

with its own issues, contexts, politics, and provides a “thick description” in order to build understanding of the case “within its own world” (p. 128), rather than the world of those the researcher. Case studies can offer more than simply insight, they offer their practice audience of readers a vicarious experience and the “opportunity to learn” (p. 130).

These two perspectives on qualitative research analysis aim for relevance and usefulness in the form of experiential learning and “information richness” (Patton, 2002, p. 245), directed to readers who share the field of practice with the author(s) and participants in the study. They trace the researcher’s engagement and analysis with a context of practice, via observation or interview, and the translation of that experience into a construction of knowledge in the form of a case study report. Case studies offer the practice-based audience a resource which other types of broad empirical studies are unable to provide, and such resources develop the field of practice. Yin (2009) cautions against a comparison with the generalisations which are based on quantitative surveys, and suggests a well-selected single case study “readily generalizes to a larger universe” (p. 37).

This strategy of enquiry aims to meet the criteria of relevance and usefulness by approaching its field of practice with a focus on problematisation. In this approach, the dilemmas of practice expressed in accounts of participants’ engagement with networked technologies are subject to discourse analysis, and the emerging controversies form the basis for case study selection and relational analysis. The institution, as in the approach used by Castor and Cooren, (2006), becomes a “discursive site” (p. 571), with “various types of agents that operate relationally” (p. 572). They describe their problematisation approach to organisational contexts:

Through this analysis, we demonstrate how various agents (human, textual, other nonhumans) are involved in the communicative constitution of organizations. Specifically, we focus on problem formulation as a significant organizational activity. Problem formulation implicates the past and future, and agents who may have caused the problem or who can address the problem. ... The recognition of the role of nonhuman agents in this process provides a more comprehensive picture of organizational action and how organizational realities are constructed (p. 593).

The strategy of problematisation brings to the foreground the relations between entities, or agents, that constitute the assemblage of practice, whether human, object, technology or discursive. This “radical relationality” (Law, 2000) emphasises connection over object or person, and constructs an analysis of practice in institutional contexts without privileging either human nor nonhuman interests.
4. Talking practice: how discourses shape online learning

In this section I will present the results and analysis of this enquiry into online learning practice in the field of higher education from the whole sample of practitioners I will describe the application of the methodological strategy for collection of experiential data and interpretive methods of analysis, the steps taken to establish the trustworthiness and authenticity of the data, and present the analysis of the whole corpus of data from interviews with practitioners and their associated online projects. As a result of this holistic analysis of the data, I will derive a series of case studies which become the topics for in-depth discussion in subsequent chapters.

4.1 Translating practice into data

In this enquiry, I study online learning in terms of its practices, consisting of embodied, practical human activities that involve shared understandings and sense-making (Alvesson & Deetz, 2000, p. 67; Schatzki, 2001; see Chapter 3.2). It follows, therefore, that practice should be studied not just for its material evidence, but how this evidence constitutes these understandings among its professional community from what Barnes (2001) calls “a shared paradigm” (p. 18). This enquiry meets this requirement by studying practice in two respects: empirically, in the interviews accounts, activities and artefacts from actual settings, and interpretively, in the discourse analysis of the range of contexts of practice. The language of practice, or discursive activity (Schatzki, 2001, p. 3), is a significant form of data that is constitutive of the shared understandings of the sample of practitioners.

This chapter presents the holistic results from the series of analytical methods (described in Figure 3.1) that were applied to the sample of practitioners in their contexts of online learning practice. The methods and their outputs are presented in Table 4.1.

<table>
<thead>
<tr>
<th>Methodological process</th>
<th>Analytical outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection: interviews, associated projects</td>
<td>Interview transcripts, Records of artefacts, samples</td>
</tr>
<tr>
<td>Initial analysis: Grounded theory process</td>
<td>The <em>whats</em> of practice: Content analysis, coding and categories</td>
</tr>
<tr>
<td>Holistic analysis: Discourse analysis</td>
<td>The <em>hows</em> of practice: Controversies, discourses/interpretative repertoires</td>
</tr>
<tr>
<td>Relational analysis</td>
<td>Case studies</td>
</tr>
</tbody>
</table>

These results represent not just an accumulation of data, they entail a series of translations: of practice into forms of data, data into analytical outputs, and analysis into
Chapter 4: Talking Practices – how discourses shape online learning

a critique which aims to account for the controversies of practice in this aspect of the complex field of higher education (see Chapter 3.1). The actor network sense of translation is used here, in which “one element stands in for another or many others” (Fox, 2005, p. 102), and the practice under study becomes empirical, available for analysis, comparison, clarification, and accountable.

The methodology presented in Chapter 3 reflects analytical moves between an ethnomethodological focus on local practices and broader discursive effects. This approach looks beyond ethnomethodology, recognising that while practices are conducted in local organisational contexts, they do not begin within them. Rather, they enact discourses from their practice community, what Schatzki (2001) describes as “shared practical understandings” (p. 2). For online learning, these shared understandings are shaped by multiple interests: government and university, software technology industries, pedagogical traditions, students, teaching staff, managers and support staff. Nevertheless, the practitioner takes a central role in the activity of practice, and in their accounts they convey the meaning and sense-making of their practice, reflecting the effects of these multiple interests. This activity includes language, and from a constructionist perspective of Potter (1996) or Schatzki (2001), talk and text are “embedded in practices” and are themselves constitutive of an individual’s practice (p. 3).

This enquiry focusses on the activity of practice through the materials and evidence of practice: the transcripts of talk, documents, uses of technology, samples of instances of teaching online, to obtain an analysis “through which the accountable features of everyday life are produced” (Holstein & Gubrium, 2008, p. 177).

Data obtained during the thesis

This study centred on encounters with 28 practitioners in a range of online learning roles over three universities, from which I conducted interviews and obtained samples of associated projects, documents or units of study material. The study was designed as an in-depth investigation over an extended period in order to produce a rich source of data. I also conducted two secondary studies concurrently that drew on additional sources of data about online learning, and explored different perspectives. These were conducted with co-researchers:

(i) a study of policy discourses of online teaching and learning from five universities, and their relation to practitioner accounts from the central study (Hannon & Bretag, 2010);
(ii) a study of student engagement with the technologies of online learning through a quantitative survey of 360 students, drawing on data external to the central study (Hannon & D’Netto, 2007).

All three studies are presented in Table 4.2.
### Table 4.2: Studies of online learning conducted during this thesis

<table>
<thead>
<tr>
<th>Enquiry title</th>
<th>Theoretical paradigm</th>
<th>Participants</th>
<th>Analytical methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CENTRAL STUDY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reassembling Practice: A relational approach to online learning in higher education</td>
<td>Interpretive</td>
<td>Practitioners in online learning (28)</td>
<td>Grounded theory coding, interpretative repertoires, and relational approach</td>
</tr>
<tr>
<td><strong>SECONDARY STUDIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotiating Contested Discourses of Learning Technologies in Higher Education (Hannon and Bretag, 2010)</td>
<td>Interpretive</td>
<td>Policy documents (5 universities), practitioners in online learning (2)</td>
<td>Discourse analysis method of interpretative repertoires</td>
</tr>
<tr>
<td>Cultural diversity online: Student engagement with learning technologies (Hannon &amp; D’Netto, 2007)</td>
<td>Normative</td>
<td>Students (360)</td>
<td>Quantitative survey, correlational and factor analysis</td>
</tr>
</tbody>
</table>

The secondary study involving discourses of learning technologies (Hannon & Bretag, 2010), juxtaposed university policy documents with interview transcripts from the central study. The analysis included an autoethnographic account of how competing discourses are negotiated in teaching practice. This study is discussed in Chapter 8 as a case study on conflicting goals between technologies and pedagogies.

Hannon & D’Netto (2007) studied the evidence for cultural differences in students’ experiences with learning technologies through a survey and quantitative analysis. The study investigated students’ engagement with standard learning technologies and the extent of variation in their experience that reflected cultural differences. This study provided a student perspective on online learning, and offers a counterpart to the staff perspective analysed in a case study in Chapter 6.

All three studies were concerned with practices in online learning in higher education, and all three were empirically based. The quantitative survey study adopted a normative, nomothetic approach that provided generalised analysis of students’ self-reported ratings of experience. The other two studies were based on interpretive methods, in which evidence that provided experiential, insider or emic accounts was analysed contrastively in order to identify factors constituting practice. These studies bring the contrasting paradigms of empiricism and interpretivism to the same overall topic, reflecting research strategies that, in Denzin & Lincoln’s (2008) terms, were “doing the same things differently” (p. 14), in offering descriptions of engagement with online learning.
Chapter 4: Talking Practices – how discourses shape online learning

Identifying participants

Scoping the central study

The central, qualitative study for this enquiry applied the methodology in stages (Chapter 3.3): (i) selecting participants and their contexts that embodied online learning practice; (ii) conducting interviews and follow-up communication with participants; (iii) applying analytical processes to a corpus of data and (iv) developing case studies from the analysis. The interview participants were selected over multiple settings of practice based on a heuristic approach (Patton, 2002, p. 104), in which the researcher’s background and involvement in the field of enquiry formed the basis of setting up an interview encounter with participants. The process of selecting participants aimed at obtaining “information-rich” cases (Patton, 2002, p. 242) through purposeful sampling, from which distinct practitioner roles were identified, and “snowball or chain sampling” (p. 243), in which associations or recommendations of projects and individuals arising from earlier participants were followed. The starting point for the field work was individual practitioners and their specific engagement or projects with networked learning technologies. Individual practitioners were identified and invited for interview based on a demonstrable engagement with online learning, and each was asked to bring to the interview a current activity, project or undertaking which was integral to their practice.

The inclusion of VET teachers was a result of chain sampling, as these participants were employed or associated with a university, and worked with similar technologies and online support staff, but in the further education rather than higher education sector. This group provided an occasional foil in this analysis, that is, a basis for contrasting online learning practices to those in higher education.

This purposeful sampling approach to selection was based on its efficacy at building coherence and “generalizability” for gathering data across settings of practice (Miles and Huberman, 1984, p. 37). From this data, a holistic discourse analysis was conducted, followed by a case study based, in-depth analysis. While case study research may reflect typicality in a field, its primary aim in this enquiry was not to generalise, but point to the specific, with the intention of producing a useful case that provides an “opportunity to learn” (Stake, 2008, p. 130) (see Chapter 3.5).

Participants and locations

The empirical data consisted of transcripts of interview, and samples of participants’ engagement in their practice, consisting of artefacts in the form of documents, images of applications and implementations, units of study, and policy or strategy documents. The participants are listed according to their practitioner role in Table 4.3 below. Pseudonyms

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5 VET is Vocational Education and Training, and describes programs with the Technical and Further Education sector of mainly post-secondary education in Australia.
are used, roles are identified to accurately reflect position titles, but the categories are not exclusive, and roles overlap.

**Table 4.3: The sample of participants and their roles**

<table>
<thead>
<tr>
<th>Academic Managers (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victor (University C)</td>
</tr>
<tr>
<td>Paul (University B)</td>
</tr>
<tr>
<td>Monica (University C)</td>
</tr>
<tr>
<td>Sylvia (University C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Academic Developers (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barb (University A)</td>
</tr>
<tr>
<td>Vicki (University B)</td>
</tr>
<tr>
<td>John (University C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Academics (Teaching) (13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wendy (University C)</td>
</tr>
<tr>
<td>Asha (University C)</td>
</tr>
<tr>
<td>Lia (University C)</td>
</tr>
<tr>
<td>Ron (University C)</td>
</tr>
<tr>
<td>Francis (University C)</td>
</tr>
<tr>
<td>Laura (University C)</td>
</tr>
<tr>
<td>Alison (University C)</td>
</tr>
<tr>
<td>Jack (University C)</td>
</tr>
<tr>
<td>Mick (University C)</td>
</tr>
<tr>
<td>Rebecca (University C)</td>
</tr>
<tr>
<td>Craig (University A)</td>
</tr>
<tr>
<td>Fran (University C)</td>
</tr>
<tr>
<td>Margaret (University C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching as an additional role (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monica (University C)</td>
</tr>
<tr>
<td>Vicki (University B)</td>
</tr>
<tr>
<td>Sylvia (University C)</td>
</tr>
<tr>
<td>John (University B)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Online Support (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom (University A)</td>
</tr>
<tr>
<td>Rachel (University A)</td>
</tr>
<tr>
<td>Wayne (University B)</td>
</tr>
<tr>
<td>Robert (University C)</td>
</tr>
</tbody>
</table>
In some instances, participants took more than one role, and sessional and EAL (English as Another Language) status is identified. For a list of each individual that identified their associated projects, artefacts or technologies, see Appendix 4.1.

The participants reflected diversity both across disciplines and role descriptions. Their disciplinary expertise ranged across faculties or schools which can be broadly identified as Business, Design, Health Sciences, Humanities, Information Technology, and organisational units concerned with teaching and learning. The selection of practitioners from the purposeful sampling process reflected practice roles that consisted of: teaching academics (total 17), academic managers (4), online support staff (4), academic developers (3), and VET (vocational education and training) teachers (4), a total of 28 participants, where four individuals were represented in two groups. As the researcher, I am included as a practitioner, as teaching academic and academic developer. My role in academic development facilitated encounters across a range of disciplinary areas and roles associated with online teaching and learning.

**Mapping the contexts of practice**

The sample of practitioners reflected a range of practices settings, and therefore represented or spoke for their own practice. A methodological question arises, therefore, as to the extent to which this sample can be considered indicative of online learning practice in higher education. In this section, I will locate the accounts of practice from the sample participants within a model of institutional online learning, then outline the staged, longitudinal progression of data collection and analysis.

**The landscape of practice**

The types of practice arising in this enquiry were scoped using the model of flexible learning by Collis & Moonen’s (2001) in Chapter 2 (Figure 2.2). The model represents institutional online learning as an integrated domain, and has been extended below in Figure 4.1 to locate practitioner roles from the sample to online learning. The model identifies the factors involved in the integration of online learning into an organisation.
Chapter 4: Talking Practices – how discourses shape online learning
(Normand, Littlejohn & Falconer, 2008; Hannon & D’Netto, 2007; Casey & Wilson, 2006; Conole, 2004).

Figure 4.1: Collis & Moonen’s (2001) model mapped against practitioners’ roles

<table>
<thead>
<tr>
<th>Key components</th>
<th>Practitioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution or strategy</td>
<td>Manager-academics (4)</td>
</tr>
<tr>
<td>Implementation</td>
<td>Academic Developers (4)</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>Academics, Teachers (20)</td>
</tr>
<tr>
<td>Technology</td>
<td>Online Support (4)</td>
</tr>
</tbody>
</table>

In this adaptation of Collis & Moonen’s model, the “key components” of organisational online learning match the roles of sample participants over the three universities in the enquiry. While the correspondence is indicative only, this extended model describes the terrain of online learning in universities to include the principal expressions of institutional online learning that were represented in the sample. The model, therefore, offered a useful basis for organising case studies of practice for this enquiry.

The progression of data collection
The strategy of enquiry (Table 4.1) described a staged process for data collection and analysis, commencing with the interview participants in their contexts of practice.

The interviews with practitioners spanned a period of 27 months, with the researcher embedded (employed) in three university settings across two Australian states. Interviews commenced in July 2004 at University A and were completed in October, 2006 at University C, with final follow-up contact mid-2007. The interviews followed the developmental path of the enquiry: at the initial phase, in University A, the aim was to explore broadly how online learning projects and activities occurred in one university. The second phase was more narrowly focused, and sought to trace how instances of online learning practice were integrated in an organisation. The third phase systematically explored online learning practice involving students, primarily from interviews with teaching academics. The phased progression of the enquiry is mapped against roles according to Collis & Moonen’s (2002) model in Table 4.4.
Chapter 4: Talking Practices – how discourses shape online learning

Table 4.4: Progression of data collection by interview

<table>
<thead>
<tr>
<th>Practice roles*</th>
<th>Academics/Teachers</th>
<th>Managing academics</th>
<th>Academic Developers</th>
<th>Online Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1:</strong> Exploratory focus – University A and VET (Victoria)</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Phase 2:</strong> Integration of learning technologies in the organisation – University B (Victoria)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Phase 3:</strong> Focus on academic practice in online teaching – University C (South Australia)</td>
<td>14</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Pedagogy | Institution/strategy | Implementation | Technology

The locations for data collection reflected discontinuities that were not designed into the enquiry, since the interviews followed from the researcher’s university employment. Nevertheless, these discontinuities offered a diversity of practice settings, and provided a basis for comparison of institutional practices between universities.

By Phase 3, the enquiry had developed a stronger focus on teaching academics, reflecting the agency of this role as the primary point at which practice was negotiated and enacted in contexts of online learning. A total of 14 academics were interviewed in this phase, and the interdisciplinary mix of participants broadened the range of responses, and lessened potential skewing of responses by too narrow a sample. The participants involved in the progression of each phase are shown in Table 4.5.

Table 4.5: Participants by institution

<table>
<thead>
<tr>
<th>Practice roles*</th>
<th>Academics/Teachers</th>
<th>Managing academics</th>
<th>Academic Developers</th>
<th>Online support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase 1:</strong> University A (Victoria, 2004)</td>
<td>Craig Paula Jenny Tanya Henry</td>
<td>Barb</td>
<td>Tom Rachel (Paula)</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 2:</strong> University B (Victoria, 2004-5)</td>
<td>Vicki (Vicki) (John)</td>
<td>Paul</td>
<td>Vicki Wayne</td>
<td></td>
</tr>
<tr>
<td><strong>Phase 3:</strong> University C (South Australia, 2004-2006)</td>
<td>Wendy Asha Lia Ron Francis Laura Alison Jack Mick Rebecca Fran Margaret (Monica) (Sylvia)</td>
<td>Victor Monica Sylvia</td>
<td>John Robert</td>
<td></td>
</tr>
</tbody>
</table>

*brackets indicates an additional role for that practitioner.
Practitioners’ contexts of practice

The interview process identified individual practitioners or clusters of participants associated with particular online learning contexts. From the 28 participants interviewed in the enquiry, 12 practice contexts were identified as shared projects, encompassing 21 practitioners. These contexts arose at the early interview stage, and are represented schematically in Figure 4.2.

Figure 4.2: Practitioners and their contexts of practice

The contexts of practice are identified in Figure 4.2 with a summary title that represents the activity or main concern for that individual or group of practitioners arising from the interviews. There remained seven participants (of a total of 28) who are not listed, either for reasons of redundancy – their concerns and contexts of practice were similar to those already listed – or their accounts of practice lacked specificity for this study of online learning. Nevertheless, the interview transcripts of these remaining participants were included in the holistic process of coding and analysis, and contributed to the patterns of discourse which emerged.

Negotiating the researcher/interviewer role

The approach to interviewing practitioners was discussed in Chapter 3 as oriented to dialogue, with interviews viewed as “collaborative accomplishments” (Chapter 3.4). The
contexts of practice listed in Figure 4.2 encompassed activities that broadly correspond to Collis and Moonen’s key components, indicating an orientation to technology, to pedagogy, to the institution, or to implementation. This range of practices reflect the complexity and multiplicity of academic practice in higher education institutions (Lewis et al., 2005; Becher & Trowler, 2001). From an actor network perspective, roles offer ways to understand multiplicity: an individual is not viewed as an intentional self, but takes multiple identities or roles (wears more than one hat) which are performed or enacted in distinct ways to different effects in a network (Law, 2003; Mol, 2002; Law & Singleton, 2000). Nonhumans also perform actions or roles in relation to other actors. In this enquiry, my own multiple roles can be identified in the “network” of my contexts of practice over the lifespan of the enquiry, as teaching academic, academic developer and participant-researcher. They also afforded me with a double perspective. On the one hand, they allowed me to locate myself as a practitioner, with an insider or emic view of the practice under study. My practitioner role enabled me to act for data collection over three universities, and the progression of locations, with its opportunities for engagement with practitioners, was therefore opportune (rather than opportunistic), and shaped the developmental and emergent trajectory of the enquiry. On the other hand, I could move to an outsider, etic perspective in my relationship to the practice of many participants, taking a detached researcher orientation to the practices represented in Collis & Moonen’s model in Figure 4.1. How these roles reflect interrelated interests, the extent of their congruence or dissonance, and how power relations are exercised between role-defined groups, are suitable questions for analysis of practice. Moreover, my role in academic development entailed the double aspect of insider/outsider, occupying a “middle ground” between academics and academic managers (Brew, 2006, p. 77), “performing hybrid, liminal roles at the ‘fault lines’ between teachers and learners” (Manathunga, 2007, p. 25). My academic development role enabled a close fit for the researcher/practitioner role in a dialogic approach to interviewing.

My encounter with practitioners reflected the heuristic approach of establishing common ground with participants on the basis of practices in online learning, with the interview proceeding from shared interests. After the interview, the methodology shifted from a heuristic to ethnomethodological orientation, from myself as an engaged and committed participant during interviews, to disinterested analysis of the discourse of dialogues in which I was one interlocutor. Patton (2002) described this shift, “[w]here heuristic inquiry focusses on issues of intense personal interest, ethnomethodology focusses on the ordinary, the routine, the details of everyday life” (p. 110). The commitment of the practitioner gave way to analytical indifference of the researcher: first through the coding and categorisation of transcripts for issues or phenomena that concerned individuals; then through the analytical methods of discourse analysis and actor network theory, the
former through textual analysis of interaction and documents, the latter through the application of actor network principle of heterogeneity, in which all entities in a network or assemblage, human or nonhuman, are treated equally.

There were two methodological aims for the interview: (i) to identify and explore concrete, current accounts or examples of practice, and (ii) to problematise and make visible the main issues of concern to participants (see Chapter 3.4). The data gathering process followed this procedure:

1. **Invitation:** Individual practitioners who were involved in online learning were identified through internal organisational communications or processes (for example, committees). Those engaged in a current project or commitment were invited to participate. The purpose of the enquiry was explained, and the ethics information communicated and consent obtained (see Appendix 4.2: Example of introductory communication).

2. **Information:** The approved set of questions for a semi-structured interview were provided to participants prior to the interview (Appendix 3.1), with a request to bring an example of their current practice that could be recorded or sampled by copying, downloading or photography. Questions or clarification were invited, and an interview venue arranged, usually in the participants’ work location.

3. **Interview focus:** The interview initially followed the approved set of questions, linked to the participants’ example of practice. As the interview progressed, the topics of discussion shifted to issues of concern to the participant, often in directions not anticipated by the interviewer. The intention was that, as the interview progressed, the participant “lead” the interview and set the narrative of the discussion.

4. **Checking interview data and analysis:** The interview sessions were recorded and transcribed. The initial interviews were later followed up periodically, at least once between 3 to 12 months, and often more frequently and informally, by a meeting or a phone call. The purpose of follow-up was to verify or confirm statements or meanings in the interview transcript, or to check analytical interpretations by seeking a view on a contrasting or conditional situation, that is, to ask a “what if…? question. Transcripts were checked directly with participants for some interviews, especially (i) when a professional transcriber was employed, and (ii) when recording equipment failed or conversation occurred when recording was switched off by request (this occurred with Tom, Alison, Laura and Henry). Where a passage from a transcript was quoted in the thesis, the audio recording was checked, and transcription codes inserted where relevant to the meaning of the transcripts (Transcript Codes, p. x).

5. **Completion of interviews:** The process of interview and follow-up came to a point of
completion that marked the close of exploration of a particular context of practice. This point was determined by evidence of “saturation”, a grounded theory term to describe the point at which further investigation of a line of enquiry produces no new results in that direction (Strauss & Corbin, 1998, p. 101). After interviews with 28 participants, the data gathered to that point indicated that issues raised were either reiterations from previous interview accounts, or they took a direction outside the scope of the enquiry. There were a number of interviews for which later analysis revealed the latter to be the case.

The grounded theory method described by Strauss & Corbin (1998) was deployed to build rigor and credibility into the analysis of interview data. While other phenomenographic approaches applied to higher education research could have been adopted (Akerlind, 2005; Marton & Booth, 1997; Marton, 1981), the coding and categorisation methods of grounded theory were selected on the basis of its suitability for this enquiry: its ability to manage breadth and depth of transcription data from a large volume of transcript data, and the systematic approach it brought to an analysis over the extended period of contact with participants.

Early stage grounded theory methods were applied to the analysis of interview data as follows. The questioning techniques for interviews sought specific details and concrete manifestations of a phenomena or experience (Strauss & Corbin, 1998, p. 89-90). The transcripts were initially coded by the “open coding” process, in which “concepts are identified and their properties and dimensions are discovered in data” (p. 101). In the open coding process, the question was asked, “what is the main issue of concern for the speaker here?” Concepts, frequent recurrences of terms or reported experiences were coded, then organised into categories and sub categories. Two further grounded theory techniques were applied: “selective coding”, described as “the process of integrating and refining categories” (p. 143); and the constant comparative method (Glaser & Strauss, 1967, p. 102), in which categories are compared, contrasted and tested across the body of data. The aim of these techniques was to arrive at core categories that reflect emerging themes and have explanatory power. This process continued until saturation, at which point no further categories could be generated from the data. The grounded theory process was not followed past the point of achieving core categories from the corpus of data, from which point the work of theory building would occur. The construction of a theory around essential phenomena in a field did not match this enquiry’s interpretive goal of describing how the controversies of online learning are constituted, and to build useful and transportable case studies.
Establishing trustworthy findings of experiential accounts

The analysis of interviews in this enquiry contrasted with the empiricist tradition of examining interviews as an account of an objective reality, and focused on the interview as a researcher-practitioner dialogue, to be analysed in terms of a discursive practice. The task remains, for this enquiry, of revisiting the issues raised in Chapter 3.4 to identify the procedures that were established to build trustworthy findings.

Deetz (1996) points out that the objective/subjective distinction “performs political functions” (p. 193) by privileging the objective and perpetuating the distinction between the natural and social worlds. In chapter 3, I argued that a study of social practices is no less real than an objective world, but that an interpretive approach to validity was required. Qualitative researchers have reframed validity with notions such as “trustworthiness” (Lincoln and Guba (1985, p. 301), and “authenticity” (Guba & Lincoln, 1989: 245), both terms that encapsulate a set of criteria in which validation is sought not through isomorphic matching of findings to “reality”, but through the transparent and credible process itself of revealing multiple realities.

Given the central role of discourse in this enquiry, the goal of trustworthiness would be achieved if, as Potter (1996) points out, the reader had as much information as possible in order to reproduce the analysis (p. 106, citing Sacks, 1992). In practice, the analytical approach needs to “democratise” interaction (p. 106): the reader needs enough information and confidence in the process to be persuaded.

Lincoln and Guba’s trustworthiness criteria can be matched to the methodological process applied to the current enquiry. The criteria can be summarised as follows (1985, pp. 296-318):

- **credibility**: established through modes by which “activities increasing the probability that credible findings will be produced” (Guba & Lincoln, 1985, p. 301). For example, prolonged participation, triangulation from multiple sources.
- **transferability**: clear context and purposeful sampling so that outcomes can apply to other contexts
- **dependability**: transparent procedures which are open to scrutiny
- **confirmability**: evidence that procedures described actually took place, and building authenticity via an audit trail (Guba & Lincoln, 1989: 249).

To establish an empirical basis for data collection and analysis, the following efforts were made to establish trustworthiness for this enquiry:

- The selection of participants through purposeful sampling, and analyses of experiential knowledge in explicit contexts of practice. The clear description of practice settings enhances transferability
Participants were asked to link examples of practice with relevant objects, technologies or documents within the institutional context, and suggest associated individuals who may offer additional or alternative accounts or perspectives. These examples were recorded, either as images or copies of documents (Appendix 4.1), and used to build multiple sources for the same account (addressing dependability and confirmability).

Interviews with participants were based on current and demonstrable examples of their practice which had material effects in their online learning context (addressing credibility).

Participants were systematically followed up post-interview, to confirm statements and meanings, to account further on the progress of their examples of practice, and to check if their perspectives and experiences had changed in relation to the topics of interview (addressing credibility and confirmability).

The researcher did not make judgements on verisimilitude, that is, attempt to establish the truth or falsity of the participants’ account. Informed by an ethnomethodological process, the analysis sought to establish how an account was arrived at, and in what ways this account matched others in the field. In this way, a case became transferable to comparable contexts in the field.

The analysis of transcripts was systematic and rigorous, following grounded theory methods in which codes and categories were tested systematically within the corpus of data, and refined to reflect patterns accurately across the sample of the field, and produce dependable and confirmable data.

The research data are transparent: audio recordings and transcripts of interview, as well as associated documentation, are stored and available for confidential access. Actual names of participants linked to pseudonyms, and their consent forms, are traceable (addressing dependability and confirmability).

Establishing authenticity, according to Lincoln & Guba (1985), required a methodology which analysed empirical data that “represented those multiple constructions adequately” (p. 296). The following steps were taken to enhance authenticity:

- The selection of participants by purposeful sampling attempted to reflect the dimensions of online learning practice in Australian higher education, with the sample of practitioners matching Collis and Moonen’s (2001) institutional model of online learning (Figure 4.1).

- The contexts of practice, through their analysis and the literature, reflect a typicality which embodies the conditions of online learning practice common in universities, enhancing their transferability to other contexts.
Chapter 4: Talking Practices – how discourses shape online learning

- The use of multiple sources for a context of practice, which consist of transcripts, associated artefacts, existing institutional documents or units of study, or other, related perspectives (see Appendix 4.1: Artefacts and projects of online learning).

- The practice of “member checking” (Charmaz, 2006) was followed, common in grounded theory, in the form of follow-up contact with participants to gather further material and confirm ideas (p. 111). In this enquiry, authenticity was enhanced through such longitudinal contact, both with participants and with associated individuals, or consulting associated materials of practice that were provided or public.

- Finally, authenticity is a “reflexive consciousness of one’s own perspective” (Patton, 2002, p. 547), involving a constructivist view of the research output, and deeper understanding of the interactions of the contexts under study. Dissemination of research is identified as a form of “communicative validity” (Akerlind, 2005, p. 330), in which a researcher argues for their particular interpretation of the data through publication and presentation in conferences and peer reviewed journals. This analytical form of checking occurred with the publication of my scholarly papers comprising early or preparatory versions of case study chapters, for example, in Hannon (2009a, 2009b), and Hannon & Bretag (2010). These studies were checked with participants before submission for publication, and through the peer review process. A list of publications arising from this research enquiry is listed in Chapter 1 (1.5).

Not every setting and practitioner account was followed or developed by the researcher or taken up for analysis. If an account reflected circumstances that were isolated or lacked resonance with the pattern of emerging issues, they were not pursued in analysis. Accounts from interviews and their associated contexts of practice (Figure 4.2) became case studies if they expressed issues of concern which were confirmed by other participant accounts and the relevant literature, and encapsulated current controversies in practice by meeting the case study conditions of relevance and usefulness (Chapter 3.5).

In the shift to reframed notions of validity and reliability for qualitative research, Akerlind (2005) notes:

Qualitative researchers are still traditionally expected to address issues of the validity and reliability of data, even though these notions derive from a positivist approach to research that attempts to study an objective reality, rather than the more intersubjective 'reality' that most interview-based qualitative research is attempting to study (p. 329).

Denzin (2009) also notes the post-positivist rubric of a “soft quantitative grid” being demanded of qualitative research (p. 149). However, Denzin points out demands for
trustworthiness that are imposed on qualitative researchers, through such techniques as member checking (Agostinho, 2005), coder reliability checking (Akerlind, 2005), and triangulation (Golafshani, 2003; Patton, 2002), are not required of quantitative researchers, who are assumed to have obtained data free of bias (p. 149-150).

Akerlind described “a common alternative” to reliability checking used in phenomenography, which is “for the researcher to make their interpretive steps clear to readers by fully detailing the steps, and presenting examples that illustrate them” (p. 332). This comprises a critical documentation process that involves an analysis of the researcher’s own interpretive processes.

Alvesson (2002b) cast post-modern doubt on the systematic approach of grounded theory in checking empirical data for the development of concepts, since “empirical material is produced within discourse” (p. 163). However, Charmaz (2006) proposed a constructive grounded theory which does not make essentialist claims about the phenomena and concepts being developed. For this enquiry, grounded theory is used not to make universal truth claims about practice, or match emergent categories against actual events, but to examine the extent of coherence and congruence of categories and themes emerging from the sample of practice via the coding process, and identify patterns of discourse and controversies from this evidence.

The attitude of the reflexive researcher was suggested by Alvesson (2002b). He proposed a “reflexive pragmatist approach to social research” (p. 171) in which the researcher is located in the social world under study, a location which “calls for exploration and self-examination” (p. 171). The reflexivity, for Alvesson, means “conscious and systematic efforts to view the subject matter from different angles, and to avoid strongly privileging a favoured one” (p. 171). The reflexive researcher is located both within the study, yet applies analytical “indifference”, discussed above in this section, in relation to the empirical data. Alvesson’s reflexivity concurs with the methods applied to data in this enquiry, and trustworthiness resides in the transparency of the enquiry process through interview and analysis stages.

The strategy of enquiry in this thesis adopted Akerlind’s “common alternative” (above), making process explicit and demonstrative. This is similar to Strauss & Corbin’s (1998) framing of evaluative criteria for grounded theory research that would be able to encompass encourage “imaginative” or creative approaches rather than necessarily confirm to “authoritative guidelines for judging their own products” (p. 273). They proposed that researchers follow a procedure that:

would help readers to judge the analytic logic and overall adequacy of the research process. It would also make readers more aware of how a particular research investigation differs from those using others modes of qualitative research. In specifying this information,
4.2 Core categories and discourse patterns in online learning practice

The strategy of enquiry presented in Chapter 3.3 described the method of discourse analysis of the whole corpus of data that focused on forms of the “talk and texts” (Potter, 1996. p. 105). The outcome of this analysis is the identification of discourses or interpretative repertoires deployed by practitioners to account for and make sense the issues and dilemmas of their practice of online learning. The resulting interpretative repertoires are used to identify a series of controversies for practice, from which a series of in-depth case studies or thick descriptions (Geertz, 1973, p. 24) are developed that offer relevance to practitioners in the field.

After the process of data collection, the methodology proceeded in three analytical stages, as represented in Figure 4.3.

**Figure 4.3: Methodological progression: collecting data to producing case studies**

<table>
<thead>
<tr>
<th>Methods</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>interviews</td>
<td>transcripts &amp; documents</td>
</tr>
<tr>
<td>recording &amp; transcription</td>
<td>content analysis</td>
</tr>
<tr>
<td>grounded theory process</td>
<td>codes &amp; categories</td>
</tr>
<tr>
<td>discourse analysis</td>
<td>interpretative repertoires</td>
</tr>
<tr>
<td>relational approach</td>
<td>controversies &amp; case studies</td>
</tr>
</tbody>
</table>

This figure shows the analytical process and the matching products or outputs for the strategy of enquiry, and extends the earlier representation in Figure 3.1 in Chapter 3.3). The derivation of these analytical outputs is taken up in this section.

**Content analysis**

**From transcripts to content analysis and key terms**

A content analysis was conducted as an initial, holistic analysis of the corpus of transcript data, with the intention of identifying the key terms used by speakers, their frequency of use, and the extent of their variation between role groups or types of participants. Key terms, in this enquiry, refers to frequently used terms associated with online learning practice.

Content analysis can be used for analysing texts, and is commonly used in online learning to analyse transcripts of online discussion for different purposes: to identify expressions of sociality and cohesion in online learning (Heckman & Annabi, 2006; Bretag & Hannon, 2009; Herring, 2004); to identify expressions of higher or lower levels of learning and cognitive processes (Ramsden, 1993; Trigwell et al., 1999); or simply
counting frequency of contributions (different approaches to content analysis are discussed in Cotton & Yorke, 2006).

Content analysis has clear limitations. As a quantitative method of counting and tallying textual items according to individuals, it enables comparisons of uses of terms based on a rubric or ranking, but is limited in its ability to reveal contexts of use, meaning or nuance. The repeated occurrence of the word “institution”, for example, does not convey contextual information nor the orientation of the speaker/author to the term: whether “institution” is invoked as a constraining, hegemonic relation to a speaker, or as an entity that supports innovative practices in learning.

Nevertheless, content analysis of a large amount of transcript data can offer useful information. In the previous section in this chapter, the interview process was described as commencing with a set of semi-structured questions, then as the interview progressed, participants set their own topics and agenda for discussion. The frequency of utterance of key terms, therefore, is able to provide an indicator of how speakers articulate and identify the issues of practice that most concern them, and direct the terms used in the interview.

To identify key terms, I followed the sense of Raymond Williams’ (1988) “keywords”, that is, words which convey “significance and difficulty” (p. 15), in particular, “binding words in certain activities and their interpretations” (p. 15). My interest was to identify the key terms in online learning were drawn on to a greater or lesser extent by practitioners, and how the uses of the terms clustered around practitioner groups: for example, were technical support practitioners (online learning support) less likely to use terms such as innovation, or community, and more likely to use terms such as flexible, and system?

I selected eight recurring terms within transcripts as key terms, and conducted content analysis to explore the following questions: What were the most frequently used key terms? Were these key terms more frequently used in some practitioner roles?

A keyword count was conducted across the corpus of interview transcripts for 28 interview participants using the qualitative software NVivo. The total count for each keyword is listed in Table 4.6, identified by the column “Indicator”, and the total occurrences for all speakers, with frequencies for each keyword, was averaged over for all participants. The full content analysis can be viewed in Appendix 4.3: Keyword frequencies for participants.
Chapter 4: Talking Practices – how discourses shape online learning

Table 4.6: Mean uses of key terms

<table>
<thead>
<tr>
<th>Key terms N = 28</th>
<th>Indicator</th>
<th>Total</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>system</td>
<td>system</td>
<td>157</td>
<td>5.61</td>
</tr>
<tr>
<td>innovate, innovation(s)</td>
<td>innovat*</td>
<td>133</td>
<td>4.75</td>
</tr>
<tr>
<td>community, communities</td>
<td>communit*</td>
<td>87</td>
<td>3.11</td>
</tr>
<tr>
<td>institute, institution, institutional</td>
<td>institut*</td>
<td>73</td>
<td>2.61</td>
</tr>
<tr>
<td>flexible, flexibly, flexibility</td>
<td>flexib*</td>
<td>71</td>
<td>2.54</td>
</tr>
<tr>
<td>engage, engagement</td>
<td>engag*</td>
<td>60</td>
<td>2.14</td>
</tr>
<tr>
<td>workload</td>
<td>workload</td>
<td>35</td>
<td>1.25</td>
</tr>
<tr>
<td>Technology, technical, technological, technique, “tech”</td>
<td>tech*</td>
<td>245</td>
<td>8.75</td>
</tr>
</tbody>
</table>

The keywords frequencies for all speakers indicate that the four most frequently recurring terms were: technology related words: (tech*); system; innovation related words (innovat*); and community words (communit*), spoken on average 8.75, 5.81, 4.93 and 3.22 times per speaker respectively (Table 4.6, Figure 4.4).

Figure 4.4: Frequencies of key terms

![Figure 4.4: Frequencies of key terms](image)

The analysis of terms was compared across practitioner groups, shown in Table 4.7.
Table 4.7: Mean uses of key terms by role groups

<table>
<thead>
<tr>
<th>Key terms N = 28</th>
<th>Total</th>
<th>Mean</th>
<th>Academics</th>
<th>Academic Managers</th>
<th>Academic Developers</th>
<th>Online Support</th>
<th>VET Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>tech*</td>
<td>245</td>
<td>8.75</td>
<td>10.1</td>
<td>5.25</td>
<td>21.0</td>
<td>3.25</td>
<td>6.75</td>
</tr>
<tr>
<td>system</td>
<td>157</td>
<td>5.61</td>
<td>5.08</td>
<td>10.25</td>
<td>7.0</td>
<td>3.0</td>
<td>4.25</td>
</tr>
<tr>
<td>innovat*</td>
<td>133</td>
<td>4.75</td>
<td>3.69</td>
<td>8.5</td>
<td>4.0</td>
<td>2.0</td>
<td>7.75</td>
</tr>
<tr>
<td>communit*</td>
<td>87</td>
<td>3.11</td>
<td>5.08</td>
<td>0.5</td>
<td>6.0</td>
<td>0.75</td>
<td>2.0</td>
</tr>
<tr>
<td>institut*</td>
<td>73</td>
<td>2.61</td>
<td>1.00</td>
<td>5.25</td>
<td>6.67</td>
<td>1.5</td>
<td>3.25</td>
</tr>
<tr>
<td>flexible/*ility</td>
<td>71</td>
<td>2.54</td>
<td>2.31</td>
<td>2.25</td>
<td>5.33</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td>engag*</td>
<td>60</td>
<td>2.14</td>
<td>2.38</td>
<td>4.5</td>
<td>0.33</td>
<td>0.5</td>
<td>2.0</td>
</tr>
<tr>
<td>workload</td>
<td>35</td>
<td>1.25</td>
<td>2.31</td>
<td>0.5</td>
<td>0</td>
<td>0.5</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The three highest frequency terms for each practitioner group were:

- academics: tech*, 10.1; system, 5.1; communit*, 5.1; innovat*, 3.7
- academic managers: system, 10.2; innovat*, 8.5; tech*, 5.25; institut*, 5.2
- academic developers: tech*, 21.0; system, 7.0; institut*, 6.7; communit* 6.0
- online support: tech*, 3.25; system, 3.0; flexib*, 3.0; innovat*, 2.0
- VET teachers: innovat*, 7.7; tech*, 6.75; system, 4.2; institut*, 3.2

Variations in the use of key terms between groups is presented in Table 4.7:

- The technology terms (tech*) occurred most frequently for all academics, especially by academic developers, who used them more than twice as often as any other term
- The word system occurred most consistently across all groups except for online support
- The community terms (communit*) reflected strong contrast in their use: very low for the academic managers and online support groups, and six times more frequent for academics and academic developers
- The innovation terms (innovat*) occurred twice as often for academic managers and VET teachers. The NVivo results for innovation terms show that Jack used the term most often for the academics group (29 times out of 48, or 60% of utterances, see Appendix 4.3). If Jack’s 29 utterances were removed, the frequency for academics drops from 3.7 to 1.5. Jack approach to innovation is part of the case study in Chapter 9.
- The institutional terms (institut*) occurred nearly twice as often for academic managers and developers
- The word workload was significant only for academics, and barely mentioned by other practitioner groups.
Terms related to “technology” and “community” were more frequently used by academics and academic developers, and were of least concern to the managers and online support groups. Perhaps counter-intuitively, “innovation” related terms were more a concern to managers as well as VET teachers, and far less for other groups. Finally, only academics expressed concern at issues of workload.

The key terms more frequently expressed by speakers can be viewed as abstractions that reflect aspects of speakers’ concrete experience of their practice of online learning. The terms have no a priori status in the field of practice, nor a clear and unambiguous meaning. Even when used in particular contexts, terms like “community” and “innovation” did not necessarily entail clearly shared meanings in relation to talk about online learning. Since key terms were part of speakers’ accounts of their practice, their use suggests directions for further exploration: do differences between groups in the use of key terms reflect conflicting concerns, or complementary tensions? To what extent do understandings of “technologies”, the most frequently used term, reflect shared or divergent orientations to practice? Does the strong variation in the use of “community” terms reflect conflicting perspectives on online learning between groups? Finally, what is the significance of the greater amount of talk about “innovation” by academic managers indicate, and what do they mean by the term?

**Coding, categories and discourses of practice**

This section reports on the application of holistic methods to the data through coding, categorisation and discourse analysis, represented above in Figure 4.3. Illustrative extracts of field notes and associated documents are presented, of which more detailed versions can be accessed in appendices.

The application of the discourse analysis technique of interpretative repertoires has two purposes. First, it aims to analyse practitioners’ accounts of practice, of what has taken place, in order to explore the how of practice: how practice is managed in talk, what is accomplished in the rhetorical strategies deployed, and how those accounts draw on antecedents such as existing shared understandings and broader discourses in the field in question. The discourse approach, then, analyses practice through the texts and talk of its social and material activities, and views the reality of practice as constituted through these. Second, this type of discourse analysis has the potential to address a limitation of ethnomethodological approaches to the study of situated interaction (Alvesson & Kärreman, 2000; Cooren et al, 2007; Holstein & Gubruim, 2008), and extend analysis beyond the local settings of discourse, making the link to Foucauldian discursive analysis at the institutional level (see Chapter 3.2). By identifying interpretative repertoires as discourse features for the field of practice embodied by practitioners, these
features can be connected to discourses from global fields of practice in, for example, higher education, government and information technology.

The discourse analysis proceeded through a sequence of steps to arrive at a set of interpretative repertoires. In the previous section of this chapter I drew on actor network theory to describe the methodological process as a series of translations, or transformations, of the empirical data of everyday practice (4.1). These steps are described in Table 4.8 as a series of translations of empirical data into analytical outputs, where translation is “a connection that transports, so to speak, transformations” (Latour, 2005, p. 108). These commence with the translation of engagement with participants in contexts of interviews into transcripts and sampled artefacts, then to analysis of practice accounts in the form of coding notes and categories, and finally a set of constitutive repertoires of online learning in higher education.

<table>
<thead>
<tr>
<th>Enquiry outputs</th>
<th>Translations</th>
<th>Appendices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translating interviews into data</td>
<td>3.1: Interview questions 4.1: Artefacts and projects of online learning 4.4: Extracts of interview with Victor</td>
<td></td>
</tr>
<tr>
<td>Coding transcripts into accounts of practice</td>
<td>4.5: Coding notes for Victor</td>
<td></td>
</tr>
<tr>
<td>From coding to categories: assembling practice</td>
<td>4.6: Categories for Victor, Fran and Lia</td>
<td></td>
</tr>
<tr>
<td>Identifying holistic categories and emerging discourses</td>
<td>4.7: Provisional categories by role</td>
<td></td>
</tr>
<tr>
<td>Translating categories into interpretative repertoires</td>
<td>4.9: Categories and repertoires</td>
<td></td>
</tr>
</tbody>
</table>

The remainder of this section details these translation.

**Translating interviews into data**

The corpus of data consists of:

- interview transcripts and coding notes for 28 participants, including records of follow-up contacts with participants (generally 6 -12 months later).
- evidence of associated individual online learning practice in the form of sample documents, institutional documents, related publications, images of associated
Chapter 4: Talking Practices – how discourses shape online learning
documents and technologies, and artefacts of practice associated with interviews are
listed in Appendix 4.1.

The initial interviews occurred at the work setting of the participant, and were 50 to 120
minutes in duration, with two interviews using online chat in addition to face to face
contact (Paula and Jenny). Transcripts from initial interviews ranged from 4000 to 12000
words each, with the corpus of transcripts compiled using NVivo software. Follow-up
contacts were informal face-to-face interview (normally), or phone/email communication.
These occurred in tandem with the categorisation process, to check and clarify details,
following the grounded theory approach of concurrent analysis and checking by contrast
and comparison.

Features of the initial analytical process are illustrated below, including interview
transcripts, coding, and assembling core categories. The following segment in Extract
4.1 is from the interview transcript for Victor (total 8028 words), an Associate Professor
and Director of Flexible Learning at University C, in which he discusses issues for online
learning within his strategic role (this extract is from Appendix 4.4):

<table>
<thead>
<tr>
<th>Extract 4.1: Segment 3 of Victor’s transcript</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victor: I had pointed out to me, a UNESCO report, on sort of the state of learning, have you seen that?</td>
</tr>
<tr>
<td>John: Yes, I've read- I've got that.</td>
</tr>
<tr>
<td>Victor: It's funny, I didn't even know it was out, until somebody pointed it out to me, because I remember doing the survey for the data in it, (laughs) because I filled in the, you know, the institutional survey thing you know, so it actually says some interesting things in there about [University C].</td>
</tr>
<tr>
<td>John: Oh really?</td>
</tr>
<tr>
<td>Victor: Yeah, if you get it up in PDF you can do a search for [Australian state], that's why I like PDFs. You can read things really quickly.</td>
</tr>
<tr>
<td>John: Yeah, I've got a couple of chapters of that and it seems, yeah, it's a very world view sort of thing.</td>
</tr>
<tr>
<td>Victor: Broad brush. But the thing I was pleased about is that it says that [this university] is unusual in that it has clear targets in the staff development for online learning, in that we actually want all staff, all the teaching staff, to be, you know, competent to a basic level when you're running an online course, you know, and they said that was quite unusual.</td>
</tr>
<tr>
<td>.... [26 lines later]</td>
</tr>
<tr>
<td>Victor: Yeah, the thing that I am interested in my research is at the moment is looking at the effect the quality assurance stuff is having on it, and I'm developing this view that-</td>
</tr>
</tbody>
</table>

---

6 The process of coding and categorisation for the entire corpus was completed without software, since sustained access to NVivo was difficult over the 27 month span of data collection and analysis. Only two instances of practice were analysed using NVivo for case studies.
Chapter 4: Talking Practices – how discourses shape online learning

John: I've read that paper you wrote in it.
Victor: Oh right, that quality assurance stuff is sort of dampening down innovation, it's sort of putting boxes around things and constraining things to such a point

In the above extract, Victor discussed institutional staff development strategies with which he had been directly involved, and their link to a UNESCO report. The topic of innovation in online learning was discussed, and Victor raised his own research interest in quality assurance, commenting on a particular dilemma for his role, expressed as a concern that quality assurance processes may have the effect of “dampening down innovation”.

The transcript, however, offers more than a descriptive record of a dialogue in an interview setting. It also maps a set of connections to a range of social and material participants. Using a relational (or actor network) reading of the whole transcript of interview, Victor’s roles – Associate Director of flexible learning, and research academic – link to both human and nonhuman participants: the university’s LMS (which Victor had a role in designing); policy documents including the University’s teaching and learning strategy document concerning quality assurance, which included a section headed “Teacher Development”; Victor’s university home page; and three of his published papers concerning integration of online learning (Appendix 4.5: Coding notes for Victor). In the relational sense, Victor’s academic manager position in the university connected his assertions and arguments in a dynamic way to far-reaching online learning practices in his institution. His active agency in shaping institutional online learning provided strong links with other practitioners and contexts.

Coding accounts of practice
The coding of interview transcripts consisted of a list of codes and their descriptions. Following grounded theory practice, the researcher analysed transcripts to identify concepts important for the speaker, assign codes, and write researcher’s comments and “memos” that linked to other contexts and made theoretical reflections. A typical coding document contained five components: a description of the local context, coding of issues of concern, commentaries on the issues, and “memos” for follow-up action.

Victor’s interview coding notes commence with contextual information: a list of items referred to by the speaker: a specific online learning project, cited publications, university documents and processes. Next, there is a table listing the issues raised in the interview, associated researcher’s comments, followed by “memos” for follow-up (Appendix 4.5). The coding itself consisted of examining each sentence to identify concepts that answer the coding question, “what is the main concern of the speaker here?” The following extract includes the coding and comments for the above extract (Interview 4.1), followed by a memo, shown in Table 4.9. In this extract, the concerns of the speaker are listed on
Chapter 4: Talking Practices – how discourses shape online learning

the left as issues, and researcher’s comments on the right. Note that field notes such as coding notes and summaries were written as working research notes, and have not been edited for reader-friendliness.

Table 4.9: Extract of Coding notes for Victor (Appendix 4.5)

<table>
<thead>
<tr>
<th>Issue</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>p. 9: Strategic plan targets: re the push for all courses online ‘there is stuff like that in the (strategic) plan stuff, like initially it was 2005, we were going to have an online presence for all courses or something, we did that, and then the current one is 2010, every student will do something online, … that can be interpreted’</td>
<td>Victor’s emphasis is for all students to do something online, not all courses.</td>
</tr>
<tr>
<td>‘there is a gap’: ‘but, we don’t really have the mechanisms to really check that either’. There is a gap between strategy and reality, ‘although we’ve got that sort of big vision thing, there is a gap still about sort of the online strategy’</td>
<td>V is very blasé, as if its not interesting, prob because it can be achieved in a token manner. See T&amp;L Strategy 2006-8</td>
</tr>
<tr>
<td>p. 10: Development of online learning strategy: in consultation process last year, there was a lack of criticism – implies development at ‘a plateau’, and pple ‘want the next silver bullet to transform education, you know, and that’s not going to happen’. V again expresses need for more ‘impetus and more innovation coming along, I think.’</td>
<td>This need for innovation also stated p. 4, ‘the idea is to capture a good idea’</td>
</tr>
<tr>
<td>p. 11: Innovation: ‘I think there’s actually a lot less innovation around now than there was when I started, which is interesting.’</td>
<td>Vs’ reference to “dampening” innovation, where an “audit culture” makes innovation a point of non-compliance, cf McWilliam et al 2002</td>
</tr>
<tr>
<td>- Takeup: JH mentions early digital educational content on CDROM that were funded but were not maintained, supported and evaluated later, V: ‘There’s lots of those things around.’</td>
<td></td>
</tr>
<tr>
<td>- Quality assurance: is ‘dampening down innovation, it’s sort of putting boxes around things and constraining things to such a point.’</td>
<td></td>
</tr>
<tr>
<td>p. 12: Risk averse culture: V follows his comment on quality with the ‘tension’ being felt with terrorism that, ‘it’s this whole culture of ‘I mustn’t try it, it might be dangerous’.</td>
<td></td>
</tr>
<tr>
<td>…..</td>
<td></td>
</tr>
<tr>
<td>MEMO: Contrast to Paul: V puts the case that innovative directions can’t be refused because of the emerging impact of open source. Paul ‘guides’ people to the preferred choice from an ROI perspective, not on T&amp;L grounds.</td>
<td></td>
</tr>
</tbody>
</table>

Victor was responsible for the University C’s in-house learning management system, UniCnet (a pseudonym), for which he was a significant contributor to its strategic direction. His concerns in this passage were identified on the left column as “Issues”, and researcher “Comments” were recorded as notes or, at the end of the document, as “Memos” (four are listed in Appendix 4.5). In the above extract, marked at p. 9, he identified a policy mandating an “online presence for all courses”. This policy was located
Chapter 4: Talking Practices – how discourses shape online learning

after the interview and the relevant section was quoted in the coding notes under the heading “Notes post-interview”:

“The University’s commitment to online learning means that all programs will have some aspect delivered online”. Teaching and Learning Strategy 2006-8. (Appendix 4.5, first page)

In his interview, Victor acknowledged his implicit relation to this policy by the word “we”, stating, “we were going to have (an) online presence for all courses” Extract 2, Appendix 4.4). He interpreted this as “every student will do something online”, and distanced himself from its implementation with the hedging remark, “its more a vision thing”. In this passage, Victor himself enacted the gap between strategy and implementation of online learning in University C, on which he reflected in the same section immediately following, (Table 4.9, “there is a gap”, p. 9. See also Extract 2, Appendix 4.4).

The coding notes, with issues and comments, build a “thick description” in which practitioners are constituted into a sociotechnical assemblage of online learning practice through a network of relational effects that include the practitioner. In the above case, the policy of “online presence for all”, shaped institutional practice at University C, and despite assigning his own agency to this policy, Victor flagged a dilemma arising from a potential effect of such policies on quality assurance by “dampening down innovation” (Table 4.9, p. 11). These concerns recur through Victor’s interview, and can be summarised as a mismatch between policy and practice, a concern which has also been identified in the literature (Conole et al., 2008; Warzynski, 2006; Cornford & Pollock, 2003, p. 85).

The thick description of the coding notes has a double function: (i) it identifies and lists the concepts and issues identified in the transcripts, and (ii) it provides a commentary of the orientation and rhetorical strategies used by the speaker to account for or defend the issues arising in their own practice. For instance, Victor stated a position that innovative directions in online learning could not be refused simply because they involved open source technologies:

Victor: When someone says “Look this is a great collaboration tool, which is an open source”, then it would be very hard for us to say “No, you can’t have that” (Appendix 4.5, p. 5).

This statement can be associated with Victor’s dilemma over online learning strategy, between his own goals, embodied in the flexible learning unit under his directorship, and other entities, such as the university’s information technology unit. A conflict is signalled in the comment," No, you can’t have that", the implication being that such a refusal may occur. A case study related to this tension over innovation in University C is taken up in Chapter 7.
Chapter 4: Talking Practices – how discourses shape online learning

In addition to setting down the issues and commentary in the coding notes, the grounded theory procedure of writing memos while coding for later investigation or verification, was followed. A sample memo in Victor’s coding document compared Victor’s orientation to innovation with Paul, his counterpart as an academic manager in University B, as shown in the MEMO in Table 4.9:

Contrast to Paul: V puts the case that innovative directions can’t be refused because its open source. Paul “guides” people to the preferred choice from an ROI [return on investment] perspective, not on T&L [teaching and learning] grounds. (Table 4.9)

This memo identified the recurring issue of contrasting orientations to management of online learning, here expressed as a difference between Paul and Victor in their comparable roles in their respective universities. This issue was taken up in a case study in Chapter 5, in which different orientations to institutional learning technologies framed approaches to staff development in online learning.

The final component of the coding process was to mark issues raised by speakers for follow-up in a post-interview contact, either formally or informally. One such example occurred in the coding notes to Victor’s interview, in which the researcher recorded a note to follow-up on the “outcome of trial of LCMS”, that is, the university’s testing of proprietorial learning content management systems (Appendix 4.5, Coding notes for Victor):

28 June 07: Victor confirmed my suspicion that the LCMS trials resulted in no further development in this area, except the library has taken an interest (Appendix 4.5)

This result was replicated in a pilot LCMS project in University B (see Chapter 8; Appendix 8.1). This shift was also reflected in the literature as a trend away from LCMS towards less complex, more mobile systems for managing online learning (Johnson, Levine & Smith, 2008; Siemens, 2006; Friesen, 2003; Brabazon, 2002), with the interest in content management being taken up as an application to library systems. This follow-up note from coding memos identified two institutional trials of corporate content management systems applied to university online learning7, reflecting a broader, global trend. The outcome of the trials was that the systems were found not to suit institutional teaching and learning needs. Arising from these instances are questions of what perspectives and discourses the university drew upon to design and manage its online learning strategy.

The coding document for each interview followed this process of identifying the issues of concern for speakers, with commentary and memos on the links to the data and theoretical perspectives, with notes for later follow-up. Victor’s coding document

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7 An LCMS, a learning content management system, was being implemented as a pilot project for organising online learning resources at each of the three universities. See Chapter 8 (8.5).
identified links to the constituents of his practice: to the implementation of the university LMS, to the policy strategy which informed his manager role, and to his role as a researcher reflecting and publishing on these processes. His coding document provided a map to the assemblage of interacting entities that constitute his practice, as shown in Table 4.10.

Table 4.10: Mapping Victor’s practice

<table>
<thead>
<tr>
<th>Roles</th>
<th>Interview transcript</th>
<th>Factors shaping practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Manager (Director, Flexible Learning)</td>
<td>▪ Coding notes:</td>
<td>▪ University online teaching and learning strategy</td>
</tr>
<tr>
<td>▪ Research academic</td>
<td>▪ local context</td>
<td>▪ Victor’s interpretation of that strategy</td>
</tr>
<tr>
<td>▪ Innovator in online learning</td>
<td>▪ coding</td>
<td>▪ Design and implementation of LMS</td>
</tr>
<tr>
<td></td>
<td>▪ commentary</td>
<td>▪ Victor’s research publications</td>
</tr>
<tr>
<td></td>
<td>▪ memos</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ follow-up</td>
<td></td>
</tr>
</tbody>
</table>

The coding process performed the critical function of the double analysis referred to in the previous chapter (3.2), described by Holstein & Gubrium (2008) as “analytical bracketing” (p. 189-190), or analytical indifference, in which the researcher alternately attends to the *whats* of the interview, that is, the speakers’ primary concerns, and the *hows*, the manner in which the speaker builds the social reality of his or her practice. The coding process accumulated researcher’s comments and notes for the next stage of analysis, categorisation, which enabled a process of constant comparison (Strauss & Corbin, 1998, p. 89) to identify themes, consistencies, tensions and patterns across the data.

**From coding to categories: assembling practice**

After completing the elaborated coding of transcripts, as in the example of Victor in Table 4.9, the codes for each participant were grouped into categories to reflect the main concerns of the speaker. The following extract shows how Fran’s coding notes were grouped categories (from Appendix 4.6: Categories for Victor, Fran and Lia). In Figure 4.5 below, Fran’s codes appear in summary form under three categories. Again, the summaries were compiled as unedited field notes (see Appendix 4.6 for the full version).
Figure 4.5: Extract of Fran’s categories and codes

<table>
<thead>
<tr>
<th>Fran: Categories and codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORK PRACTICES: TEACHING ONLINE</strong></td>
</tr>
<tr>
<td>- <strong>workload/efficiency</strong>: actual marking is efficient, but electronic marking requires significant processes before and after marking, ‘a significant amount of time before the fact’, and formerly administrative work is shifted to teaching staff.</td>
</tr>
<tr>
<td>- <strong>workload/shift to online</strong>: Eg. 4000 assignments are marked via [online assignment system], U’grad Nursing program driven by economics</td>
</tr>
<tr>
<td>- <strong>marginalised students</strong>: Eg. exceptions: not accommodated by new systems, which disadvantages students: conflict with university’s policy on equity</td>
</tr>
<tr>
<td>- <strong>workload</strong> – Fran had 13 discussion groups’, which is ‘time-consuming’</td>
</tr>
<tr>
<td>- <strong>personal interaction</strong> with ‘about 700’ students. Real issues on how to manage this</td>
</tr>
<tr>
<td>- <strong>group participation process online</strong> ‘very protracted’, much easier to solve problems FTF [face-to-face]</td>
</tr>
<tr>
<td>- no expected technological literacy, spend more time online with students with problems,</td>
</tr>
<tr>
<td>- ‘depersonalising the students’: CMC [computer mediated communication] increases sense of distance for students,</td>
</tr>
<tr>
<td>- <strong>so that's wonderful</strong>: designed courseware simulation interactive where, ‘the actual psycho-motor skill’ is replaced by ‘an activity on the screen’</td>
</tr>
</tbody>
</table>

**TEACHING ‘A HUMAN BASED PROFESSION’ ONLINE**

- **modelling**: ‘how they develop those skills is modelling on our behaviour’ online, which is ‘less empathetic and more businesslike and efficient.’ ‘Reading’ the non-verbal, the ‘subtle cues’ of ‘visual assessment’
- **real skill** of using technology: ‘to have it be able to acknowledge that humanity still,’
- **are we at the computer**: more time planning the use of technology less time with student or patient.
- **many participants** in this professional encounter
- **security** of electronic records and confidentiality are issues not thought through
- **so internalised and automatic**: articulating one’s own practice - the difficulty of nurses to “define what they did and how they did it”, see Val Adams’ [2007] paper.

**ASSESSING TECHNOLOGY**

- “Our question”: ‘how do you teach the humanity, in terms of having it online’
- **technology as adjunct**: Fran proposes a ‘humanistic model’ which places technology off centre stage. Technology ‘as an adjunct to what we do not as a barrier.’

Fran’s three categories arise from clustering her codes. The categories indicate how Fran’s concerns with her online learning practice are expressed differently from those of Victor in Table 4.9, both of them from University C. Where one of Victor’s primary concerns was with the tension between managing innovative learning technologies and institutional policies, for Fran it was the impact of managed technological change on her teaching program, and on her colleagues and students. In the first category, she described the effects on her of a large-scale shift to online learning: on students, on staff workloads. In the second, on the implications of teaching hands-on, professional health.
practices primarily online. In the third category, she reflected on the process of adoption of technologies for the health profession and how they can be assessed in a context of use.

**Assembling provisional holistic categories**

After completion of coding for all interview participants, categories were developed for the four roles that were mapped to Collis and Moonen’s model in Figure 4.1. In one of these roles, the categories that emerged for the four *manager academics*, including Victor, were clustered to reflect similarities and contrasts. Categories for the academic managers are shown in Table 4.11 (condensed from Appendix 4.7: Provisional categories by role).

<table>
<thead>
<tr>
<th>Table 4.11: Categories for academic managers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manager academics: Victor, Paul, Monica, Sylvia</strong></td>
</tr>
<tr>
<td><strong>Teaching and learning online</strong></td>
</tr>
<tr>
<td>- approaches to teaching online</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Institutional strategies for online learning</strong></td>
</tr>
<tr>
<td>- responses to institutional demands</td>
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<td></td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Working with learning technology systems</strong></td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Changing</strong></td>
</tr>
</tbody>
</table>
Chapter 4: Talking Practices – how discourses shape online learning

<table>
<thead>
<tr>
<th>academic work</th>
<th>Online learning as less “real” vs as new forms of engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>- ‘I don’t think we cater for them (innovators) well enough still’ (Victor, contrast Paul).</td>
<td></td>
</tr>
<tr>
<td>Efficiency and workload - Monica’s demonstrates efficient teaching online. Contrast with Fran in same School.</td>
<td></td>
</tr>
<tr>
<td>- Managing cultures online: clash of East-West teaching cultures as well as business cultures. ‘Asking students to answer a question is like drawing blood from a stone.’ (Sylvia)</td>
<td></td>
</tr>
<tr>
<td>Shifting to virtual learning</td>
<td>Text online was not as real: ‘If it’s online all this discussion, participation, and challenge is by words. It’s not as real.’ (Sylvia). Contrast with Monica’s quest for online dialogue for large cohorts, and Vicki and Barb’s building community via online literacies</td>
</tr>
</tbody>
</table>

For the group of academic managers, these categories expressed both shared concerns and disparate perspectives on practice. Shared concerns included institutional, economic and policy demands, student demands, staff development and adaptation to online learning by academics, the capabilities of learning technologies, and the consequences of their deployment. Tensions were expressed in variations within categories: Victor was concerned that institutional quality assurance processes were “dampening down innovation”, and wished to “capture a good idea” and support initiatives in online learning. He summed up his view with a metaphor, “the academic makes the decision, you know, we provide the paint pots” (see the first category in Table 4.11). In contrast, Paul, from University B, prioritised teaching delivery and instructional design, directing online learning towards compliance with existing infrastructure and institutionally supported system technologies. Monica (University C, from the same Faculty and School as Fran) was concerned that the technological capability for teaching large cohorts of students meet faculty strategic needs, and that it work both efficiently and effectively. Sylvia, however, responded to evidence from her market research (2. Manager academics, Appendix 4.7) of the lack of appeal in online learning for international students, and planned to reduce the reliance on technologies in her distance program. All participants in this group articulated a “gap between policy and implementation” of learning technologies in their own contexts.

After categories were assembled for each practitioner role (samples in Appendix 4.7), a set of provisional categories were developed from the whole corpus of data. The intention was to capture the issues of concern reflected in the categories holistically over the sample of practitioners. Issues were grouped based on similarities arising from different practice contexts, and category names were reformulated to arrive at a list of overall provisional categories, shown in Figure 4.6.
Figure 4.6: Provisional categories for all participants

<table>
<thead>
<tr>
<th>Provisional categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and learning online</td>
</tr>
<tr>
<td>• strategies for a shift to teaching online</td>
</tr>
<tr>
<td>• mass learning approaches</td>
</tr>
<tr>
<td>• engaging students in learning online</td>
</tr>
<tr>
<td>• interculturality, language diversity and online learning</td>
</tr>
<tr>
<td>• building learning communities and literacies online</td>
</tr>
<tr>
<td>Institutional strategies for online learning</td>
</tr>
<tr>
<td>• policy, implementation and competitive pressures</td>
</tr>
<tr>
<td>• content management and learning objects, emphasis on content or presence</td>
</tr>
<tr>
<td>• flexibility, interpretations of</td>
</tr>
<tr>
<td>• internationalisation of teaching and learning</td>
</tr>
<tr>
<td>• business approach to higher education, an economic model</td>
</tr>
<tr>
<td>• trends and future of online learning (Vicki, Wendy, Paula, Craig, Victor – his paper)</td>
</tr>
<tr>
<td>• working with organisational change in online teaching and learning</td>
</tr>
<tr>
<td>• working with innovative teaching and learning practice</td>
</tr>
<tr>
<td>• working with policy and professional development strategies</td>
</tr>
<tr>
<td>Working with learning technology systems</td>
</tr>
<tr>
<td>• working with learning management systems and institutional technologies,</td>
</tr>
<tr>
<td>• adoption of and resistance to technologies, “patchy” adoption (Vicki)</td>
</tr>
<tr>
<td>• working with information technology units in universities</td>
</tr>
<tr>
<td>• using innovative approaches to learning technologies, open source approaches</td>
</tr>
<tr>
<td>• risk, trust, standards, compliance and constraints, non-compliance</td>
</tr>
<tr>
<td>• the technology learning curve and training gap</td>
</tr>
<tr>
<td>• managing technology projects</td>
</tr>
<tr>
<td>• multimedia development – functionality</td>
</tr>
<tr>
<td>Changing academic work</td>
</tr>
<tr>
<td>• valuing practice and workload issues</td>
</tr>
<tr>
<td>• sharing knowledge and collegiality</td>
</tr>
<tr>
<td>• plagiarism and assessment with digital texts</td>
</tr>
<tr>
<td>• managerialism and pressure on academic practice – economic/teaching/research</td>
</tr>
<tr>
<td>Shifting work online</td>
</tr>
<tr>
<td>• deficit view of online learning as less teacher-student contact</td>
</tr>
<tr>
<td>• trade-offs, workarounds, exceptions produced by learning technologies</td>
</tr>
<tr>
<td>• how to model professional practice online (Fran, Margaret)</td>
</tr>
<tr>
<td>Topics that don’t fit</td>
</tr>
<tr>
<td>• building online communities (Francis, Jack)</td>
</tr>
<tr>
<td>• working globally by the Internet (Francis)</td>
</tr>
<tr>
<td>• IT consultancy &amp; project management – issues with online work communication – control vs mentoring &amp; sharing. (Henry)</td>
</tr>
<tr>
<td>• “feedback and assessment software” (Mick)</td>
</tr>
</tbody>
</table>

Five provisional categories were developed from the corpus of data: Teaching and learning online, Institutional strategies for online learning, Working with learning technology systems, Changing academic work, and Shifting work online, that is, the shift
Chapter 4: Talking Practices – how discourses shape online learning

of work (and learning) to virtual spaces and processes. These provisional categories grouped the main issues of concern (the *whats*) across the sample of practitioners, and summarise the types of practice issues raised by speakers: concerns with teaching and learning online, with institutional strategies, with technologies for practice, and with the changing nature of academic work related to networked technologies. Some particular topics occurred infrequently, or emerged from contexts too specific to be included in categories (see "Topics that don't fit").

After categorisation of the whole corpus of data, the next methodological stage (from Figure 4.3) was the identification of rhetorical patterns and interpretative repertoires (the *hows*).

**Identifying emerging discourses**

The methodological progression from categorisation to identifying interpretative repertoires involved a problematisation approach (Chapter 3.1), in which the issues of concern expressed in speakers’ accounts were examined as *dilemmas of practice*. These dilemmas were identified across each practitioner role defined group, and the patterns emerging from these dilemmas within groups reflected consistency and variation around a discourse. The emerging discourses are shown in condensed form in Table 4.12 (from Appendix 4.8).
Table 4.12: Emerging discourses for each practitioner group (Appendix 4.8)

<table>
<thead>
<tr>
<th>Practitioners</th>
<th>Dilemmas of practice</th>
<th>Emerging discourses of practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics (teaching)</td>
<td>“Massification” and diversity of student cohort. Hidden workload</td>
<td>Discourses of teaching online:</td>
</tr>
<tr>
<td></td>
<td>Diminished or constrained teaching ‘presence’ online</td>
<td>• “complementarity” and building relationships, engaging students</td>
</tr>
<tr>
<td></td>
<td>Tension between innovation and compliance</td>
<td>• technology delivery systems</td>
</tr>
<tr>
<td></td>
<td>The student as learner or customer</td>
<td>Discourses of institutional practice:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• academic autonomy and disciplinary learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• managerialism and performativity</td>
</tr>
<tr>
<td>Academic Developers</td>
<td>Top-down implementation: Lack of take-up and resistance to LMS.</td>
<td>Discourses of academic development:</td>
</tr>
<tr>
<td></td>
<td>Loss of autonomy for academics with designing online learning content.</td>
<td>• Enabling staff in use of learning technologies</td>
</tr>
<tr>
<td></td>
<td>Role ambiguity of academic developers – implementing or interpreting policy</td>
<td>• Guiding staff in use of institutional technologies</td>
</tr>
<tr>
<td></td>
<td>Teaching online: transformative or disastrous experiences</td>
<td>Discourses of organisational change:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Institution-wide strategies for training in learning technologies,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• academic autonomy in relation to use of learning technologies</td>
</tr>
<tr>
<td>Academic Managers</td>
<td>Gap between policy &amp; implementation:</td>
<td>Discourses of online learning:</td>
</tr>
<tr>
<td></td>
<td>• poor take-up of learning technologies;</td>
<td>• Model of teaching as delivery: scaling up and operationalising online teaching and interaction</td>
</tr>
<tr>
<td></td>
<td>• ‘gap’ between policies and capability of system technologies</td>
<td>• Model of technology to enhance teaching and learning</td>
</tr>
<tr>
<td></td>
<td>Scaling up online delivery</td>
<td>Collegiality and autonomy: Do academics belong to the discipline or the institution</td>
</tr>
<tr>
<td></td>
<td>Autonomy of practice: splitting online teaching into design and delivery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Managing innovation and handling compliance</td>
<td></td>
</tr>
<tr>
<td>Online Support</td>
<td>Working with a mismatch in attitudes to learning technologies between management and teaching academics</td>
<td>Competing views of online support:</td>
</tr>
<tr>
<td></td>
<td>Working with academics as continually re-training, ‘you’re never going to win’ (Robert)</td>
<td>• Institutional change management strategy for the diffusion of technologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Facilitation of teaching staff to adapt to learning technologies</td>
</tr>
<tr>
<td>VET (Further Education)</td>
<td>Conflicting models of online learning: Teaching as managing students vs learning.</td>
<td>Models of online learning:</td>
</tr>
<tr>
<td>teachers</td>
<td></td>
<td>• Controlled systems: Institutional needs drive learning technologies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Engagement with learning drives use of learning technologies as open-ended</td>
</tr>
</tbody>
</table>
This analysis of emergent discourses can be elaborated through the example of the largest group of practitioners, the 17 teaching academics (the first row in Table 4.12 above). These individuals articulated dilemmas of their online learning practice which can be clustered as consisting of four main issues:

- the “massification” of learning (Land, 2004a, p. 532; Lewis et al., 2005, p. 66), in which making provision for increasing student cohorts is associated with technological solutions
- the perceived diminishing teaching presence and student contact with online learning
- the tension between innovation in approaches to teaching online and compliance with institutional technologies
- the impact of the customer oriented student on teaching and learning

In response to these dilemmas, speakers articulated their practice in terms of recurring discourses. For instance, Wendy appealed to the notion of teaching as building engagement with students, or “complementarity” (Wendy, Academics, Appendix 4.8), when she framed a strong response to a perceived rationalist discourse that shaped her workload and teaching conditions. Paul, on the other hand, drew on this rationalist discourse of technology by arguing that strategically directed online learning systems offered the best outcome for teaching and learning and return on investment for the institution (Paul, 2. Manager academics, Appendix 4.7).

In further instances, reported experiences of the effects of managerialism presented dilemmas for approaches to online teaching. Some responses – gestures of resistance, token engagement with learning technologies – were defended through an appeal to a culture of collegiality and academic autonomy (Jack, Margaret and Craig, 3. Academics, Appendix 4.7; Academic Developers, Appendix 4.8).

In the final step towards the articulation of discourses of online learning practice, these emerging discourses were compared across practitioner groups and developed into an overall set of interpretative repertoires.

**Translating core categories into interpretative repertoires**

The arrival point for this chapter is the development of core categories and interpretative repertoires from the accounts of all practitioners.

Interpretative repertoires were described by Potter and Wetherell (1987) as “recurrently used systems of terms used for characterizing and evaluating actions, events and other phenomena” (p. 149), and are a means of identifying shared or disparate orientations to practice in speakers’ accounts. Interpretative repertoires arise as speakers attempt to

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8 These contrasting discourses are taken up in Chapter 5 (5.3) in the case of Paul, and in Chapter 6 (6.5) for Wendy.
resolve dilemmas, explain or defend their actions through drawing on specific discourses (p. 116). As practice discourses are goal directed and action oriented (Chapter 4.1; Schatzki, 2001; Potter, 1996, p. 105), they are constitutive of the social practices of online learning.

The methodological progression from categories to discourses involved the translation of one form of analytical data to another: from the categories that arose from problematising the issues for speakers and authors, to the discourses used by a speaker in accounting for an issue and resolving it in practice. The interpretative repertoires that were identified for the sample of practitioners were those recurrent “ways of talking” (Edley, 2001, p. 198) used by speakers to account for their practice and resolve their dilemmas.

The synthesis of issues of concern into core categories, and the identification of interpretative repertoires or coherent “ways of talking” linked to those categories will be shown in two steps.

**STEP 1: CORE CATEGORIES**

A set of core categories were produced by comparing the provisional categories (Figure 4.6) across practitioner groups and reformulating them to reflect the whole sample in a consistent way. The list of core categories is shown in Table 4.13.

<table>
<thead>
<tr>
<th>Provisional categories</th>
<th>Core categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and learning online</td>
<td>Teaching online</td>
</tr>
<tr>
<td></td>
<td>Engaging students in online learning</td>
</tr>
<tr>
<td>Institutional strategies for online learning</td>
<td>Implementing learning technologies</td>
</tr>
<tr>
<td>Working with learning technology systems</td>
<td>Academic development in online teaching &amp; learning</td>
</tr>
<tr>
<td>Changing academic work</td>
<td>Reconfiguring the academic for online learning</td>
</tr>
<tr>
<td>Shifting work online</td>
<td></td>
</tr>
</tbody>
</table>

The list of provisional categories in Figure 4.6 was further analysed for consistency across practitioner roles, and modified to produce five core categories which represented the participants’ main concerns in their online learning practice. The categories were modified as follows:

- the provisional category “Teaching and learning online” was separated into *Teaching online* and *Engaging students in online learning* to reflect the distinction in accounts between the shift to teaching online and student engagement, reflecting especially practitioners’ accounts of unexpected student approaches to technologies

- the core category *Implementing learning technologies* is a re-orientation around the concerns of both managers and online support staff.
Chapter 4: Talking Practices – how discourses shape online learning

- *Academic development in online teaching and learning* is a re-orientation around issues of staff development and the effects of technologies on teaching and learning environment, and

- *Reconfiguring the academic for online learning* reflects accounts of the transformative effects of shifting work to online spaces, including commentary on workload issues and the changing role of academics role.

The process of establishing core categories completes the analytical grounding of practice in empirical contexts that are ecologically valid for this enquiry. That is, the categories attempt to represent adequately the accounts of practitioners in their contexts of practice (see Chapter 3.4). Categories are overlapping rather than exclusive, and may reflect concerns about the same issue from different viewpoints or orientations. For example, a category distinction was made between *Teaching online* and *Implementing learning technologies*, activities which may interrelate and share concerns, but warranted separate categorisation in order to reflect different stakeholders, terminology and dilemmas that arose from speakers.

**STEP 2: INTERPRETATIVE REPERTOIRES**

The list of emerging discourses for each practitioner group, summarised above in Table 4.12, identified responses in practice to the dilemmas of practice for speakers. These emerging discourses reflected practitioner talk about practice in terms of binary opposites. For instance, a practice described in terms of “building relationships” for learning was contrasted with talk that used terms from the discourse of “technology delivery systems” (first row, Table 4.12). These discourse binaries can be organised as two types of orientation to practice: one that reflects a holistic approach to practice, seeking understanding, an emic, insider view; the other that is outward looking and outcomes focused, an etic, outsider view⁹. For each core category, two interpretative repertoires emerged as a tension or dynamic between two poles:

- a repertoire which has an internal, process or journey orientation towards individual practice
- a repertoire which has an external, production or outcome orientation towards institutional practice.

The interpretative repertoires for all participants are shown in Table 4.14 (a summary of Appendix 4.9: Categories and repertoires).

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⁹ This distinction parallels Brew’s (2003) two conceptions of research: “atomistic and synthetic with an orientation towards external products and where the intention is to produce an outcome, and on the other, conceptions which are holistic and analytical with an orientation towards internal processes and where the intention is to understand.” (Brew, 2003, p. 5-6). I am proposing that the orientations to practice in online learning parallel the orientations to practice in research.
Chapter 4: Talking Practices – how discourses shape online learning

Table 4.14: Interpretative repertoires of practice for all practitioners

<table>
<thead>
<tr>
<th>Categories</th>
<th>Dilemmas of practice</th>
<th>Repertoire which has an internal, process, journey orientation</th>
<th>Repertoire which has an external, production, outcome orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic development in online teaching &amp; learning</td>
<td>responding to strategies for adoption of learning technologies</td>
<td>Academic development as enabling staff in the adoption of technologies</td>
<td>Academic development as guiding staff in the use of institutional technologies</td>
</tr>
<tr>
<td>Teaching online</td>
<td>massification and student diversity of teaching and learning</td>
<td>Teaching as building relationships and a learning community</td>
<td>Teaching as flexible delivery valuing access and content</td>
</tr>
<tr>
<td>Engaging students in online learning</td>
<td>negotiating students’ use of learning technologies</td>
<td>Teaching as engaging students as a community of learners</td>
<td>Teaching as engaging students as customers with individual orientations to technologies</td>
</tr>
<tr>
<td>Implementing learning technologies</td>
<td>competing goals in implementation of online learning</td>
<td>Technologies to enhance learning and engagement</td>
<td>Technologies to deliver content flexibly for the institution</td>
</tr>
<tr>
<td>Reconfiguring the academic</td>
<td>responding to organisational change, workload demands</td>
<td>Academic practice as collegial, disciplinary</td>
<td>Academic practice as performance, managerial, entrepreneurial</td>
</tr>
</tbody>
</table>

Two points are noteworthy in this table. First, the interpretative repertoires are expressed as binary opposites, expressions which are not inconsistent with respect to the literature on technology and online learning discussed in Chapter 2. Second, these repertoire binaries reflect not that speakers necessarily held to one or other of what amounts to a strong position, but that practitioners by their accounts were located somewhere in between, or even at more than one position. The accounts of practitioners did not necessarily reflect opposing or mutually exclusive stances, and both poles could be accommodated, adapted and negotiated in practice. Wetherell and Potter (1988) note that:

> discourse is variable in the sense that one speaker will construct events and persons in different ways according to function … regularity cannot be pinned down to the level of the individual speaker. There is regularity in the variation. (p. 173).

These repertoire binaries make comprehensible the manner in which an individual may draw on two “opposing” repertoires in their descriptions or their account of their practice. Interpretative repertoires can be drawn on as a resource as a way of talking about practice to achieve particular ends, such as to resolve a dilemma or negotiate a practice. In the category Implementing learning technologies, practitioners drew upon two repertoires to describe their approach to online learning: “technologies to enhance learning”, which focused on using technologies for engagement, and “teaching to deliver content flexibly”, which focused on technologies offering scalable access to content. In
Chapter 4: Talking Practices – how discourses shape online learning

attempting to resolve the dilemmas of their learning context, speakers drew on both contrasting repertoires. Three examples follow:

**Example 1:** Wendy stated a need to restore the values of learning to the university from the economic determination of its online learning strategy:

> I think honestly that the online strategy that the university wants to employ is largely based in an economic rationale, this thing about, you know, being efficient, using time, saving time, saving money, and if that’s your rationale, I just can’t see how it fits with an educational rationale – I want that one first … I’m not saying there aren’t elements of it that would actually make a lot of sense, but if we’re constantly thinking about “Hey, we’ll be more efficient …” (Wendy, p. 12)

In Wendy’s account she sought to reclaim the “educational rationale” for her practice, and reconcile “elements” of the “economic rationale”. Her dilemma was how to achieve this reconciliation between the university’s online strategy and her own practice. Wendy offered the term “complementarity” (Table 4.12) to describe the beneficial effect of using online communication as a complement to face-to-face learning:

> because I’m so interested in a relationship, and I’m sceptical that you can really develop that in the same way without face-to-face. I think online learning, online materials, can complement the face-to-face, but I just don’t think it should replace it (p. 4).

This quote from Wendy illustrates the second row in Table 4.14: her account exemplifies the category *Teaching online*, her dilemma is the effect of *massification* on her teaching practice, of large student cohorts reflecting high levels of linguistic and cultural diversity. Wendy attempted to negotiate her own practice from the repertoire *teaching as building relationships*, a summary term that captured her own articulation and rhetoric of her practice (“relationship”, “complement”, “face-to-face”, in the above quote). This repertoire was in tension with the institutional repertoire *teaching as flexible delivery*, and she proposed a practice of teaching online as a “complement” to face-to-face teaching.

**Example 2:** The category *Reconfiguring the academic* and its related repertoires of academic culture carry no explicit reference to online technologies. However, the dilemmas upon which both category and repertoire are founded, “responding to organisational change, and workload demands”, emerge from the reconfiguration of the university by networked technologies (Lewis et al., 2005; Barnett, 2000, 2004; Cornford & Pollock, 2003). These authors identified the co-existence of disparate academic practices and cultures (discussed in Chapter 3.1) that overlap as networked technologies reconfigure the “virtual university” (Lewis et al., 2005). This convergence of competing academic cultures onto government and economic discourses has the effect of intensifying tension within academic practice. Wendy’s attempt to resolve her dilemma
between efficiency needs and her own teaching approach is illustrated by her statements
drawing on the two competing repertoires of the category *Teaching online*.

**Example 3:** The category *Engaging students in online learning* encompassed the
variations in the ways students were reported to engage with networked technologies.
These were accounted for through multiple discourses: as a member of a community of
learners, as a customer, and as a strategic user of communication technology. The
notion of the independent, student-centred learner, with its own pedagogical derivation
(Ramsden, 2003; Rust, 2002), was translated through networked technologies into the
expression of individual preferences through the discourse repertoire of the customer.
These enactments of multiple discourses in online spaces had unexpected effects on
teaching and learning practice, according to accounts by practitioners. This multiple
enactment of the student online is discussed in Chapter 6.

The core categories and interpretative repertoires that emerged from the accounts of
practitioners, shown in Table 4.14, represent holistically the orientations to online
learning practice from the practitioner sample. From these repertoires, a number of
controversies of practice were derived, which are explored as case studies in
forthcoming chapters.

### 4.3 From controversies to cases: constructing new knowledge about practice

The construction of case studies is the final outcome of the methodology for this enquiry.
The strategy of enquiry applied methods of holistic analysis that problematised a sample
of practice contexts, applied methods of holistic analysis to that sample, to produce
controversies on which to construct case studies of authentic descriptions of practice.

One of the intentions of this enquiry, to build new knowledge about practice in online
learning, is met by the case study approach. The potential for case studies is to offer the
reader more than insight into practice, it is to offer experiential learning which is both
relevant and useful (discussed in Chapter 3 (3.4)). Robert Stake (2008) points out that
the case study research process:

> emerges from one social experience, the observation, to choreograph another, the report.
> Knowledge is socially constructed – or so we constructivists believe (see Schwandt,
> 2000) – and through their experiential and contextual accounts, case study researchers
> assist readers in the construction of knowledge. (p. 134)

In Stake’s description, case studies are a translation of experiential knowledge into a
report, organised around research questions or issues, in which the reader is oriented to
issues as “complex, situated, problematic relationships” (p. 126). The value and
contribution of case studies is through their specificity rather than their generality,
developing in-depth narratives and “thick descriptions” of the case’s own issues. Just as the fields of medicine and law use cases to “bridge the gap between foundational studies and practice” (Berg, 2001, p. 225), similarly, in the field of higher education, case studies can offer the reader insider knowledge that is not available from theoretical perspectives, in the form of a new shared understanding of knowledge according to its practitioners. The aim is to develop “what is perceived to be the case’s own issues, contexts, and interpretations, its thick descriptions” (Stake, 2008, p. 128, author’s italics).

Stake (2008) suggests that the usefulness of a case is greater as the case itself is “a specific, unique, bounded system” (p. 121). Since it offers an experiential account, the useful case has implications for its practitioners. Stake (2008) suggests that while a case may be selected as typical, its “potential for learning is a different and sometime superior criterion to representativeness” (p. 130).

It is this sense of “different” which scopes the case studies in the following chapters, and leads towards the goals of this enquiry in greater understanding of a field of practice. The purpose of producing case studies is not simply illuminative, it is to develop a different type of analysis of technology-related projects in higher education organisations, one which breaks from the business process or information view (Cornford & Pollock, 2003). This difference is the “potential for learning”, and case studies offer an alternative, or less often encountered, means of forming ways of relating to technologies, that is, a different approach to “the necessary ways of practising technologies” (Law, 2000).

There is, nevertheless, a tension between the focus on the particular and the possibility for generalisation in case studies, and the usefulness of a case’s particularity may lie in its implications for change in practice, and the extent to which practitioners can learn from and apply the case. This tension is paralleled in the discussion in this chapter (4.2) concerning the analytical emphasis on the hows of ethnomethodology compared to the whats of Foucauldian analysis, and Holstein and Gubrium (2008) emphasise the interplay between these two in their discourse analytical approach (p. 182-9). This tension is expressed in this study as the link between the emic, insider view and the etic, outsider perspective (Denzin & Lincoln, 2008, p. 16). This link becomes productive for case studies in a field of practice which articulates globally, such as online learning in higher education. This dynamic is explored in the chapters that follow.

Returning to the overall aims of this thesis, to explore and account for effects of networked learning technologies on higher education practice (Chapter 2.5), the case study approach offers responses to the critical issues of practice that are expressed as interpretative repertoires, a response that takes up the dialogic goal to “reclaim conflict” (Deetz, 1996. p. 199; Chapter 3.2). A set of controversies were framed as questions
arising from each interpretative repertoire. The controversies of practice around learning technologies, matching the dilemmas of practice in Table 4.14, are shown in Table 4.15.

Table 4.15: Controversies around learning technologies

<table>
<thead>
<tr>
<th>Interpretative repertoires of</th>
<th>Controversies arising from how learning technologies are:</th>
<th>Case studies concerning</th>
</tr>
</thead>
<tbody>
<tr>
<td>academic development approaches to adopting learning technologies</td>
<td>disseminated and adopted through the university?</td>
<td>Institutional strategies for online teaching and learning, and their dissemination</td>
</tr>
<tr>
<td>engaging students in technologies for learning</td>
<td>engaged with by students?</td>
<td>Negotiating student uses of learning technologies</td>
</tr>
<tr>
<td>teaching online to large, diverse cohorts</td>
<td>deployed by teaching staff?</td>
<td>Responses by teaching staff to institutional learning technologies</td>
</tr>
<tr>
<td>implementing learning technologies for competing goals</td>
<td>implemented and integrated through the institution?</td>
<td>Implementation strategies for institutional technologies applied to learning contexts</td>
</tr>
<tr>
<td>responding to organisational change</td>
<td>engaged with strategically through the institution</td>
<td>Responses to organisational change and teaching and learning policies</td>
</tr>
</tbody>
</table>

These questions reflect practice as expressed by practitioners at various levels of the organisation, at local contexts of teaching and learning practice, at the meso-level of implementation, technical support and academic development, and at the level of institutional strategy. These levels are represented in Figure 4.7, as locations for embedded and interdependent orientations to practice in the organisation.

Figure 4.7: Online learning in the organisation

These organisational orientations of practice map to the “key components” in Collis & Moonen’s (2001) model (Figure 4.1): institution (in a strategic sense), implementation, technology and pedagogy. Controversies are linked to organisational domains and practitioner roles, and exemplified in case studies. This alignment is shown in Table 4.16.
Table 4.16: Case studies emerging from discourse-based controversies

<table>
<thead>
<tr>
<th>Categories</th>
<th>Controversies</th>
<th>Practitioner as mediator</th>
<th>Focus (Collis &amp; Moonen, 2001)</th>
<th>Case study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic development</td>
<td>Competing strategies for adoption of learning technologies</td>
<td>Academic developers</td>
<td>Implementation Pedagogy</td>
<td>Chapter 5: Shaping online learning</td>
</tr>
<tr>
<td>Engaging students in online learning</td>
<td>Multiple forms of online engagement from students</td>
<td>Teaching academics</td>
<td>Pedagogy Technology</td>
<td>Chapter 6: Disorienting spaces</td>
</tr>
<tr>
<td>Teaching online</td>
<td>Pressure from mass learning environments</td>
<td>Teaching academics</td>
<td>Pedagogy Technology</td>
<td>Chapter 7: Breaking down online teaching</td>
</tr>
<tr>
<td>Implementing learning technologies</td>
<td>Conflicting demands of implementation and practice</td>
<td>Online support staff</td>
<td>Implementation</td>
<td>Chapter 8: Implementing learning technologies</td>
</tr>
<tr>
<td>Reconfiguring the academic</td>
<td>Organisational change effects, mismatch of policy and practice</td>
<td>Academic managers</td>
<td>Institutional strategy</td>
<td>Chapter 8: Implementing learning technologies</td>
</tr>
</tbody>
</table>

Four case study chapters take up the five controversies emerging from the interpretative repertoires. Following Merriam’s (1998) definition (discussed in Chapter 3.6), a case study focusses on a particular phenomenon, which may encompass more than one particular context. In Table 4.16, the categories reflect institutional role orientations of practitioners. The emergent controversies express the repertoires in a practice context and are the basis for the construction of the case studies. The cases align with the organisational orientations to practice corresponding to Figure 4.7 above, so that each case study exemplifies controversies of online learning through a particular practitioner focus or lens.

The case studies offer a relational analysis of the assemblage of people, technologies, discourses and materials which comprise that instance of practice. The practitioner as mediator identifies the key practitioner role in a controversy and case study. As the practitioner had some discretion in how a technology is put into practice, this individual acted as a mediator of the agency of practice in a particular assemblage, to claim, or delegate. The term “mediator” is used in Latour’s (2005, 1999b) sense, in which “mediators transform, translate, distort, and modify the meanings or the elements they are supposed to carry” (2005, p. 39). The contrasting term “intermediary”, describes a transmission process which “transports meaning or force without transformation” (p. 39). The repertoire of delivery expresses technology as an intermediary.

In the first case study, in Chapter 5, online learning is viewed through the lens of academic development, whose practitioners occupy a “hybrid, liminal” role (Manathunga,
Chapter 4: Talking Practices – how discourses shape online learning

The case concerns their dilemmas in implementing organisational change associated with the adoption of institutional learning technologies and forms of staff development. It explores intra-institutional perspectives through academic developers’ negotiation of institutional and pedagogic goals for online learning. The technologies of learning raise particular issues for pedagogy and the agency of practice related to institutional strategies for online learning.

Chapter 6 investigates the issues confronting teaching academics through the lens of student engagement in online learning. A mismatch of expectations emerged in accounts from practitioners in relation to uses of communication technologies. Students were reported to adopt multiple and unpredictable forms of online engagement that disrupted teaching approaches to online learning.

Chapter 7 considers the response of teaching academics to organisational change in the shift to online learning, and conversely, the response of the organisation to innovative online learning approaches, and the implications for local innovations in institutional contexts.

Chapter 8 investigates two phenomena. First, a study examines the rhetorical gap over several universities between strategic discourses of learning technologies and accounts of online learning practice. Second, the implementation of system technologies is examined through the lens of two types of practitioners: academic managers who implement institutional strategies, and learning technologists (online learning support staff) who implement technology systems. These two studies investigate how project and practice goals intersect and are resolved between practitioner roles in practice.

Limitations of this enquiry

This enquiry into the complex field of online learning in higher education entails inherent methodological challenges and limitations. I designed an emergent methodology, rather than a theory driven, hypothesis testing one, around encounters with practitioners to explore multiple institutional orientations to practice, and gather data from both the “mess” of experiential accounts and documentation of authentic, situated contexts. I located myself as researcher-practitioner in the field of practice, and deployed methods of qualitative enquiry to obtain accounts of practice from a selected sample of practitioners. While the design of the methodology within an interpretive paradigm was described in Chapter 3, complex issues arise concerning the data comprising practice. I will attempt to address some possible concerns with aspects of the methodology and procedures through four “objections”, and identify the steps taken to establish and maintain trustworthiness and authenticity.
Chapter 4: Talking Practices – how discourses shape online learning

**Objection 1:** The scope of the study is too limited to make broad claims about online learning in higher education.

Scoping the research involved decisions that focused the enquiry and limited the field of study, including selection of participants and contexts for study in a systematic manner according to suitable criteria for effective research. This enquiry did not set out to emulate normative approaches to research in order to make generalised claims, or aim to amass a broad range of data about online learning. A broad scope of enquiry aimed at seeking factual knowledge in a social field of practice would be unlikely to provide in-depth analysis or bring the reader to a closer understanding of how practice occurs. To seek generalised claims in this field would be fraught with problems, since practice is not usefully understood as conforming to universal laws, but (following Bourdieu, discussed in Chapter 2,2), can be conceived of as activity that occurs in a configuration of relations, agents, and contested boundaries, as activities that are dynamic and in tension.

The enquiry, therefore, was designed as an in-depth rather than broad study, and explored practice from the participant sample over a range of institutional contexts and through a diversity of roles, over more than two years of data collection. The interpretive research approach was deployed to obtain rich experiential accounts of some of the interesting ways in which practice is assembled, to produce case studies constructed on the basis of relevance and usefulness for the practitioner reader (see Chapter 3.6), and capture some of the powerful discourses that shape practice.

**Objection 2:** Participants were selected to match an implicit agenda based on empathy with the researcher’s online learning practice.

The adoption of a heuristic approach involved a practitioner-researcher setting up an interview encounter which was based on shared interests and common perspectives, therefore there was potential for an empathetic encounter in which account reflected the interviewer’s agenda. This effect was addressed in the plurality of the practitioner sample, and the explicit process for interview. In the process of selecting practitioners (Chapter 4.1), a broad range of participants accepted invitations for interview across three universities to comprise a sample of five distinct practitioner roles (Table 4.3). The selection process was based on stratified purposeful sampling (Patton, 2002, p. 243), and the composition of the final sample was loosely guided by the components of Collis and Moonen’s (2001) model (Figure 4.1): academic managers were located in an institutional and implementation perspective, online support staff provided a technological perspective, teaching academics the pedagogical view, and academic developers crossed over different perspectives. The sample also reflected an interdisciplinarity which helped to offset the potential for narrow or skewed responses.
Chapter 4: Talking Practices – how discourses shape online learning

The interview agenda was explicit: the set of semi-structured interview questions (Appendix 3.1), approved by three university ethics committees, was forwarded to the selected participants prior to the interview, accompanied by ethics related information, and requests to bring to the interview a specific project and for follow-up contact (Appendix 4.2: Example of introductory communication). Practitioners presented varying perspectives on the same context of practice, reflected in the terminology and concerns raised, with academic managers and online support staff presenting particular instances of this in-group variation. The diverse range of practitioner roles lessened the potential for a common, researcher-biased perspective, and the accounts reflected practitioners’ own varied agendas and role-defined goals.

Objection 3: The interviews were conducted by leading questions which pre-structured responses to accord with the interviewer perspective.

The interviews aimed to gather experiential accounts in order to build a rich description of a specific context of practice, and develop an in-depth, critical response to issues arising from each context of practice. The enquiry, therefore, was not confined to an interview encounter, but encompassed an interrogation of associated artefacts and projects of practice, and framed by researcher/participant contact over an extended period. During the interview, the questions functioned as trigger questions and markers for re-orienting the dialogue to the concerns of the enquiry. Hence the interview performed two functions: first it established a common understanding concerning the enquiry so that the participant could locate their online learning practice, and second, it problematised practice by focussing on effects and materials associated with a specific context, to elicit dilemmas of practice from situated accounts of online learning.

The results from coding analysis and categorisation demonstrated similarities and variation between practitioner groups. There was consistency in the categories reflecting issues of concern between practitioner groups (Table 4.11, Appendix 4.9: Categories and repertoires), and also variation in the terminology used in accounts of practice (Table 4.7), and in the emergent dilemmas of practice (Table 4.12, Appendix 4.8). The transcripts of interview demonstrate a dialogue that indicates practitioner-led topics of discussion: their current activities, how these were configured in the institution, associated artefacts and technologies, and the issues of concern which arose for speakers. Therefore, the specificity of the interview accounts reflected the practitioners’ perspectives on their context of practice, rather than that of the interviewer.

Objection 4: The researcher’s questions resembled a conversation rather than an interview.

The interviews did in fact resemble conversation which were informal in style, nevertheless they were not casual, everyday conversations. The encounter was a
dialogue which constituted a joint enquiry into the participant’s practice within their field of expertise, in cooperation with the interviewer’s informed interest. The model of interview was reflective rather than adversarial, nevertheless the interviewer sought to ground the account through evidence in the form of material effects of practice. The agenda for the interview commenced with the interview questions, then shifted to the specific project brought by the participant. In this open-ended style of interview, participants were encouraged to bring their own terminology and interpretations to their account (Silverman, 2001, p. 17). The transcripts indicate that speakers did not follow the interview question list, nor a set of pre-determined topics and issues, rather, they reflect variation in topics, terminology and concerns across the sample, providing evidence that the agenda of discussion followed the participants’ account of practice. Further evidence of this variation is that several topics, and indeed several interviews, followed trajectories that drew them outside the scope of the enquiry, indicated by the list of “topics that don’t fit” at the end of the list of provisional categories in Figure 4.8. Finally, the span of the enquiry, across a set of bounded institutional contexts of practice from three universities and over a duration of 27 months, offered a specificity and diversity in accounts that enhanced the trustworthiness of the analysis.

**Describing controversies of practice**

This enquiry approaches practice as fluid, dynamic and unpredictable, yet an outcome of Bourdieu’s “objective relations” between stakeholders in the field of higher education (Bourdieu & Wacquant, 1992, p. 104). Practice, therefore, is available as evidence and in material forms.

The final methodological stage is a translation of holistic analysis into particular cases constructed from the list of controversies. The case studies provide specific experiential descriptions of the controversies emerging from the analysis of accounts by the 28 sampled practitioners, developed as narratives that offer Stake's (2008) “opportunity to learn”. They apply the dialogic and relational perspective to selected practitioner contexts of practice, tracing the activities and orientations of teaching academics, academic developers, academic managers and online support staff. They will be used to respond to the critical issues for online learning raised in Chapter 2, concerning the reconfiguration of practice in online spaces, the overdetermination of its objects and activities, the immense level of investment for dubious outcomes, and the possibility of designing an approach to online learning in a way that supports practice.
Chapter 4: Talking Practices – how discourses shape online learning
Chapter 5

5. Case Study 1. Shaping online learning: Practices, dilemmas and technologies

One of the controversies from the broad analysis of practice is taken up in this chapter. This controversy arises from two categories in Table 4.16, Academic development and Implementing learning technologies (Chapter 4.3). It concerns how two imperatives for online learning are put into effect and reconciled: its institutional strategies, arrangements and dissemination through the university, and its practices in situated contexts of teaching and learning. Online learning is shaped at the intersection of these imperatives, and learning technologies are the common ground on which its practice is negotiated. In this chapter, I take up this intersection as a case study of the enactment of institutional online learning, and explore two ways in which practice in online learning is shaped. The study seeks to offer a case with “potential for learning” (Stake, 2008, p, 121), by making visible the tensions and conflicts that may be submerged in everyday practice, and describing potentially productive approaches to deployment of technologies for learning. I will follow a particular perspective on practice from the corpus of data, that of the “middle ground” of academic development, to enquire into how institutional online learning strategies are taken into academic practice, and the manner in which competing imperatives impact on practice, and the responses practitioners may bring.

Academic developers are located at a nexus between institutional strategy and local needs of academic practice, and work with the tensions and incongruencies that arise in everyday practice. In this case study, I investigate this nexus through accounts of academic development practice, based on interviews with academic developers and associated academics and technical support staff. The practices examined are approaches to professional development in online learning as a response to the organisational change, and the responses of practitioners to resolve tensions and conflicts that arise from these processes. The discourse analysis method of “interpretative repertoires” (Potter and Wetherell, 1987) is used to explore how dilemmas in practice are accounted for and resolved. Two contrasting repertoires were used to account for academic development: one that “enables” academic staff in their use of learning technologies, and another which “guides” staff in their online teaching towards specified technologies. The intersection of the two repertoires in the institution presented dilemmas for academic development, and the responses to these dilemmas and the implications for practice using institutional learning technologies are explored.
5.1 Introduction: Academic development as a hybrid practice

Academic developers, variously known as educational, professional, or staff developers, advisors, consultants or even learning technologists (Chapter 8.3), occupy an institutional position between the structural and pragmatic. Since the work of academic development is aligned with institutional needs and organisational change, academic developers are positioned within a confluence of factors which are institutional, technological and pedagogical. A “careful balancing act” is required (Wozniak, Scott and Atkinson, 2005, p. 741), between organisational project outcomes and the need to support and engage academic teaching staff in a productive way. As learning technologies pervade educational organisations, academic development has become critical to processes which are reshaping and transforming higher education. This change process is not confined to the teacher-student learning environment, but extends to most aspects of academic work: Goodfellow (2004) states “there is an inexorable process of penetration of technical processes into all aspects of course development, production, delivery, quality assurance, assessment, validation.” With this reconfiguration of learning, academic or staff development is an outcome of institutional strategy and is increasingly in demand (O’Connell, Benson, Samarawickrema, 2006; Shephard 2004, p. 76; Bird 2004). Learning technologies, however, cannot be assumed to be neutral, and act to open up teaching and learning to multiple stakeholders and participants, and therefore to a new politics (Roberts 2007). The practices of academic developers will necessarily play a part in this politics.

This chapter explores technologies in practice through academic developers who perform this “balancing act”, and how they work with the tensions and ambiguities that arise in their practice. Academic development in universities is constituted in various forms: it may vary in its constituent staff depending on an institution’s history and orientation, perhaps comprising “an ill-defined professional group” (Bird 2004, p. 123); there may be “blurring” of work roles between academic and non-academic staff (Wozniak et al 2005, p. 735). I am using the term to refer to academics in teaching and learning who work in an academic development team or context, which may encompass managers, advisors, consultants, educational and instructional designers, managerial and technical roles.

The literature around academic development confirms the presence of an undercurrent of uncertainty and ambiguity in its status, which periodically erupts. Some examples: issues concerning legitimacy of the role of academic developers in their own institutions (Brew 2006, p. 73); perceptions that the role is a remedial one involving academic teaching staff (McAlpine 2006, p. 4), concerns about the proximity of academic developers to a managerial ethos (Andresen 2000, p. 7), and tensions in the implicitly
colonial relations between developers and their client “Others” (Manathunga 2007). Brew highlights the hybridity of academic development practice, which is not fixed and its context is complex and uncertain, while academic developers “occupy the middle ground” between academics and academic managers (2006, p. 77). It is within this fluidity of contexts in organisational cultures that Ray Land (2001) identified “twelve distinct orientations to practice” (p. 4) to characterise the variability of the “strategic conduct” (p. 1) of academic development practice. Land presented a typology of orientations adopted by academic developers, including managerial, political strategist, entrepreneurial, romantic, reflective practitioner. These orientations of practice are not fixed, and not “personal characteristics” (p. 4), but relate to organisational contexts and cultures. This complexity extends to academic work in general and is subject to re-evaluation under the pressures of institutional imperatives (Greenbank 2006; Marginson 2000; McShane 2004). Nevertheless, the politics of academic work is especially present in this “in-between space” (Manathunga, 2007, p. 25) occupied by academic developers, and an exploration of practices in this space offers a particular lens through which to analyse tensions in academic work. There is little research on how academic developers themselves appraise their practice as a “careful balancing act” in the context of networked technologies and their effects on academic work. One example is a discussion of instructional design practice by Campbell, Schwier & Kenny (2005), in which they located the agency of practice in conflict between a notion of instructional design as a “rational, technical process”, and a dialogic “moral relationship” of the practitioner and client.

Academic developers are likely to be closely involved with flexible learning as both strategy and implementation. Willems (2005) considered “flexibility” in institutional discourse and in its local manifestations, and found disenfranchisement and competing agendas between multiple stakeholders in flexible learning, in which she included “politicians, managers, administrators, marketers, program and product developers, teachers, support staff, and students” (p. 434). There exists a gap between principles and actual teaching and learning effects in practice: the “rationales to support the implementation of the spectrum of activities associated with flexible learning” (p. 434). Pollock and Cornford (2002) described this gap as one between the potential of the “virtual” university and its realisation. They find that “less has been said about the actual ‘work’ involved” (p. 359). In their discussion of three failed online learning projects, they identified issues of the complex “work” of reconfiguration, where the issues were not with technology, nor with staff resistance, rather “the underlying problem is the sheer volume and complexity of the work required to configure people, machines, objects, texts, and money” (p.371). The implication is that the configuration of learning technologies and the work of educational developers to support this configuration is far more complex, volatile
and uncertain than is generally assumed. There are “challenges of supercomplexity” in the curriculum of the future, according to Barnett (2004, also 2000), which arise where there is “unpredictability and uncertainty in a global and pluralist world” (Barnett 2004, p. 257). Barnett posits educational transformation as an alternative to educational development, and calls for a new set of dispositions and practices for a “curriculum for supercomplexity” (p. 257).

The tensions described here, between institutional needs and local contexts of practice, reflect broader and historical issues with technology (discussed in Chapter 2.3) that were raised by Habermas (1987) and Feenberg (2005; 2002), concerning how practitioners work with the instrumental and rational processes of institutions, and whether a “democratic conception of communication” (Feenberg, 2005, p. 62) is possible in working with technologies in universities. Questions can be asked that have implications for academic work involving institutional learning technologies: namely, how do academic developers resolve the politics of their practice as they work with institutional strategies and technologies of teaching and learning? What can be learned from academic developers as they negotiate fluid organisational cultures with their “orientations to practice”? And what can be learned from them about how institutional technologies become embedded into teaching and learning practices?

It is this “actual work” that occurs in the localised settings of practice which is the focus of this study: the work of reconfiguration which occurs between the principles or potential of teaching and learning, and the practice. In this chapter, I analyse the accounts of academic developers and associated practitioners concerning issues arising from their work with learning technologies, and explore the variations in academic development as they resolve the issues of their “middle ground” in practice. The dilemmas and responses encountered by academic development staff with technologies have relevance for staff development across the higher education sector.

5.2 Methodology: Investigating dilemmas of practice
The research setting and participants
This study is a particular case of the research enquiry for this thesis. The interviews and analysis were conducted at an early phase of the enquiry with a sample selected from one practice context (Chapter 4.1, Table 4.5). The selection of academic development staff as a focus of the case study aimed to explore an aspect or layer of institutional online learning through the perspective of those who work in an in-between space of practice.

The case study focused one context in one location, that is, the strategies for online learning in one university’s teaching and learning support unit, referred to under the
pseudonym the Educational Development Unit (EDU), in University B. The single location provided an opportunity to explore the tensions and issues emerging within one educational development context within one university. Three practitioners in this setting were the primary focus for analysis, consisting of transcripts of interviews, records of follow-up communication, selected policy documents and an online unit of study.

While this narrow focus limits this analysis to the activities of one academic development organisational unit in University B, it offers comparison with practice contexts in similar educational development units in the two other universities from the corpus of data. The grounded theory method of contrast and comparison was used to balance accounts of the primary case study participants with practitioners in other locations. The practitioners involved in academic development in the larger enquiry\footnote{The sample of 28 participants from the corpus of data is listed in Chapter 4, Table 4.2} are shown in Table 5.1, and consist of 3 academic developers, 2 managing academics, and 2 technical online learning support staff.

<table>
<thead>
<tr>
<th>Practitioner</th>
<th>Position</th>
<th>Role</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom</td>
<td>Team Leader</td>
<td>Team Leader</td>
<td>University A</td>
</tr>
<tr>
<td>Rachel</td>
<td>Multimedia Developer</td>
<td>Multimedia Developer</td>
<td>University A</td>
</tr>
<tr>
<td>Barbara</td>
<td>Educational Development Advisor</td>
<td>Academic Developer</td>
<td>University A</td>
</tr>
<tr>
<td>Vicki</td>
<td>Lecturer</td>
<td>Academic Developer, Teaching academic</td>
<td>University B</td>
</tr>
<tr>
<td>Wayne</td>
<td>WebCT Trainer</td>
<td>Online support</td>
<td>University B</td>
</tr>
<tr>
<td>Paul</td>
<td>Acting Manager (Teaching and Learning)</td>
<td>Managing academic</td>
<td>University B</td>
</tr>
<tr>
<td>Victor</td>
<td>Associate Professor (Teaching and Learning)</td>
<td>Managing academic</td>
<td>University C</td>
</tr>
<tr>
<td>John</td>
<td>Lecturer</td>
<td>Academic Developer</td>
<td>University C</td>
</tr>
<tr>
<td>Robert</td>
<td>Team Leader</td>
<td>Online support</td>
<td>University C</td>
</tr>
</tbody>
</table>

The EDU in this case study was structurally located centrally within University B, separate from faculties, and its broad function was to build and support online learning and teaching for the university, mainly through the LMS, WebCT. Interviews were conducted with three staff from the EDU in University B: Vicki, Paul, and Wayne. Their roles, with other members of the unit, were to support academic staff in designing and teaching their online units of study within their faculty contexts, for both on-campus and off-campus teaching. Interviews were conducted in the workplace setting of participants, using the list of semi-structured questions for this enquiry (Appendix 3.1) to invite practitioners to provide a description and examples of their current activity, and articulate
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

the issues that concerned them about their practice with institutional learning technologies. The intention of the researcher was to encourage practitioners to shift away from understandings of their role available from organisational charts or structures, and describe their practice in terms of everyday activities and decisions. The interview encouraged participants to build an account of a complex social reality from their own explanatory perspectives and their response to the issues which confront their practice.

**Identifying themes and interpretative repertoires**

The purpose of analysing interviews transcripts was not to record and represent the activities and attitudes of speakers, nor obtain descriptions from which to construct the social worlds of participants. A discourse analysis approach was applied in order to analyse how those accounts of practice were organised, and how practitioners resolved multiple demands and institutional agendas, made decisions and crafted responses, and constructed the activities that constituted their practice. In this single institutional setting of the EDU, the variation in participants’ accounts of their practice offered an opportunity to compare how individuals configured their academic development practice.

Transcripts were analysed using elements of grounded theory (Strauss and Corbin 1998; Chapter 4.1) in order to identify themes that reflected their issues of concern in a systematic way\(^ {11} \). Following the identification of emerging themes, the technique of interpretative repertoires was used to explore the issues and incongruities that arose in practitioners’ accounts (see Chapter 3.2). As a type of discourse analysis, repertoires can be used as an analytical tool to identify how individuals resolve contextual dilemmas and achieve particular ends, and the specific rhetorical devices they deploy to do this (Potter & Wetherell 1987, p.155). Applied to data from interview transcripts, they provide a way to understand how participants give meaning to issues in their practice, and account for inconsistencies and dilemmas which arise.

**5.3 Analysis: Accounting for practice**

The analysis of transcripts from academic development staff in University B identified four themes, that are expressed in terms that attempt to capture practitioners own descriptions of the issues shaping their practice within the EDU, and the dilemmas entailed in their practice. Following this elaboration of themes, discourse analysis is used to explore how practice is organised by participants. Practitioners from other, comparable settings across the three universities were also brought to the analysis to provide a balancing or contrastive perspective (Table 5.1). The development of the themes is summarised in Appendix 5.1. The themes are shown in Table 5.2.

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\(^ {11} \) In this case study, themes were identified from transcripts of the EDU practitioners in University B. While this analysis for themes occurred prior to the holistic analysis of all participants that produced core categories in Chapter 4, it provides an in-depth case analysis of academic development that aligns with the categories of Table 4.16.
Table 5.2: Emerging themes for academic development

<table>
<thead>
<tr>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theme 1</td>
<td>Developing courses or developing staff</td>
</tr>
<tr>
<td>Theme 2</td>
<td>Implementing or adapting institutional strategy</td>
</tr>
<tr>
<td>Theme 3</td>
<td>Drawing together – systems or community</td>
</tr>
<tr>
<td>Theme 4</td>
<td>Reframing technology or reframing the user</td>
</tr>
</tbody>
</table>

Theme 1: Developing courses or developing staff  
All practitioners, at some point in their interviews, stated a position or a model for their practice in academic development. Vicki presented a model of “professional development” in which teaching staff are encouraged by academic developers to acquire the skills to design and manage their own online units of study:

We encourage people to have the skills to be able to. That it’s the same as knowing how to use Word. That you actually need to be able to develop your own materials for WebCT (Vicki).

The model proposed by Wayne, as a (non-academic) trainer, was also skills based:

We’ve got a professional development model towards online teaching and learning so that we are there to train people, get their skills up and assist where necessary, but not to, not in the main to develop content (Wayne).

With this reference to content, Wayne expressed concern at an existing implementation of the institution’s teaching and learning strategy in which projects were funded to produce instructionally designed exemplar online courses. Vicki echoed this concern, that awarding grants for online course design which the teacher cannot later modify, “is not really the model that we encourage”. This, she felt, was a model which did not support teaching staff, but was deskillling, or “disabling people”:

We’ve had people who have been successful with a grant. They have a subject, sort of, built for them, with their input around content and assessment tasks. So if there is a typo, they don’t even know how to get in and fix it. So that’s just sort of disabling people through the technology (Vicki).

Vicki’s preferred model was to enable staff to apply the online learning system to their own learning design. She described how she attempted to achieve this model of practice by aligning herself closely to one group (teaching staff), and distancing herself from another:

We actually need to infiltrate departments, we need to make friends with people, we really need to look like we are not just the handmaidens of whoever has decided that we’re all going to use it (Vicki).

Vicki disavowed herself from “whoever has decided” that learning management systems be used by “all”, despite her role as an agent of those decision makers referred to in her
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

description. In this alignment, she located a practice for herself and Wayne in the “middle ground” (Brew 2006, p. 77) between policy and staff needs, and between two institutional viewpoints.

A similar alignment was expressed by an educational developer in another organisation (University A). Barbara stated that those in her role were like “chameleons”. She defined their roles by contrast: not instructional design, not “technologists”, and roles not described by their formal position descriptions. For her, university teaching and learning strategies did not keep up with changes in technologies, consequently, “we actually have to adapt to whatever is the need”. She described her and her colleagues in academic development as one in which, “we don’t actually implement”. Rather, she positioned her practice with the practices of teaching academics, “my real approach is to build their capacity”.

Where Barbara described her role as capacity building, Paul’s model of staff development focused more on institutional capacity. He emphasised the design of online courses, and implied a separation of course design and content from teaching. He elaborated a preferred course of action in academic development:

If I had unlimited budget, what I would be doing would be employing a very strong team of instructional design specialists who would work in a team environment with subject matter specialists, and the instructional design specialists would be very conversant with the LMS (Paul).

Paul described his model of practice as placing “emphasis on the design of courses” and supporting innovators as exemplars who would, where possible, work in specialist teams. “You pick up the people who are willing early on then you use those as models” (Paul). For Paul, online course development was a key component of his role, particularly through the teaching and learning grants he coordinated, and he indicated a preference for the production of online courses, by teams comprising teaching academics with instructional designers as mentors. The downstream effects of instructionally designed courses were commented on sharply by both Vicki and Wayne. Vicki described the consequences of such courses as “disabling people”, by leaving developed courses unsupported once their funding was completed, and Wayne commented that their construction failed to develop the skill base of teaching staff to create and maintain their own online courses, and that the performance of this task defaulted to him.

Theme 2. Implementing or adapting institutional strategy

The institutional strategy of establishing a Web presence in all courses was described in a university teaching and learning policy document, to “Develop online learning components learning support in all units of study” (Learning and Teaching Support Functional Plan 2005-2007, Appendix 4.1). All three practitioners from University B
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

acknowledged this policy by expressing concern with the low level of adoption of online learning by academic staff. This policy statement that learning technologies be supported for all units, was given only oblique reference by Vicki and Wayne. Vicki acknowledged this policy but downplayed its significance, responding to an interviewer query whether placing all units online was mandatory, “I don't know that anyone's ever policed that, I think it's sort of an idea at this point”. Vicki and Wayne both identified staff uptake of online teaching as a primary concern, and observed that the extent of use of WebCT as “patchy”. Vicki expressed concern with the difficulties of reaching teaching staff, who she described as time poor and “overworked, overwhelmed”, and the high proportion of sessional teaching staff. She stated a limit to her engagement, “if there's any resistance at all, we can't do anything, we can't make people take it up”. (emphasis from audio recording).

Wayne was also ambiguous about policy. In the following extract, Wayne was asked if staff attendance in training sessions was a mandatory requirement for use of WebCT:

<table>
<thead>
<tr>
<th>Extract 5.1: I'd probably have to check out the formal policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicki: Yeah well, there was a bit of that here, wasn't there</td>
</tr>
<tr>
<td>Wayne: If that's right then I would have to look at policy I think, if you look at the formal literature that we put out</td>
</tr>
<tr>
<td>Vicki: I think technically you're supposed to</td>
</tr>
<tr>
<td>Wayne: Yes that may still be true</td>
</tr>
<tr>
<td>John: Mm</td>
</tr>
<tr>
<td>Wayne: but because I administer the workshops myself, um, and I'll tell people, people ring up and say &quot;how do I get a WebCT, um, subject set up &quot; and I say you just go to this location fill in a form and away you go</td>
</tr>
<tr>
<td>Vicki: And (just) give us a ring</td>
</tr>
<tr>
<td>Wayne: That's exactly right</td>
</tr>
<tr>
<td>John: And so you've got the free- freedom in the process of, um</td>
</tr>
<tr>
<td>Wayne: Yeah of</td>
</tr>
<tr>
<td>Vicki: What you might not have, but you do</td>
</tr>
<tr>
<td>Wayne: No I do anyway, I'd probably have to check out the formal policy, which I can do if you are interested in (Vicki, Wayne, John).</td>
</tr>
</tbody>
</table>

Despite hedging, Wayne took responsibility for the policy, “the formal literature that we put out”, but distanced his own practice from it, “technically you’re supposed to”, and finally reconfigured it: Wayne did not insist that teaching academics attend a mandatory WebCT training session, “because I administer the workshops myself”, but provided a more informal, one to one, type of support.
In this section of their spoken account, both Vicki and Wayne performed a tactical manoeuvre, in which they can be observed to place the mandatory requirement in the background, while they adapted the implementation of the online teaching and learning policy document to their own practice of “enabling” teaching staff. Their adaptation, nevertheless, supported the objective described in the original policy, in this case the increased uptake of learning technologies through WebCT.

Paul approached the dilemma of increasing staff take-up of online learning in a different way. He described a “gap” between the use of learning technologies and the lack of training among teaching staff, “the institution is able to do what individual academic staff are able to do, and you don’t get much above that”. This gap has the characteristics of an impasse in relation to teaching and learning policy goals. His strategy to address this gap was to support innovators as models for online education, reasoning that there was less risk of expending resources with reluctant adopters for little result. “You pick up the people who are willing early on then you use those as models to the people who are a bit more resistant” (Paul). These resisters included not only those reluctant to engage with learning technologies, but those eager to experiment with them. Paul set clear bounds to innovation, and he stated the university’s position: “the University takes the view that it’s supporting WebCT, so it allows there to be systems but it doesn’t fund the other system”.

Paul took a step further, and identified one such system as Moodle, an open source learning management system which is frequently used in universities. He described as one of his roles to persuade or challenge individuals on their approach:

Why you get lots of different systems is because people aren’t aware of what existing systems can do. And so we can have a very significant influence in terms of supporting WebCT. Not because it’s WebCT but because it’s our supporting system (Paul).

Significantly, Paul made the case for WebCT over other systems or Web communication software not on the merits of one or other software tool, but on the basis of the question, “how do you interface it into the infrastructure of the institution?”. The innovator, who by definition does something new, becomes highly constrained by this approach.

This perspective on innovation contrasts with Victor, an academic manager from University C, whose role included design and management of the implementation of an in-house learning management system. Victor was commenting on the compatibility of different software systems on the university’s infrastructure:

There’s going to be a lot more useful stuff in the open source community (for) add-ons than there will be in the commercial area, so I think, you know, when someone says “Look this is a great collaboration tool, which is an open source”, then it would be very
hard for us to say “No, you can’t have that”. We’re going to find a way to meet that need (Victor).

Victor expressed concern that “quality assurance” processes would have the effect of “dampening down innovation, it’s sort of putting boxes around things and constraining things” (Chapter 4, Extract 4.1). For Victor, innovation in approaches to teaching and learning entailed technology, so that the uses of technology were open to the purview and appraisal of academics, not restricted to information technology units. He described his “philosophy” as “the academic makes the decision, you know, we provide the paint pots and they do whatever painting they want with them”. While he acknowledged the need for risk management so that initiatives from innovators may be tested by the limitations of technical infrastructure, they were not foreclosed by them. His strategy was to enable for bottom-up innovation, linking “little things” into an online learning environment, based on standards that would be scalable and interoperable with existing systems.

Paul’s role in relation to institutional teaching and learning policy was similar to Victor’s, yet Paul interpreted implementation of the institutional policy differently. He proposed a strategy or persuasion to contain innovation:

<table>
<thead>
<tr>
<th>Extract 5.2: Guide people in certain directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul: This is where it comes down to management of the whole system, otherwise you get into a situation, where you've got so many variations that you can't support anything (properly).</td>
</tr>
<tr>
<td>John: {yes} No, yes. So it sounds like you are saying that it would be wise to look at the technologies that do particular things, and then you know, point to some particular purposes {in a way that}</td>
</tr>
<tr>
<td>Paul: (You)guide people in certain directions that are defensible and when they raise issues, seriously engage with the issues, but if they are spurious issues, then, work with them to develop their awareness of why they are spurious issues, and if they’re genuine issues, then look into how those can be addressed. (Paul’s emphasis in italics)</td>
</tr>
</tbody>
</table>

Paul’s strategy was a rhetorical one. Based on the LMS, he assessed innovation as compliant or non-compliant, and proposed an awareness raising dialogue to support innovators in effective teaching and learning, under guidance, and within existing institutional technology systems.

Theme 3. Drawing together – systems or community
All participants described practices for drawing together, of people, of systems, or integrating the use of learning technologies, however their accounts reflected different trajectories. Vicki indicated a concern with using networked technologies as an interaction space for online learning. Wayne was concerned with bringing people up to a
particular skill level in using learning technologies, and Paul aimed to increase the use of existing learning technology systems among teaching staff across the university.

Paul saw his responsibility to ensure that all online systems were interoperable and to justify the university’s investment in networked learning infrastructure. He indicated a strategic direction for the institution in the use of its resources:

See our focus is right at the moment is on the learning content management system, and there’s a limit to how far you can spread yourself at one point in time (Paul).

As Acting Manager, Paul interpreted the institutional teaching and learning strategy by undertaking a pilot implementation of a learning content management system (LCMS), which he defined not in its usual description as a repository of digital objects (McDonald, 2006; Friesen, 2004), but in the sense of “developing once and using in several places”, and “resources that can be used by multiple people”.

Paul narrowed his field of concern for that part of the institutional strategy he was responsible for as Acting Manager to the foreshadowed learning content management system (LCMS), which he defined not in its usual description as a repository of digital objects, but in the sense of “developing once and using in several places”, and “resources that can be used by multiple people”. He gives the example of a subject which may have “20 or 30 people delivering it”. From Paul’s perspective, reuse offered economies of scale, and “having a system like that, just makes that so much simpler”.

Wayne described his support role as directed at training staff in online skills. However, Wayne’s view differed from Paul’s above, describing his “professional development model” as “not in the main to develop content” (quoted under Theme 1), implying that content development is how his role is occasionally wrongly perceived. This implies a conflict in defining his role, at least in his perception, within the EDU.

Vicki’s perspective was different from both Wayne and Paul: the achievement of online learning for her was creating a shared communication space for learning. An indicator of this achievement was her reports of identity formation and a sense of community online that was not possible in a face to face setting. For Vicki the affordances of online learning spaces for text-based communication provided opportunities for deep and salient learning experiences. She reported several transformative encounters for both staff and students in online spaces, and identified online literacy as a key focus, enabling students to reflect on online identity through writing in genres using online discussion. In one such example, a lecturer had preconceptions about online communication:

She was certainly going into it with that expectation (was) that there was just going to be the use impersonal marks on a discussion. And so the idea of personality, and actually being more interesting online than in face-to-face, was an interesting
Vicki linked the literacies of developing ICT skills with the university’s graduate attribute associated with communication, “the online learning environment can help you develop other literacies,” and framed the use of online communication into building a sense of community. Vicki recounted an encounter with a teacher who was a reluctant technology user:

She was pleasantly surprised at how personalities are conveyed online. Whereas there's a perception that the technology is impersonal and that you don't get a sense of community or of individuals. And she was certainly going into it with that expectation. (Vicki). (Emphasis from audio tape).

Barbara, in University A, also recounted similar transformations of “techno-phobes” into “extraordinary evangelists” for uses of learning technologies.

For Vicki, the perception of a sense of community was a significant indicator of the effectiveness in online teaching and learning. In Vicki’s accounts of her encounters with staff as an academic developer, she repeatedly drew them to the potential of online discussion as a text-based space of shared communication. She and Wayne were concerned that learning technologies were being used as a “default” or technology-led pedagogy (Goodyear and Jones 2003, p. 40), in which simply providing access to course content afforded in the online space was seen to constitute an online learning environment, obviating the need for a deliberate pedagogical approach. Her practice was to engage academic teachers with approaches to reflective, deeper learning, and shift staff in their use of WebCT away from its use as a repository of information, to using it for the construction of shared experiences and meanings, and the formation of a community of learners.

In these approaches to practice, all participants were adapting existing learning technologies to institutional strategy for teaching and learning. However, while the accounts of Paul and Wayne were concerned with a macro-view of increasing capability of learning technology use, Vicki’s account was focused beyond the goal of skills for technology use, and appropriated the technology for specified uses in order to create learning communities and critical, reflective learning.

**Theme 4. Reframing technology or reframing the user**

The university’s institutional learning technologies were central to the accounts or practice for all three participants, and they shared a concern with engaging teaching academics and supporting effective online learning environments.
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

Vicki described numerous encounters between herself as an academic developer and teaching staff in which their use of learning technology presented an obstacle or an opportunity for a transformative experience. These included dramatic changes in teaching practice involving pedagogical use of WebCT: for example, an individual shifted from reluctance to enthusiasm in the use of online discussion; an undertaking by an academic to “refigure” a lecture consisting of “about 90 Powerpoints”. On other occasions the technology seemed to act as a barrier to an effective learning environment: the emphasis on content inherent in the LMS promoted a pedagogy of “access” being considered “the same as understanding”; the limitations of WebCT functions such as displaying webpages; the “clunky” process of working with student groups online; the reluctance of many staff to attend WebCT workshops or adopt WebCT at all. Vicki reported instances of outright refusal to use WebCT by an ICT-based program at her university.

Recurring factors in the accounts of all three participants were related to the low uptake of online learning among teaching staff: the time required to train in the learning management system and to set up an online course, poor pedagogy associated with the LMS, and limitations with the functionality of online learning systems. Vicki and Wayne responded to these factors and shaped a practice around one to one interaction with staff, based on the use of learning technologies for sound pedagogical principles.

Paul described limits to implementing the institutional teaching and learning strategy in terms of staff capability, and the “gap” between where staff are in relation to technology skills, and where they need to be achieve such skills:

There is going to be a gap there, well what you do about the gap often is not addressed. And so you drop to the lowest common denominator, you know, across an institution. The institution is able to do what individual academic staff are able to do, and you don’t get much above that. (Paul)

Paul has interpreted institutional teaching and learning strategy in terms of the capacity of staff to use the LMS, and the problem becomes one of how long it would take to build that capacity. After Paul’s commentary on the low level of staff technology skills, the interviewer shifted the discussion to the role of the LMS in this issue of building capacity. Paul suggested the lack of enthusiasm in the adoption of WebCT could be understood as a moment in the evolution of learning management systems:
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

**Extract 5.3: An early phase of their evolution**

John: Do you get to you get any expressions of frustration with WebCT at all in any areas?

Paul: With WebCT, the frustration that most people, or most commonly is expressed is that it takes a little time to get the hang of it and also to set up materials, and, so those online learning systems are (in) an early phase of their evolution and so we can understand

John: Still?

Paul: Well they’re moving ahead, but compared with what they will be like in 10 years time, they’re still (at an early phase) in their evolution so, you take that on board, and then look for the ways of alleviating frustration as far as possible. That’s part of the job. And recognising that innovators, if you think of the innovation period, innovators are quite able to handle those frustrations. As you go across the (curve), and you get to people who . tend to be followers who they’re going to be affected more, but in the meantime you learnt . about how to handle the glitches and the rough edges (Paul).

Paul located “innovators” as the key to dealing with these frustrations with online learning systems, and these would lead and provide a good practice model for the “followers”. For Paul, the learning management system per se was not important: “what people do online is much more to do with how they’re designing the course than what LMS they’re using.” Paul’s academic development strategy for online learning was based on dissemination of online content through course teams of designers and those teaching, and with innovators and their “followers”. These innovators, however, were circumscribed within the university’s “institutional strategy”. Paul deflected the perceived lack of effectiveness of staff development and the deficiencies with the LMS by a rhetorical act of deferral, in which at some future date the technology will arrive at correct fit with staff needs. The mismatch between teaching and learning practices and the technology implementation was diverted by an eschatological gesture, that staff will adopt learning technologies when the technology at last has fully evolved. Despite the evidence of low adoption by staff, the strategy for teaching and learning for the institution converged onto a technology focus, and became consolidated in the learning management system. Consequently the staff development strategy came to modify or reframe the practice of the innovator/teacher to fit the system technology.

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12 A similar device was noted by Gilbert & Mulkay (1982): the ‘truth will out device’ was identified as a rhetorical device used by scientists to express speculative beliefs, such that one day the truth will be known. See Potter and Wetherell (1987, p. 154).
5.4 Discussion
The four themes described above, which emerged from participants’ accounts of their work in the EDU, comprise a set of academic development practices which can be grouped around two perspectives or interpretations of teaching and learning strategy. These interpretations reflect a strategic duality in the EDU for integrating policy, learning technologies and the needs of teaching staff. Despite responding to a common policy and technological environment, the practitioners in the Unit constructed their practice in distinctive and sometimes incongruent ways. The distinct discourses around practice raise the questions of how the emergence of different accounts of practice in the same setting can be understood, and how did the practitioners in the EDU resolve these differences between each other?

In this study, a discourse analytic approach was used to consider various accounts of practice: how they were constructed and organised, and what different accounts achieved (Denzin, 1978, p. 149). The discourse analysis approach of interpretative repertoires (Potter and Wetherell, 1987) provided a means of understanding variation in accounts of practice, “the notion of repertoires has enabled us to distinguish contrasting sets of terms used in different ways” (p. 153). Interpretative repertoires are ways of organising an account, they “perform different sorts of accounting tasks” (1987, p. 156).

The two perspectives that emerged as each practitioner gave an account of their own practice can be identified as contrasting repertoires that were used by participants to support their claims and activities, and make sense of the particular contexts in which their practice was located. The participants in the EDU drew on repertoires in their accounts of practice that are “action-oriented” (Potter and Wetherell, 1987, p. 183), that is, oriented towards specific goals and ends. In fact, the accounts reflected two distinct sets of practices in academic development. These repertoires can be identified and phrased in terms used by participants themselves: an enabling repertoire was deployed primarily by Vicki, whereby she endeavoured to enable teaching staff to adapt learning technologies for their local needs, while Paul used a guiding repertoire, where teaching staff were guided or encouraged to adapt their online teaching to the learning management system, and were also discouraged and not supported in the uptake of non-compliant technologies. Wayne, in his WebCT training role, drew on both repertoires, supporting Vicki’s enabling approach, but also expressed a goal to train staff and “get their skills up” (Wayne), both guiding and enabling them towards technological capability.

Each repertoire provided a means for practitioners to resolve conflicts and dilemmas in their academic development practice which arose from the requirement of the policy that technologies be available “in all courses”, and their low level of take-up by teaching staff,
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

and. In order to build and maintain a repertoire, participants used a tactic which Potter and Wetherell refer to as a “rhetorical device” (1987, p. 155). Such rhetorical devices are drawn on as needed in order to resolve conflicts in talk and a speaker’s own interpretative repertoire restored and maintained. For Vicki and Wayne their dilemma arose from the need to increase adoption of WebCT among staff, and address tensions expressed in stories of staff resistance to using online learning systems, and of token adoption of WebCT resulting in poor pedagogy.

The response of Vicki and Wayne was to construct their practice around the enabling repertoire, by endeavouring to establish good relationships with teaching staff as clients. To maintain the enabling repertoire, policy was accommodated by the use of the rhetorical device of foregrounding, in which the local needs of teaching staff framed staff development practice, and policy requirements placed in the background. Both Vicki and Wayne distanced themselves from aspects of policy, by, for example, not stating clearly what it required, or observing it as being in flux and indefinite (Vicki, Wayne). This use of the foregrounding device included: expressions of vagueness on certain policy directives where they may draw a negative response from teaching staff; demonstration of dialogic capabilities of learning technologies; and deployment of workarounds, in which the technology is adapted for uses other than originally intended so that problematic features are avoided. The sense of workarounds can extend beyond technical fixes, following Pollock (2005), to encompass the social practices and other participants in a context of use. Vicki and Wayne enact a practice to workaround the policy requirements in order to address their model of academic development.

The dilemma that arose for Paul was to reconcile his support for good teaching practice and innovation, while keeping faith with the institutional commitment to technological systems. Consequently, he formed a practice which constrained staff development within existing learning technologies, particularly WebCT, despite significant problems in its uptake and adoption. By constructing his practice around the guiding repertoire, Paul took the view that all online teaching and learning needs, including innovative approaches, could be achieved through the institution’s learning management system, and declared his willingness to challenge individuals who proposed alternative approaches. The learning management system functioned as a “black-box”. Blackboxing can be described as an arrangement where “machines and skills and statements can be turned into packages” (Law, 2004, p. 33), which function as “routinised” entities that are embedded into their environments. Bruno Latour identifies “blackboxing” as a process which refers to the way “technical work is made invisible by its own success” (1999, p. 304). Blackboxing is not only technical, but discursive. It can embody a history of decisions and processes, and entails a “folding of time and space” (Lee 2008, p. 241) into an object, policy or process. Paul deployed blackboxing by drawing on it as a
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

rhetorical device, with the effect of delegating any discussion of online learning to the learning technology system, despite problems arising from its lack of user-friendliness, the time it took staff to learn, and the evidence that it was not embraced by staff. The repertoires are detailed in Figure 5.1:

**Figure 5.1: Educational developers’ interpretative repertoires**

<table>
<thead>
<tr>
<th><strong>The Enabling Repertoire</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Basic principle: staff development means enabling staff in adapting learning technologies for their local needs.</td>
</tr>
<tr>
<td>• Strategy: locate staff development activity within settings of practice, and encourage interactive and communicative learning environments using learning technologies</td>
</tr>
<tr>
<td>• Rhetorical device: Local needs of staff were foregrounded, enabling staff to use learning technologies independently.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>The Guiding Repertoire</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Basic principle: staff development means guiding and encouraging teaching staff to adapt their online teaching activity to the learning management system</td>
</tr>
<tr>
<td>• Strategy: support good teaching and learning practices through content development and showcases within existing technology systems</td>
</tr>
<tr>
<td>• Rhetorical device: Blackboxing of online teaching and learning, including innovative approaches, through the learning management system.</td>
</tr>
</tbody>
</table>

Blackboxing provided Paul a means to disseminate his own strategic model for academic development based on the guiding repertoire: not only was online teaching and learning blackboxed into the learning management system, so also was the institutional strategy on online teaching and learning. To use a expression of Andrew Feenberg (1999, p. 113), institutional strategy became “concretized” in the technological system, a process whereby a statement or object is taken as external to the social world. The policy requirement of supporting learning technologies in all units of study became an issue for technology implementation.

Paul’s strategic approach to academic development reflected the institutional investment in technological infrastructure, in which online learning systems are valued for their with of interoperability with other technological systems. This strategy overshadowed and marginalised discussion of potential innovative options in online learning. Approaches involving the open source course management system *Moodle*, or the adoption of blogs in teaching were declared unsupported, or possibly “spurious”.

By way of contrast, the approach to online learning described by Victor in University C was to provide staff and students with technologies as “little things” which were “glued
Chapter 5: Case Study 1 – Practices, dilemmas, and technologies

together”. In this approach, one technology management system does not frame the use of online learning, rather, the practitioner is presented with a set of discrete, “loosely joined” technologies, a process described by Dalsgaard (2006) thus:

Instead of integrating all functions within a system, the approach suggests making available several separate tools to support different needs of students.

This difference in relation to technologies in organisations is between the system approach of managing technology use, and the “loosely joined” approach of providing opportunities for staff and students to manage their own learning.

The two repertoires can be seen to follow from the functional roles of the participants, and the divergence of their corresponding action orientation was not unexpected. What this divergence indicates, however, is the potential for the “concretization” of particular practices in an institution, and the explicit or tacit embedding of practices which may be at odds, despite sharing the same strategic goal. In the case of the EDU, the guiding repertoire drew on institutional teaching and learning strategy to place technology centre stage. Consequently, the practices of academic developers were under pressure to submit to a technological system, so that pedagogy and innovation were directed towards the use of learning technology, rather than the use of technologies for effective teaching and learning.

This case study was initially limited to one institution in order to explore the variations and incongruencies in practice arising from one academic development context. Comparisons were subsequently made with practitioners in similar roles from other institutions selected from the corpus of data. This case of academic development identified two distinct accounts of practice that were organised around the repertoires of enabling and guiding, with distinct accounts of technology use and engagement with teaching staff. In this sense, “talk is both about things and actions, and also part of things” (Potter and Wetherell, 1987, p. 182, authors’ italics). The talk of the participants was part of their practice, and part of the reality that was enacted in staff development.

While all participants in the EDU defined a practice shaped by the imperatives of their own work context, the two repertoires expressed incongruencies in academic development practice. The enabling repertoire allowed practitioners to innovate and adapt online technologies to the local settings that arose in developer-staff consultations: enabling staff to adapt and use the technologies themselves, working around technological limitations, and building learning online communities. At the same time, the enabling repertoire allowed practitioners to place mandated official requirements in the background. In contrast, the guiding repertoire interpreted the institutional strategy in a way that closely aligned staff development with the learning management system, by adapting and accommodating staff to those systems by use of the rhetorical device of
“blackboxing”. As a consequence, possible innovative approaches to learning technologies were constrained by a technology-centred discourse which framed the nexus between learning technologies and institutional strategy.

Academic development is shaped in the middle ground between institutional teaching and learning strategy and the needs of day to day practice. Politics enters this middle ground when institutional strategy is implemented to delimit or foreclose the agency of academic development. The case of the EDU in University B showed that it was neither institutional strategy nor learning technologies that imposed these constraints, rather, it was the effects of the discourses or repertoires associated with their implementation. Staff development practices framed by a repertoire which spoke for an institutional technological system saw staff innovation in online pedagogy as non-compliant. The implications for academic development, and for practice in online teaching and learning, are in challenging the discourses around technological infrastructure that covertly capture university strategies and policies, and drawing on an enabling repertoire for online teaching and learning which is congruent with a learning-centred approach, adaptable to local contexts, and placing responsive and innovative online learning in the foreground in the process of change.
6. Case study 2. The disoriented practitioner: Engaging the multiple “student” online

This chapter takes up the controversy of student engagement in online learning as a case study. How students engage in learning through technologies emerged as one of the core categories from the holistic analysis of practice (Chapter 4.3), and the discourses associated with communication technologies were identified as a factor shaping online learning. While there is much data from research on students’ experiences with online learning in higher education, there is less on practitioners’ evaluations of their practices for engaging students with networked learning technologies. One of the effects of teaching online was the disorientation reported by practitioners in their attempts to apply strategies to engage students online. Practitioners’ accounts from the interview data related to this issue were selected, analysed for dilemmas of practice and discourse patterns. This case study investigates the mismatch of expectations between teaching academics and students by analysing students as constituted differently online. Two analytical techniques are used: practitioner interviews were analysed for interpretative repertoires that identified “ways of talking” about students, and Annemarie Mol’s (2002, 1999a) concept of enactment was applied to make sense of student activities, identities and discourses in the interactive spaces of online learning. I argue that the identity of “student” is performed or enacted in multiple discursive ways in online spaces, which has disorienting effects on practitioners. Recognising how online spaces enable multiple enactments of the student can offer a basis to review strategies for engagement. In this chapter I will take up this issue as a controversy of the enquiry and explore the mutual shaping of students and their technologies in learning contexts.

6.1 Shifting engagement online

Engaging students is now central to considerations of effective teaching and learning. The notion of “student engagement” has become a basis of understanding and measuring of the quality of learning in higher education (Bluic, Goodyear & Ellis, 2007; Coates, 2005; Kift, 2004; Krause & Coates, 2008). Studies on how students approach learning, and the strategies they deploy for achieving higher order or deep learning, focus on ways to understand this engagement (Biggs & Tang, 2007; Ramsden, 2003; Entwhistle, 1988). Hence a deep approach to learning correlates with a student’s “intention to understand” (Ramsden, 2003, p. 47), relate new knowledge contextually, and make sense of what they are learning, whereas a surface learning approach focusses on memory work and information unrelated to contexts. Yet a focus on how
students engage and their learning experiences has had a recent history in higher
education, and can be traced to the shift from teacher-centred approaches to student-
centred learning which occurred during the 1980s and 1990s, until the present situation
where it pervades higher education institutions in the English speaking world (Trigwell,
Prosser and Waterhouse, 1999; Rust, 2002, p. 146; Biggs and Tang, 2007; McShane,
2006). Student engagement and the student experience is the primary focus of
measures such as the Course Experience Questionnaire (CEQ), which measures the
quality of teaching and learning in every Australian university, reporting to the Australian
Government (DCITA, 2002). The student experience is measured at a national level by
the AUSSE survey in Australia (ACER, 2009), the NSSE in the US (Kuh, Pace & Vesper,
1997), and the JISC learner experience program in the UK (JISC, 2007; Sharpe,
Beetham, Benfield, DeCicco & Lessner, 2009).

Online learning presents a different, less bounded, space of interaction and engagement
for teaching practice, and the encounter with an unfamiliar environment brings an implicit
comparison with the traditions of face-to-face learning. Price and Oliver (2007b) point out
that in the shift to teaching online, while the purpose may be the same in both face-to-
face and online contexts, “the methods of achieving this alter in significant ways” (p. 24).
This is exemplified, they note, in the “relatively frequent breakdowns in teaching online”
(p. 24). They also suggest that the practices brought to online teaching draw on
“conventional” or assumed knowledge of practice. The traditional, physical locations of
teaching and learning bring a set of assumed and shared understandings based largely
on constraints of size of teaching rooms and scheduled class times. The very metaphors
used for online learning environments tend to preserve that tradition (p. 24). However,
the efficacy of this tradition as the assumed organising principle for approaches to
teaching has diminished with the steady shift towards the blurred boundaries and
individuated environments of online learning (Jones, Asensio & Goodyear, 2000, p. 25).
The online spaces of networked communication technologies offer a greater range of
options, choices and possibilities for teaching and learning, but simultaneously fewer
shared understandings of what, where, who and how it takes place. The interactions that
assemble and sustain online learning are underpinned by language, and to a large extent
online learning occurs through written communication, including non-verbal and
paralinguistic cues that must be conveyed textually online (Price, Richardson & Jelfs,
2007). Despite the use of audio and image communication over the Web, the interactions
that constitute learning online occur largely through writing, and Andrew Feenberg (1989)
oberves, “[l]ife in such a ‘written world’ gives rise to many unfamiliar problems and
possibilities” (p. 23).

While the shape of online learning is still a work in progress, in flux, its objects and
practices always mutable and lacking finality (see discussion in Chapter 2.2), the new
possibilities of online environments for student learning, and how they relate to face-to-face learning, tends to be less well understood or even researched (Hemmi et al., 2009, p. 20; Ellis et al., 2009, p. 304). With student engagement now a primary focus and basis of measurement in higher education institutions in the English speaking world (McShane, 2006; Rust, 2002), the question arises as to how effective are practices for engaging students online, and what transformations have been accomplished.

Teaching and learning in online or hybrid environments can be expected to present uncertainty, risk and also opportunities for innovative approaches, nevertheless, the goal of student engagement cannot be expected to be achieved from a simple transposition from modes of traditional teaching to online teaching. This chapter explores the dilemmas in teaching practice from the sample of practitioners as they shift between these two modes of teaching, and questions the stability of the category of the “student” in online learning.

Reconsidering the student online
The current emphasis in higher education on “the student” (McShane, 2006, p. 88), has shaped teaching practice around the need for effective student engagement through the possibilities opened up by online learning spaces. Indeed the notion of the “student” cannot be assumed to have a common understanding in an environment in which technologies reconfigure possibilities of spaces, times and size of student cohort, to shape the learning environments of mass learning (Marginson, 2000, p. 29).

The conditions for uncertainty in practice in online environments is reflected in the adoption of “disruptive technologies” (Conole, de Laat, Dillon & Darby, 2008) into teaching and learning contexts (see Chapter 2.1), and the literature on their deployment and integration (Price & Oliver, 2007b; Benson & Palaskas, 2006; Sharpe, Benfield & Francis, 2006; Malikowski, Thompson & Theis, 2006; Wilson & Stacey, 2003). Putting online learning into practice is not simply a matter of application of a technological tool, and Price & Oliver (2007b) give the example of building social interaction in online learning as “fraught with complexity” (p. 21), since it requires much effort and planning to achieve group interaction and cohesion. The tool metaphor carries the assumption that a technology application will work when applied. In fact, there is a high level of “breakdown” and failure of the technologies of online learning, particularly large-scale implementations (Robert, 2007; Romiszowski, 2004; Cornford & Pollock, 2003). A further assumption is that students, and staff, will use the technologies for their designed purpose, and Goodyear & Ellis (2008) identify studies in higher education learning which challenge this “assumption of learner compliance” (p. 146). In their review of research on student performance, they found that the research on effects of technologies on learning neglected the actions of students in shaping their uses (p. 145-6).
Don Ihde (2002) called the unintended use of a technology the “designer fallacy”, and cautioned that the reduction of technologies to their technical functionality masks their ambiguity and potential for appropriation (p. 106). This chapter, therefore, takes up student engagement from this neglected focus of research: how students appropriate technologies and their impact on approaches to teaching and learning. This case study takes Meriam’s (1988) sense of focussing on “a particular situation, event, program, or phenomenon” (p. 11). The phenomenon, then, concerns the effects on practitioners and their practice in their engagement with students in online learning.

Relational perspectives on student engagement

If student engagement is an outcome or measure for effective teaching and learning, the activities that produce student engagement are practice. This chapter acknowledges and builds on the breadth of research on the student experience and student engagement, and focusses on practices for student engagement online, following Schatzki’s (2001) practice approach, discussed in Chapter 3.2, which studies practice as actions, objects, discourses and shared understandings in terms of their material effects. For this case study, I will examine the accounts of practitioners in the corpus of data to analyse these effects.

I will draw on two theoretical concepts for analysis in this study, both of them centred on the action orientation of practice. The first is a discourse approach involving the identification of interpretative repertoires or “ways of talking” (Edley, 2001, p. 198; Edwards, 1997; Every & Augoustinos, 2007; Tileaga, 2006) that occur in coherent forms and provide “a basis of shared social understanding” (p. 198) across a discipline or field of practice (see Chapter 3.2). Repertoires may circulate among practitioners of a field of practice and can also be constitutive of that practice. They can be used to identify variations in how practitioners account for the issues and dilemmas arising in their teaching practice.

The second is Annemarie Mols’ (2002; 1999; Mol & Law, 2004) concept of enactment. Mol explores objects such as technologies, and entities such as diseases, as realities which are enacted in practices, rather than being isolated from them and having a pre-existing reality (p. 36). In Mol’s example of anaemia (1999), based on her field work, she described how a disease may be enacted as multiple realities, with distinct “versions”. In her example, anaemia was performed in several ways (pp. 77-8): one was clinically in the consulting room, another was statistically in the laboratory: two diseases were enacted, with distinct effects. These may overlap but were not necessarily coherent.

Mol draws on actor-network perspectives (Latour, 1987, 2005; Law, 2004) which treat objects and phenomena not as things in themselves, but as a “continuously generated effect of the webs of relations within which they are located” (Law, 2009, p. 141). Mol
contrasts her approach with that of Goffman’s (1959) in *The Presentation of Self in Everyday Life*, in the presentation of the self is a “*mere performance*” (2002, p. 35), with an authentic identity or self hidden behind the presentations. For Mol, there need not be “*doer behind the deed*” (2002, p. 36, quoting Judith Butler (1990, p. 142)). In this approach, ideas about reality and identities are explored in terms of their orientation to action, in practice. The implications are that realities and identities are contingent on performances, and can be understood or shown to be multiple and not necessarily congruent. As John Law (2004) states, “enactments, it is being argued, don’t just present something that has already been made, but also have powerful productive consequences” (p. 56).

These theoretical concepts provide the basis in this chapter for taking up the controversies arising from the transformative impact of networked technologies on higher education, with its unpredictable outcomes *in practice*. They underpin the analysis of practitioners accounts based on the corpus of interview transcripts, first by identifying interpretative repertoires in discourses of online learning, then in considering the participants in online teaching and learning practices, such as technologies and students, in terms of situated enactments.

Teaching practices in online spaces still occur as if there is an uncomplicated transposition from face-to-face approaches resulting in low levels of engagement (Coates, 2005; Coates, James & Baldwin, 2005; Malikowski, Thompson & Theis, 2006), and there is a history in which “technology has been seen as added on to a set of traditional educational practices” (Goodyear & Ellis, 2008, p. 149). There is a need to examine the practices of teaching online more critically and more closely, both as strategies for student engagement and as approaches to deployment of learning technologies. The shift to online teaching is caught between its promise and its pitfalls: on the one hand there is the possibility for innovative pedagogical approaches to enhance learning and extend its reach (Al-Mahmood & McLoughlin, 2004; Conole et al., 2008; Conole, White & Oliver, 2007; McLoughlin & Lee, 2008a); on the other hand there are the demands and difficulties encountered in new undertakings. To draw on a few instances in the extensive literature: the need to rethink the use of learning technologies beyond the “processes of simplification” where technologies are concerned (Goodyear & Ellis, 2008, p. 142), and navigate the shifting landscape of a digital world (Bigum & Rowan, 2008); and the need for a better understanding of the assumptions concerning online learning (Ellis, Ginns & Piggott, 2009, p. 304). Teaching into online spaces brings issues of institutional integration as well as acceptance by both teaching staff and students (Georgina & Olson, 2008; McNaught, 2005; Wise & Quealy, 2006), with the outcome that online teaching can be “the ultimate disorienting dilemma in higher education” (McShane, 2006, p. 89). My focus is on this disorientation and how it occurs
Chapter 6: Case Study 2 – The disoriented practitioner

in practice, and the dilemmas that arise for practitioners as they negotiate the uncertain and unsettled terrain of online spaces. My question for this case study is: what happens in practice that makes engaging students online uncertain and disorienting?

6.2 The study

The data for this study consisted of a selection or filter of the transcripts from the broader enquiry over three Australian universities, presented in Chapter 4. The issue of student engagement with technologies emerged as one theme from this analysis which showed variation, and for this case study, transcripts were scanned and comments compiled based on the enquiry question: how did practitioners account for their experiences student engagement in online learning?

Comments from practitioners concerning student engagement were collected and organised into categories, and applying the grounded theory process to this case, category names were modified as comments were gathered and shaped a category. As the categories were refined, comments were examined for the terminology and rhetorical strategies used to evaluate the activities of practice (Potter & Wetherell, 1987, p. 138), and account for dilemmas of student engagement. Interpretative repertoires were identified from these “ways of talking” about practice.

A total of 117 comments on student engagement online were selected from the interview summaries of 28 participants, and of these, 20 participants provided comments concerning students in the context of engagement. There were a total of 123 categorised comments, of which 6 were duplicated and assigned to one other category (marked with * in Appendix 6.1). The identities of participants are identified against practitioner roles in Appendix 6.1 (p. 1). The distribution of comments is shown in Table 6.1.

Table 6.1: Distribution of comments on students

<table>
<thead>
<tr>
<th>Practitioner primary roles</th>
<th>Responding practitioners</th>
<th>Responses</th>
<th>Percentage responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>teaching academics (total 13)</td>
<td>10</td>
<td>98</td>
<td>80%</td>
</tr>
<tr>
<td>managing academics (4)</td>
<td>4</td>
<td>9</td>
<td>7.2%</td>
</tr>
<tr>
<td>academic developers (3)</td>
<td>3</td>
<td>9</td>
<td>7.2%</td>
</tr>
<tr>
<td>online support staff (4)</td>
<td>1</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>VET teachers (4)</td>
<td>2</td>
<td>6</td>
<td>4.8%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>123</td>
<td>100</td>
</tr>
</tbody>
</table>

Not all participants expressed concerns about students, nor were comments distributed evenly among the different practitioner roles (for identification of roles, see Chapter 4, Table 4.3). The speakers who expressed the greatest number of comments about student engagement were teaching academics (10 of a total of 13), who provided 99
Chapter 6: Case Study 2 – The disoriented practitioner

responses (80%). The other participant roles were managing academics, with 9 responses (7.2%), academic developers, (7.2%), VET teachers (4.8%), and online support (0.8%). The first two roles, teaching and managing academics, comprised 87%, with three (out of four) managing academics also taking a teaching role. The teaching academics averaged 10 responses each, and the other roles averaged 2.5 responses each. This weighting towards teaching academics was reflected by the nature of their responses, which were predominantly about direct contact with students.

6.3 Ways of talking about students
The analysis identified four “ways of talking”, or interpretative repertoires, about students which were used by practitioners while reflecting on student engagement in online learning. A summary of the list of practitioners’ comments that were extracted from the interview summaries is shown in Appendix 6.1. These were organised into categories and subcategories, and ranked by frequency, as summarised in Table 6.2.

Table 6.2: Practitioners’ talk about student engagement in online learning

<table>
<thead>
<tr>
<th>Practitioners’ talk of students as:</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>student-centred learners, requiring new strategies for engagement</td>
<td>55</td>
</tr>
<tr>
<td>• bringing new problems to learning</td>
<td>28</td>
</tr>
<tr>
<td>• constrained by institutional and technological processes</td>
<td>13</td>
</tr>
<tr>
<td>• raising issues of plagiarism</td>
<td>8</td>
</tr>
<tr>
<td>• international students unable to engage with deep learning</td>
<td>6</td>
</tr>
<tr>
<td>a community of learners, engaging collaboratively online</td>
<td>36</td>
</tr>
<tr>
<td>• collaboration online</td>
<td>15</td>
</tr>
<tr>
<td>• using online text in a way ‘not possible in face-to-face’</td>
<td>13</td>
</tr>
<tr>
<td>• international students interact online for a ‘deeper cultural experience’</td>
<td>8</td>
</tr>
<tr>
<td>customers, engaging selectively</td>
<td>28</td>
</tr>
<tr>
<td>• ‘individualistic’, ‘optional’ students. exercising preferences in learning</td>
<td></td>
</tr>
<tr>
<td>the digital generation</td>
<td>5</td>
</tr>
<tr>
<td>• the “Net generation”, having a “particular relationship to technology”</td>
<td></td>
</tr>
</tbody>
</table>

The form of discourse analysis used in this study, identifying interpretative repertoires, focused on how speakers evaluate and articulate the dilemmas of their practices: the understandings which practitioners brought to these problems with student engagement online, and the way in which these understandings were phrased.
Chapter 6: Case Study 2 – The disoriented practitioner

1. Students as student-centred learners, requiring new strategies for engagement (55 responses, or 44%)

Practitioners drawing on this repertoire described the encounter between students and the technologies of learning as problematic and practices as less effective in engaging students in learning. Comments were framed as a problem or dilemma of practice which required new or revised strategies for engagement (see Table 6.2), and were phrased in terms of student-centred learning. This description is perhaps counter-intuitive, but captured the challenge for practitioners in formulating strategies for engagement online.

These evaluative descriptions evoked the contrast between surface and deep learning approaches to learning by students, associated with the shift to a focus on student learning (Ramsden, 2003; Trigwell et al., 1999). Examples were descriptions of the need for “self-directed learning”, “motivation”, “personal interaction”, and the centrality of the “relationship to the student”. This repertoire, or way of talking, draws on the “paradigm shift” (Rust, 2002, p. 146) from teacher-focused to learner-centred approaches. In the subcategory bringing new problems to learning (28 responses), speakers recounted examples of superficial or instrumental interaction (Laura, Paula, Lia, Craig), a “large drop-out rate” (Lia, also Monica, Asha & Laura), low levels of participation in online discussion, lack of shared expectations, and minimal or last minute engagement (Appendix 6.1). A mismatch of expectations was reported in encounters with Asian international students, who were attributed with an orientation to teacher-centred learning, and as unable to engage with analytical or deeper learning.

Learning technologies were seen as producing unanticipated problems and requiring intensive effort to align with both teaching practices and student learning. In recounting recurring experiences of poor engagement through miscommunication, speakers made connections between poor outcome and the technologies used, implicitly comparing online with face to face encounters. Two examples typify this comparison. In Extract 6.1, Fran, a coordinator in a unit related to clinical health practice, noted the success of assessing online group participation, and reflected on the strategies to achieve this with a cohort of 600 students:
### Extract 6.1: It's much easier just to get four of them in the room

Fran: Those activities in terms of setting them up as assessments of learning activities, they really are so time-consuming but I have to say, like they’re great. Like, you know, like our question, like how do you teach the humanity, in terms of having it online, but you know, I look at the groups where communication just completely fell down, and I’ve actually pushed students to get to the point where they would come to a consensus in this one group, because they have to do participation of course so they have to assess each other's participation, and the gulf in this one group was just horrendous.

John: and this is all online

Fran: this is all online. This was done, all e-mail, and they all e-mail me separately with their own little agendas, and, I’ve actually pushed that group of students to the point where they have actually as a group decided that this is what they will do. And I mean, they've moved, you know, whether they realise it or not, they have actually learnt a lot about themselves and about communicating

John: because you have brought a strong moderating role where it was necessary

Fran: Mm, mm. That's right. But you know it's very time consuming. And it's much easier just to get four of them in the room, and (its) pretty well solved, in a half an hour face-to-face. You know

John: okay, and this makes it protracted (one to one)

Fran: (it's been very protracted), it's been one to one, one to two, one to three, and then one to the whole group. And I had to be very careful not to take sides, not to get sucked in to politics of different students and agendas, and to say, this is my observation of what's happening in the group, I think these are some strategies that you could think about.

Where communication problems arose with students in online learning spaces, Fran’s dilemma was either to conduct a protracted, time-consuming online moderation, or organise to bring the group in for a face-to-face meeting. The online strategies for moderation made her teaching practice unsustainable for this cohort of 300 external students.

Building effective teacher-student relationships online involved greater effort compared to face-to-face encounters. In Extract 6.2, Alison, a tutor in a unit in Media, noted the absence of non-verbal cues in online discussion for the second iteration of her unit, and the potential for online communication to fail in establishing student engagement:
Extract 6.2: There are not the non-verbal cues and shared expectations

Alison: In the case of teaching online, there are not the nonverbal cues and shared expectations are not built up in the teacher student relationship. The staff/student relationship is harder to develop again this is more so for first years, not the OUA students, as they have the ‘fear’ factor of tutors that they bring to the interactions. The missing cues means there is more potential for misunderstanding – even knowing this and having strategies does not eliminate this possibility entirely.

Alison offered two examples of the lack of shared expectation she alludes to above:

(i) Students who lie about receiving emails about important information, despite it being sent to their email address. Its hard to provide proof if they insist they did not receive it.
(ii) The textual nature of online communication can cause offence. Explaining that certain arrangements were made since the course was aimed at first year, caused one student to react negatively at a supposed insult. The student withdrew from the course shortly after.

(Alison, email communication)

Alison found that relationships with students were “harder to develop” online than in the face to face context, and that despite “having strategies”, miscommunication could be rapid and uncontrollable, resulting in failure in student engagement.

Practices that draw on the repertoire of student-centred learning contrast and are counter to transmissive and teacher focused approaches (Devlin, 2006; Trigwell, Prosser & Waterhouse, 1999), they can, however, be enhanced or hindered by organisational systems. A number of practitioners described their practices around engagement as being constrained by institutional and technological processes (13 responses).

Institutional requirements such as meeting the demands of performance and evaluation measures were reported as not congruent with efforts to build engagement. Strategies to engage students, such as a focus on building relationships (Wendy, Craig) were reported as in conflict with the values of performance measures, or at odds with a strategy of institutional “compliance” (Jack) and the cost-basis of the institutional “information transmission model” (John). This pressure intensified with the prospect of evaluations in mass learning environments. The experience and prospect of large class sizes (of 600 - 700 students) was perceived as further bringing performance measures of teaching into tension with efforts to engage students: issues of workload, intercultural communication, and “equity and inclusion” (Lia) in large class online learning contexts were difficult to negotiate with an approach where “that relationship to the student is so central” (Wendy).

A further area of concern arose where students were reported as raising issues of plagiarism (8 responses): that the easily replicable nature of digital text offered new possibilities for plagiarism and concerns for assessment. While practical responses to
potential plagiarism were recounted, such as monitoring and assessing online discussion (Lia), denying access to the Internet in exams (Craig), or accessing expert advice on strategies (as Craig drew on Marcia Devlin’s academic development work in his university), the issue of plagiarism in online learning raised a dilemma for practitioners, as their experience of the tactics of plagiarising students indicated a lack of engagement with learning.

Technologies also presented dilemmas for teaching practices as they became an obstacle to engagement with learning. Speakers reported technologies disadvantaging external students through lack of access to the Internet, or poor technological proficiency. Fran stated that “I would have said maybe 25 to 30% of students had significant difficulties with computer technology”. Concerns were expressed at high levels of attrition and very low participation where online discussion was the primary interaction (Lia, Asha), and concerns that units of study were unable to meet the university’s policies on equity (Monica, Fran, Alison, Wendy). Such reports identified problems in learning in which networked technologies were prominent (for example, communication via computer, or low levels of online interaction), or were enhanced and magnified by them (plagiarism), such that speakers were unable to identify strategies that would achieve effective engagement in these instances.

In this category, descriptions drew on the student-centred learning repertoire to account for poor engagement online and evaluate practitioners’ strategies for teaching online. Where speakers described unexpected or disconcerting results, these strategies tended to be compared or understood as transpositions from teaching approaches in face to face contexts, that were less effective.

2. Students as a community of learners, engaging collaboratively online
(36 responses, or 29%)

The repertoire of a community of learning is organised around the principle that students collaborate in their learning by forming a self-sustaining learning community. The notion of a community of learners (Garrison & Arbaugh, 2007) entails the view that higher order or deep learning occurs in an environment of collaboration among peers, and that there is evidence that a “sense of community” is associated with effective learning in online contexts (p. 158). The interactive modes of communities of learning (Anderson, 2004) are enabled by the technologies of networked communication and more recently by “social software” (Dalsgaard, 2006), and its pedagogy has its origins in approaches to constructivist and democratic learning (Dewey, 1916). In online learning contexts, the community of inquiry model is a much explored approach to participatory teaching and learning (Garrison, Anderson & Archer, 2000), and continues to function as a well-established and useful metaphor for designing interactive and engaging learning using
networked communication. The “community of inquiry” model derives from Lipman (1991) and from the community of practice ideas of Wenger (Lave & Wenger, 1991; Wenger 1998), which document and explore an emergent model of interaction within organisations which does not depend on hierarchical and top-down structures.

“Community talk” has been referred to as a “classic repertoire” (Wetherell & Potter, 1988, p. 172). In this study, talk of a community of learning was drawn on in 29% of responses in the data, and reflected accounts of student engagement which achieved deep learning online, including reports of unexpected positive experiences with international students.

The online community is constructed by discursive activity and textual interactions that convey salience and meaning to participants. In this study, the community of learning repertoire was drawn on in accounts by speakers which included the terms collaborative, engagement, interact, self-reliant, self-sustaining, virtually autonomously, building relationships, dialogue, deep learning, peers, community building, community of learners and community of practice (see Appendix 6.1).

Building social bonds through online interaction was the common theme in the responses grouped under collaboration online (15 responses): the group became “self-reliant” (Jack), and interaction was focused on building relationships, “(it) has to be very very relaxed to keep them engaged” (Rebecca, similarly Wendy). Textual communication was the foundation for new pedagogical possibilities in the responses grouped under using online text in a way ‘not possible in face-to-face’ (13 responses). Practitioners focused on use of “IT literacy” (Monica) or writing online (Barb, Vicki, Asha) or as a mode of interaction that contributed to a perceived community, including the use of an informal, relaxed and conversational writing style, a social “cafeteria” aspect that built camaraderie (Asha), and an interaction space which had a self-organising and “self-sustaining” capability (Francis), such that “once set up, the groups works out of itself” (Rebecca). Asha took the view that deep learning was more likely to occur through online writing by affording “time to reflect”, so that students “get to know each other very well through writing”. Asha found, however, that there was a self-selection process in achieving deep learning online:

I find the students that seem to thrive in the online environment, it's not the ones (that are) necessarily more technically minded, but those that are more comfortable with the written word rather than the spoken word. (Asha)

For Asha, individual preference among students was a factor in the achievement of an effective online learning community, as the online learning mode “won't suit everyone”. In her teaching a fully online unit of study, the cost of effective learning was self selection and a significant level of attrition.
Chapter 6: Case Study 2 – The disoriented practitioner

Two speakers reported a transformative impact of the community of learning repertoire. Vicki explored the uses of online text for collaboration in ways “not possible face to face”, by developing “literacies” and attending to “genres” in which ‘you write in different ways’ according to the affordances of the online textual space. Jack used an approach to assessment which was contrary to the standard, closed, individualised process, and set up a class wiki space for individual projects, viewable to all class members, that “develops with a learning community rather than a finished assignment document between the assessor and the student” (Jack). The online environment was used to open up rather than constrain student activity: the open nature of the Internet was deployed for assessment in which students work “was open to their peers” (Jack).

These accounts indicated that, under the right conditions, students were reported to constitute a learning community as a means of engagement. International students, in particular, were reported as keen adopters of learning online. In the subcategory international students interacting online for a ‘deeper cultural experience’ (8 responses), six speakers noted the readiness and motivation of international students using online discussion, they are “quite keen on using discussion and chatrooms” (Laura), “seem to thrive in that environment“ (Alison), were highly motivated, Rebecca was “astonished” at their “very engaged response”, and Wendy noted their keenness to explore a different culture. These reports contrasted with the previous theme in which international students (were) unable to engage with deep learning (6 responses).

3. Students as customers, engaging selectively
(28 responses, or 23%)

The repertoire of the student as customer was drawn on to describe students who negotiated their learning within a set of individual demands and preferences, and who adapted available technologies for this purpose. Students were described as “more individualistic, focused on assessment only”, “optional”, “pick n mix” (Alison). There was the expectation of immediacy in communication: “prompt response” (Monica), of “24/7 availability” (Paula), expectations of help with assignments (Lia); and preferring particular modes of communication such as email over online discussion (Laura). Laura observed “a definite shift from seeing class attendance as what one must do, to being something optional, for both online and face to face participation”. Preferences were expressed by students for communication by email or telephone rather than the prescribed online discussion, and for interaction to occur only with the lecturer/tutor rather than by peer collaboration. Alison notes:

There are often quite a few students in any one intake who prefer to ring rather than email and don’t seem to use the online study guide or discussion list (Alison).
Craig drew on his field of customer relations management to distinguish between “transactional” and “relationship” customers, and identified customer-focused or “transactional” students as instrumental in their orientation to learning, seeking minimum engagement. The behaviours reflecting a customer focus were: an expectation of non-attendance since “I can get this online” (Craig, also Alison); that email response was equivalent to tutorial attendance (Alison); an expectation that concepts and content which have been missed through non-attendance be repeated later classes; and competing demands of work or social life. Craig suggested that the fault lies in part with the university in providing them with “the technology not to engage” (Craig).

The customer or consumer repertoire is common in higher education literature (Blackmore, 2001, p. 362; Blin & Munro, 2008, p. 478; Burbules, 2004; Devlin, Coates & Kinzie, 2008; Schapper & Mayson, 2005, p. 184; Scott, 1999), and is related to shifts away from the traditional university to more corporate styles of management, and the conceptual shift to education in a market economy (Bretag & Hannon, 2008, p. 221; Lewis et al., 2005). The accounts in this study indicate that both practitioners and students draw on the customer repertoire to understand students’ orientation to their learning. What is significant here is how students appropriated technologies to produce individual orientations to learning according to their own preferences, which often took priority over the arrangements set out in the unit of study and by teaching staff, contributing to dilemmas for teaching practices among practitioners.

4. Students as the digital generation
(5 responses, or 4%)

Talk of a generational difference that distinguishes students on the basis of their use of technologies is the repertoire of the digital generation. Three speakers described students as generationally distinct, as holding “a particular relationship with technology” (Wendy, also Craig, Asha). The digital generation student has been described as the “Net Gen” (Oblinger & Oblinger, 2005), the “New Student” (Oblinger, 2003), the “digital natives” (Prensky, 2001), and the “Yuk-Wow” generation (McWilliam, 2005). The Net generation are “students who were born in the 1980s and later” (Oblinger & Oblinger, 2005), and such an individual “has been described as experiential, engaged, and constantly connected, with a strong need for immediacy” (Ramaley, 2005). Prensky holds that the “digital natives” are distinct to the extent that they have different brain structures (Prensky, 2001). Such views suggest university teaching is unable or failing to keep pace with the needs of this generation.

Critics of this view suggest there is little supporting evidence for the “digital divide” between students and staff (Kennedy et al., 2008a). On the contrary, there is evidence that students show great diversity in their proficiency and use of Web 2.0 and mobile
technologies (JISC, 2007; Kennedy, Judd, Churchward, Gray & Krause, 2008b; Sharpe & Benfield, 2005), and that the focus should be on the design of learning environments rather than the technology (Sheely, 2008). Bayne and Ross (2007) note that the “potentially disorienting spaces” of networked technologies enable a simplistic reduction to generational difference, and link digital generation talk with “a ‘marketized’ public discourse” in which online learning is constructed around globalisation and a market-driven higher education sector. They point out that, contrary to proponents of this view, there is little evidence that students demand “more technologically-driven approaches to teaching and learning”.

It is this discourse of the market that may be the context through which generational talk may be more usefully understood. In the accounts from practitioners in this study, talk of “generational difference” (Wendy) and the digital divide can be seen as part of the repertoire of the students as customer with a technological inflection.

While discussing flexible learning, Craig saw a generational difference that was more related to the customer orientation than to technologies:

> The students differ. A generation ago they used to go and demonstrate and take over the Vice Chancellor’s office, for all sorts of reasons, but not go and see their, not go and see their lecturer because they wouldn’t demand things from their lecturer, OK, so they had a community spirit, and now, now they march up to your door and say “Why didn’t you give me a better mark?” (Craig)

Alison also identified a customer focus in the way first year students expressed preferences the use of online technologies for learning:

> First year face to face are more individualistic, focused on assessment only, need to be persuaded into collaborative use of discussion list. First year students would rather use email than a discussion list. (Alison)

Students were seen not as embracing networked technologies for learning, rather they were seen mainly as instrumentally appropriating particular technologies into their working and social world, in which their learning was only one component. Appropriation, however, also went in the opposite direction. A segment of the student population were reported as marginalised and disadvantaged, as “depersonalised” and poorly “accommodated” by new technologies (Fran estimated 25-30% of her student thus), and as experiencing problems with access and submission to online learning systems (Fran, Lia). The repertoire of generational difference obscures other differences: of socio-economic status, of language and cultural diversity, of expectations and prior experience of education, and of experience and use of networked technologies.
Summarising the repertoires

Networked technologies offer new and potentially radical opportunities for learning (Hemmi, Bayne & Land, 2009), but bring an unfamiliar and less stable environment for even experienced practitioners, requiring different approaches and models for pedagogy (Conole, Dyke, Oliver & Seale, 2004; McLoughlin & Lee, 2008b). The discourse approach of identifying interpretative repertoires can be used to understand how practitioners negotiate the “disorienting spaces” (Bayne & Ross, 2008) of online learning, as they attempt to resolve the issues and dilemmas of their practice. Each of the four repertories reflect coherent “ways of talking about objects and events in the world” (Edley, 2001), ways which exist as prior discourses and were deployed by practitioners to make sense of how students engage in the less concrete spaces of virtualised learning.

The accounts of practitioners in this study confirm the diversity of engagement found in studies on the experiences of students (Kennedy et al., 2008b; JISC, 2007; Sharpe & Benfield, 2005; Crook, 2002). In the current study, 71% of responses by practitioners recounted problematic experiences with students in online learning, while 29% of responses were reported as successful. The study suggests that technologies of online learning have a profound effect on teaching practice, and on how students engage with their learning. The accounts support the view that students negotiate their own relationship to online learning and the university, frequently on their own terms.

In these accounts, engagement carried a double orientation: not only did students build their own distinctive relationship to their learning, confirming the student experience studies cited above, their orientation to the technologies of online learning was also distinctive and often unexpected (to practitioners), requiring a re-evaluation of teaching practice. The combination of learning and networked technologies produced a hybrid, technologised student.

6.4 Engagement that is flexible

The repertories of practitioners tell a story of student engagement with learning which can be broadly located on a scale from low or problematic engagement to high or enhanced engagement. Accounts by practitioners tended to cluster at each end of this scale. The contrast is shown in Table 6.3, with the number of comments after each category:
Table 6.3: Contrasting repertoires of practice in online teaching and learning

<table>
<thead>
<tr>
<th>Low/problematic engagement with learning</th>
<th>High/enhanced engagement with learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repertoires of practice:</td>
<td>Repertoires of practice:</td>
</tr>
<tr>
<td>▪ requiring new strategies for engagement (55)</td>
<td>▪ an online community of learners (36)</td>
</tr>
<tr>
<td>▪ student as customer (28)</td>
<td></td>
</tr>
<tr>
<td>▪ student as the digital generation (5)</td>
<td></td>
</tr>
<tr>
<td>Total comments 88</td>
<td>Total comments 36</td>
</tr>
</tbody>
</table>

Reported experiences of low student engagement occurred three times more often than high engagement, with a 71% of comments (88) compared to 29% of comments (36). Practitioners’ comments spanned the range of categories, with respondents commenting into both ends of the scale. All respondents who reported high engagement also reported experiences of low engagement, with one exception (Francis).

Accounts of engagement also tell a story of engagement with technologies. Students build different types of engagement with technologies. In this study, engagement with technologies tended to take two forms: students used technologies in an opportunistic manner, or were constrained in its use. This double orientation to engagement are shown as clustered over the two scales of engagement shown in Figure 6.1.

Students who engaged with technologies opportunistically tended to appropriate technologies so as to order learning into the sociality of their lives, according to their own
perceived requirements, that is, their preferences for interaction and conditions of engagement. This opportunistic use of technologies, however, occurred at both the low and high end of the engagement with learning scale.

At the high engagement end of both scales, practitioners gave accounts of networked technology being used as an opportunity for learning. Speakers drew on the repertoire of students as a learning community in their explanations, using terms descriptive of online interaction, collaboration and deep learning, as describe above in the repertoire of a community of learners. Online discussion was reported as leading to the formation of a community of learners online (Jack, Francis, Wendy, Monica). In particular, the take-up of online discussion by international students was identified as enthusiastic and effective, and able to engage with deep learning (Wendy, Alison, Laura, Asha, Rebecca, Wendy, Monica).

At the low end of the scale of engagement with learning, there were two stories: one concerned the opportunistic use of technologies, the other concerned constraint or limitation by technologies. In the first story, practitioners drew on the customer repertoire to describe the opportunistic appropriation of technologies by students: as “individualistic”, where attendance was considered optional, as having expectations of immediate response, or particular preferences for communication by email or phone. The appropriation of technologies according to personal preferences constructed an individualised learning environment designed around a teacher-student interaction, an orientation to learning incongruent with the community of learners.

The second story of low engagement with learning arose from students who were constrained, limited or appropriated by learning technologies. Accounts of failed strategies were described using the repertoire of student engagement, as problems requiring new practices. Reports of low response rates in online discussion, “four (students) give comments out of 220 students” (Lia, also Alison, Laura, Craig); high attrition from online units (Laura, Lia, Asha); students marginalised by technologies and experiencing impoverished interactions (Lia, Fran, Jenny); and in the case of international students unable to engage with deep learning (Sylvia, Asha, Wendy, Lia). At this low end of both scales in Figure 6.1, student attempts to engage with their learning were hindered or constrained by technology.

The accounts of student engagement with online learning in this study support separate understandings of engagement with learning and engagement with learning technologies, and a dynamic and ambiguous intersection between them. Research on student experiences with online learning found that student uses of technologies in higher education were complex, unexpected, highly communicative, integrated and adaptable (Conole, et al., 2008; Conole et al., 2006), that social and learning purposes
Chapter 6: Case Study 2 – The disoriented practitioner

became blurred (Crook, 2002; Woo et al., 2008), and there was considerable variation in sophistication of use of technologies (Kennedy et al., 2008b). Engagement with technologies can be described as an active, iterative process, whereby, according to Don Ihde’s (1990), technologies “withdraw” as a presence with repeated use, and become absorbed into the background of daily life (p. 73). Then, as Price & Oliver (2007b) note, “successful practice becomes invisible – once the breakdowns at the operational level are resolved” (p. 24). If, however, malfunction or breakdown occurs, technologies intrude, become necessary and present, and engagement with learning is thwarted.

The deployment of learning technologies by students, however, was diverse and unpredictable, based on practitioners’ accounts, with 71% of comments reporting low levels of engagement with learning. As the times and spaces for learning became distributed over networks, so engagement was able to be re-ordered through those networks by participants. The blurring of sociality and learning in online spaces distributes the agency of this ordering through its networks, favouring individual preferences. The flexibility of online learning brought a corresponding flexibility of student engagement, both opening up and foreclosing choices, building social “inflexibilities” (Willems, 2005) to learning to accompany technical flexibility.

6.5 Disorienting practice: encountering an aporia

We had a university-wide decision to have flexible learning, whatever flexible learning is, online stuff so, you know, we can’t entirely blame the students. (Craig)

Emerging from these accounts is the picture of the disoriented practitioner. Teacher-student interaction over the virtual spaces of learning reflected variation in experiences and unexpected effects. Accounts of these interactions were analysed as drawing on discourses within and outside of the domains of teaching and learning, with the consequence of a disruption of prior assumptions concerning teaching practice.

Disorientation and disruption of practice in this study, therefore, is influenced by factors beyond teacher-student interaction. One such factor is the effect on academic practice brought by networked technologies in the institution. As universities have been transformed by institutional change and corporatisation brought by globalisation and networked technologies (Coates, 2005; Schapper & Mayson, 2005; Blackmore, 2001), there has been a reconfiguration of academic identity and work (Lee & McWilliam, 2008; Clegg, 2007; Marginson, 2000). Academic identity has become a “multiple and shifting term” (Clegg, 2007, p. 329), and academics negotiate variable orientations and uses of technologies within or despite standardised institutional agendas. Critics have expressed concerns at the impact of technologies on teaching and learning practice: as “disorienting” (Bayne & Ross, 2007; McShane, 2006); at the tendency for managed learning technologies “to place educators in straitjackets” (Gibbs & Gosper, 2006, p. 52);
at institutional and technological factors “disfiguring academics’ work and identity” (McWilliam, 2004), and at the tension between the institutional constraints on uses of technologies for learning and the “radical” potential of social software (Hemmis et al., 2009). The complexity of online learning is foregrounded by Goodyear & Ellis (2008) in student-centred approaches:

What may look like a technological intervention actually depends on a web of skilful activity, human relationships, and subtle adjustments to a changing material environment (p. 149).

Goodyear & Ellis refer to the “intervention” of a technology by the metaphor of a device which masks the effort required in the arrangements of people, pedagogical practices, machines and administration. In online learning, this effort encompasses the adoption of technologies by staff and students, which may be variable and unpredictable (Malikowski, Thompson & Theis, 2007, 2006; Coates et al., 2005).

This unpredictability was in evidence in the comments by practitioners on unexpected uses of technologies by students. A recurring trope was the expression of a sense of disorientation to the types of engagement by students in online learning spaces, as interactions were found to be guided by different rules and expectations. In many interviews with teaching academics, a reflective moment or aporia recurred, in which speakers expressed bewilderment at unfamiliar conditions of engagement, and arrived at an impasse in their teaching practice. In the following five examples, practitioners expressed such reflective moments as they recalled their experiences with technology mediated learning.

Optional attendance: Alison noted that the combination of face-to-face classes and the use of the LMS brought a different notion of attendance:

This is the second year I've had students voice that they shouldn't have to go to all the classes, instead should be allowed to “pick n mix”. But this causes a slew of problems, including the individualistic demand to go over concepts again. (Alison)

Similarly, Craig expressed frustration at the effects of “flexibility”, by which he meant the availability of unit resources and content online, with the consequence that many students considered attendance to lectures and tutorials optional:

We're giving them the technology to give them greater flexibility to be slacker, and so that's a down side of a technology, and what can we do about that? Well on our level nothing quickly. (Craig)

Requests for repetition: Craig was at a loss at how to respond to the evident spasmodic engagement in his subject by students, and the requests for repetition:

I give a new, an Excel spreadsheet of when you're meant to post, but still here we are, Week 7, and they're asking me about what they're required to post, and so we have now...
Chapter 6: Case Study 2 – The disoriented practitioner

because we have greater flexibility, and I don’t know the balance between whether we have the online stuff and we just, they’re out working more. (Craig)

**Personal interaction with large classes:** Fran grappled with the logistics and constraints of engaging students in a large cohort online. She asked what type of day to day engagement was possible when conducting tutorials for such large numbers by online groupwork:

I mean personal interaction with a group of students of about 700 is pretty difficult, you’re not going to have all of them at any one time. So to me, as a means of communication in terms of educational administration, and communicating on a daily basis with students either internal or external or whatever as an educator, as a lecturer, there are some real issues about that in terms of, that you really need to develop very good skills about how you communicate (across) with technology, using technology. (Fran)

For Fran, there were two issues: managing and administering a subject to a large cohort when interaction was mainly conducted using technologies, and the “real issues”, for her, of engagement that arise when the online mode of teaching is adopted as pedagogy, particularly concerning the time spent interacting with over 20 small groups per teacher. A key issue for Fran was depth of communication, such as “personal” or “emotive” issues in group interaction, or in a student’s life experience:

I mean, it's pretty hard, when you’re in a situation where a student might need some kind of comfort, or you might need to hand them a tissue, you can't do that electronically can you. (Fran)

**Modelling communication:** Fran asked how, in a “human based profession”, she could achieve her objective to model the communicative aspects of health practice using technologies:

… you know the communication that is so integral to nursing, but in fact the technology removes that. You know, it becomes much more impersonal, much more succinct, and so then one has to say if you are using it educationally as well, have students developed those skills, because part of how they develop those skills is modelling our behaviour, and the way in which they are interactively, as well as, in a theoretical sense, one (is) teaching communication practice. So, how do you actually do that, (respectively), using this technology? (Fran)

The dilemma for Fran was how to achieve her learning goals of preparing students for assessment of hands-on, professional health communication, over a distance, through online groupwork.

**Students’ preferred mode of engagement:** Wendy reflected on normative assumptions behind large scale, online learning contexts, organised around students engaging unproblematically, and managing teaching and learning is based on the notion that
communication online was equivalent to that in face to face settings. She raised the question of why international students, for example, go to great effort not to do distance online learning, and prefer to engage face-to-face, rather than online content:

why would students be wanting to come to university and actually be in a classroom environment, because all that stuff is already there, people could just go and do all their learning sitting in front of a computer, but they don’t. Why don’t they? Because they actually want human contact. They want to say “What does John think about this? (Wendy)

These comments reflected disruptions in teaching practice. Other practitioners recounted incidents that indicated mismatched expectations (Alison, Craig, Fran), or questioned the efficacy of practices for teaching in online spaces (Fran, Wendy, Lia). Similar disorienting impasses were recounted: on mass learning environments, on plagiarism online, international students’ expectations (Lia, Sylvia, Asha), and the variable, individuated preferences in communication (Lia, Laura, Monica, Paula) (see Appendix 6.1).

Practitioners attempted to make sense of their practices and resolve dilemmas by drawing on repertoires; for example, Craig and Alison explained lack of engagement in terms of the low acceptance of student-centred learning approaches, and the appropriation of learning technologies in terms of the student as customer. Their disorientation arose when these explanations were unable to resolve these dilemmas in their teaching practice.

Technologies played a central role in the mismatch between teaching practices and student engagement, and shaped the relations and the interactions between students, their learning, and their teachers. How, therefore, is it possible to build strategies for engagement that would better cope with the “disorienting spaces” of online learning? While there is no single answer to this, a useful step may be to review what constitutes the student in “the network university” (Lewis et al., 2005).

6.6 The student as multiple
One way of understanding students’ engagement online may be arrived by applying Annemarie Mols’ (2002; 1999) concept of enactment to the use of discourse repertoires (see 6.1). The student that emerges in practitioners’ accounts is multiple, that is, the “student” is constituted differently in online learning contexts, and enacted according to specific interpretative repertoires: as a member of a community of learners, or according to an individuating discourse of student-centred learner (effective or otherwise), as a customer, or as part of the digital generation. The student engages through the “written world” (Feenberg, 1989) that constitutes online spaces, and engagement is shaped by the discourses of sociality mediated textual interaction online. My argument is that
understanding the category of “student” as enacted in multiple ways offers a potential way to address the disorientation of practice in online learning.

The disorientation and the kinds of impasse expressed by teaching academics in this study calls for a different approach to the teaching-learning nexus in online learning spaces. Students were reported as interacting online in distinctive ways that were recognisable as antecedent discourses and shared understandings. While each such repertoire provided an explanation of students’ actions, they combined to create online learning as a disorienting space.

The two repertoires of the student as the digital generation, or as customer, both offer explanations of student engagement in terms of localised, individual dispositions or preferences. In the repertoire of the digital generation, students are “digital natives” (Prensky, 2001), or the “new student” (Oblinger, 2003), where “students have developed new attitudes and aptitudes” (p. 40). Indeed, the customer repertoire is also expressed in university public statements on vision and strategy (Hannon & Bretag, 2010). While Oblinger (2005; 2003) and others may make worthwhile suggestions for ways to engage learners, their evidence base has been criticised as poor (see 6.3). Further, both the repertoire of the digital generation and of the customer subscribe to a form of professional disempowerment for practitioners in relation to networked technologies, in which academics require development and “(self) work” (McWilliam, 2004, p. 161).

The less stable entity of the “student” can be linked to institutional changes in the field of higher education. Blackmore (2001) traced the global shifts in higher education as it has become more focused on outcomes linked to funding and student satisfaction, and she notes there has been a corresponding shift in which “the student is a more volatile object/subject of higher education” (p. 362). The disorientation, for both teachers and students, arises from the unanticipated complexity of the encounter with online learning environment (Bayne & Ross, 2007; Goodyear & Ellis, 2008, 2007; McShane, 2006; Gibbs & Gosper, 2006; Barnett, 2004; McWilliam, 2004; Warschauer, 1998). To approach this complexity, I will start with the “student” as a category.

Mol (1999) argued that a category such as an identity need not be considered as inherent, hidden or stable, but performed and enacted in practice, in different “versions” (p. 83). Following this notion, the student can be considered as a category that is constituted by a set of practices, such as those constituted by the customer or community repertoires. In online learning, the category “student” may be enacted in multiple ways that are not necessarily in congruence. Some enactments of the student bring consequences for engagement with learning: an engagement in terms of individual customer preferences limits the conditions constituting learning and narrows the range of participating actors and entities that shape the learning environment. Online learning
Chapter 6: Case Study 2 – The disoriented practitioner

encompasses many types of participants: students, lecturers and tutors, learning technologies, units of study, schedules, institutional support, procedures and learning activities, “all of these assemble and together enact a set of practices that make a more or less precarious reality” (Law, 2009, p. 151). The process of progressively assembling the contingent relations that form student learning is more complex than individual preference.

The repertoires that constitute the student in multiple performances are not predispositions, that is, they do not primarily arise from the student. They are not styles or preferences for learning embodied in the student, nor a psychological construct. The category of student is constituted in practices which are assembled through the relations of the institutional teaching and learning context. The “student” is enacted and performed online in multiple ways that may not be congruent.

Variation in practitioner accounts

Practitioners talk about engagement can be analysed as talk that was organised by distinct repertoires, and variation in these accounts was constituted a particular enactment of the student. Speakers made contrasting comments on international students, for example, as both unable to and able to engage in online learning (Table 6.2). The international student was enacted in terms of the repertoire of student-centred learning, as lacking the prerequisites identified as critical skills, English language proficiency and knowledge of plagiarism; they were also enacted in accounts as members of an online learning community, able to interact online and engage in deep learning. Each repertoire was drawn on to explain high or low levels of engagement.

Technologies tended not to take centre stage in these accounts by practitioners, and there were few descriptions of technical functions. Rather, technologies opened learning to the discourses of community, customer, and the Net generation, enacted on virtual spaces that were less separated by the markers of physical learning environments. The distinctive enactments of engagement by students interacted and competed with practitioners’ expectations. Indeed, in this study the enactment of student-centred learning over the blurred boundaries of online learning spaces had arguably shifted from the paradigm of independent, active, deep learning (Trigwell et al., 1999) to the individual preferences of the customer repertoire. The repertoire with the greatest number of comments (55%) was talk of students as student-centred learners, reflecting problematic strategies for engaging learners, as students expressed their individual preferences. The four repertoires listed in Table 6.2, therefore can be organised into two: online learning as enacted through the customer or through the community repertoire.

The disorientation of practitioners to online learning needs to be considered as an effect of practice and the relations that constitute it. Rather than understanding students’
actions as the result of predispositions or preferences for learning embodied in the individual, they can be understood as the result of an *assemblage* of people, technologies, curriculum, times and places. Online learning is formed less by the constraints of traditional pedagogies built around fixed times and spaces, and participants are more able to modify the conditions of engagement. The personalised virtual spaces of networked sociality invite opportunities to locate and organise learning within individual preferences and preferred modes of interaction. Discourses and repertoires, as customer, as learning community, form the building blocks to construct the student online.

There were some limitations in this case study. The enquiry on which this study was based did not encompass academics or managers who were indifferent or antagonistic to online learning, or who willingly drew on practices and pedagogies of transmission of knowledge. A broader range of pedagogical approaches may result in further repertoires of student engagement.

With networked technologies, online learning practices are opened up through computer interfaces to the virtual social practices of the Internet. Traditional practices of learning, pedagogies and social interaction are less anchored to fixed locations, and more open to ways of talking from other domains. Two consequences follow: expectations between practitioners and students may not be so readily shared and brought into coherence in online learning, as is possible in face to face environments; and competing engagements arise, with institutional learning technologies located in the same online space as learners’ social and working lives. Consequently, learning may become just one component in a students’ busy virtualised life.

The disorientation expressed by practitioners can be understood as a response to multiple enactments of the student. Engaging learners requires working with the blurred boundaries and the modes of interaction of online sociality deployed by students in other areas of their lives, which overflow into learning spaces to constitute the multiple student. Practice over online spaces requires negotiating the stakes and conditions of engagement and modelling modes of interaction, rather than assume communication modes and styles are understood. Teaching online means being implicated in enacting the student.
Chapter 6: Case Study 2 – The disoriented practitioner
7. Case Study 3. Breaking down online teaching: Innovation and resistance

The types of unexpected consequences that arise in the use of technologies for teaching and learning constitutes the controversy for the case study in this chapter. However, instead of a focus on the teacher-student interaction in online learning, as in the previous chapter, in this chapter I focus on teaching online through the perspectives and accounts of practitioners in their online teaching practice. The approach I take in this case study is to follow particular unexpected consequences of practice that result from planned approaches to teaching with technologies, that is, through innovation in teaching online. Discussion of innovation requires a contextual grounding if it is to have practical relevance, and in this enquiry, innovation is associated with institutional strategies and practice using educational technologies, at both large- or small-scale implementations. This chapter links technological innovation with breakdowns: it considers the evidence that innovations in online teaching and learning in higher education have poor outcomes, and explores the questions: why do innovations break down or deliver less than they promise, why they are so resource intensive, so prone to breakdown, and why they often fail to live up to their promises?

Two cases of innovation were selected from the cohort of 28 practitioners for this enquiry across three Australian universities. Both involved large student cohorts: one case deployed a wiki based learning space to a local context, inspired by a constructivist commitment; the other a response to organisational change across a degree program. This chapter also raises the broad lack of interest in universities in analytical perspectives with which to interrogate the breakdowns and failure in online learning, despite literature on case studies which offer useful, evidence based approaches and models for online pedagogy. While the focus of this study is on instances of online teaching, breakdowns are scoped beyond the technologies involved and encompass social, material and discursive entities. An actor network perspective (Callon, 1986; Latour, 1987; Law, 2000) is applied to explore the relation between social and technological entities, and the sociotechnical assemblage which constitutes online teaching. I argue that (i) crucial factors are hidden by the normative perspective inherent in the implementation of technology systems, and (ii) recognising the connections between the social, material and discursive entities in online learning offers a strong analytic basis for innovative teaching and learning practice.
7.1 Legacies of innovation and breakdown

Innovation in higher education has been variously associated with pedagogical approaches and the quality of learning (Jones, Dirckinck-Holmfie1d & Lindstrom, 2006, p. 38), organisational processes, grant opportunities, learning technologies (Alexander, S., 2006), responses to globalisation, and the agendas of government (Roberts, 2007). The term innovation is put to many uses, from government policy, to frequent appearances in university vision statements, and as a rhetorical participant in organisational change. Despite its fuzziness, and questions about the meaning of the “new” inherent in the term (Conole, de Laat, Dillon & Darby, 2008; Alexander, 2006), a connecting theme for innovation in higher education contexts is significant change, and its potential to transform practice. As an example, the appropriation by learners of social software technologies of interaction and collaboration is identified as a “disruptive” type of innovation such that “we are reaching a turning point in the way technology is used for learning” (Conole et al. 2008, p. 511). Others agree that user centred and Web 2.0 technologies represent an innovative shift for online learning (McLoughlin & Lee, 2008a; Downes, 2006a; Oblinger & Oblinger, 2005).

Conole et al. (2008) also point out that the rhetoric that accompanies e-learning at the policy level probably does not match changes in practice (p. 511). In considering the history of online learning in higher education that is associated with innovation as organisational change, the record indicates a pattern of immense investment, “thwarted innovation” (Zemsky & Massy, 2004), “exaggerated claims” (Hamilton & Feenberg, 2005), recurring breakdowns, costly failures and unintended outcomes (Conole, 2007; Price & Oliver, 2007b; Hedberg, 2006; Warzynski, 2006; Oliver, 2005; McMullin, 2005; Bacsich, 2005; Cornford & Pollock, 2003, p. 85). Reasons that emerge from studies of online learning are: approaches to change and technology implementation are too narrowly focused (Warzynski, 2006), or limited by an “information view of higher education” (Cornford & Pollock, 2003, p. 41); there is a disparity between how different groups understand key organisational terms, which may be taken up in different ways in the organisation (Lewis, Marginson & Snyder, 2005); there is a mismatch of goals between organisational participants in a project, such as a technological, organisational or pedagogical focus (Cornford & Pollock, 2003, p. 85; Weisenberg & Stacey, 2005, p. 401); a technology centred approach and a lack of integration of all elements of an innovation (Goodyear & Ellis, 2008; Romiszowski, 2004); and too much focus on the “how” of technology use, rather than the what and who involved (Bigum & Rowan, 2004, p. 218).

Online learning innovation seems to mirror the track record of information technology projects in the business and government sectors, where there is evidence that failure has
a “long, dismal history” (Charette, 2005), and breakdowns or unexpected outcomes have become incorporated into implementation as a normal part of the experience of working with large technological innovations. Such unhappy outcomes suggest that the project of integrating online learning technologies into organisations is narrowly understood.

This focus on breakdowns problematises innovation, and while this is intentionally a negative starting point, my aim is to offer a different analytical perspective to bring to the high incidence of breakdowns in online teaching and learning. A consideration of breakdowns, then, may be extended beyond the technology involved, and encompass other contributing interests in a project: any social, material or discursive participant. My focus in this study is on online teaching, since that is the intersection of all the participants in such ventures – the technologies, the organisations, the knowledge, the teaching staff, and students – all those who together make it work, or not.

Bigum and Rowan (2004) contrast two approaches to the deployment of technologies into teaching and learning: the “corporate approaches”, which tend to be implementations of proprietorial software across the whole organisation, and “maverick approaches” to flexible and online learning, usually individualised, small-scale undertakings (p. 214). Where innovations occur as large-scale implementations of online learning based on institutional goals, entailing significant investments and regimes of implementation, training and professional development, for instance, as responses to economic pressures and increasing numbers of students, it does not follow that any transformation of learning or practice results. Blin and Munro (2008) state, “there is little evidence of significant impact on teaching practices and current implementations are accused of being focused on improving administration and replicating behaviourist, content-driven models” (p. 475).

To analyse innovation beyond its rhetorical use, a measure of the effectiveness of an innovation in an organisation would account for its persistence and acceptance. Shirley Alexander (2006) proposed criteria for analysis of innovation (based on Coburn, 2003), incorporating evaluation of depth, sustainability, spread, and ownership (p. 25), as factors which establish effectiveness criteria for innovation. These are useful criteria for analysing innovation that originates both as a top-down, organisational change process and as bottom-up, local practices.

Two case studies of innovations in online teaching were selected from one Australian university, which reflected the two expressions of innovation indicated by Bigum & Rowan above: an individual, localised, innovation in online pedagogy using wiki technology; and an organisational innovation to provide mass learning enabled by online technology. These two cases were in fact successful as technology implementations, but breakdowns in practice occurred. My contention is that the separation of social and
technological entities in online teaching, such that either one is assumed or considered fixed, will produce breakdowns in practice. A relational perspective incorporating all the entities participating in online teaching - material, discursive, and social – can offer a more useful, alternative perspective on innovation compared to orthodox implementations informed by technology units or organisational structures (Alvesson & Sveningsson, 2008; Cornford & Pollock, 2003).

A relational perspective on technology and practice

The technologies of everyday work, such as a filing cabinet, email or an institutional learning management system (LMS), tend to be encountered as a bundled set of functions and uses, mainly fixed, and little remains to be negotiated. They are then absorbed as a "tool" into the practice of day to day work. A discourse in which technologies are tools, and inherently neutral, itself acts on the setting of use and may implicate the human participants. Any issues or problems associated with their use are resolved after according a status of neutrality to the object: perhaps it is the wrong tool for the purpose required, or the user needs training in its proper use.

Don Ihde posits the non-neutrality, and "non-innocence", of technologies that perform an action which may have transformative effects, for which he implicates the non-humans (Ihde, 2002, p. 94). An alternative way to think of technologies is that they embody a condensed set of relations: they represent the end of a process of design and development involving many participants in which selections and decisions are made, until finally this chain of relations is stabilised into a material or digital form. John Law emphasises the contingency of these relations that make up an object, which "is an object as long as everything stays in place" (Law, 1999a). Technologies, texts, discourses and notions of pedagogy do not exist by themselves, rather they are assembled from and act in local settings. Hence such a object "is an effect of its relation to other entities" (Law, 2000).

In this study I bring a relational perspective to the way people work with innovations in their academic practice of online teaching. This perspective derives from two theoretical directions which converge in this analysis: actor network theory (Callon, 1986; Latour, 1987; Law, 1999b) is used to explore relations between actors - both human and nonhuman - in situated cases of breakdown in online teaching and learning. I identified interpretative repertoires in practitioners' accounts to connect an assemblage of practice to broad patterns of discourse associated with online teaching (see Chapter 3.2). Discourses emerging from pedagogical theory, from institutional policies, and from disciplinary practices, are able to be transported across contexts as "tokens of text or talk" (Cooren, Matte, Taylor & Vasquez, 2007, p. 155), that is, they are able to travel as relatively fixed textual entities from one point to another, and take effect on local
contexts. They become, in actor network terms, “immutable mobiles” (Latour, 1987, p. 227; Law, 1999a). Discourses, then, become globalised, “Looking across policy texts from around the world, it appears that descriptions within policy discourse are relatively stable, they emerge again and again in quite similar formulations” (Edwards, Nicoll, Solomon & Usher, 2004, p. 151). These authors give the example of “flexibility” and “lifelong learning” as two such globalised discourses. Discourses associated with teaching and learning in higher education, therefore, act on local settings: they offer descriptions which have an “action-orientation”, that is, they can be “used to accomplish an action, and it can be analysed to see how it is constructed so as to accomplish that action” (Potter, 2000, p. 108). The method of interpretative repertoires and the concept of immutable mobiles can be used to bridge analysis of local, situated discourses with Foucauldian discourse analysis of institutional effects of power relations (Cooren et al., 2007, p. 154). In this study, interview accounts were analysed to account for the shaping of notions and practices in situated contexts by broader pre-existing discourses and rhetorical strategies.

The relational perspective broadens the description of an innovation from a focus on an object or intervention to a focus on its relations, to a consideration of who and what constitutes an innovation in practice, and how it persists or breaks down. In Law's “radical relationality” (2000), there are no fixed or static categories, and connection is emphasised rather than the object or person, “elements have no significance except in relation to their neighbours, or the structure of the system as a whole”. A core principle of the relational approach is heterogeneity: the symmetry of the human and non-human, such that one is not privileged nor takes agency over the other in any analysis. Hence what is important is the extent of strong and weak ties that make up the network, or the sociotechnical assemblage (Latour, 1986), which “hybridizes the social and the technical” (Arnold, 2007). The term “assemblage” more accurately describes the sense of “network” in actor network theory that predates the Internet (Latour, 2005, p. 8), and in doing so conveys the sense of contingency and fragility of the connections that comprise the set of relations under analysis. Latour (1999a) offers the example of a speed bump, which “is ultimately not made of matter; it is full of engineers and chancellors and lawmakers, commingling their wills and their storylines with those of gravel, concrete, paint, and standard calculations.” (p. 190). The entities that need to be brought into the assemblage may be uncooperative and offer resistance, and Bigum & Rowan (2004) refer to the “unruliness” of the assemblage of entities that make up teaching (p. 220). For example, the assemblage that constitutes “learning” in higher education is described by Edwards et al. (2004):

Learning involves the enrolment and mobilization of heterogeneous elements: for example supervisors, colleagues, peers, laboratories, test-tubes, computers, the configuration of
space, journal articles, conferences, funders and many more. All these and the relationships between them forges the network that needs continual management (p. 90).

From this perspective, it is possible to uncover the “hard work” involved in assembling and maintaining “heterogeneous bits and pieces” (Law, 1992) into a stabilised or blackboxed assemblage (Latour 1999b). A black box is a set of relations, a hybrid of social and material elements, that constitutes the temporary settling of a controversy, that persists and is transportable. By implication, there is resistance, and work is still required in assembling and maintaining such a network of relations. This work of relating or associating elements is translation (Callon 1986; Latour 1987; Law, 2009), in which participants are engaged, aligned and assembled, and project goals are achieved when the assemblage of heterogeneous elements has been enrolled and mobilised. Fox (2005) described translation of people into professionals:

People are enrolled by teachers and translated into “learners”; they form queues to buy books, get in line to join the ranks of the professions, become this or that professional identity ... (Fox, 2005, p. 106)

In translation, one element can stand in for others, which then become blackboxed, or assumed, or presumed. In an online teaching context, an institutional implementation of an LMS is a black box in which many decisions about procedures (and some practices) are embodied in irreversible technological choices: it is a hybrid that is a stabilisation of institutional and pedagogical controversies into a sociotechnical assemblage. This stable assemblage becomes transported when a discourse is organised, reified and mobilised into a powerful rhetorical black box to become an immutable mobile, for example, “student centred learning”, “LMS” or “sustainability”.

Innovation occurs within a context of change, or to use Callon’s (1986) term, a “controversy”. Callon (1986) and Latour (1987) identify four not necessarily consecutive “moments” of translation in analysing a controversy. These are outlined as:

1. **Problematisation** or “how to become indispensable” (Callon, 1986, p. 203), in which key stakeholders or assemblages are defined. Key actors will attempt to establish themselves as an “obligatory passage point” around a problem (p. 206). For examples, teachers are an obligatory passage point around education.

2. **Interessement**: engagement of key actors and translation of their interests into the assemblage.

3. **Enrolment**: coordination of actors as translators, delegation of roles around project.

4. **Mobilisation**: alignment of the assemblage and strategies for expansion, where actors, large, small, concrete or abstract, come to be mobilised as actors. One stands for many.
Chapter 7: Case Study 3 – Breaking down online learning

The assemblage achieves mobilisation as a black box, when “all previous discussion, questions, assumptions and, maybe, controversy are closed down and are no longer visible as the technology moves from a private to a public domain” (Cornford & Pollock, 2003, p. 19).

These moments can be represented, using the example of the translation of a student into a professional from Fox (2005) above, in Table 7.1:

Table 7.1: Actor network “moments”

<table>
<thead>
<tr>
<th>Problematisation</th>
<th>Interessement</th>
<th>Enrolment</th>
<th>Mobilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define problem or controversy</td>
<td>Engagement of key actors, their goals diverted or changed</td>
<td>Alignment of goals, values, displacement</td>
<td>Network alignment and expansion. One element stands for many and acts. Blackboxing.</td>
</tr>
</tbody>
</table>

Individuals aim to join the law profession | Are engaged into subjects, classes, timetables | Are translated into learners. Progression, assessment, award | Enter and act in the profession. The lawyer becomes a black box. |

Translation, therefore, occurs when one actor stands in for or represents others, whether human, object, technology, role, discourse, policy, and so on.

**Action at a distance**

While the actor network approach is deployed specifically to focus on the material relations arising from a local setting, its analytical scope need not be limited by the location of its actors, nor are its effects “only local constructions” (Couldry, 2008, p. 165). A focus on the translations themselves, and the relations that produce them, links an apparently local instantiation of practice to connections with actors over distance and time, and obviates the need to analyse the local through an appeal to a “macro”, big picture context (Latour, 2005, p. 184). Opening the black box of online teaching reveals the discourses that connect those local actors to the possibility of “action at a distance”, in which documents, papers and policies are “highly portable and retain their form and shape” (Cornford & Pollock, 2003, p. 43) as they circulate and perform. Discourses, of pedagogy, technology and policy, become relatively stable, and are mobilised through global dissemination of policy text (Edwards et al., 2004, p. 165). A discourse about online learning, then, can make use of “the shared assumptions and cultural memories that exist between authors and audience” (p. 19). Practice, therefore, is the point at which concepts, discourses and innovations become concrete and embodied, where abstractions hit the ground.

Actor network theory does not consider matters of scale to draw distinctions between actors. However, in this chapter, the metaphor of action at a distance is used to include in the assemblage (through the accounts of participants) actors who reside in settings
that are spatially or temporally distinct from the specific teaching and learning setting. This distinction does not privilege one type of actor over another, it rather is used to develop and extend our understanding of the assemblage.

Comparing analytical perspectives
Where institutional technologies are concerned, a normative model of organisational change, such as a planned management approach (Alvesson & Sveningsson, 2008, p. 19), is commonly adopted by informational technology units in organisations. These approaches deploy analytical perspectives from a business process or “informational model” (Pollock, 2000, p. 351; also Cornford & Pollock, 2003) in which work and knowledge in the organisation become translated into information processes. The business process model is compared to the relational approach, developed from an earlier version in Table 3.1 (Chapter 3), shown below in Table 7.2.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Process or informational model</th>
<th>Relational approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation as</td>
<td>Implementation – a business process to be managed until project goals are achieved</td>
<td>Problematisation – a set of social and technical relations to be negotiated until stabilisation of relations is achieved</td>
</tr>
<tr>
<td>Learning technology as</td>
<td>Tool or application for something</td>
<td>Reordering or configuring a space of interaction</td>
</tr>
<tr>
<td>Process</td>
<td>Manage and allocate time, cost, resources to achieve project goals</td>
<td>Align “unruly” entities and overcome resistances until a sociotechnical assemblage is achieved</td>
</tr>
<tr>
<td>Examples</td>
<td>Implementation of an LMS, of an institutional e-portfolio</td>
<td>the speed bump (Latour, 1999a), “flexibility” (Edwards et al., 2004), an LMS, a wiki</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Separation of humans, technology and goals</td>
<td>Symmetry of humans and nonhumans - social, material and discursive relations constitute an assemblage</td>
</tr>
<tr>
<td>Analysis</td>
<td>Project management evaluation – discrete entities, clear project boundaries</td>
<td>Actor-network approach - trace the strength of alignments in an assemblage. Breakdowns occur where alignments are weak</td>
</tr>
</tbody>
</table>

In the process model “information has become the unifying principle in the university, the basis around which all actors are ordered” (Pollock, 2000, p. 358), and university teaching and learning translates into the delivery of courses as an information process (Cornford & Pollock, 2003, p. 42). If only entities visible to information technologies are recognised, the issue for practice is how sociality breaks through.

In each of the two contexts for online teaching for this case study, three practitioners were interviewed and asked follow-up questions where required. The data comprised a
total of six practitioners from University C, their interview transcripts and associated
technological and textual objects, such as samples of online course material, a School
seminar paper, and relevant institutional documents.

7.2 Why does a successful innovation in online teaching fail?

We all agree on the road rules, but we don’t have to all drive Holden Barinas (Jack)

Jack’s innovation was an informal, “maverick” approach to online teaching as a response
to his perceived limitations of the institutional LMS. He researched and set up a
collaborative, wiki based platform for his teaching and learning, using his own expertise
in computer programming with Unix and PHP to install the wiki on servers next door to
his office (these he had acquired from a community project grant and acquiring unwanted
university computers). He and several colleagues placed a number of units of study on
the wiki. Having set up and configured a dedicated wiki platform and successfully used it
for online teaching over two semesters, including for a class of 510 students, Jack
subsequently abandoned his innovation. The wiki home page is shown in Figure 7.1.

Applying the relational approach brings a focus on the associations that constitute the
wiki project. I will limit the case to the actors associated with one of Jack’s units of study,
an undergraduate unit of a degree program, Computers and Society (CS, a pseudonym).
Based on participants’ accounts and related documentation, the sociotechnical
assemblage of the wiki can be described initially as encompassing the following actors,
that is, “entities who do things” (Latour, 1992): the unit CS, the unit content, the
assessment based on the wiki, Jack as unit coordinator and as lecturer, the installed and configured wiki, a team of 13 tutors, a class of 510 students, institutional governance (policies on assessment, unit design, evaluation), Faculty staff (Dean, Head of School, administration, colleagues), information technology (IT) support, the student name database, Jack’s servers, and the Faculty workload model.

To describe the process of assembling the actors and their associations that constitute Jack’s innovation to teaching online, Callon’s “moments of translation” can be used. These are represented in Table 7.3.

**Table 7.3: The wiki assemblage**

<table>
<thead>
<tr>
<th>Problematisation</th>
<th>Interessement</th>
<th>Enrolment</th>
<th>Mobilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The existing technology, the LMS, was found to offer a limited model of pedagogy, an alternative technology, an open-source collaborative online space was deployed</td>
<td>Installation of wiki, linking to student names, engaging tutors and students with wiki. Lack of involvement from Faculty management and IT support.</td>
<td>Online learning practice is translated into the wiki: it becomes the site for activities and assessments</td>
<td>Wiki becomes the unit’s primary learning and assessment space</td>
</tr>
</tbody>
</table>

**Problematisation:** Jack found a mismatch between the LMS and his conceptions of teaching online. He found the LMS “very constraining”, “cumbersome”(p. 4)\(^{13}\), and based on a model in which “there are no surprises, no uncertainty” (p. 20). Jack described his innovation as founded in the application of social constructivist learning concepts to open-source software and a “model of the virtual community” (p. 13). The decision to adopt open-source collaborative technology, and his methodical selection of the wiki (from a survey of over 200 wiki engines), was based on these traditions. Jack described his model of teaching online using the wiki as one based on trust and transparency, compared to the LMS model which, he said, was based on managing risk, and “overly concerned about people doing the wrong thing” (p. 20).

**Interessement:** This process describes the engagement, recruitment, and continual regeneration of interest for key actors in the wiki assemblage, and the strength of the associations between them. Jack overcame infrastructure issues with his own expertise, installing the wiki on his own servers, linking to the student name database, and organising students’ individual spaces on the wiki. The two key sets of human actors, 510 students and 13 tutors, formed strong ties with both Jack as the unit coordinator, and the wiki as the space for teaching and learning. Jack’s self sufficiency and the strength of ties with the teaching and learning actors had the consequence that the links to Faculty

\(^{13}\) See Appendix 7.1: Coding notes for Jack
management and IT support were tenuous, “no one’s saying stop it, but no one’s saying do it. It’s a thing of being on the sideline but being harmless” (p. 9). Further weakening the link between his wiki and the institution was Jack’s workload calculation, which excluded the work of maintaining the wiki and supporting students in this and future iterations of the unit.

Enrolment: The process of translation can be described as “enticing and engaging” (Callon 1986) actors in the assemblage, and the creation of a key role in the wiki, which acted as the “obligatory passage point” (p. 206). Jack translated the wiki into an online learning space for 13 tutors and 510 students that matched his conceptions of learning in which “the curriculum can be more flexible” (p. 20). This flexibility of the wiki was illustrated in assessment, which was translated into a “disruptive” form not possible using the closed system on the LMS:

I have gone away from the model of students handing things up. When students have finished their work, they just take the hands off the keyboard. Because their work is always here, and I can see them as they construct it (Jack, p. 5).

The wiki made possible an approach to assessment in which student’s project work was visible to peers. Jack defined assessment in the wiki as an open ended, visible and transparent task, a mode which he deployed as a means of self regulation, “it’s reasonably hard for people to cheat, really. I mean, they can collaborate, and they can look at each other’s work and be inspired” (p. 7). While this approach was contingent on each student’s agreement, Jack successfully delegated this agreement to the open architecture and collaborative design of the wiki; there were no closed spaces within the wiki.

Mobilisation: This stage indicates the extent of support leading to stabilisation and extension or mobilisation of a network, and resistance can be identified in the weak ties linking actors. For Jack, the increase of student numbers from a small class to 510 was not problematic in technical terms, “scale is not an issue” (p. 18), moreover the unit was eventually completed successfully for all these students. However, there were sources of resistance which brought Jack to reconsider the future of the wiki: one was the potential for poor student evaluations:

There is, I mean, a lot of room to innovate here and there is no one stopping me. But in our present climate though, I think, if you innovate, sometimes it might not go well. (Jack, p. 10).

Jack recounted a threat to his wiki approach in prospective student evaluations. The enrolment in his unit in the upcoming semester of over 500 students had the effect of linking the innovative pedagogy of the wiki to a potent institutional actor “student evaluation”. As class sizes increased, so did the diversity of students’ responses and
Chapter 7: Case Study 3 – Breaking down online learning

their orientation to learning. (Alison, a tutor in the wiki, alluded to this concern when she described the “pick n mix” student, that is, a student who considered participation merely optional). Student evaluation was present in the assemblage in two forms: materially as a survey of student responses to the unit; and as a component of the institution discourse of performance and improvement. Evaluation was a mobile actor with its own “transportation effects” (Cooren et al, 2007, p. 567), that acted to link students with institutional policy, and make more tenuous the ties between the wiki and the institution.

At a follow-up interview with Jack after his class of 510 students completed the unit on the wiki, he reflected on his decision to cease the open assessment strategy enabled by the wiki, and abandon the wiki as the primary mode of online teaching. Instead, he used it only to house content, and provide a common development space for tutors rather than students. Other factors Jack identified in his decision were a lack of shared interest and connection with Faculty management and many colleagues, and the increased workload in maintaining the wiki, not accounted for in the workload model.

In Jack’s account, the wiki assemblage extended in time and distance to an actor with real effects: prospective student evaluations, as a potential, absent yet material entity, and this actor formed a resistance strong enough to overcome the mobilisation of the assemblage and ultimately lead to the breakdown of the sociotechnical assemblage. The status of the wiki innovation after two iterations was indicated by Jack’s comment that he was now “not experimenting”, and “we are still driving Holden Barinas” (p. 22).

7.3 How is practice negotiated in a shift to mass online learning?

Fran taught an undergraduate unit in a program in the Health Sciences Faculty, one of several programs at the university undergoing a shift to online large class teaching using the LMS, shaped by conditions of organisational change and an associated institutional commitment to flexibility. Fran coordinated a unit, Communication in Practice (CP), in which there were about 700 students, about half attending face to face classes (internal), and half off campus (external), including a large proportion of nursing students. The shift to online mode aimed to offer an equivalent experience to both internal and external students using one, unified curriculum. One consequence was a strong emphasis on online groupwork for external students, in a context of learning professional practice. There were 39 online groups (comprising 6-7 students each) to be managed by Fran and two colleagues. Three individuals were interviewed for this program: Fran and Margaret, lecturers, and Monica, a program coordinator.

The entities that made up the new sociotechnical assemblage of online teaching for CP included: the unit CP, the 700 enrolled students, the unit coordinator, and a unit team of three colleagues as tutors, the online group work and assessment, the LMS, institutional
policies, IT support, Faculty administration. The assemblage also extended outside the immediate learning setting, to include links to health practice, such as requirements and competencies for accreditation set by health regulatory bodies.

The actor network approach focusses on the process of translation while assembling the unit’s online teaching. A dilemma gradually emerged: how does Fran negotiate a shift from a face to face model of teaching health practice to a an online teaching model for a face large class? The process of translation is presented in Table 7.4.

### Table 7.4: The shift to online teaching of a large class

<table>
<thead>
<tr>
<th>Problematisation</th>
<th>Interessement</th>
<th>Enrolment</th>
<th>Mobilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is coordination and teaching of a large class unit shifted online? How does Fran shift her discipline based conceptions of learning online to the LMS?</td>
<td>Connecting actors in the new assemblage: coordinating the LMS, online marking system, tutors, managing student data to new standards.</td>
<td>Learning and assessment is translated on the LMS. However, the conditions are narrow and not all students are accepted. Managing exceptions to the system</td>
<td>The new online teaching assemblage was mobilised despite weak links, including those with models of professional practice</td>
</tr>
</tbody>
</table>

*Problematisation:* Fran’s initial task was connecting and coordinating separate processes of the institution to the new arrangements, that is, constituting the unruly assemblage of entities that made up online teaching. During the first iteration of CP, these processes converged on online assessment, and a series of actors made insistent demands on Fran. These demands were administrative, managerial, technological and pedagogical, and they became manifest in an institutional regime of on-screen marking. A new institutional policy required a two week cycle of marking and return of student assignments, and Faculty restrictions on printing required marking to be conducted on-screen. Fran compared marking as a manual process with the on-screen process, where “course” refers to one unit of study:

Fran: I actually find that, the actual marking is good. It’s the front-end work, and the back-end work ... you have got to download your documents, put it in a zip file, transfer it to from the zip file to a marking file, then you’ve got to import your criteria sheet, and that actually adds about four hours, you know for my last, because I’m doing 100 - and this time, and I was marking 375 Word documents online!

John: In one course?

Fran: In one course!

Fran had found the marking process on-screen and on paper as equally demanding, however the “front end work and the back end work” of on-screen marking were onerous.
Not factored into the online marking process was the management of extensions and manual assignments (from students with Internet access problems). This meant accommodating those for whom the system did not work:

you’re moving between marking systems, okay you are marking manually, you’re marking online, you are handling documents ... (Fran)

Fran noted that the agency of her practice has now shifted, “I am constrained to actually sitting in front of this computer”, narrowing the choice of time and place for marking. The initial problematisation, constituting a new agency for unit coordination, had shifted from Fran as unit coordinator to a shared agency of coordination with the LMS. In addition, Fran concurrently managed the earlier manual process for those students who did not meet the requirements of the new online system, the “exceptions”. Coordination was now a tightly coupled hybrid of person and LMS database.

Interessement: The engagement of key actors in building an assemblage for teaching online required adapting prior arrangements and coordinating a series of new operations, that is, operations that shifted teaching and assessment from face to face settings to online ones. One outcome was increased workload, as Fran’s colleague Margaret puts it, “the word used around here is ‘relentless’”.

A consequence of this translation of teaching onto the LMS was the displacement and alignment of learning activities to the text based mode of electronic communication. Fran expressed concern with the reliance on online communication in a professional practice unit, citing a “humanistic model” for health professionals. For example, teaching the “subtle cues” involved in visual assessment of patients is best done in a face to face setting. Fran raised the question of how students can be prepared for clinical practice online, if “part of how they develop those skills is modelling on our behaviour”.

Enrolment: With online discussion as the primary mode of interaction with students in CP, the nature of interaction for teaching and learning changed. Fran was concerned that text based online communication “has a potential to depersonalise communication and is open to misinterpretation”. With such a large cohort, “personal interaction with a group of students of about 700 is pretty difficult”, it was those students who were not coping who required the most attention:

Generally the students that you interact with most are most of the students who have major problems. And you’re either academically or personally counselling them or educationally counselling them. And using an electronic means (Fran).

Fran identified online communication as a shift from pedagogy towards counselling. In particular managing groupwork communication breakdowns by email and telephone was “very protracted” and time consuming. Consequently, she questioned how effective
Mobilisation: The conditions for standardised mass learning online occur when the administrative and technological actors are centralised, formalised and standardised (Cornford & Pollock, 2003, p. 76), and the processes made seamless, that is, stabilised or blackboxed. In Fran’s unit and degree program, online teaching was assembled and standardisation achieved, although with great effort on the part of coordinators and fellow teaching staff. There were two implications for Fran and her colleagues: first, standardisation produced non-standard entities, the “exceptions”, mainly external students who did not have reliable online access to enable reliable submission of assignments. Fran estimated up to 30% of students had difficulties with online technology. These exceptions, as enrolled students, were still part of the assemblage of online teaching, but invisible to the standardised process of on-screen marking.

Moreover the effort of accommodating the exceptions excluded by the standardised LMS, formerly managed by faculty administration, was now delegated to teaching staff, who picked up the now expanded hidden work of bringing the student exceptions into the assemblage. Second, the pedagogical approach for teaching clinical practice was now delegated to the mode of online asynchronous, text based communication, and for Fran and her colleagues, this mode did not align with their discipline based experience of hands on teaching of clinical practice.

While no breakdown occurred with the newly constituted online teaching unit in a technical or organisational sense - the unit CP and the program continued - the conditions for participation were so narrowly defined that people were continually at risk of falling out of the assemblage: breakdowns occurred for students who could not be translated into standardised performance, and teaching staff for whom the link between teaching and practice was weakened or marginalised. The conditions for breakdown could also be located in the “relentless” workload that was cited (by Margaret) to indicate the effort required by teaching staff to take on the invisible work of adaptation and implementation required for this top-down innovation.

7.4 Discussion

Both the above innovations produced “disruptive” change in their own contexts, one a bottom-up initiative originating from an individual teaching academic and implemented in several units, the other, top-down, was part of program wide organisational change. In each case breakdowns interrupted or distorted the innovation. To analyse how the resistances and breakdowns emerged using the relational perspective described above, it is necessary to review each sociotechnical assemblage and identify the “action at a distance” which acted on the assemblage.
Chapter 7: Case Study 3 – Breaking down online learning

In the relational perspective using actor network analysis, the principle of symmetry applies, so that for the entities involved, whether technical, social or discursive, no one type is privileged over another, nor are there barriers in describing relations between them. The key to the success of an innovation is alignment of all actors through the process of translation, in which decisions, selections and sequences of actions, are displaced and delegated. Actor network theory explores the process of “orchestration, ordering and resistance” (Law, 1992), until the assemblage is stabilised, or blackboxed, and itself becomes an actor. Once stabilised, the assemblage acts and becomes mobile, and in a sociotechnical environment like online teaching in a university, this occurs not just through a production process but also a discursive process. An institutional LMS may achieve alignment with the institution and become a stabilised black box for online teaching. This is accomplished when online teaching is translated both onto the LMS technology, and summarised by the term “LMS”. Finally, the LMS and “LMS” become mobile respectively as a dominant technology and as a discourse throughout the institution.

In order to account for the breakdown of the wiki innovation, it is necessary to extend the description of the wiki assemblage beyond those actors that are co-present and local to the wiki enactment, to include actors that have effects from a distance, both spatially and temporally. Nespor (1994) raised this issue in terms of the inadequacy of analysing activity limited to specific situations, and asked “how is activity in one setting (such as a classroom) related to activity in settings distant in space and time” (p. 6).

The wiki assemblage comprised the entities who enacted learning in Jack’s unit CS, ranging from: the people (the coordinator, 510 students, 13 tutors, Faculty people), the technologies (the wiki itself, the university student database and infrastructure), and institutional policies. In addition, there were two actors from elsewhere that shaped the project. One emerged from Jack’s initial decision to deploy the wiki: he identified constructivist learning concepts as a resource for his wiki when he found a mismatch between the latent pedagogy of the LMS and his concept of learning. Hence constructivist learning, an expression that summarises a discourse with wide application in higher education, is an immutable mobile that is transported across settings to become an actor in the wiki assemblage. The second actor was the “open source way of doing things” (p. 13), which Jack aligned with constructivist learning. Hence open source software also emerged as a resource for Jack’s collaborative online teaching approach, and Jack used this to entice (interessement) students into his open assessment strategy. The actors in the wiki assemblage are shown in Table 7.5.
There were two further actors from a distance: anticipated student evaluations (Appendix 7.1, p. 10), which, at the time of initial interview, were yet to manifest, but nevertheless had effects on the decision to undertake further iterations of the wiki in CS. As student numbers increased and the wiki displaced institutional IT support, CS became less connected to the institutional standard for teaching and learning and more contingent on student evaluation, leaving Jack vulnerable to the effect of negative evaluations of the wiki.

The final distant actor was the incumbent institutional LMS which, despite not being used in CS, was nevertheless present. The resident LMS was managed by information technology unit and the standard environment for online teaching, and claimed the pivotal status of “obligatory passage point” for online teaching. The wiki, in contrast, had weak ties with both these institutional players, and its presence marked its status as non-standard to the university, and hence to the students. Jack’s plea, “We all agree on the road rules, but we don’t have to all drive Holden Barinas” was a reference to standardising effect, the hidden online pedagogy, of the LMS through a comparison with an automotive token of ordinariness. After two iterations of CS, the existing alignment between the LMS, university infrastructure and policies weakened those ties between the wiki and the university, despite Jack’s efforts and his increased workload. The distant actors – student evaluations and the LMS – had strong ties with the university that built
resistances and led to the eventual breakdown to the wiki assemblage. Contacted nine months later, Jack stated, “We’re back to driving Barinas!”

In the top-down innovation of Fran’s unit, CP, she described the effect of the shift to a unified online curriculum on her practice in two ways: first, as unit coordinator, she was trying to integrate administrative processes, institutional needs and learning technologies into a functioning online teaching and learning environment for over 700 students. Second, as lecturer and coordinator, she described a tension created by the new teaching arrangements, with the substitution of online groupwork for hands-on modelling of clinical practice. This did not fit her conception of CP as “a human based profession”, and she queried how this could be reconciled with such an strong emphasis on technology based learning.

Again, discourses of learning became a distant actor in this assemblage of online teaching: in Fran’s case, her prior conceptions of teaching emerged from health care practice and valued teaching by modelling clinical behaviour. The translation of the discourse and hands on practice of “humanistic” care onto mass online groupwork was neither tenable nor workable for Fran and colleagues in her CS team. In addition, the LMS produced a new category: that of the exception, the approximately 30% non-standard students, for whom continual work was required to accommodate and keep them in the assemblage, displaced onto increased workload. The breakdown, for Fran and Margaret, commenced at the outset, where the inclusion of online groupwork for assessment in CP was not negotiated with Fran’s conceptions of teaching health care practice. The point of breakdown, for Fran, was the misalignment between online teaching and her discipline. Again, the assumed neutrality of online pedagogy (see 7.1) using the LMS was translated as an unproblematic shift from face to face communication to a distance mode.

In both innovations, the effectiveness criteria for innovation described by Alexander (2006) – depth, sustainability, spread, and ownership – require evaluation over several iterations of teaching. The pedagogical success of the wiki innovation, followed by its institutional failure, compares to the pedagogical and logistic problems with the Health unit. Both innovations indicate the critical importance of institutional alignment for an innovation to stabilise.

This relational analysis suggests that an innovation will be successful if all the actors, that is, entities which perform actions, are able to form associations based on strong ties, and are brought to alignment and mobilised into a sociotechnical assemblage. In both cases, action at a distance occurred via discursive “immutable mobiles”, with shaping effects on online teaching in the local case setting.
One question arising from the two cases is how innovation, with the potential for transformative change, can occur in the context of mass teaching and learning, that is, the tension between innovation and standardised approaches to online teaching. At issue is the tendency of blackboxed strategies, such as an LMS, to be totalising both as technologies and as discourses, and to set an institutional “standard” approach to online teaching which may be the antithesis of innovation. As such they will contest and resist alternative pedagogical models brought to the assemblage. Technologies and discourses need to be recognised as part of the assemblage of online teaching, but not stand for online teaching. These entities that arrive at a sociotechnical assemblage of online teaching must not be assumed, but an effort made to identify the black boxes, open them and negotiate them.

Stabilized networks seem to insist on annihilating our personal experience, and there is suffering. One source of the suffering is denial of the co-causality of multiple selves and standards, when claims are made that the standardized network is the only reality there is (Star, 1991, p. 48).

8.1 Introduction: Building a picture of practice

This chapter is the last of four case studies on the critical issues arising from this enquiry. While previous case studies investigated the data on practice for its emerging controversies from the perspectives of academic development, teacher-learner interaction, and online teaching (Table 4.16, Chapter 4.3), the remaining controversies emerged from accounts of practitioners around the implementation of institutional strategies for online learning. This chapter brings an institutional focus on technologies through the practitioners who support and manage institutional technologies and make decisions concerning the contexts of teaching and learning.

In the previous chapter, online learning was analysed as a socio-technical assemblage, a heterogeneous set of connections of people, artefacts, documents, strategies and practices, and the extent to which these actors were aligned towards a common goal. The question was raised of how innovation in online learning become effective practice within competing institutional interests and goals. Do innovative practices inevitably conflict with standardised institution wide implementations? Is the agency of practice for innovative online learning inevitably subsumed within institutional implementations?

By focussing on the practitioners who manage and support learning technologies, this case study of technological implementation investigates how strategies relating to online learning align with and shape local contexts of teaching and learning practice. In this chapter, I will argue that institutional technologies have a profound and transformative effect on established approaches to teaching and learning that is insufficiently acknowledged by practitioners, and that technology implementation by the top-down imposition of a standard operating procedure is not inevitable. Rather, implementation needs to be a negotiated process that assembles all the social, material and discursive participants that are critical to the stability of a practice context.

Behind this case study is the question of what happens to learning during the implementation of learning technologies? A contrast can be useful: teaching practice that is traditionally bounded by physical spaces and allocated time periods foregrounds and privileges teacher-student interaction, whereas over the more open, flexible and less
bounded networked spaces of the Internet, interaction online is far less delimited. There is a convergence of multiple interests and modes of sociality onto the same screen as learning, setting the conditions for a shift of the agency of practice from the practitioners to the virtual spaces of networked technology. One form which these interests may take is in their effects as discourses – of technology, of pedagogy and of the institution – and the processes of ordering that follow. These discursive effects, I will argue, constitute online learning to a greater extent than a local technological process.

My approach in this chapter is to explore the gap between technology implementation and pedagogical practice by tracing the discursive actions and effects produced in particular online learning contexts. I will use the relational approach (Latour, 1986, p. 14, 1999b; Law, 2009, 2000, 1992) described in the methodology (Chapter 3), which analyses the social and material entities in a practice context as effects of their relations, rather than as discrete artefacts of technologies, or as effects of human intentions. I will draw on data from practitioner interviews and related studies to explore the relations constituting strategies for implementation and online learning support in two instances. In the first, I refer to a prior study (Hannon & Bretag, 2010) that contrasts activity at two points in organisations: the institutional strategy that occurs at the macro-level14, and online learning practice at the micro-level, and how these intersect at implementation. In the second, I focus on how different discourses of implementation at the meso-level have effects on the practice of team leaders and technical support staff, or the “learning technologist” (Conole, White & Oliver, 2007, p. 79). In this latter instance, I will extend my case study from Chapter 5 of a centralised educational development unit, with reference to a study by Ooms, Burke, Linsey, and Heaton-Shrestha, (2008), who in turn undertook a larger study based on the Chapter 5 case study, in a version published in Hannon (2008a) (Ooms et al., 2008. p. 113).

The concern in this chapter is the agency of implementation: who and what directs this process, and how is it controlled and delegated. At issue is the manner in which the agency of learning technologies is negotiated through the institution, at the levels of policy, implementation and practice. The overall question for implementation is how institutional learning technologies can be designed into online teaching and learning in a way that supports and enables effective practice, rather than predetermines and mandates a certain version of it.

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14 The use of indicators of scale – macro, meso and micro are identifiers of settings of activity in an organisation, not structural categories. Actors and humans, discourses or technologies are not distinguished hierarchically in this description.
8.2 Ambiguous effects: The “impact” of technologies on learning

Implementation brings the much researched issue of “impact” of technologies to higher education learning (Price & Oliver, 2007b, p. 16). The term, however, condenses a process involving a series of determinants and effects into one convenient notion that requires disambiguation and clarification (p. 25). Investigation of impact raises issues of scale and the type of technological application (Riley, 2007, p. 85). One approach is an investigative focus on the local, micro-level of a technological intervention, evaluating impact against the goals or learning outcomes for that particular setting. Beyond the local, implementation is more broadly scoped, involving institutional resourcing and support towards strategic goals. Implementation brings a chain of decision making, multiple interested parties from inside and outside the organisation, and different evaluative measures based on existing institutional technology configurations, policy directions, efficiencies, cost and risk, and pedagogy. In an institutional case study, Dutton, Cheong and Park (2004) offered insights into the complexity of an implementation of a virtual learning environment (VLE):

By following the diffusion and use of eClass at NEU, we discovered how multifaceted the implementation process can be. It is not simply a matter of teachers using a VLE with more or less positive implications. It includes efforts by universities to keep up with the state of the practice, in competition with other universities. There is also competition among multiple vendors in selling e-learning and other ICTs. There has been much discussion about ‘books versus bytes’, but more multi-faceted competition is emerging through the availability of laptops and palmtop devices, mobile cellphones, e-mail, instant messaging, and other media competing for the time and attention of students, teachers, administrators, and other users of their multiple techno-wares. This competition could be discerned at NEU, which makes any assessment of one piece of a multimedia e-learning environment increasingly difficult.

Other conflicts within the university involved differences between central and departmental administrators, and users, with administrators interested in gaining efficiencies and economies of scale in licensing and purchasing, and therefore supporting an enterprise-wide or school-wide system, versus many users wanting to pursue their own styles and approaches and have more control over their own software. (p. 142)

While presenting their case study as an example of the “faltering development of e-learning in higher education” (p. 131), relating a story of conflicting goals between implementation and pedagogy, Dutton et al. eschewed a position opposing the incumbent virtual learning environment (VLE), but expressed a view that, in the face of big technologies, universities needed reminding of their role, “educational institutions are not just providers of information or codified knowledge, but are vibrant learning communities” (p. 147). The implication was that a focus on the implementation of
technology lost sight of that institutional role, and their legacy in the Newman (1959) tradition of the modern university.

In the previous chapter, I identified the gap between policy rhetoric and changes in practice for online learning (Conole, 2004; Conole, de Laat, Dillon & Darby, 2008), which was exemplified in two cases of mismatches between interpretations of institutional policy on learning technologies and local practices. This mismatch or gap is a recurring trope in the literature on online learning. In a literature review on the effects of technology on higher education teaching and learning, Price & Oliver (2007b) identified a range of strategic policy initiatives in Europe to promote and mandate “new kinds of practice” in teaching and learning in universities. Their study confirmed the perceived “gulf between hype around e-learning and people’s experiences”, and they concluded from their review that there was a “paucity of convincing research that was able to reconcile these agendas” (p. 17).

In reviewing research into educational technology, Goodyear & Ellis (2008) caution against “simplistic comparisons” (p. 141) between technology use and educational practices, since reductive evaluations oversimplify and overlook the interconnected relations and the effort required in the deployment of a technology. De Freitas and Oliver (2005) note that “the changed pedagogical practices of staff” (p. 94) may be complex, two-way, and occur formally in organisational change, or informally as a negotiated process. A factor contributing to the paucity of research on the impact of technology on higher education (Krause & McEwen, 2009a, p. 251), or its apparent “fragmented” nature (Price & Oliver, 2007b, p. 25) may be a lack of clarity over what happens in practice, that is, what practitioners do, and how. Oliver (2006) points out that while practices in online teaching are different at the level of activity: in the use of functional tools, button clicks and typing, however, in terms of what practitioners attempt to achieve, “strategically, nothing changed” (p. 133).

Other critics and studies similarly highlight a “gulf”, gap or mismatch, or issue a warning concerning the trajectory of online learning practice in relation to institutional learning technologies. Gibbs & Gosper (2006) noted that “currently available learning technologies and systems, generally devised by technicians rather than educators, have offered limited room for creative or effective teaching” (p. 46). They imply that the gulf between managed learning systems and practice is not narrowing, and warn of the danger of a trajectory of technological development which lacks “an educational voice” (p. 51), lest they “continue to place educators in straitjackets” (p. 52). Wise and Quealy (2006) take issue with Laurillard (2002) and others over the heralded transformation of teaching and learning by technologies. They identify a gap between the “social
constructivist mantra” of pedagogical approaches to online learning, and the “implicit ‘command and control’ mentality” inherent in learning management systems (LMS):

The apparent lack of awareness of this glaring theoretical inconsistency is worrying and has implications for the capacity of universities to embrace Elearning 2.0 (Downes, 2005), whose underlying conceptual framework is fundamentally different from that of traditional LMS and project-based multimedia forms of elearning.” (p. 905)

This unhappy nexus between active learning approaches using communication technologies and the transmissive pedagogies of institutional technology systems has been identified by other critics (Malikowski, Thompson & Theis, 2006; Sessums, 2006; Siemens, 2006; Warzynski, 2006; Coates, James & Baldwin, 2005; Dutton et al., 2004). The use of Web 2.0 technologies seems to intensify this pedagogical gulf in online learning (Bayne, 2008; Dalsgaard, 2006; Garrote & Pettersson, 2007; Wise & Quealy, 2006). Hemmi, Bayne & Land (2009) noted the tendency for institutions to constrain and contain the new spaces of the Web, and observe that, “the volatile modes of online interaction enabled by the new social media perhaps sit uncomfortably within existing higher education practice” (p. 29). A more optimistic view is taken by McLoughlin and Lee (2008a, 2008b), who urge the use of Web 2.0 for constructivist models of collaborative learning, rather than “instructor-centred approaches” underpinned by LMS.

The historical progression of online learning
The origins of online education, according to one of its creators, Andrew Feenberg (1999b; Hamilton & Feenberg, 2005) lay in small scale innovation. As these local, faculty-led innovations were developed into an “automated system” based on the correspondence school model of distribution (Feenberg, 1999a), the dual trajectories of innovation and automation have been present since the 1990s. A review of the past two decades suggests that this mismatch between institutional implementation of technologies and innovative practices has continued, notwithstanding the advent of Web 2.0 technologies. The persistence of such institutional strategies for teaching and learning was confirmed by Riley (2007), who noted that “much remains the same when educational technologies are introduced into higher education, thanks to historical or even pre-historical momentum” (p. 91), and that significant change and innovation may only occur, gradually, as a “slow burn revolution” over generations. This minimal progress can be confirmed by two studies, one a decade ago, the other, 7 years ago. Valcke (1999) identified existing conflicts between innovative and traditional approaches to online learning in institutions, and recommended “diagnosing your institute” (p. 53) to ensure that its approach to online learning was congruent with the resident “dominant educational model” (p. 51). A large scale international comparison of the use of information and communication technologies (ICT) in higher education was conducted by Collis and Van der Wende (2002), who surveyed 693 practitioners in 174 higher
Chapter 8: Case Study 4 – Managing technologies and pedagogies

education institutional over Netherlands, Germany, the United Kingdom, the United States of America, Australia, Sweden and Finland. They identified “four scenarios for educational delivery”:

**Scenario A Back to Basics** is the current dominant situation for many traditional postsecondary institutions. It is also the case that many universities are starting to experiment with distance participation in their established programs. This can lead to

**Scenario B The Global Campus.**

**Scenario C Stretching the Mould** relates to increased flexibility with or without changing the underlying pedagogical model within the institution. Many traditional universities are now moving toward some forms of *Stretching the Mould*, by offering more flexibility for participation within their pre-set programs.

**Scenario D The New Economy** is the most radical; a systematic example of it does not yet seem to be available in most traditional universities and yet it is increasingly being seen as the way of the future (Collis & Van der Wende, 2002, p. 14).

Scenarios A and B were both institutionally offered and quality controlled, globally for Scenario B, whereas Scenarios C and D were more learner-centred and individualised. The overall conclusions were that institutions were slowly adopting the “Stretching the Mould” scenario, adapting gradually to the process of change (p. 61). Thus the use of ICT was widespread, but “in a way that only gradually is stretching traditional on-campus practices” (p. 7). The sense of “use” with technologies seems to be at the level of activity with software functions:

In many cases the first stage of institution-wide ICT implementation, i.e. the establishment of institution-wide technological infrastructure, is now in place. However, the second stage, i.e. rich pedagogical use of this infrastructure, is in many cases still in development. The third stage, which could be labelled as strategic use of ICT with a view to the different target groups of higher education, has in most cases not been considered explicitly yet (p. 8).

Approaching a decade after Collis and Van der Wende’s study, the call to bridge the gap between institutional educational technologies and practice is still being made. Riley (2007) concluded his study on educational technology over an extended timescale with the observation that “the first inklings of significant change are emerging” (p. 91). Notwithstanding this, based on current literature, the situation in 2010 could not be said to be have progressed significantly from that described in Collis and Van der Wende's international study. Nor could it be said that Valcke’s (1999) concerns with congruencies between institutional models of learning and extant practices have been taken up.

There is a paradox which emerges in these studies. On the one hand, studies indicate that technologies have produced little change in pedagogical approaches, in large part
due to the persistence of traditional teaching and learning and transmissive approaches encouraged by the LMS. On the other hand, the huge investment in institutional learning technologies and their implementation (Chapter 7.1), combined with processes of organisational change have had a profound effect on practice: by opening up teaching and learning to large classes, through opportunities for blended modes, distance and off-campus learning, on the control and design of curriculum, on the demand for professional and academic development, and on the way academic work is organised and conceptualised (Price & Oliver, 2007b; De Freitas & Oliver, 2005; Harris, S., 2005; McShane 2004; McWilliam, 2004).

Hamilton and Feenberg (2005) identified this ambivalence in institutional online learning as an unhappy trade-off between efficiency and quality:

The current state of online education is deeply ambiguous. Administrations have had to temper their ambitions as they discovered that the technology was not capable of delivering on the promise of cost-effectiveness without severely degrading educational quality. … But before this realization had sunk in, universities invested millions in the infrastructure of online education. The basic software acquired in this context and used now on most campuses retains the representational emphasis reflecting the automating agenda of the commercial vendors who originally drove this process with unrealistic promises.

Their analysis of online education concluded that the “current state” was a matter for politics rather than for technology and its implementation. The state of online education was presented as a choice between two goals: a pedagogy based on information transmission and “standardised modes of interaction”, or “an essentially social ideal of education”. Technology, they argued, was able to support either.

These dual competing imperatives or goals of online learning were represented in the literature, by Hamilton and Feenberg and others, by the practices of teaching academics and tutors on the one hand, and by decision-makers or management on the other. For this enquiry, I have broadly followed Collis and Van der Wende’s (2002) investigation of technologies in higher education by surveying practitioners as three response groups: “decision makers, support staff and instructors” (p. 7). The focus in this chapter is on the middle ground occupied by learning technology support staff, identified as “learning technologists” in the UK (Conole et al., 2007), and also as instructional designers (USA) and educational designers (Australia).

8.3 Negotiating the gap: the learning technologist

One of the “impacts” of technologies on higher education identified by Price and Oliver (2007b) and Conole et al., 2007, p. 79) was the emergence of the “learning technologist”. This role originally assumed diverse forms according to its institutional contexts. Conole et al. (2007) note that the role has bifurcated, as:
The current, second generation of learning technologists do not have such a holistic role and tend to orientate towards either researching e-learning or providing a support function for those using learning technologies (p. 80).

The research orientation of the learning technologist has evolved into the field of academic development, and the nature of their “middle ground” was discussed in Chapter 5 (5.1). Academic development may overlap with educational or instructional design, roles which themselves are defined by fluid and shifting parameters (Campbell, Schwier & Kenny, 2005). The other orientation of the learning technologist can be located more closely to technology support rather than pedagogy.

In following the actions of learning technology support staff and managers, questions arise of where agency resides in technology implementations. The effect on practice of the technical support professional or manager can be described in two scenarios, both recounted in Chapter 5. In the first, the practitioner follows the technology, implementing policy as procedures and protocols associated with the technology, focussing on compliance and recommended use. In University A, Paul, the academic manager of the educational development unit, implemented teaching and learning policy by locating the agency of online learning with the institutional LMS, as a top-down institution-wide program. In the second scenario, implementation was interpreted tactically with regard to local contexts (by Vicki and Wayne, in the same organisational unit), as practitioners used their discretion, or applied a “workaround” (Pollock, 2005), deploying technologies in ways other than intended in order to achieve the required outcomes. In University C, therefore, two incongruent practices in online learning were in progress.

Scenarios of implementation involving technologies can entail a range of possible actions, a contingency which can be described by the concept of a “margin of maneuver”. According to Andrew Feenberg (1999):

> All implementation involves unplanned actions in what I will call the “margin of maneuver” of those charged with carrying it out. In all technically mediated organizations margin of maneuver is at work, modifying work pace, misappropriating resources, improvising solutions to problems, and so on (p. 113).

With the margin of maneuver, Feenberg draws attention to the inherent ambiguity of implementation. In the online learning context, the “margin of maneuver” describes the extent to which a practitioner, whether a technical support professional, manager or teaching academic, is able to adapt or accommodate unforeseen contingencies as a technology is assumed into their practice. Feenberg describes the margin of maneuver as coming into play with the effects of a technology implementation, as discretionary actions are taken in response to the intervention in particular work contexts.
What happens to the agency of practice in technology implementations? The margin of maneuver can show how practitioners account for their practice by circumscribing their agency: if the margin is limited, agency is ceded to others, including the technologies; or if there is a broader margin, adaptations, workarounds and negotiations are acquitted as a technology is configured into practice.

However, implementation is itself an effect of a chain of decision making, and the margin of maneuver may also apply at other stages of implementation and at other levels of the institution. Decisions that take place at an earlier stage may delimit the margin of maneuver, where technologies have been adopted prior, or a practice discouraged due to its risks or non-compliance. It may also occur at the level above the implementation, at the strategic or policy level. Agency may be delegated to policies, procedures, technologies and roles across the institution. The margin of maneuver available to practitioners points to the extent to which agency resides with their practice, either through delegation from other points in the institution, or claimed intentionally for their practice. One of the dilemmas of practice that repeatedly emerged from the case studies in previous chapters was a tension between two imperatives acting on practitioners: those of institutional strategies and technologies for teaching and learning, and those arising from the local context of online learning. Given the accounts of mismatch between institutional learning technologies and practice, questions arise for learning technologists: how do they respond to the ambiguity of implementation of learning technologies, and is it possible to implement technologies in a way that support a practice-oriented approach to online teaching and learning?

8.4 Discourses of implementation: from strategies to technologies

The persistence of the troublesome accommodation between technologies and practice in online learning is captured by Blin and Munro (2008):

Although technology is now common place in most higher education institutions – most institutions have invested in a virtual learning environment (VLE) and employ staff dedicated to supporting e-learning – there is little evidence of significant impact on teaching practices and current implementations are accused of being focused on improving administration and replicating behaviourist, content-driven models (p. 475).

The “staff” referred to, the learning technologists, are one link in the chain from institutional policy on teaching and learning to practice, and their capacity to respond to strategic and organisational change within the margin of maneuver may be a significant factor shaping online learning. To investigate their roles and actions, however, requires locating them in relation to the discourses of implementation.
The complex and “multi-faceted” (Dutton et al., 2004) nature of the implementation process follows a chain of effects over the global field of higher education: by economic imperatives and competitive pressures between universities result in organisational strategies and change agendas (Bretag & Hannon, 2008; Malikowski, Thompson & Theis, 2007, 2006; Coates et al., 2005; Centre for Educational Research and Innovation (CERI), 2005; Minielli & Ferris, 2005). These strategies and agendas are concretised in technology implementation, marked by the investment and rapid institutional adoption of learning management systems (LMS), which in turn shapes teaching and learning practices both globally and locally. In organisational terms, implementation can be located within the institution at the meso level, described in relation to the higher education field by Jones, Dirckinck-Holmfeld & Lindstrom (2006) as “a level that was intermediate between small scale, local interaction and large-scale policy and institutional processes” (p. 37). Valcke (1999, 2004) described how interactions from intra-institutional processes produce conflicts between macro-, micro- and meso-levels of the organisation: policies impact at all three levels, and teaching and learning support (staffing, resources, quality issues) interact between the meso- and micro-level (1999, p. 59).

This case study considers interactions between levels of the organisation through their discourses. First, I will consider the macro-level, strategic responses of universities to globalisation and economic imperatives in the context of a previous study on institutional discourses by Hannon and Bretag (2010), then I will consider how strategies for technology implementation interact with online learning practice. I will draw on selected practitioners from the corpus of interview data for this enquiry to explore the agency for learning technologists within their available margins of maneuver.

**Repertoires of strategy: visions of technologised learning**

The shift in universities from their traditional identity (see Chapter 3.1) to their remaking of themselves as managed enterprises that reflect a neo-liberal agenda (Harris, S., 2005; Marginson, 2006, 2000), has been accomplished through the restructuring of university organisation by networked technologies. However, work in the “networked university” (Lewis et al., 2005) encompasses multiple cultures of governance within the organisation, and alternatives agendas to managerialism persist. Lewis et al. (2005) found two contested discourses of online learning: a concern with centralised, standardised managed teaching and learning with technologies that contrasted with more “distributed and collaborative possibilities of networked technology” (p. 73). Such discourses, while “highly contested” (p. 72), co-existed in the networked organisation of the university.
As networked technologies connect all levels of the university, from strategy statements, implementation, to practice, so do their associated discourses. Technology talk and text in an institution reflects multiple organisational interests and goals, and different discourses around technologies converge on implementation strategies. For managers, according to Lewis et al. (2005), teaching and learning practice was viewed in terms of notions of flexibility, and the authors noted that “the rhetoric of student-centred learning tended to be seen as going hand in hand with a market-driven, enterprise model of the university” (p. 66). This rhetoric confirms the ambiguity evident in the notion of student-centred learning in Chapter 6 (6.6), its meaning shifting from the sense of Rust’s (2002) independent, active learner towards an individualised customer orientation. In both Lewis et al. above, and in Chapter 6, this ambiguity arose as an effect of discourses of technology.

In a study by Hannon and Bretag (2010), discourses of technology from two types of participants in the university were compared: those arising from the management level of university strategies of teaching and learning, and those from teaching academics. The study analysed strategic policy statements from public university websites, and autoethnographic accounts of practice that provided a reflective, insider perspective from academics on how organisational discourses were negotiated.

The public statements of teaching and learning policy were selected from five Australian Technology Network (ATN) universities, and compared with two practitioner interview transcripts (from the corpus of data for this enquiry). Interpretative repertoires were identified as a way of analysing texts for their “action-orientation”, on the basis that “language is put together, constructed, for purposes and to achieve particular consequences” (Wetherell & Potter, 1988, p. 171).

The analysis of teaching and learning policy statements of the ATN universities found a pattern of metaphors of technology associated with access, connection, community, and global opportunity. The following extracts are from original documents cited in Hannon & Bretag (2010, p. 113):

- Goals include: provision of resource-rich, technologically-mediated forms of delivery that enable access (UniSA)
- Our flexible learning environment and effective use of technology in teaching and learning will underpin the University's reputation for excellence in the facilitation of learning (UTS)

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15 The Australian Technology Network is one of three current strategic groupings of Australian universities, representing approximately 20% of Australia’s student population. See http://www.atn.edu.au/ (Retrieved 10 May 2010).
Chapter 8: Case Study 4 – Managing technologies and pedagogies

- Build a global university grounded in Melbourne and connected to communities, enterprises and industry across the world (RMIT)
- Technological advances open up opportunities for adding newer and more innovative methods to the spoken lecture and the face-to-face seminar. (QUT)
- The University will be a leader in global access to learning that is enabled by emerging technologies. (UniSA).

These statements reflected consistencies across the universities: in voice and tone, and in style of address to prospective students, often using the first person (“our”), linking technology to connection, opportunity, innovation and industry. The tone was declarative, making claims in the up-beat tone of a promotional brochure. The text was also strategic, Hannon and Bretag (2010) note:

In the teaching and learning strategy documents, technologies both underpinned and enabled institutional goals. The authors of the ATN documents consistently framed a field of operations which reflected a volatile, globalised and unpredictable world of shifting markets and demands, “major challenges” in global education, and competition with other educational institutions. Having constructed such a challenging environment, a response was proffered by institutions in the form of self-descriptions: they were adaptable, internationalised and technologically cutting edge, and were able to offer their audience global reach, and access to opportunities in this unpredictable world (p. 113).

A narrative was constructed around this path to globalised opportunity. On that path, terms that reference managerialism and efficiency are softened or replaced by terms reflecting a social orientation:

The uncertainty of the “complex workplace and community of the 21st century” (UTS) is made palatable by the terms community, engage, response, innovative. Technologies, then, are a key to a dual network, technical and social: one offers the reader (presumably a student) a network which provides “technologically-mediated forms of delivery”, the other offers social access and connection to this high-tech, utopian community (p. 113).

A discourse or interpretative repertoire that emerged from the ATN policy documents was a bridging metaphor that offered readers access to a desirable, but unpredictable, networked world. This repertoire of technology was identified as a bridge to globalised opportunity (p. 112).

This discourse of the outward looking, competitive university contrasted with two other discourses within the university from Hannon and Bretag’s (2010) study. These emerged from interview transcripts of academics: one reflected their encounter with institution-wide of learning technologies, the other their teaching practice. These are summarised by the table of “contrasting repertoires of learning technologies” in Table 8.1 (Hannon & Bretag, 2010, p. 116).
Table 8.1: Contrasting repertoires of learning technologies

<table>
<thead>
<tr>
<th>Interpretative repertoire</th>
<th>Technology as a bridge to global opportunity</th>
<th>Technology as delivery of learning</th>
<th>Technology as building learning relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>ATN policy documents</td>
<td>Author interview transcripts</td>
<td>Author interview transcripts</td>
</tr>
<tr>
<td>Perspective</td>
<td>Strategic: visionary, a global, technologised world. Outward looking.</td>
<td>Implementation: access to learning, reach, scalable. Inward looking.</td>
<td>Practice: situated contexts, interactive, communicative style</td>
</tr>
<tr>
<td>Goal or accomplishment of repertoire</td>
<td>positions institution as global player</td>
<td>provides access to large-scale, distributed cost-effective education</td>
<td>augments face-to-face settings and enables deep and effective learning</td>
</tr>
<tr>
<td>Rhetoric</td>
<td>improve, engage, response, flexible, community, global, appropriate, innovate</td>
<td>economic inevitability, normative positioning of large-scale online learning</td>
<td>relationships, interaction, sharing cultural experiences, learning as change</td>
</tr>
</tbody>
</table>

The second repertoire, *technologies as delivery of learning* was drawn from accounts of experiences with managed learning technologies for large cohorts and off-campus teaching contexts, a scenario which drew directly on the university’s vision of globalised education. The third repertoire, *technologies as building relationships for learning*, identified accounts of technology used to augment a learning context, and offer means of collaboration and peer interaction. The paper concludes by calling for an articulated discourse of practice that maintains academic autonomy of teaching and learning, while working within an institutional strategy framework.

Despite this study being limited in scope, the emerging discourses from Hannon and Bretag (2010) reflected the literature on the impact of technologies in higher education concerning the mismatch between institutional learning technologies and practice (Blin & Munro, 2008; Conole et al., 2007; Malikowski et al., 2007; Warzynski, 2006; Lewis et al., 2005; Hamilton & Feenberg, 2005; Dutton et al., 2004). The middle discourse in Table 8.1, concerning the institutional delivery of learning, refers to the implementation of learning technologies as an activity that connects all levels of the university, oriented towards the levels of policy strategies and of teaching practice. The discourse of delivery concerns the meso-level of practitioners: the managers and learning technologists who implement and support learning technologies, and the margin of maneuver within which they act. Questions arise at the meso-level: to what extent do learning technologists act as functionaries, executing an operational strategy, and what agency do they exercise in relation to the technologies with which they work?

**Repertoires of the meso-level: The learning technologists’ dilemma**

Studies of learning technologists tell stories of unresolved work roles, blurred boundaries and divergent expectations. A total of 11 distinct roles were identified by Peacock, Robertson, Williams & Clausen (2009, p. 117), encompassing academic roles of
educational development and research, management, library resource professionals, and technical development roles. The blurred boundaries and conflicting expectations occur in day to day work: Conole (2007) related a large-scale case study in which problems arose when the roles of learning technologists were misperceived, and were seen as “techies” (p. 30) with a limited role, consequently their expertise was not called upon. Ooms et al. (2008) also found that “differing expectations and misconceptions” (p. 120) brought a negative effect, and called for a “situative” approach to practice that was particular to project contexts. Similarly, Campbell et al. (2005) found that the “dominant discourse of instructional design” as “a rational, technical process operating outside of, or in spite of, social, political, culture and personal contexts – deskills the instructional designer in higher education institutions” (p. 257). Peacock et al. (2009) argue that this “bipolarisation” of roles, “into practitioners or researchers”, is unproductive, and call for a “more inclusive model” of the role of the learning technologist (p. 127), extending role boundaries and participation in research into e-learning.

The learning technologist emerges as an evolving and contested role in universities that is one aspect of the area of educational development, reflecting the organisational fluidity and hybridity of practice in this domain of higher education (see Chapter 5, Introduction). There appears to be limited literature on learning technologists per se, and their issues tend to be subsumed into other arenas, for example, in the literature on integration of technologies into teaching and learning (Goodyear & Ellis, 2008; Georgina & Olson, 2008; Price & Oliver, 2007a; Conole et al., 2007; Sharpe, Benfield & Francis, 2006; Romiszowski, 2004), and through scholarly journals in education management.

The dilemmas of learning technologists offer a perspective on practice at the meso-level of implementation of learning technologies. I will take up their issues by revisiting and extending my study on educational development from Hannon (2008a), which itself was taken up by Ooms et al. (2008). The Hannon (2008a) study, written at an early stage of analysis for this Ph D research, was based on data from one university. This was rewritten for Chapter 5 to draw comparison with participants from other sample universities. The study by Ooms et al. was also based on a university’s centralised educational development, and found that learning technologists, or “e-developers”, in that study, were considered by participating academic staff to be crucial to the success of the implementation of blended learning projects, and moreover that faculty “educational technology leaders” were much less so.

Following this theme of implementation, the practitioners in this enquiry who worked at the meso-level of online learning support across the three universities encompassed learning technologists and selected members of their functional teams, including managers and associated academic developers. A table of educational development
Chapter 8: Case Study 4 – Managing technologies and pedagogies

staff from Table 5.1, Chapter 5, can be revised to distinguish roles of managers, academic developers, and learning technologists, as shown in Table 8.2.

Table 8.2: Practitioners in educational development units across three universities

<table>
<thead>
<tr>
<th>Participant</th>
<th>Position</th>
<th>Role</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom</td>
<td>Team Leader</td>
<td>Learning Technologist</td>
<td>University A</td>
</tr>
<tr>
<td>Rachel</td>
<td>Multimedia Developer</td>
<td>Learning Technologist</td>
<td>University A</td>
</tr>
<tr>
<td>Barbara</td>
<td>Educational Development Advisor</td>
<td>Academic Developer</td>
<td>University A</td>
</tr>
<tr>
<td>Wayne</td>
<td>WebCT Trainer</td>
<td>Learning Technologist</td>
<td>University B</td>
</tr>
<tr>
<td>Vicki</td>
<td>Lecturer</td>
<td>Academic Developer, Teaching academic</td>
<td>University B</td>
</tr>
<tr>
<td>Paul</td>
<td>Acting Manager (Teaching and Learning)</td>
<td>Managing academic</td>
<td>University B</td>
</tr>
<tr>
<td>Robert</td>
<td>Team Leader</td>
<td>Learning Technologist</td>
<td>University C</td>
</tr>
<tr>
<td>Victor</td>
<td>Associate Professor (Teaching and Learning)</td>
<td>Managing academic</td>
<td>University C</td>
</tr>
</tbody>
</table>

Managing content or managing learning

A technology implementation project was underway at University A in 2004-5, with Tom and Rachel as the learning technologists for a pilot implementation of a proprietorial LCMS (Learning Content Management System) named Hive. According to Tom, a Team Leader, pilot consisted of “three camps”: the project’s “business owner”, the managers of the Educational Development Unit (EDU); the Faculty-based Centre for E-Business; and the university library. The first camp comprised the EDU team (5 people), consisting of Tom as project manager for the pilot, a systems analyst, two multimedia/web developers, and two educational advisors. The second camp consisted of Faculty academics and an assistant for large online class units, for which the learning management system Blackboard was used.

Tom offered a succinct goal for the LMCS project, which was to “have just one object but lots of references to that object, so that, like badge subjects, all use the same Powerpoint presentation”. The rationale for the pilot implementation of the LCMS was described by Tom:

John: What are the drivers of this implementation? How does it fit with the departmental aims, and vision, KPI, etc?

Tom: There are multiple viewpoints – one in education circles, there are drivers to have the ability to reuse content, for individuals or other people. A lot is available digitally online, and possible to re-use. The potential is very high to share amongst colleagues. This is a

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16 The transcript for this interview was reconstructed from notes taken during the interview, subsequently checked and modified by the interviewee. Transcript available in Appendix 8.1
potential use for Hive, and the pilot will show how well Hive can demonstrate reuse and shareability. The current LMS, Blackboard is well entrenched, and content is unmanaged. Only individual authors know their content. With the embracing of online learning, the potential for online volume to escalate is huge. The purpose of the pilot is, in part, content management. Outcomes are version control, shareability, reuseability. Some digital content is exported to provide an ROI [return on investment].

Tom’s definition of outcomes and explanation of the strategic purpose configured the project within a corporate model of the university (Schapper & Mayson, 2005; Lewis et al., 2005; Marginson, 2000). More specifically it reflects the structure of a “business process model” such as that described by Cornford and Pollock (2003), in which the affordances of networked technology and database capability enables an “information view of higher education” (p. 41). In this model, database functionality is central, technological connections take priority and become a “hidden curriculum”, and consequently other social connections and pedagogical models may be marginalised. In the LCMS pilot, teaching and learning is based on a model of education as an information process (p. 42).

This “information view” of education can be contrasted with the relational view (Law, 2000). Following the relational approach used in Chapter 7, the entities that comprise the project can be viewed as a heterogeneous assemblage, or set of active participants, encompassing teachers, students administrators, documents, objects, units of study, technologies, arrangements, and discourses (both perspectives are compared in Table 7.2, Chapter 7).

The LMCS was also an actor in the pilot. According to Tom, it produces outputs, “Hive can demonstrate reuse and shareability”, and is linked with “badge” subjects to achieve this goal of many uses from a single “object”. It is active in another way, circulating a discourse based on a new standard for “content”, in which the connection with the content author is shifted to a connection with a shareable database. The arrival of the LCMS constituted a new set of relations to knowledge, implemented as if a technical process. Its arrival produced new terminology: existing content in a unit of study was rendered “unmanaged”, since “only individual authors know their content”. Once it was connected into the LCMS and modularised into content objects, it would became manageable. The goal of the LCMS was to reconfigure online learning to a new standard of manageable, shareable content.

The researcher (John) asked about the possible negative effects of decontextualising content:

Tom: Hive is about content. Its very controlling. With learning objects and managing content, the big push is to make things to certain standards so that it can be interoperable.
John: But what about context versus chunking?

Terry: To disaggregate and repurpose more chunks and assets is said to remove contexts. I am not in a position to debate it, I’m not married to either proposition, I am not an educationalist, but you need to embrace it. I consult them. Hive is the key thing, how it integrates with the LMS, Blackboard.

Tom stated his position as disinterested in relation to issues of pedagogy and author’s interest in content. As project manager, he aligned himself to the business goals of the LCMS pilot. His view was not to declare a view, and he acted to delegate agency to the LCMS, in order to implement the pilot successfully.

However, there is high potential for conflict between technological and business goals with teaching and learning goals in a sociotechnical assemblage. Cornford and Pollock (2003) found that managing data for a business model was complex and time-consuming, that the loosely structured and “locally negotiated practices” of the university did not match the “highly defined processes” of the business model, to the extent that the organisation addressed by the business model bore no resemblance to the actual working university. Ultimately, “There is no university there to fit to the system” (p. 84).

Tom discussed the work involved building the pilot:

Tom: A lot of work has happened with key stakeholders: us as implementers, with responsibility identifying a metadata schema, building the metadata profile, publishing the metadata to the system.

John: What do you mean ‘publishing the metadata ’?

Tom: Physical entry [of metadata].

The production of metadata, Tom explained, “aids discoverability”, which was “the key to finding content.” Metadata was the critical means to producing shareable content.

Rachel, a member of Tom’s team, confirmed the demands of Hive’s metadata requirements, “to put something up, there’s a lot of processes you have to go through, it’s simple to share an object across subjects, and functionality was good”, however, entering metadata for objects was onerous, requiring “a lot (of work) to write it in”. The interface for the LCMS is shown in Figure 8.1, and a metadata entry example in Figure 8.2.
The metadata template for content objects is shown as a spreadsheet in Figure 8.2. For each object, there are plain English requirements for entry: Title, Language, Description, Keywords, Date Created, School, Discipline, Contributors, Rights (conditions of use), audience, subject code and learning objective. Other requirements are more technical: Identifier, mime types, file size, interactivity type, and columns for IEEE equivalent, Description, Notes, Type, Optional/Mandatory, and so on.
In fact, the issue of metadata entry, that is, who would actually enter this data into the LCMS to achieve content sharing and interoperability, was a critical issue for the pilot project, as communicated by Tom in a final followup contact over a year later (in 2006). Tom described the failure of the pilot and rejection of the LCMS due to issues with “learnability”. The pilot project was successful in terms of functionality, he explained, with apparently effective uses of learning objects in an actual online teaching of eBusiness units, however there appeared to be no feasible way for any human participant to be organised around the needs of the LCMS and to enter metadata on the learning objects.

An instance of how this breakdown occurred was described by Rachel. Her work on the LCMS included a sub-project called “workflow”, where version tracking, a functionality of Hive, was applied to unit learning guides. These had been reconfigured as content objects in which more than one author was involved:

One person would write up the learning guide and the convenor would have to check it and see that it’s correct. And then sometimes more than one person works on that learning guide, they wanted to have more than one person to be able to work on that learning guide. That’s kind of the collaborative work that they wanted and you couldn’t really do that very well using the workflows (Rachel).

The version control process involved “publishing” a version to Hive, after which an automated email would be sent to the document owner for approval. The problem arose when the team wanted to continue this process collaboratively. Rachel noted, “it gets passed between different people, they want to have collaborative work as well during the...
workflow." The existing practice of collaboration during the workflow process could not be met by the hierarchical standards of the LCMS. Rachel offered her multimedia developer perspective on the academic team’s rejection of the workflow she helped set up:

The resolution was we’re not going to have a workflow, we’re not doing workflows at all, they’re just going to go with what they used to do, you know, just, in front of people, like it wasn’t anything to do with any system, you don’t have to go through any system or anything, like what they usually did is just when its finished they go, send it, give it to the convenor, and the convenor checks it just normally without any technology at all. (Rachel)

It was not only the demanding administrative requirements of the workflow function of the LCMS that caused resistance by the learning guide team, its process also proscribed collaboration, a common mode of curriculum development in universities. The Faculty stakeholders, for whom teaching and learning was their primary concern, rejected the workflow process of the LCMS as a substitute for their existing cooperative process of version control. The unit convenor and teaching team refused to be configured into the set of relations with the LCMS, and the learning guide, no longer a content object, was reviewed “just normally without any technology at all”.

Managing the margins

The goal of the LCMS pilot, to manage content for reuse, offered potential benefits that aligned with the discourse of technology as delivery of learning (presented in Table 8.1), a discourse underpinning the terminology of managed systems for implementing online learning. The pilot also brought a change agenda which had transformative implications for academic work practices. The new standards for content did not recognise standing collegial modes of working, supplanting academic values with hierarchical, corporate ones (Marginson, 2000, p. 29). In relational terms, implementation required all participants to align their interests and values with that of the LCMS, involving new values, “new technologies and practices through which the conduct of conduct is fashioned and ordered” (Edwards, R., 2003). The margin of maneuver for the implementation of the LCMS involved unplanned actions of transformative impact.

Tom delineated his role as learning technologist as one which bracketed out pedagogy. However, his position statement, “I am not an educationalist”, points to the opposite orientation as an option. Most learning technologists, according to Peacock et al., (2009, p. 119), locate themselves “in the middle” between expertise and pedagogy. Tom aligned himself with the business goals of the LCMS, avoiding the middle, a possibly uncomfortable place for a project manager in this instance. In contrast, Tom’s colleague, Barb, the academic developer also in the EDU at University A, while indicating she had no involvement with the pilot, expressed her “main concern” with online learning:
Chapter 8: Case Study 4 – Managing technologies and pedagogies

My main concern is that academic staff feel very stretched and need to develop their teaching techniques along-side these new technologies, so they do not feel ‘controlled’ by them, they need to be in control. (Barb, email communication follow-up of interview)

In the other universities in this enquiry, two learning technologists, Wayne and Robert defined their roles in a contextual “situative” manner (Ooms et al. (2008), rather than in formal, institution terms. Wayne, a WebCT trainer, described his role as allied to Vicki, an academic developer:

We do have that model we’ve got a professional development model towards online teaching and learning, so that one in which we are there to train people, get their skills up and assist where necessary, but not in the main to develop content and maintain content. (Wayne).

Similarly, Robert, an online advisor and team leader, excluded the work of building content from his role, describing it as enabling academic staff to work the technology, as:

supporting academic staff in their use of [UniCnet], and the support is very much in a proactive way where the online advisor doesn’t do work for the academic but we facilitate training, so that ultimately they become self-sufficient.. (Robert). [UniCnet is the custom LMS]

Robert defined a crossover area between issues of technology and pedagogy, “there is a grey area that you cannot avoid … you can’t avoid talking about pedagogy, or thinking about the appropriate pedagogy, and having that sort of discussion with the academic.” However, Robert marked this boundary by referring to “very deep questions” concerning pedagogy to his academic developer colleagues.

All three learning technologists defined their roles in a way that delineated their margin of maneuver, the unplanned consequences of implementation, articulating their relations to the technologies of their work. Where Tom located his agency wholly with the LCMS technology and aligned it with its business goals, his margin of maneuver was determined by strict LCMS system requirements. In contrast, both Wayne and Robert claimed their margin of maneuver as contingent on their own agency, described in terms of their own practice, not in the terminology of institutional implementation or technology.

8.5 Discussion: Bridging the gap

This chapter set out two intentions: (i) to investigate a key aspect of agency in relation to learning technologies in the institution, that is, how the competing demands of technology implementation and pedagogical practice are negotiated through the critical role of learning technologists; and (ii) to discover if it was possible to reconcile system technologies with educational goals in order to design effective practice-oriented approaches for online teaching and learning.

209
Chapter 8: Case Study 4 – Managing technologies and pedagogies

The accounts in the literature on conflict between technology implementations and practice in online learning raise the issue of whether system technologies inevitably distort teaching and learning. Can online learning be designed that overcomes the divide between social and technological and enables a practice-oriented approach that nevertheless aligns with all levels of the institution? Before offering some possible responses and solutions, there is a coda on content management systems and agency in this study that suggests a wave of technology-led implementations.

During this enquiry, the topic of content management and learning objects emerged as part of interviews with managers in the educational development units at all three universities (Paul, Tom, and Victor), each of which were undertaking pilots or investigations of content management at the time of interview. However, by 2007, these pursuits had faded, and projects were either abandoned or had shifted to an information management focus and taken up as information management projects by university libraries or the corporate functions of the university. John Hedberg (2006) commented:

> Interestingly, while learning object repositories have been developed in several countries, their usage is not as common as might be expected. Without exploring the range of reasons, the lack of use appears related to the type of objects being shared. Most are content dependent and contain elements that can only be used to teach a specific topic and ‘fit’ into the context for which it was devised. (p. 179).

The pilot LCMS in University A was treated as primarily a technical issue, its project goals and scope reflected in its terminology, bracketing out social and political considerations in its implementation. In a followup communication after the closure of the pilot and rejection of the LCMS, Tom defined his role as more contingent on staff needs:

> we now focus on a broader range of support options for academics rather than the specialist approach that was perceived. Lecturers appear to still need support to perform basic tasks in e-learning, i.e. how do I do this task in my LMS? (Tom)

Tom had exercised his margin of maneuver by shifting his agency from an alignment with technology goals to supporting staff in educational goals.

Delegating agency to technology

The two accounts of implementation in this chapter describe instances of the institutionalisation of technologies in universities, one concerning discourses of technology at policy level, the other concerning the attempted integration of a content management system into a teaching context. Both confirm two effects identified in the literature: the mismatch between corporate information technology applications and higher education (Blin & Munro, 2008; Coates et al., 2005; Malikowski et al., 2007; Cornford & Pollock, 2003), and the potential for reconfiguring the agency of practice as academics become “managed professionals” (Clegg, 2007; McWilliam, 2004; Marginson,
For practitioners, this mismatch became embodied into a practice with competing goals between implementing technology and achieving educational outcomes. The accounts of the learning technologists in this enquiry, however, showed that they were able to exercise significant autonomy and discretion in defining their role in terms of technological or pedagogical goals. Three online learning support practitioners articulated what was not part of their role: “I am not an educationalist, but ...” (Tom); “we are there ... not in the main to develop content” (Wayne); “the online advisor doesn’t do work for the academic” (Robert). This attention to demarcation suggests that all three worked in an environment where role expectations and perceptions were unclear, a recurring issue identified in literature on learning technologists (Peacock et al., 2009; Ooms et al., 2008; Conole, 2007b; Campbell et al., 2005).

Given the legacy of dissensus between institutional technology implementation and practice, how is it possible for learning technologists to work with conflicting goals, and can they bridge the gap between the demands of technologies and pedagogy? The possibility of a productive response to this dilemma may emerge from the finding that the effects of technology implementation go beyond the application of the technology itself. Implementation involves many agents: people, technologies, arrangements, documents; it also involves a process of ordering roles and relations, of reworking the relations of practice. Technology projects extend beyond the technology to complex institutional arrangements, as Pollock and Cornford (2002) point out, requiring “the rethinking, and more significantly, the reworking, of relationships” (p. 372). The discourses and language which underpin an implementation will largely determine how this ordering process and reworking occurs. Learning technologists, therefore, can be active agents in the process.

The LCMS pilot in University A was an implementation clearly aligned with the goal of efficiency and return of investment based on the business process model, or “information view” of education (Cornford & Pollock, 2003), a goal met by the LCMS technology’s database capability and the production of shareable content objects. The LCMS established a new, informational relation between the curriculum produced by the Faculty and the strategic goals of the LCMS business owners. The curriculum submitted to the LCMS, of which one example was the learning guides mentioned by Rachel, was reworked into “content” through a process of division and classification into “modular ‘bite-size’ chunks” (Edwards et al., 2004, p. 38). This process involved tagging such “chunks” of content with metadata so that is was no longer “unmanaged”, but ordered by the attribute “discoverability” (Tom). The LCMS implementation reconfigured curriculum content into a form that was available to an information system, with discursive and cultural effects that accompanied this transformation. Tom described part of this process in how he worked with the LCMS:
In terms of the users, groups, roles, users, I set up groups with members. A role has a person attached, eg., administrator, publisher, viewer, user. It does not use an educational metaphor. Hive is repurposed to the business environment. (Tom)

The language of pedagogy was translated into operational terms. The content that Rachel and Tom referred to as input to the LCMS pilot, was concurrently part of curriculum for the Faculty academics. The learning guide that was collegially reviewed carried the sense of curriculum as a “dynamic work-in-progress” (Gough, 1999, p. 1), rather than a product. Once chunked into “learning objects” (Tom), it was reconstituted into segments wrapped and defined by information tags. Reordering brings new relations and alignments, new priorities and exclusions. Extant curriculum was rendered “unmanaged” by the arrival of the LCMS, as the process of meta-tagging re-ordered material into the binary managed/unmanaged.

This reworking of teaching and curriculum into content and delivery was raised by Paul, an academic manager in the educational development unit at University B, who promoted funded curriculum design projects with “instructional design specialists who would work in a team environment with subject matter specialists” (Appendix 4.7). However, Paul’s learning technologist colleagues in the University B’s EDU, Wayne and Vicki, both expressed dismay at the consequent requirement to modify packaged online units, commenting that this model did not support teaching staff, but was “disabling people through the technology” (Vicki, Chapter 5.3). This EDU was clearly working to conflicting goals, with Paul undertaking a top-down approach of funding content design projects to achieve scalable, reusable, large-scale online teaching, whereas the learning technologists worked with individual staff on online units for the purpose of enabling self-sufficiency.

By way of contrast, Victor, academic manager and director of the EDU unit in University C, in which Robert was a learning technologist and team leader, articulated different goals for implementation of learning technologies. He recounted a bottom-up approach to curriculum change and development, centred on the academic:

I think technology should really be way back from that, just support the change not be driving that, you know, because those decisions should be based on educational rationales (Victor)

Victor’s evaluation of his LMS, and his testing of an LCMS, was that a low key approach was required, in which the technology was “as invisible to the user as possible”.

The LCMS technology was intrusive, “very controlling”, by Tom’s description, and potentially transformative. The LCMS was an instance of the arrival of a blackboxed technology, where decisions had been made and operational matters closed, consequently this type of control extends not simply to measuring user activity and
outputs, but to discourses and practices. A cultural process was involved in rendering knowledge and curriculum to a form in which it was able to be apprehended as an input for a blackboxed system, with its own terminology, specifications, standards and procedures.

The effects of this type of reworking was exemplified in the workflow process described earlier by Rachel. The LCMS brought discursive effects to a key document, the learning guide, translating it into a managed information object. The new process of managing according to a hierarchical workflow system, required a shift to a new discourse: from a prior, collaborative work process based on the collegial practice of academic culture, to an informational discourse based on the metadata language.

Implementation based on the “information view” of education requires a process that will “fit university practice to new technologies” (Cornford & Pollock, 2003, p. 108). The metadata process of the LCMS pilot brought new orderings of practice, in which the resources and activities of learning were formalised and standardised in order to be made available to other parts of the organisation, a means by which “the conduct of conduct is fashioned and ordered” (Edwards, R., 2003). The discourse of the new ordering of the LCMS was unable to recognise conduct which was informal and tacit. In such scenarios, the agency for teaching and learning in the implementation has been delegated to the affordances and discourses of technology.

**Delegating agency to learning**

The instances of technology instantiation in this chapter resonate with the case study descriptions of Chapter 7, where implementations were successful technologically, but socially and institutionally a failure, as participants are marginalised in the process and terminology used. Institutional technology implementations are always at risk of joining the litany of poor outcomes and failure in online learning, with “little evidence of significant impact on teaching practices” (Blin & Munro, 2008, p. 476). The case study and experiences recounted in this chapter have shown that where implementations embed conflicting institutional and educational goals, learning technologists are caught between competing demands, and need to negotiate their own agency and their margin of maneuver.

Systems of managed learning are now so pervasive in higher education that it is easy to overlook the extent to which proprietorial LMS implement an information view of education, establishing new relations and implicitly aligning all participants in the assemblage to the goals and processes of the least flexible actor, usually the technology. System technologies may be disinterested and information oriented, but they are not neutral. As knowledge and learning are recognised as information, learning technologies
become information systems, designed and implemented in universities “irrespective of evidence about pedagogical benefit (Goodyear & Ellis, 2008, p. 145).

This raises the question of what the “learning” is that learning technologies, learning management systems, learning content management systems, learning objects are concerned with. Star (1991) argued that standardisation processes, such as those which view learning as information, exclude practices that cannot be mapped to the new configuration, “annihilating our personal experience” (p. 48). Social processes of learning are translated to operational processes. Goodyear & Ellis (2008) suggested unpacking terms like “e-learning”, re-thinking what constitutes a “technological intervention”, what it depends on, and the work involved in assembling social, technological and discursive participants. In particular, they called for a shift from managed systems to a student perspective in relation to learning technologies.

A renewed focus on learning and a critical perspective on “learning management” must be a key concern for the learning technologist. Just as Victor was attentive to academic staff who sought to use technology that matched pedagogical goals, learning technologists can support and deploy technologies as learning-centred, and approach with caution the research on the impact of technology in contexts of learning. Despite the extensive research on impact of technologies on learning (Price & Oliver, 2007b; Conole & Oliver, 2007; Riley, 2007), impact asserts a separation between two things, one having effects on the other. In impact studies, the impacting technologies are already fixed, determined, leaving the researcher simply with the task of measuring their effects on those concerned. A better focus, I argue, is a shift to a focus on practice. A learning focused approach to technologies means a “practice-oriented” (Jones et al., 2006; also Goodyear & Ellis, 2008) and “situative” perspective (Ooms et al., 2008), oriented to how students and staff interact with and through technologies in specific contexts. For learning technologists, agency is greater in an approach that foregrounds practice, and their margin of maneuver is determined by the whole context of learning. Perhaps this role extends to that of learning technologist/sociologist, to focus on assembling a context for establishing durable relationships with all human, technological, and strategic participants.
Chapter 9.

9. Conclusion: Recovering agency – Technologies in practice

Instead, we look for the empirically traceable associations that link networks of actors as they express agency, and respond to the agency of others in the phenomenological world, in a way that is perfectly able to account for itself, and is blind to distinctions between, for example, social things, technical things, material things, living things, legal things, and cultural things (Arnold, Shepherd, Gibbs & Mecoles, 2006, p. 12).

9.1 Revisiting the research enquiry

This enquiry adopted a relational approach to practice, in which artefacts, documents, and technologies were not viewed as separate objects (Chapter 2.6), rather, they “exist in the relationships between people and the world” (Jones, Dirckinck-Holmfield & Lindstrom, 2006, p. 51). This approach, Jones et al. point out, rejects the dualist view of objects and technologies as external, fixed and existing separately from interpretations of them, but neither does it entail a “radical social constructivism or relativism” (p. 50) that holds that the world and its objects are a construction of human interaction and engagement. The notion of the social is, however, transformed, from the traditional Durkheimian sociological view that behind social ties there is a “hidden presence” of structuring forces (Durkheim, 1982), to a redefinition of the social as “a trail of associations between heterogeneous elements” (Latour, 2005, p. 5). The relational view (Law, 2009, 2000; Latour, 1986) holds that people and objects do not have significance inherently, through their own attributes, but through their relations to each other in a network of human and non-human actors (Law, 2000). In this view, “an object is an effect of an array of relations” (Law, 1999a), and indeed, people, through their actions in a network assemblage, are themselves network actors, or “relational effects” (Law, 2009, p. 145).

Relational approaches in research on technologies in higher education are relatively uncommon. Research in this area tends to retain a traditionally human-centred focus, mainly investigating issues concerning the impact of technologies on teaching staff and students, and the integration of technologies into institutional teaching and learning (see Chapters 2.2, 2.4 and 8.4). The evolution of actor-network theory over three decades, and its transition to “performativity” (Law, 1999b, p. 4; Law & Singleton, 2000) and “material semiotics” (Law, 2009), have produced accounts of the social and natural world over a diverse range of fields (Latour, 2005, p. 10; Law, 2009). Some applications of relational or actor network approaches to higher education were identified in Chapter 2, including: critiques on networked learning and communities of practice (Fox, 2005, 2002, 2000); the tension between the representational and “relational potential” of networked
learning technologies (Hamilton & Feenberg, 2005); accounts of organisational change in the constitution of the “virtual university” (Cornford and Pollock, 2003; Pollock & Cornford, 2000); effects of discursive action on teaching and learning (Roberts 2007; Edwards et al., 2004; Edwards, R., 2003); the misconceptions in uses of digital technologies for teacher education (Bigum and Rowan, 2008, 2004); higher education as a globalised network (Urry, 1998); and the interrelations between pedagogy and technology introduced by Lee (2008) through the notion of “technopedagogy” (p. 240).

This enquiry into practice with learning technologies follows this less dominant tradition, an approach warranted, I have argued, by a systemic failing in the relations between the social and technological in institutional teaching and learning in higher education, and the lack of effective approaches to address this failing. The evidence of breakdown and failure has emerged from both personal experience and research literature. In my experience of teaching and academic development, I encountered the apparently tacit acceptance among staff of the state of affairs that constituted the standard practice arrangements between technology and learning. This experience was borne out in the literature on learning technologies in higher education: the evidence for chronic, persistently poor outcomes in technology implementations of online learning (Chapters 2.4, 7.1), and a lack of coherence in research into the impact of technologies (Krause & McEwen, 2009a; Goodyear & Ellis, 2008; Price & Oliver, 2007b; Riley, 2007; see Chapters, 2.4. 8.1). The persistent commentary on a mismatch between the effects of technology implementations and their use by practitioners suggested that agency of practice had in some way shifted to the technologies themselves.

In this thesis I designed a methodology for studying technologies in terms of relational effects, to investigate “things that are complex, diffuse and messy” (Law, 2004, p. 2). Applying this approach involved problematising contexts of practice through accounts of its dilemmas and breakdowns, from which a set of controversies was identified across the practitioner sample. Next, a descriptive account of these relations rendered them visible in order to challenge the assumptions and decisions of their assemblage. It is at this point that the opportunity arises for different types of response: one strategy may be to call in an array of experts (technical or business) to repair the breakdown, and re-seal (and re-blacken) the blackbox, foreclosing any further discussion (for the time being). Or participants may open the controversy without dispatching it to the business of others, trace the chain of associations, and review the agency of that particular sociotechnical assemblage. The relational approach to investigating practice, therefore, entails a sequence of identification, analysis and a final response, shown in Figure 9.1:
While this thesis addresses one of the main concerns of the literature on online learning on institutional integration of technologies for learning, it is not a study of how to apply and integrate learning technologies, nor are technologies considered as pre-formed applications or tools. Instead, it is a study of technologies as social practices and as heterogeneous effects of particular relations and arrangements. This approach offers descriptions rather than explanations, “about ‘how’ relations assemble or don’t” (Law, 2009, p. 141). Yet these descriptions, or stories, are not trivial, for they can act as a response or an intervention, an opening of the blackboxes into which multiple processes, decisions and translations have been folded (Latour, 1992, 1999), leading to a re-ordering of socio-technical relations. It is, therefore, a call for a cultural change in the relations of technologies to practice, from the dualist approach in which technologies are viewed as separate from interpretations of them (Jones et al., 2006, p. 50), to a dialogic engagement with technologies in practice, in which objects and identities are considered as situated and fluid rather than fixed and pre-defined (Deetz, 1996, p. 203). In Law’s (2000) “radical relationality”, people, objects, and discourses are relational effects, in which are particular enactments and performances that do particular types of work (Law & Singleton, 2000). Stated in a strong form, this calls for a Kuhnian paradigm shift, in the sense of a change in the “entire constellation of beliefs, values and techniques, and so on, shared by the members of a given community” (Kuhn, 1970, p. 175).

Arnold et al. (2006), quoted at the start of this chapter, called for such a shift in the study of technologies in the social domain of the home, an alternative response which does not seek explanations of social effects in terms of prior, social causal factors, but seeks “traceable associations” (p.12) in the expression of agency in a network of people and things. This thesis proposed a similar approach, one that could account for the effects of technologies of learning within contexts in which the social and material are embedded in each other.

It is the effects of relations which can be analysed as a contest over the agency of practice. The transforming work of assembling relations or translations, aligning and ordering participants in an actor network, shifts or delegates agency between the social and the material (as in the example of Latour’s (1999a) speed bump, discussed in Chapter 7.1). Examples discussed in previous chapters were: translations of law students into lawyers, of aspirations into documents and then policies, and of online learning into an LMS. In online learning practice, the interplay of relations produces effects in which agency is delegated, ordered and expressed through its institutional
actors: people, technologies, discourses, policies, implementations and organisational arrangements. In all such instances, the translation process may be represented as procedural, whereby a history of decisions and arrangements are folded into an apparently unified entity, or a blackbox. Indeed, the act of translating processes into blackboxes brings necessary benefits to organisations, for example, building efficient, sustainable institutional systems, and embedding within them accountable standards and quality. However, where technology systems are implemented through a planning approach to organisational change (Alvesson & Sveningsson, 2008), or an informational model which translates people and things into information (Chapter 7, Table 7.2), the autonomy of practice is readily located with the planning and the information technology.

The question arises here: to what end? What will this alternative approach achieve? The proposed relational approach is a response to an issue of central concern for online learning: given the poor outcomes resulting from the mismatch between the effects of institutional technologies and their associated practices, how it is possible to implement learning technologies and design their contexts of use in a way that renegotiates practice and recovers its agency for practitioners?

At the start of this thesis, I set out a direction for a potential contribution to knowledge (Chapter 1.4), seeking a better account for the controversies of online learning practice than offered by managerial or technical perspectives, through case studies that offered descriptions with a “potential for learning” (Stake, 2008). In this final chapter, I will draw on the findings and analyses of preceding chapters to develop an approach to online learning that can respond to its controversies, account for its breakdowns and failures, and recover and improve practice through possible readings of the cases. To answer the question “To what end?” is to adopt a dialogic perspective, to open up recurring controversies of online learning for scrutiny and questioning, to embrace the “potentiality and actuality” of technologies (Feenberg, 2005, p. 63), and to “reclaim conflict” (Deetz, 1996, p. 203; see Chapter 4.3).

In the following sections, I will return to the analyses of data completed over this enquiry to describe a relational approach to practice. This description will address two questions. First, what is online learning in an organisation, or specifically, what can we say about the constitution of online learning through the sample of practitioners over the three universities? Second, can the case studies provide useful and relevant insights into online learning practice? I will argue that online learning is an negotiation involving many stakeholders in an institution, that it was enacted in multiple versions in the practitioner sample, and that these versions compete for agency within the institution. I will also propose that the case studies tell a story about agency, and that designing online learning involves renegotiating the agency of practice not just at the local site of
implementation, but with discourses that extend globally and draw on disparate fields of practice.

9.2 Enacting online learning

Online learning is an outcome of the institution

The data on practice over three universities was obtained from interview transcripts and records of artefacts. However, the analytical results did not reflect simply an individuated set of findings from interview transcripts. Many practitioners were linked as colleagues or team members, or co-participants in technological implementations (these are listed in Figure 4.2, and detailed in Appendix 4.1). Practitioners did not simply recount uses of technologies, rather, they articulated their own practice in which technologies were embedded in specific actions and institutional undertakings, yet were also shaped by professional discourse communities that extended beyond the local technological instantiation. For example, practice was articulated by academic and technical managers in terms of the language of higher education strategy (Tom, Paul, Victor); in the language of health professionals (Fran, Margaret, Monica), in the technological discourses of implementation (Victor, Robert, Wayne, Tom); the pedagogical discourses of student engagement (Wendy, Fran, Margaret, Craig, Jack, Laura, Alison, Rebecca, Lisa), and discourses of educational development (Vicki, Wayne, Robert, Monica).

These accounts reflected practitioners’ enactments of practice: through their performances as teaching academics, manager academics, academic developers, and learning technologists. These performances were also represented in the components of the organisation according to Collis & Moonen’s (2001) model in Table 4.16: strategic, implementation, technological, and pedagogical. The alignment of practitioners’ enactments of practice with the organisation is represented in Figure 9.2:

Figure 9.2: Online learning practice at levels of the institution

<table>
<thead>
<tr>
<th></th>
<th>Institutional &amp; strategic</th>
<th>Macro-level</th>
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<tbody>
<tr>
<td></td>
<td>Implementation</td>
<td>Meso-level</td>
</tr>
<tr>
<td></td>
<td>Technological</td>
<td>Meso-level</td>
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<tr>
<td></td>
<td>Pedagogical</td>
<td>Micro-level</td>
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</table>

Performances of practice were oriented to levels of the institution in this representation, in the sense that Law (2009) describes as a relational effect (p. 148), in this case, of the
in institution. That is, practice is enacted rather than structured through institutional levels: at the micro-level of situated contexts of learning, the practices of *Engaging students* and *Teaching online* reflected the concerns of mainly teaching academics. At the meso-level, the accounts of learning technologists, academic developers and academic managers were largely concerned with the practices of *Implementing learning technologies*. At the macro-level, the activity of *Engaging with institutional strategies* arose from the accounts of managers and other practitioners, with each role reflecting their own engagement with the institution. These levels, moreover, are permeable, for example, the micro-level of teaching and learning contexts were also acted upon from the meso and macro levels (Valcke, 2004, 2001).

A caution is due here: for a relational or actor-network approach, distinctions of scale are inconsistent with its principle of heterogeneity of elements. Moreover, a focus on structure leads away from descriptions of social and material effects, to explanations in terms of abstract structures that act behind the scenes (Latour, 2005, p. 168). A relational approach would not posit a reality or explanatory power with structures behind those local interactions. In fact, the term “actor-network” is itself a response to the dualisms of macro and micro, structure and agency, and local and global. Its method is not to treat the dualism as the reflection of a different phenomenon, but to acknowledge the history of reciprocity between subject and object, and the co-evolution between the social and the material and technological, as humans and nonhumans exchange properties and agencies, and reconfigure each other (Latour, 1999a). The method is to “follow the suggestion that interactions are overflowed by many ingredients already in place that come from other times, other spaces and other agents” (p. 171). There are no things, only exchanges.

The representation of the organisation through institutional levels in Figure 9.2, however, can be useful to locate specific enactments of practice from both human and nonhuman actors, for example, from practitioner roles, policy documents, technology implementations, or organisational change agendas. These orientations do not represent or suggest an underlying structure, and a relational approach rejects the status of a “doer behind the deed” (Mol, 2002; Chapter 6.1). The represented levels mark the performance of institutional relations of particular actors, and use the language of institutional relations for its description.

The matching of types of online learning practice to the macro/meso/micro levels of the organisation, shown in Figure 9.2, describes the enactments of practice from the practitioner sample from the three universities. It locates the relations that constitute practice as expressed by practitioners in association with their controversies. In
Chapter 9: Conclusion – Recovering agency

Summary, drawing on the case study chapters, online learning was performed through the organisation at:

- the strategic, macro-level of the institution, where online learning was a response to global imperatives and corporate models of the university (Chapter 8.4)
- the meso perspective of academic development, where online learning encompassed a program for the uptake of learning technologies through staff development. (Chapter 5)
- the meso perspective of the learning technologists, where online learning was oriented to the goals of a technology implementation project focused around issues of interoperability and adoption by staff (Chapters 5 and 8)
- the micro-level of teaching online, where online learning was the actual practices deployed by teaching academics, in Chapters 6 and 7.

Online learning emerges as a descriptive term that encompasses particular sets of activities that reflect different institutional orientations to practice with learning technologies. These enactments emphasise or owe allegiance to strategic, technological or pedagogical discourses. The case studies, therefore, can be read as descriptions of practices that embodied performances from levels of the organisation. They also describe how agency was distributed: in a particular practice assemblage, conflicts over agency arose in the enactment of practice from these different orientations.

**Enactments in the case studies**

The descriptions of practice in the case studies expressed the controversies that emerged in the discourse analysis of interview data. These controversies arose from the interpretative repertoires that underpinned speakers’ accounts and understandings of practice. The interpretative repertoires present the discourses drawn together for the whole sample of practitioners across all settings that describe how speakers made sense of the dilemmas in their practice (Table 4.14). These are listed in Table 9.1.
Table 9.1: Interpretative repertoires identified in the case studies

<table>
<thead>
<tr>
<th>Category</th>
<th>Interpretative repertoire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic development</td>
<td> as enabling teaching staff to adapt learning technologies to their local needs.</td>
</tr>
<tr>
<td>Chapter 5: Shaping online learning</td>
<td> as guiding teaching staff to adapt their online teaching to the learning management system</td>
</tr>
<tr>
<td>Engaging students</td>
<td> as student-centred learners through strategic use of online technologies</td>
</tr>
<tr>
<td>Chapter 6: The disoriented practitioner</td>
<td> as a community of learners, using online spaces for collaboration</td>
</tr>
<tr>
<td></td>
<td> as customers who engaging selectively and exercising preferences in learning, or as the digital generation</td>
</tr>
<tr>
<td>Teaching online</td>
<td> as (flexible) delivery of learning, technology as an intermediary</td>
</tr>
<tr>
<td>Chapter 7: Breaking down online learning</td>
<td> as constructivist learning, technology as a mediator</td>
</tr>
<tr>
<td></td>
<td> as a “philosophy of open-source” or open-source community</td>
</tr>
<tr>
<td>Implementing learning technologies</td>
<td> as a bridge to a globalised world</td>
</tr>
<tr>
<td>Chapter 8: Managing technologies and pedagogies</td>
<td> as delivery of learning</td>
</tr>
<tr>
<td></td>
<td> as building relationships for learning</td>
</tr>
<tr>
<td></td>
<td> as a content management system</td>
</tr>
<tr>
<td></td>
<td> as practice-oriented</td>
</tr>
<tr>
<td>Reconfiguring the academic for online learning</td>
<td> as collegial, disciplinary</td>
</tr>
<tr>
<td>17 (Chapter 8)</td>
<td> as entrepreneurial, managerial, performativity</td>
</tr>
</tbody>
</table>

The interpretative repertoires identified how speakers negotiated and responded to the dilemmas of their practice, and the cultural and linguistic resources they drew upon. The above array of repertoires identify the range of practitioners’ orientations to their practice. They indicate a play of agency in the case studies, and tell stories of how relations do or do not assemble. These stories reflect enactments of distinct versions of online learning.

The case study of online learning through the perspective of Academic development is a story of negotiation between two competing repertoires of academic development: as “enabling” staff to adapt technologies for their own needs, or as “guiding” staff to adapt to the needs of institutional technologies. In this case, all educational development practitioners in University B used the same LMS technology, and worked from the same teaching and learning policy that specified components of online learning “in all units of study” (Chapter 5.3). However, they articulated different goals and expressed different dilemmas in their practice. The academic manager of the EDU, Paul, interpreted the policy to promote the instructional design of curriculum content into the LMS for large-

17 This category of practice is identified in Figure 9.1 as Engaging with institutional strategies, but is expressed in this table in terms that more closely resemble the concerns of speakers about the effects of technologies on their practice, as Reconfiguring the academic for online learning.
scale online learning. Vicki’s response was that producing content as fixed online objects unable to be modified by academics was “disabling people” in their online learning (5.3). She and her learning technologist Wayne enacted a competing interpretation of policy, of enabling academic staff to become self-reliant with learning technologies. Where Paul foregrounded the “management system” part of the LMS, the educational developers focused on the “learning” potential for staff use of the technologies. There is the story of agency here: as the developers described their practice in terms of the enabling repertoire, they delegated the agency of practice to teaching staff, whereas Paul described practice in terms of institutional benefits, and delegated agency to the LMS. For Paul, online learning could be negotiated only through the LMS, and so the matter was decided or blackboxed before the activities of practice occurred. Blackboxing simplifies the issue at hand (Law, 2009, p. 147), and by delegating the LMS as the “obligatory passage point” (Callon, 1986) for online learning, a controversy was (temporarily) settled.

A contrasting approach to technologies was articulated by Paul’s counterpart, Victor, the Director of flexible learning who implemented the LMS for University C. As in Paul’s University B, teaching and learning policy called for a mandatory Web presence in online learning in some form (see Victor’s transcript, Appendix 4.5, Extract 2; Paul, Chapter 5.3). Yet in Victor’s context, the institutional technologies were deployed based on an enabling repertoire of practice using technology to encourage innovative teaching. For Victor, the matter of technologies was not settled.

A similar discursive pattern occurred in the case studies Teaching Online and Implementing learning technologies. While accounts of technology use were nuanced and context specific, across the three universities they can be grouped as oriented to either institutional goals or practice goals. Technologies were enacted in two ways: as modes for the “delivery of learning”, both institutionally and globally; and as spaces for collaboration and interaction, as “building relationships for learning”, a repertoire in part based on the discourse of “community”, from online communities of inquiry (Anderson, 2004), or the “open-source” community (Ghosh & Prakash, 2000; see Chapter 7.4). In the first, learning technologies fulfilled a strategic function associated with mass learning and marketing the institution; in the second, learning technologies provided opportunities for learning based on constructivist pedagogies combined with existing forms of online social interaction. These versions of online learning recall the dichotomous models of online education depicted by Hamilton and Feenberg (2005), as technocratic versus faculty led. It is the effect of these competing versions that generated the commentary grouped under the category Reconfiguring the academic, where the implications of the shift of teaching to institutional technologies raised issues of massification of higher education, workload, and the transformative effects on the role of the academic.
The categories of practice in Table 9.1, Engaging students and Teaching online, enacted repertoires with similar features: online learning was constructed as delivery of learning to customer-students; or as collaborative knowledge construction with a community of learners. The repertoire of delivery, with the sense of technology as simply a medium, is based on a realist discourse which constitutes a “pre-structured reality” (Fairclough, 2005, p. 923) of objects, processes, organisations, which, although socially produced, delimit the possibilities of action. Talk about online learning constantly refers back to the affordances of the institutional technological system. In delivery talk and text, what is delivered is the destination (usually utopian): “opportunities”, “global access”, or “effective education” (Chapter 8.4). Technology, in this repertoire, is an intermediary (Latour, 2005, p. 39) which “transports meaning or force without transformation”. By way of contrast, technology in the constructivist learning repertoire is a mediator, with the capacity to transform meanings and effects.

**Version control: competing enactments of online learning**

For our part, we’re focused on delivering solutions that help you enrich all aspects of the academic experience, engaging and assessing students, making their daily lives more convenient and secure, and keeping them informed about what’s important.

The identification of interpretative repertoires across a large body of interview transcripts was a method for obtaining a trustworthy analysis of practitioners’ sense making in their accounts of their practice, with the aim that the analysis will have “represented those multiple constructions adequately” (Lincoln & Guba, 1985, p. 296). The interpretative repertoires identified in the case studies in table 9.1 were used to identify the pattern of responses by practitioners to their concerns about practice. They account for practice in two broadly distinct ways: practitioners described their practice in terms of learning goals in local contexts; or in terms of institutional outcomes. In the analysis in Chapter 4, the repertoires emerging from the corpus of data were arranged under two types of repertoire (see Table 4.14), reflecting: an internal, process, journey orientation to practice; and an external, production, outcome orientation. Similarly, the manner in which speakers and authors drew on interpretative repertoires to describe their practice over the case studies is represented in Table 9.2.

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## Table 9.2: Orientations of interpretative repertoires to online learning

<table>
<thead>
<tr>
<th>Categories of practice</th>
<th>Discourse of learning-centred practice</th>
<th>Discourse of institution delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic development</td>
<td>• as enabling teaching staff</td>
<td>• as guiding teaching staff</td>
</tr>
<tr>
<td>Teaching and learning online</td>
<td>• as student-centred, constructivist, community of learners</td>
<td>• as student-centred, customer focused learning</td>
</tr>
<tr>
<td>Implementing learning technologies</td>
<td>• as an open-source community</td>
<td>• as a bridge to globalised learning</td>
</tr>
<tr>
<td></td>
<td>• as building relationships for learning</td>
<td>• as delivery of learning</td>
</tr>
<tr>
<td></td>
<td>• as practice oriented</td>
<td>• as managing content of learning</td>
</tr>
<tr>
<td>Reconfiguring the academic</td>
<td>• collegial, disciplinary</td>
<td>• entrepreneurial, managerial, performativity</td>
</tr>
</tbody>
</table>

This representation of the repertoires as binaries suggests a structuralist approach to discourse, described by Eagleton (1983) as the analysis of discourse as a system of interrelated meanings (p. 100). Nevertheless, the contrasting orientations of the repertoires capture the symmetrical way in which speakers articulate their practice and their sense-making activity. The expression of practice as a dichotomy of learning-oriented or institution-oriented indicates not that their practice was defined by one description, but that speakers were able to call on both interpretations of their practice context, and their use of contrast as a rhetorical strategy.

The relational perspective does not seek explanations that postulate inherent structures. Practice, therefore, can be understood in terms of Mol’s (2002; 1999a) concept of enactment (discussed in Chapter 6): online learning does not exist as a singular or authentic entity behind its various activities, it exists in its performances, in its enactments in practice. Online learning is contingent on such performances, and I argue that it was enacted in this enquiry in versions based on two distinct sets of repertoires: one version as pedagogical, a practice centred on learning; the other as institutional, in which learning has shifted to the institutional flows of the networked organisation, the outcomes-oriented “managed university” (Lewis et al., 2005, p. 61).

Following Mol (1999a), the two versions can be described as co-existing, yet neither consistent nor coherent in practice (Law, 2004, p. 92). At the macro-level, online learning emerged as a singular reality across the three universities in this enquiry, adopting the repertoires of the “delivery of learning” and “a bridge to a globalised world”, with goals of efficiency, scalability and return on investment (Chapter 8.5). At the micro-level, a local version of online learning was enacted in situated learning contexts, but may be “rendered invisible” (p. 92) or overshadowed by the rational discourse of implementation,
as in the case study in Chapter 7. The implementation of institutional management technologies tended to be instructivist and controlling, demanding adaptation to its terms and goals by its human users, including its agents of implementation. Nevertheless, the two versions of online learning did not divide practitioners into two camps, and both were available to practitioners at all levels of the organisation to negotiate practice between institutional and learning goals.

In practice, individuals work with ambiguity and non-coherence, as noted by Mol (1999a) and Law (2004, p. 92), and they enact more than one reality in the same context. But the hard work of negotiation mainly fell on the teaching academic at the local level – instances discussed in earlier chapters included Fran, Wendy, Craig, Jack, Alison, Laura, Vicki, Margaret, Monica and Lia, as they struggled to build a learning environment which aligned students, technologies, assessment, into times and spaces for teaching and learning. On occasions, the enactment of technologies for learning, that is, practice oriented to learning-centred repertoires, acquired the tenor of a maverick, clandestine activity, resembling Michel de Certeau’s (1984) “tactical response” in everyday life to the overarching and dominating system “strategies” (p. 114). Examples of this occurred when Jack deployed wiki software to achieve the pedagogical goal of collaborative project assessment that was not possible with the institution’s LMS (Chapter 7); and when Vicki used online textual interaction to develop and explore online literacies (Chapter 5).

The ambiguity of online learning practice is reflected in terminology which crosses between discourses. For instance, the repertoire of student-centred learning was expressed as part of the repertoires of the community of learner and the student as customer: it was located in both discourse orientations to the category Teaching and Learning Online, in Table 9.2. This ambiguity arises elsewhere: Wise and Quealy (2006) found that discussion of managed learning technologies may deploy the rhetoric of constructivism and student engagement yet frame “an implicit instructional design agenda” (p. 901); Lewis et al. (2005) found academics pursued the collaborative potential of networked technologies within a “managerial agenda” (p. 73) (also Malikowski et al., 2006; Coates et al., 2005). There has been extensive educational literature on student-centred learning as a “paradigm shift” (Rust, 2002) in approaches to teaching in higher education (Carlile & Jordan, 2005; Trigwell, Prosser & Waterhouse, 1999), reflecting its presence in constructivist, community of learning contexts. This expression is still in widespread use in institutional strategy documents, as demonstrated by an Internet search of Australian universities. As student-centred learning has become a widely transportable repertoire of higher education, it has acquired a rhetorical function which is readily aligned to the repertoire of the student as customer, a feature which emerged strongly in the case study in Chapter 6 (6.3).
A discourse of learning-centred practice, and a discourse of institutional delivery. But where are the technologies? In practitioners’ accounts, the talk and text about learning technologies was not especially technical, even from learning technologists. Ihde (2002) points out that where technologies blend and merge with the normal, everyday environment, they tend to recede into the background and withdraw their presence, as in his example of the embodied technology of spectacles, which become noticed only when absent or broken (Ihde, 1990, p. 48). This backgrounding of technology also occurs through an institutional process, where technologies become the business of software companies and the technical operations of university information technology units, reflected in their specialist terminology. Blackboxed, they become processes with which practitioners do not need to concern themselves, and only emerge into view when there is a breakdown. As born out in the case studies, these tend to have antecedents that are social rather than technical.

Yet technologies act. As practitioners struggled to adapt institutional strategy and to their practice, it was the technologies that were the least negotiable actor in their sociotechnical assemblage of online learning. Technologies brought transformative effects: on the manner of student engagement with learning (Chapter 6), on approaches to teaching online (Chapters 6, 7), and on the learning environment offered by the university (Chapter 8). A pervasive effect of networked technologies reported in practitioners’ accounts was grouped under the category Reconfiguring the academic (Table 4.14, Chapter 4). These were moments reflected in practitioners’ accounts that point to reconfigurations of practice and identity: the impasses arising from student modes of online interaction (Chapter 6.5), the re-ordering of practice for Fran, Margaret and their colleagues as they shifted online the teaching of practical skills to health professionals (Chapter 7.3), and the redefinition of the roles of Tom and his team in the terms of the pilot content management system (Chapter 8.4). The institutional technologies for learning emerged as inflexible and needy, demanding extensive time and effort, insisting on participants adopting their terminology, claiming agency for practice, yet with unpredictable consequences for learning and effects for teaching staff and students.

The analytical finding that practice in online learning in higher education was enacted through two competing discourses is neither a new nor startling conclusion. In the sample of practitioners from the three universities that constitute this enquiry, practitioners’ accounts indicated that online learning was enacted from different discourses, offering alternative orientations or versions, each with its own goals, with the consequence that competing goals establish the conditions for conflicting practices. In

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19 Learning technologists, or online support staff, were the least frequent users of technology terms, see Table 4.7, Chapter 4
cases where other universities have similar organisational structures, the ramifications are that assemblages of practice also enact competing orientations to online learning. The issue which remains for online learning, however, concerns how the conflict and tension between discourses persists, and why they are so difficult to reconcile? How does the technocratic discourse act powerfully and pervasively, yet discreetly, to make practice so troublesome for practitioners?

9.3 Agency in the socio-technical assemblage

Message sent to All Staff

Description: The LMS service is experiencing a difficulty with uploading files (new content, assignments). ICT is currently investigating.

When: Tuesday 23rd June 2009, Approx 9:00 am – Current

The persistence of competing discourses of technology in higher education prompts an actor network theory question raised by Law (2009): “How does an organisation hold itself together?” (p. 148). In the conflicted practices of institutional online learning, some things persist and stay in place, despite differences in discourses and their enactments. From the case studies and practitioners’ accounts, two descriptions or stories can be told about assembling relations. The first description concerns the discourses of technology that arrive already embedded in a practice context, blackboxed and packaged by specialist terminology, their mode of deployment to a large extent assumed and standardised. Consequently, practice is shaped by factors beyond the local, through “action at a distance” (Latour, 1987), in which discourses are able to be transported between contexts as material objects, documents, and technologies, and retain their stability and form (Edwards et al., 2004; Cornford & Pollock, 2003; see Chapters 3.3, 7.1). I argue that conflict arises when practice is viewed only as organised locally, its agency located within that setting as if uninformed by distant actors. The second description concerns one of the effects of discursive actions, whether distant or near: the socio-technical separation of technology from humans, which produces and reproduces conflict and tensions in online learning practice. From these two stories, I will propose an approach to recover the agency of technology in practice.

The effects of distant actors

In his description of the expansion of the Portuguese imperial system, Law (2002, 1986), traces a system of mobile objects which held precariously in place and endured for a century and a half: an object, such as a vessel, is part of a network or assemblage of ports, merchants, the military, and markets. The vessel is an effect of these network relations, and it “remains an object while everything stays in place and relations between it and neighbouring entities hold steady” (Law, 2002, p. 93). Objects and forms which are
mobile, yet durable and retain their shape, are immutable mobiles (Latour, 1987, see Chapter 3.2), and can accomplish action over a distance. The functioning vessels, as immutable mobiles, held the network of empire in place.

Immutable mobiles can also be discursive. In a longitudinal study of a humanitarian organisation, Cooren et al. (2007) distinguish “two key dimensions” of organisational discourse (p. 153). They show how broader, distant discourses are materialised in local, situated settings and transported and reproduced in others, as immutable mobiles. These function as a bridge between local, real-time, “transient” ethnomethodological discourses, and “muscular”, “trans-local”, Foucauldian “Discourses”, which, they show, were embodied in expressions of local discourse (emphasis in Cooren et al., 2007; see Chapter 7.1). The authors note that interpretative repertoires, similarly, provide an analytical link between the ethnomethodological and the Foucauldian discourse types, between instances of situated social interaction and broader discourses in the field of practice (Cooren et al., 2007, p. 157), and they recommend attending to the “transportation effects” of a given discourse. The more “muscular” discourses, in this view, “exert power to the extent that it is supported by convincing arguments, people, technologies, documents, and anything that might make a difference when people are confronted with it” (p.182).

The discourses of government and organisational policy texts provide examples of immutable mobiles, existing as stable forms in policy texts which circulate throughout their global field, and “emerge again and again in quite similar formulations” (Edwards et al., 2004, p. 51). The interpretative repertoires listed above (Tables 9.2, 9.3) provide examples of global discourses that circulate within their practice communities: repertoires of constructivist learning, (flexible) delivery, student-centred learning, community, customer, digital generation, and open-source community. These repertoires and their associated terminology recur in the literature and institutional texts of online learning in higher education, and are able to perform actions at a distance temporally and spatially. Examples of powerful discourses in higher education literature are “lifelong learning”, which entails the mobilising of “intellectual technologies” (Edwards, R., 2003), “community” (Fox, 2005) and the contested term “flexible” (Bigum & Rowan, 2004). Two examples from the case study analysis show how discourses act at a distance.

**Example 1:** In the case study of an innovative teaching approach involving the use of a collaborative wiki for a large student cohort (Jack’s wiki in Chapter 7.4), four discursive entities were identified as distant. Two were discourses that had prior shaping effects on the pedagogical approach adopted for the unit of study: a constructivist learning approach, and the open-source community of social software. The third was the discourse of delivery of learning, embodied through the LMS. As the available alternative
to the wiki in the institution, the LMS was a present but distant, or trans-local, actor (Chapter 7, Table 7.5). Although the LMS was not adopted in this unit of study, it nevertheless had effects on the assemblage of practice, competing with the wiki through its strong alignments with the university infrastructure, policies and students’ orientation to learning from their prior experience. The fourth discourse, the managerial culture of performativity, was present in the anticipated student evaluation for the unit, and acted as a potentiality in the assemblage. The effects of forthcoming student evaluations were an instance of an inherent virtuality in an assemblage that describes trajectories and consequences yet to be actualised (Feenberg, 2005, p. 63). The potential negative evaluations arising from a non-standard, “maverick” online learning technology increased the risk of negative performance data for Jack and institutional sanction, consequently weakening the stability of the wiki innovation. In the story of the decline of the wiki implementation, the distant, or locally absent, potentialities acted to destabilise the wiki assemblage, and hence its sustainability.

Example 2: The policy statements on teaching and learning over five universities, analysed in the case study in Chapter 8 (8.4), reflected the global circulation of discourses in which technology was a rhetorical immutable mobile that expressed the discourses of organisational strategy. The statements adopted the genre of organisational vision statements, with declarative statements addressed to the reader, for instance, “Our flexible learning environment and effective use of technology in teaching and learning will underpin the University's reputation for excellence …”, and “The university will be a leader in global access to learning that is enabled by emerging technologies”. These public statements invited the reader to adopt the shared understandings of a particular action-orientation to technology. These were identified by the interpretative repertoire of technology as “a bridge to global opportunity” (8.4), in which the university offers readers a bridge to an unpredictable yet utopian world of high-tech opportunity. In this discussion, this way of talking was compared to two repertoires listed above in Table 9.2: technology as “delivery of learning”, and as “building relationships for learning”, in Hannon & Bretag (2010).

Both the bridging and delivery metaphors of the first two repertoires have the effect of diverting attention from the actual conditions of teaching and learning practice, from the concrete considerations of organising and coordinating time, place, people, interactions and technologies, and especially maintaining quality of teaching and learning in mass or spatially dislocated settings. … The work of organising the teaching and learning environment and engagement with colleagues and students is left to the third repertoire of communication and building relationships. The two repertoires of technology as “bridging” and as “delivery” are institutionally oriented, and project an idealised world where the work of building relationships is invisible. (Hannon & Bretag, 2010. p. 116)
In this description, there is an attempted accommodation between the futuristic vision of globalised learning with the grounded work of actual teaching and learning. The presumed neutrality of technology in the “bridging” and “delivery” metaphors, in which online learning is an ideal, already determined, technical matter, builds the conditions for tension and conflict with alternative orientations to practice. The policy statements act at a distance to frame a technologised teaching and learning practice, one that can be transposed to delivery platforms, and mask the effort of reconfiguring people, technologies, resources, arrangements required for practice in online learning.

Conflict in practice arose where versions of online learning were enacted based on competing discourses. Implementations based on the interpretative repertoire of the delivery of learning bring an already assembled online pedagogy in the form of the teacher-centred approaches apparent on many LMS interfaces, reflected in the quote from the LMS Blackboard, above (9.3), offering to deliver (to academics) blackboxed “solutions” to the problems of engaging, assessing and informing students. Implementations of learning technologies as an unproblematic transposition of traditional learning approaches to online spaces is a recurring source of socio-technical breakdown (Price & Oliver, 2007b; Chapter 6.1). Critics of online learning have commented that learning and content management systems "are not pedagogically neutral" (Coates, James & Baldwin, 2005, p. 27), bring a “default” pedagogy privileging notions of “access” and the management of content (Goodyear & Jones, 2003, p. 40), and that the “inherent pedagogies” (Lane, 2009) of proprietorial content management systems are likely to be instructivist and behaviourist through the very terms and functions on the interface (Lane, 2009; Bayne, 2008; Chapter 8.2). That the pedagogies brought to face to face learning did not transpose readily to online spaces was apparent in the accounts of practitioners, in particular those who recounted their disorientation at the modes of teacher-student online interaction (Chapter 6). In relational terms, learning and content management technologies act as an intermediary for learning, transposing their inputs without transformation.

Yet system technologies do act transformatively, only covertly so, and complaints about learning management systems tend to come from constructivist and innovative users (Lane, 2009). In this study, LMS implementations were reported by practitioners in terms of the delivery repertoire, enacting a teacher-centred, instructivist discourse. And yet the LMS acted not as an intermediary but as a mediator, transforming meanings and modifying the elements brought to it (Latour, 2005, p. 39). By claiming the neutrality of delivery of teaching and learning, the LMS covertly translates learning with a “covert curriculum” (Roberts, 2007), demanding compliance and adaptation to its implicit discourse of instrumental neutrality (see 9.2).
Action at a distance is both corporeal and discursive. The apparently local, situated practices of online learning are not bounded by local constraints, but are shaped by distant effects, embodied in material and discursive forms. Examples are policy statements, the procedures of institutional technology implementation, assumed forms of assessment, planned approaches to institutional change from organisational theories (Alvesson & Sveningsson, 2008). The interpretative repertoires of customer service, of the delivery of learning, of the community of learners, and of open source communities, all transportable and rhetorical immutable mobiles, were embodied in the case studies, and enacted broadly as Foucauldian discourses in local contexts of practice. All these repertoires acted to constitute the meanings and social realities of practice, such that “local” practices were not just local.

Separating the social and technological
An effect of practice that is oriented to a discourse of institutional delivery is to adopt a subject-object distinction and maintain the separation of technologies and social interaction. Hayles (1999) identified this distinction as “the materiality/information separation” (p. 12), the notion that embodied reality is distinct from, and inferior to abstracted information. She sought to challenge the shift from our corporeal interactions to abstractions that are then held to be more real, and highlight that which is erased in the achievement of such “bodiless information” (p. 12). The translation of practice to the “nonbiological medium” (p. 13) of digital technology, she suggests, brings a shift to the privileging of disembodied information as the Platonic real, as powerful abstractions.

In the online learning practices from this enquiry, the work of separating embodied practice into abstractions of the social and technological was performed by repertoires that acted from a distance on local contexts. Three forms of separations of practice emerged from the case studies: of curriculum, of teaching online, and of academic staff.

1. Separation of curriculum into content design and delivery. Feenberg (2002) observed that the separation of “content” from “process” was the key to the goal of efficient delivery, of “automating education” (p. 121). The privileging of “access” in learning management systems (Goodyear & Jones, 2003) becomes an implicit pedagogy that enacts the discourse of delivery and information transmission of learning.20 The attention to “content” in delivery-oriented online learning overshadows the notion of curriculum, in the sense of a process rather than product, of “curriculum work” in progress (Gough, 1999, p. 1). The delivery repertoire of the LMS provides the terminology to put into practice this separation: content, access, and technology as a platform or tool for something. The academic manager, Paul, enacted this repertoire by funding content

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20 Learning management systems, or their equivalent in the UK, virtual learning environments, can also be deployed to enact other discourses, eg, constructivist learning approaches, see Lane (2009), Bayne (2008), and Cousin (2005).
development that employed instructional designers to work with “subject matter experts” to produce reusable units of study for scalable mass learning (Chapter 5.3). This separation brought two effects: curriculum development was shifted away from teaching academics, and some of the teaching was delegated to the technology system. Consequently, the academic was re-configured as an element in a technologically designed process. The chunking of curriculum into “modular ‘bite-size’ chunks” (Edwards et al., 2004, p. 38), suppresses alternative pedagogical approaches and shifts the agency of learning towards the technology platform, “as teaching is marginalized through the focus on the learner, it is itself divided into separate activities of ‘design’ and ‘delivery’.” (p. 63).

Bigum and Rowan (2004) observed that the metaphor of technology as “just a tool” separates the social from the technical (p. 218). Whether refrigerators or hammers (p. 218), the technology as tool brings an implied neutrality, a blackbox which is solutions focused. They note that “corporate” approaches to online teaching commonly involve proprietorial software dedicated to the development and delivery of courses as content (p. 214). The university policy statements, described above, also adopted the corporate discourse of neutrality and delivery to a futuristic world, enacting the technological determinism of the utopian/dystopian commentaries. In online learning, this separation is described by Hamilton and Feenberg (2005):

The social relations of education are here broken down along functional lines. Social interaction is replaced by interaction with technology and the static content it delivers, and the producers of knowledge are separated from the learners they traditionally encounter in the classroom.

In this separation, technology systems such as the LMS compete with teaching staff for the critical role of “obligatory passage point” (Callon, 1986) in which the LMS becomes the necessary entity with which the student must interact in order to progress (see Chapter 7.4).

2. Separation of teaching online into managing technology and managing learning.

Edwards et al. (2004) points out that “teaching” as a term recedes in learning technology talk, as “it is itself divided into separate activities of ‘design’ and ‘delivery’.” (p. 63). For the learning technologists, Tom and Rachel (Chapter 8), the demands of the pilot content management implementation required them to reconfigure a learning context, and the teaching academics, according to a database system. In addition, several practitioners commented on the separation of their teaching into work with learning technologies and work with students. Fran, Margaret and Jack (Chapter 7), Craig, Monica (Chapter 6) and Lia (Chapter 4), noted the administrative orientation of the LMS favoured approaches such as monitoring participation rates and numbers of posts (Monica was the exception
who reported a positive large class online experience). Wendy, Laura, Alison, and others (Chapter 6) were concerned with the workload implications in the amount of effort spent on managing the conditions of interaction rather than of learning. Jack noted that he was unable to deploy the institutional LMS to design an independent project-based assessment for his large student cohort. The pedagogy enabled by Jack’s wiki was not available as an interactive “tool” of the LMS, nor recognised in the discourse of the delivery of learning. To build his project assessment at University C, Jack adopted a different repertoire, social constructivism, with matching social software.

3. Separation of teaching staff into technology proficient and technology deficient. The take-up or adoption of learning technologies was raised as an institutional issue in University B (Paul, Vicki, Wayne), and University C (Paul, Robert). Professional development programs for academic staff in learning technologies are common in universities, and resources of the institution are perennially dedicated towards training in the idiosyncratic interfaces of proprietary software. On the basis of a technology implementation, teaching staff can be distinguished as trained and untrained, irrespective of the quality of their teaching or their disciplinary knowledge and experience. Individuals may become known as (early or late) adopters, or technology resistant, or “laggards” to use Rogers’ (2003) term. Where an institution grants the agency for online learning to a technology system, its form dominates content and modalities of engagement.

The contest over agency
Two features recurred consistently from the practitioner data: the amount of effort involved in assembling technologies into practice in online learning, and the neglect of the social during institutional implementations of online learning. These features interact, as the lack of recognition of the social interactions necessary to integrate institutional systems masks the effort involved in responding to, setting up and maintaining technologies in practice.

There were several types of response to the demands of institutional learning technologies among practitioners in this enquiry, ranging from resistance, avoidance, and forms of adaptation. Adaptation could take a “bolt-on” form, in which traditional teaching approaches were transposed to the technology platform, or a “built-in” form where the technology offered a new space of learning. The following are examples of response types from practitioners, (details of technology engagements can be found in Appendix 4.1):

- resistances and avoidance, as practitioners adopted alternative strategies. Examples were: avoiding the LMS and adopting email interaction (Wendy, Francis); deferring the adoption of online learning on the basis of lack of evidence of demand from
transposition of traditional practices to online learning, for example, of face to face interaction to the “discussion” feature of the LMS (Laura, Alison, Asha, Lia).

adaptation of existing technologies to enact a learning-centred discourse (Jack, Paul, Vicki, Paula, Wendy, Craig, Monica, Barb)

adaptation and appropriation of existing or new technology in the form of work-arounds: use of Web 2.0 technologies for independent student tasks (Paula, Jack, Laura, Alison, John); structuring online discussion as an assignment submission (Craig, Monica).

Most practitioners, especially teaching academics, articulated their practice in terms of repertoires of learning: constructivist learning approaches, student-centred and community building (Table 9.2). However, teaching practices embodying these repertoires could still separate the social and technological. For instance, at least four practitioners allocated online discussion forums as a learning activity with little or no moderation, and recorded low levels of student engagement (Laura, Alison, Asha, Lia).

Such examples of approaching online learning as an “add-on technology” (Goodyear & Ellis, 2008, p. 149) were practices noted by Cousin (2005) concerning uses of virtual learning environments (VLEs). She identified a “luddite drift” (p. 117), as both the texts and practices with learning technologies tended to replicate the “traditional” physical markers of learning, in an effort to place the presence of technology in the background. The quest to place pedagogy before technology in learning, Cousins suggests, brings terminology and images that bring “associations with a safe and known academic world” (p. 122). By this reading, when teacher-student interaction was translated to the LMS “discussion” tool, interaction became less guided and scaffolded, and the phatic and paralinguistic markers that shape face-to-face interaction had no counterpart online. For Cousin, this tendency derives from “a division between humans and technology in which the latter is neutral and in the service of the former” (p. 117) which limits the potential uses of technologies for online learning.

Considerable effort and increased workload was reported on the occasions where strategies of adaptation or resistance were adopted, for example, Fran, Margaret and Jack in Chapter 7. Comments on workload and the effort involved also arose in configuring new arrangements of learning on online spaces (Wendy, Lia, Laura, Alison, Craig). The discourse of learning, as Cousin (2005) suggests, has the potential to consolidate the technophobic legacy of Heidegger, Ellul and Marcuse, separating technology from the lifeworld.
For practitioners in the case studies, the implicit pedagogies embodied in the LMS constrained innovative models of learning based on constructivist or community repertoires, such that approaches such as Jack’s wiki (Chapter 7) were positioned as marginal to University C’s online learning, despite broad indications of support by Paul, the Director of Flexible Learning. The institutional constraints on innovation in the form of Web 2.0 or social software for learning have emerged as one of the expressions of competing discourses in universities (Hemmi et al., 2009; Garrote & Pettersson, 2007; Wise & Quealy, 2006), and the rise of social software may usefully contribute to current rethinking of the relationship between humans and educational technologies (Goodyear & Ellis, 2008, p. 149). The marginal status of innovations to learning such as appropriations of social software is likely to continue as long as institutional learning strategies are guided by the goals of information technology experts rather than higher education learning practitioners. These separate domains are marked by the terminology of the LMS, which reflects the language of information technology. In the experience of many practitioners, the LMS was encountered as part of their technology environment, an “add-on technology”, rather than their teaching and learning context.

The separations of practice follows Hayles’ shift of embodied activity to abstracted “Forms” (p. 13), in a process where distant, abstract, discursive actors overshadow and pre-determine local, contingent, embodied activities. The separations of the social and technological in the case studies were discursively constituted, already in place, and framed the assemblage of practice that transpired. Agency was articulated, translated and delegated throughout the mediators of online learning: through policy documents, unit guides, teaching staff, learning technologists, LMS, class times and locations, and assessments. In the organisation of the case study contexts, each such entity was assigned, enrolled and put into action with its own goals, to negotiate an assemblage, stable or not, that performed institutional online learning.

In the email quote at the head of this section, “A Message to All Staff”, two nonhuman entities are assigned agency by a textual narrative by email, “The LMS service is experiencing a difficulty with uploading files … ICT is currently investigating.” A technological object, the LMS, and an organisational unit, ICT, the “sender” of the email, were endowed with very human attributes (including blame). This is an instance of the systematic discursive work that is done institutionally, constituting relations, delegating agency, defining roles, responsibilities, lines of communication, and configuring the organisation. Latour (1999b) identified this type of “purposeful action” as an institutional function, “Only corporate bodies are able to absorb the proliferation of mediators, to regulate their expression, to redistribute skills, to force boxes to blacken and close” (p. 192). The separations follow the tradition of the nature/culture distinction, Latour’s (1993) “modernist settlement”, the redistribution, delegation and shifting down of processes are
divided into the technological and human domains. The claim to neutrality by institutional technologies anchors this separation by masking its transformative role in reconfiguring learning. Once agency was exchanged, the discourses or separation acted to seal the blackboxes, and close off further negotiation.

9.4 Approaching online learning as sociotechnical relations

*Ecce homo*: delegated, mediated, distributed, mandated, uttered …. The human is in the delegation itself, in the pass, in the sending, in the continuous exchange of forms (Latour 1993, p. 138).

This description of online learning derived so far from the practitioner sample from this enquiry reflects accounts of practice that enact competing discourses of technology, and in the contest for agency of practice in the organisation, historical separations resurface and keep apart the social and technological domains, bringing unintended consequences of breakdowns in practice with learning technologies. Different versions of online learning were enacted by the dichotomous repertoires listed in Table 9.2: a learning-centred discourse that drew on pedagogies of interaction and community, and an institutional discourse that drew on managerial models of the organisation and corporate models of training, using the terminology of delivery, scalability, functionality and efficiency (terms used by academic managers and learning technologists in Chapters 5 and 8). The institutional discourse was also found by Cornford and Pollock (2003), whose investigations traced institutional technologies to standardised technology systems tailored for a corporate model of the organisation as a standardised, informational model of the university, whereas the university, they found, was “made up of locally negotiated practices and interactions” (p. 84; Chapter 8.4). This clash of models, and practice cultures, was confirmed by Lewis et al. (2005), who nevertheless found accommodation: the multiple forms of governance in the university enabled negotiation in the uses of networked technologies, and despite managerial agendas for networked technologies, academics were able to negotiate more democratic approaches to online learning (p. 73).

The results from this enquiry confirmed this conclusion, that while networked technologies were tied to centralised and instrumental agendas for organisational change, alternative responses were able to be negotiated in the uses of networked technology. Yet these responses, in this enquiry, tended to be disparate and localised, their status those of “maverick” innovations, their stability tenuous, as exemplified in the case study on innovations in Chapter 7.

While the expressions of practice in this enquiry confirm the literature on the mismatch between implementation and teaching practice in online learning (Chapter 2.4), it is
Chapter 9: Conclusion – Recovering agency

noteworthy that the legacy of sociotechnical separation is so pervasive in the traditions of pedagogy, technology and organisational studies. This pattern of separation is reflected in the literature on the integration of institutional learning technologies (Chapters 2.4, 9.1), which are implemented as a software installation and normalised as a standard institutional process, yet bring huge costs and high levels of maintenance. Examples of competing discourses of technology in higher education literature that have been discussed previously (Chapter 2) include: the technocratic versus faculty-led versions of online education described in Hamilton and Feenberg (2005), and Feenberg (2002); a “social-technical binary” identified by Bigum and Rowan (2008) in “almost all” policy and analyses of learning technologies (p. 250); the contrast between centralised and standardised online learning versus the “distributed and collaborative possibilities of networked technology” described by Lewis et al. (2005, p. 73). Networked learning, according to Fox (2005, 2002), can be seen as the old battle between Deweyian “progressive” and “authoritarian” education (2002, p. 81), reproducing the “abstract/concrete dualism” in cyberspace (p. 88). These dualisms, some argue, are the emergence in online learning of those tropes of traditional Western rationalist thought, Cartesian mind/body dualism (Land, 2004a), and Plato’s distinction between ideas and reality (Fox, 2002, p. 78; 2000). In organisational contexts, they emerge as expressions of the structure/agency debate over versions of reality and its control (Deetz, 1996; Reed, 1999). Those who debate and research online learning, therefore, would be advised to take care lest they are located on either side of this duality, thereby perpetuating this divide.

The goal of moving beyond these dualisms is shared by many commentators: in sociology, Bourdieu (1993, 1977), Giddens (1984), Foucault (1972), in organisational studies (Alvesson, 2002a, Reed, 2003, 1999; Deetz, 1996), in practice oriented theories (Schatzki, 2001; Knorr-Cetina, 2001; Lave & Wenger, 1991) (see Chapters 2.3, 3.2), and in online learning (Bigum & Rowan, 2008, 2004; Goodyear & Ellis, 2008; Feenberg, 2005, 2002, 2000b, 1999b; Jones et al., 2006). This enquiry seeks to bridge the separation between the social and material worlds: both theoretically, in offering an alternative orientation to teaching and learning in online spaces, and pragmatically, building on the innovative uses of learning technologies emerging from the community of practice in online learning.

The separate versions of online learning that emerged from the data on practice in this study were informed and shaped from organisational orientations to teaching and learning: by institutional goals and global perspectives at the macro-level; by technological implementation strategies at the meso-level; and by way of contrast, a set of internal, process oriented, pedagogical concerns that emerged from micro-level contexts of practice. To describe and understand these institutional levels, their domains
of practice and their discourse orientations, the relational approach follows the “traceable associations” (Arnold, 2006), which:

  describes the enactment of materially and discursively heterogeneous relations that produce and reshuffle all kinds of actors including objects, subjects, human beings, machines, animals, ‘nature’, ideas, organisations, inequalities, scale and sizes, and geographical arrangements (Law, 2009, p. 141).

This approach offers a mode of encountering technologies in practice, a “radical relationality” which endeavours to go beyond the expression of a dichotomous world. For Law (2009), the relational approach offers a “toolkit which can be understood as a powerful set of devices for levelling divisions usually taken to be foundational” (p. 146). It focusses on the “material practices that generate the social” (Law, 2009, p. 150), that is, the hows of social practice and not the whys. The descriptions of how these diverse actors can be recognised as acting beyond the local contexts, how they align with strong and weak ties, how they are ordered into a socio-technical assemblage of relations and their efforts to become stabilised, offer a potential means of breaking down and reassembling online learning practice.

**Criticisms of actor network theory**

A relational approach to online learning applies a theoretical perspective which derives to a large extent from actor network theory (ANT), and despite this thesis drawing on a “post-ANT” relationality (Law, 1999b; Latour, 1999b), there are critics of ANT who raise objections relevant to this thesis. These I will address only briefly, since this thesis is not proposing ANT as an explanatory theory of the social world, but as a method that offers useful descriptions of it. Some important objections can be summarised by two critics, Couldry (2008) and Cooper (2008). One of Couldry’s concerns is that ANT is “agnostic” (p. 5) concerning its descriptions and interpretations of the world, and its neglect of a treatment of power relations. ANT’s self-limitation to a “sociology of associations” (Latour, 2005) is not, for Couldry, a sufficient basis for an account of a social world consisting of the functions of powerful organisations such as global media interests. Cooper is concerned with ANT’s moral and ontological orientation to the world when it applies the principle of heterogeneity and “decentering the primacy of the human” (p. 306). Like Couldry, he identifies ANT’s lack of capacity for interpretation, its “rejection of critique” (p. 312) in evaluating a good, bad or dangerous hybrid or assemblage (p. 313). Its “ontological levelling” (p. 330), he concludes, makes ANT unable to deal with the complexities of the future.

My response is not to defend ANT on ontological grounds, nor attempt to counter these objections directly, except to note that both Latour and Law describe it as a method rather than a theory (Law, 2009; Latour 2005). ANT may be problematic as an
explanatory theory, in part since the price it pays for offering descriptions in terms of heterogeneous assemblages is that it is unable to comment on, only describe, the arrangements that lead to the ordering of a network, or the relations of power that may not be innocent.

In this thesis, I follow the “sensibility to the messy practices of relationality and materiality of the world” (Law, 2009, p. 141) to build a practical orientation to practice. I make the case that the social and technological relations that make up online learning in higher education are largely captured by monologic information technology discourses and interests, through which power relations act, and that a radical method is required to disrupt and make visible these arrangements, in order to reassemble them. If follows that this thesis is not pure in its application of actor network theory: it uses a relational approach to open up a sociotechnical assemblage for scrutiny, and deploys a constructionist (Potter, 1996, p. 98) discourse analysis to identify the effects of powerful repertoires that are called on to shape local contexts. The interpretative repertoires perform critical work in this relational approach, linking effects on local practice contexts to broader Foucauldian discourses (Chapter 3.2). The descriptions of networks or assemblages, then, need not remain as a neutral depiction of a flat ontology of relations, nor ignore powerful actors, but can challenge pre-given arrangements, and critique “the character of links, the character of invariant connection, the character of possible relations” (Law, 1999b, p. 7). This thesis is not agnostic: it calls for a different paradigm for online learning practice that recognises the acts of delegation of institutional power that shape sociotechnical assemblages, and it takes a position with moral and political implications in the construction of a domain of human-technology relations.

9.5: Reassembling practice for online learning

The case studies offer ostensive descriptions of the relational approach that can be mapped to other homologous contexts of practice in higher education institutions. In constructing the case studies, I identified controversies of practice and their socio-technical assemblages of constituents: technologies, policy texts, implementation procedures, discourses effects, digital artefacts, arrangements for learning contexts, and practitioners. I analysed specific phenomena of practice through descriptions that focused on how these constituents were aligned, and their relative effects on the stability of the assemblage. With these descriptions I aimed to bring a “defamiliarization” (Alvesson & Deetz, 2000, p. 171; Chapter 2.6), that is, a problematisation of the potential reader’s orientation to familiar, standard arrangements for the implementation of technologies to practice contexts. These descriptions make visible the strategic arrangements and discursive strategies of technology instantiations, and open up alternative deployments of technologies to design learning and renegotiate practice.
Chapter 9: Conclusion – Recovering agency

The case studies, therefore, do not offer “solutions” to problems and controversies. Rather, they offer descriptions of relations of practice that indicate potential ways to renegotiate agency. The following list in Table 9.3 offers possible readings of the case studies that offer the practitioner reader Stake’s (2008) “potential for learning” (p. 130).

Table 9.3: Potential readings of case studies

<table>
<thead>
<tr>
<th>Case study</th>
<th>Possible reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 5: Shaping online learning</td>
<td>Strategies for staff adoption of institutional learning technologies: How to identify the discourses associated with two practices that enact conflicting institutional strategies for staff adoption of learning technologies, and how these strategies may be negotiated and aligned to shared goals</td>
</tr>
<tr>
<td>Chapter 6: The disoriented practitioner</td>
<td>Student engagement in learning online: How to describe the unexpected and disorienting modes of online interaction with which students express their sociality online, its overflow into their engagement with learning, and how these modes can be recognised and incorporated into online learning practices</td>
</tr>
<tr>
<td>Chapter 7: Breaking down online teaching</td>
<td>Orientations to teaching online: How to describe practices in teaching online tailored to large class student cohorts. Learning-centred practices were in tension with institutional learning technologies, and the breakdowns that ensued were used to identify approaches for adapting institutional technologies to constructivist, enquiry based approaches and authentic learning</td>
</tr>
<tr>
<td>Chapter 8: Managing technologies and pedagogies</td>
<td>Implementing learning technologies through the organisation: How to identify and avert the conditions for breakdown in institutional implementations through negotiation with teaching and learning practice. The roles of managers and learning technologists, and the technologies, need not be pre-determined, but can be assembled as a potentially stable sociotechnical assemblage oriented to learning.</td>
</tr>
</tbody>
</table>

While the case studies offer descriptions of the controversies and their sociotechnical relations, they raise the question of how to reassemble practice. What are the implications of “radical relationality” for online teaching and learning? How can it constitute new orientations and trajectories? A traditional evaluation research approach would scope a bounded field of enquiry and conclude with proved or disproved hypotheses, an explanatory theory, propose a program, or make recommendations (Chapter 3.2). However, the multiplicity of the factors shaping technologies in higher education, and the embedding of practice in everyday social relations and arrangements, makes it unlikely that an attempt at a definitive exposition can give an adequate account. The formative goal and emergent methods set out for this thesis (Chapter 2.5, 2.6) were designed to meet the complex, fluid, unbounded, in vivo settings of online learning practice and address its controversies.
In response to this goal, a synthesis of the relational descriptions from the case studies can provide some groundwork towards making the cultural or paradigm shift in the relations of technologies to practice (as proposed in 9.1), and facilitate the design of a relational approach to practice in online learning. Building on the approach of defamiliarisation of normative arrangements with technologies, a set of contrasting concepts between the relational approach and the planned implementation approach (Alvesson & Sveningsson, 2008; Cornford & Pollock, 2003) is presented in Table 9.4.

Table 9.4: Contrasting paradigms of practice

<table>
<thead>
<tr>
<th>Implementation approach</th>
<th>Relational approach</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perspective</strong></td>
<td></td>
</tr>
<tr>
<td>Human-centred</td>
<td>Heterogeneous</td>
</tr>
<tr>
<td>Separation of humans from material world</td>
<td>Symmetry of human and nonhuman actors</td>
</tr>
<tr>
<td>Actors – human – produce intended effects</td>
<td>Actors – humans, objects and technologies – are themselves an effect of relations</td>
</tr>
<tr>
<td><strong>Technologies</strong></td>
<td></td>
</tr>
<tr>
<td>are a tool or application to practice, an intermediary which transports without transformation (Latour, 2005, p. 39)</td>
<td>are an effect of social and material relations, a mediator which transforms meanings (Latour, 2005, p. 39)</td>
</tr>
<tr>
<td>transpose practice to online learning</td>
<td>transform practice in online learning</td>
</tr>
<tr>
<td>arrive as a blackboxed, pre-determined set of functions</td>
<td>arrive as embedded with discourses that shape practice</td>
</tr>
<tr>
<td><strong>Agency</strong></td>
<td></td>
</tr>
<tr>
<td>Agency resides with human experts, procedures and applications</td>
<td>Agency resides in the sociotechnical relations of an assemblage</td>
</tr>
<tr>
<td>Breakdowns are analysed by identifying some element – humans, objects or technologies – need of modification or repair</td>
<td>Breakdowns are analysed by identifying weak alignments between heterogeneous elements</td>
</tr>
<tr>
<td><strong>Design of practice</strong></td>
<td></td>
</tr>
<tr>
<td>Planning as the design for intended consequences</td>
<td>Planning as the negotiation of unintended consequences</td>
</tr>
<tr>
<td>Significance of intentions</td>
<td>Significance of relations</td>
</tr>
<tr>
<td>Design as application of technologies based on project goals</td>
<td>Design as translation of actors into a stable assemblage of practice</td>
</tr>
</tbody>
</table>

21 This table is based on the same contrasting discourses underpinning the two models of online teaching, the informational and relation perspectives, in Table 7.2
The paradigms offer a stark contrast between approaches: to view practice as a program of technological implementation, or as a strategy for assembling sociotechnical relations. The relational approach offers a radically different framing of practice: it challenges the implicit intentionality and technological neutrality inherent in institutional implementations of technology, which I have demonstrated, sets up the conditions for conflict and tensions arising from competing discourses of practice. An implementation approach to learning technologies assigns the agency of practice to blackboxes, both technological and discursive, and delegates action to pre-given procedures and systems. While the conceptual vocabulary in Table 9.4 is not new, I argue that it can make a difference by offering a relational description of the technologies of online learning, both those that are planned or brought to notice through breakdowns.

Applying the relational approach sets up conditions for practice that do not replay the dichotomy of structure and agency, of institutional and local, and is potentially able to bridge the conflict between technology implementation and practice by defining and negotiating a practice assemblage that does not separate domains of activity. This reframing of human-technology relations seeks to make visible the discourse repertoires which are brought ready-made through the technology to practice, and arrange “configurations that might lead to relative stability” (Latour, 2009, p. 147).

An example of reframing technologies in this way is an approach to assembling institutional online learning as “small pieces, loosely joined” (Dalsgaard, 2006), in which innovative and Web 2.0 technologies are hosted by the institution, to be adapted by practitioners for particular contexts of teaching and learning. In a shift away from an LMS that insists on a “one size fits all” approach, Reid (2008) describes a “comprehensive strategy” that combines supported learning management infrastructure with the ability to customise a personal learning environment with a range of Web 2.0 options, and build online learning practices based on disciplinary requirements. This approach offers new discourses and strategies that have the potential for innovative approaches to gain status beyond the “maverick” and achieve stability.

The “radical” aspect of relationality entails the refusal to accept the terminology that reproduces the divisions of technology issues and their appropriation by various interests in an institution, but an insistence on heterogeneity. This heterogeneity encompasses policy strategies, discourses and repertoires, which may be embodied as immutable mobiles that circulate as texts (and talk), and act at a distance on local contexts. For instance, “LMS” has become an immutable mobile that, in a number of institutions in
Australia, circulates as a term for a proprietorial system that defines and claims near total agency of online learning. This insistence on heterogeneity aims to reclaim the agency for learning technologies from those institutional entities that “own” its various processes of selection and implementation.

**Shaping online learning futures**

To speak for others is to first silence those in whose name we speak (Callon, 1986, p. 14)

Relationality brings a dialogic engagement to technologies, in which their conditions of deployment are up for negotiation rather than foreclosed through blackboxed arrangements. Dialogism enables practitioners to demythologise the presumed discourses of institutional technologies, and opens potential trajectories of online learning assemblages for different configurations of relative stability.

This call for a fresh approach is also made by a range of commentators in online learning. Goodyear & Ellis (2008) call for an move away from “atomistic” notions of persons and things, towards “radical and thoroughgoing reconceptualisations of the relations between technology use and learning outcomes” (p. 149), which are required now that learning goals have become more diverse and ambitious. For Bigum and Rowan (2008), a “socio-technical realist approach” to networked learning technologies is more suited to the “rapidly shifting technological landscape” (p. 252). Existing institutional processes and teaching approaches tend to constrain the potential of Web 2.0 and social technologies, according to Hemmi et al. (2009), who call for new pedagogies appropriate to these online spaces. Similar expressions and guidance for online learning using social software are offered through studies emerging from the UK JISC reports (JISC, 2009, 2007) and the Australian Learning and Teaching Council (ALTC) (Fitzgerald & Steele, 2008), as well as other commentators (Bayne, 2008; McLoughlin & Lee, 2008; Collis & Moonen, 2008; Conole et al., 2008; Downes, 2006; Dalsgaard, 2006; Wise & Quealy, 2006).

The need for radical approaches to learning technologies has also been proposed by others. Blin & Munro (2008) found little transformative use of virtual learning environments (VLEs), and a need for “more radical transformations of the overall social and cultural context of university teaching practices” (p. 489). Land (2004a) calls for new understandings of learning “in radically different forms of space” (p. 530). Jones et al. (2006) reviewed the outcomes of European research networks on quality of e-learning, and call for a “non-dualist and relational approach to understanding technologies” (p. 53), in which the affordances of technologies are not viewed as attributes, but “in relationships with active agents” (p. 51).
This thesis analysed online learning as practices which are doubly shaped: practice that is constituted by discourses, and also transformed by the virtual spaces of networked technologies. First, the dialogic perspective brought methods of analysis that foregrounded the discursive effects of participating entities – information technology, higher education pedagogy, models of corporate and university governance – discourses that circulate globally across fields of practice, and act from a distance on local practice contexts. Through these methods, discourses became available for analysis of their effects on practice. Second, these discursive effects are heightened as they act on the forms of life that have shifted to the virtual spaces built on networked technologies. With digital networks in place, digital artefacts, resources and practices are no longer bounded by the constraints of material objects in the physical world, but are as fluid and dynamic as the discourses that shape them. Institutional policies, implementation guides, managed technology systems, software training manuals, navigational interfaces, all become actors that “speak for others” from a particular discourse repertoire. When this form of speaking is deployed to preclude dialogue or constrain negotiation, it becomes a silencing of others that is brought to the social and technological relations of a practice assemblage. The effect of the implementation approach is conveyed by Sorensen’s (2008) reference to Merleau-Ponty, in her discussion of the dialogic potential of e-Learning, that the “monologic imposes a reduction of meaning to a single ‘true’ perspective” (p. 283). This thesis takes up the dialogic response through constructing and disseminating its own relational discourses that act at a distance, for example, through publication to a community of professional practitioners (Chapter 1.6).

The relational approach in this thesis is influenced by Foucault, who analyses power as exerted through the actions of others (Latour, 1986, p. 265), and the delegation of power to the textual objects of networked learning technologies is a critical process in the negotiation of agency. The analysis of discursive effects engages with the controversies of practice that take place on the overdetermined and fluid virtual spaces of online learning. The results, or descriptions from this relational approach convey the effect of domination of the metaphors and discourses deployed in technology text and talk, and the transformative potential in possible online learning trajectories when technologies are considered as negotiable, as everyone’s business.

There is one online learning future indicated by the implementation approach in Table 9.4, in which technologies are attributed the role of intermediary, acting to transpose and transmit intended effects (second row). This representation as intermediary denies the acts of mediation, of transforming, reconfiguring and re-ordering practice. For practitioners, the discursive act of relinquishing agency to technology or information systems has political effects, one of which is to accept and maintain a familiar sociotechnical assemblage: that of the proliferation of breakdowns in practice with
technologies, breakdowns that are apparently technical in origin, but most likely arise from the social relations preceding the technology instantiation, as occurred in the case studies in Chapters 6, 7 and 8. A regime of perennial breakdown and maintenance of system technologies, at immense cost to the institution, has been analysed in terms of strategies of corporations in relation to higher education (Zemsky & Massey, 2004; Noble, 2002), a strategy to tightly couple universities to system technologies, establishing the relations of organisation to technology that reflects a 20th century model of large-scale installation and maintenance of industrial machines. A relational analysis, however, views sociotechnical breakdown less in terms of the effects of dominating organisational strategies, and more in terms a lack of alignment of goals within a practice assemblage: between institutional actors, institutional goals, implementation goals (including managing risk and cost), and practice goals. Following Callon’s quote, the political issues become who is speaking and who are the others.

Hamilton & Feenberg (2005) acknowledge this future as one side of a debate over “differing socio-technical paradigms”, and call for way to “resituate technology in the politics of the contemporary university”. They suggest that the issue of how to deploy learning technologies in practice extends to broader aspects of work, in fact, of being an academic:

In the wake of the general disappointment with the exaggerated claims made for online education, there is now wide latitude for faculty intervention and participation in shaping the terms on which it will impact the academic labour process, the division of academic labour, and ownership of intellectual resources.

This call for a radical, cultural change in the relations of humans to technologies, and of technologies to practice, recognises the fragile potential in the shift of work and life to the virtual spaces enabled by networked technologies. Just as the structure/agency debate is enacted over the Internet as a conflict over the commons (Bollier, 2002; Chapter 2.3), between proprietorial spaces and open-source communities, so the virtual spaces of online learning are subject to the same struggle. To reclaim practice in teaching and learning over virtual spaces requires a radical shift from the metaphors and structures embodied in the institutionalised separations of the non-digital world: metaphors of machine installation and maintenance, of training for use of technology as a tool, of the bounded spaces of learning activity; to the dialogic discourses that assemble the potential for learning inherent in Berners-Lee’s original notion of the read/write Web (World Wide Web Consortium (W3C), 2006; Alexander, B., 2006; Gillmor, 2004).

It is radical to challenge those practices that hold to these separations. The quote by Latour (at the head of 9.4) concerns the consequence of the collapse of the division between the social and natural worlds. If there are no things, only exchanges, if the
human emerges in the act of delegation itself, then agency is for speakers and authors to claim, in the metaphors for applying technologies, of policies, and the discourses of technology.
Appendices

Contents

3.1: Interview questions

4.1: Artefacts and projects of online learning
4.2: Example of introductory communication
4.3: Keyword frequencies for participants
4.4: Extracts of interview with Victor
4.5: Coding notes for Victor
4.6: Categories for Victor, Fran and Lia
4.7: Provisional categories by role
4.8: Categories and emerging discourses for each practitioner role
4.9: Categories and repertoires

5.1: Emerging themes for academic development

6.1: Practitioners accounts of student engagement

8.1: LCMS pilot – Extract of interview with Tom

Supplementary Appendix: Confidential references (separate from the bound thesis)
Appendices

Appendix 3.1: Interview questions

Interview Questions Handout

This set of interview questions was part of the Ethics approval process by each of the three universities in the study, A, B, and C

E-learning Practices in university and VET*

The interview is semi-structured. These are some key questions, which focus, for convenience, on e-learning. We do not need to ‘cover’ all questions.

1. Your role as educator: Can you describe your role – it may be multiple - your area of expertise, your teaching and research areas

2. First use: Describe your first use(s) of e-learning technologies. What was it, when, was it successful and so on. How did you discover it?

3. Changes in use: Have you discarded or shifted away from any uses of e-learning approaches or technologies? Why?

4. A specific current use: Can your describe a current use of e-learning technologies or computer mediated communication that is significant for you? Briefly, how did this project arise, and what do you hope to achieve?

5. How does this project fit in with the organisation framework and IT system.

6. What has worked well in this project or related areas? What has been opened up by this engagement for you or others?

7. What hasn’t or doesn’t work well in this project or related areas? Has anything or anyone been constrained, excluded or foreclosed?

8. Can you describe any unexpected consequences of in your use of networked communication technologies in this project?

9. Can you describe any innovative uses, adaptations, or workarounds involving technologies for this project that you have discovered or used with some success?
   Innovative uses include ‘official' uses, which are supported and presented by your organisation, and 'unofficial' uses, which are those discovered through your own research and contacts.

10. What concerns you about where e-learning is heading? Can you comment on the direction of your work with e-learning.

* All interviews were face-to-face except Tanya, (University A, Teacher, VET).
Appendices

Appendix 4.1: Artefacts and projects of online learning

This appendix lists examples of artefacts of practice provided by interview participants. Those indicated by * are either held in the researcher’s data collection, or are published articles or public institutional documents referred to in the thesis. The university ethics committee approvals for this enquiry specify that participants and institutions be de-identified, therefore some references and records are listed separately in the Appendix section, under Supplementary Appendix: Confidential references.

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<th>Participant pseudonym</th>
<th>Title</th>
<th>Examples of practice</th>
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<td><strong>Academic Managers (N = 4)</strong></td>
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| Victor (University C) | Assoc Director (Flexible Learning) | The university’s learning management system UniCnet  
*Teaching and Learning Strategy 2006-8*  
*Teaching and Learning Framework 2010*  
*Flexible learning: Statement of Strategic Intent*  
Author publications* (Appendix 4.5) |
| Paul (University B) | Acting Manager, Teaching and Learning | University LMS, WebCT  
*Teaching and Learning Support: 2005 Projects*  
*Learning and Teaching Support Functional Plan 2005-2007*  
*2004 Professional Development Programs* |
| Monica (University C) | Program Director, Health Sciences | Online learning example with large cohort: Unit Learning guide, assessment and criteria for fully online unit *Literature Review* |
| Sylvia (University C) | Program Director, MBA Program | University personal web page and biography, Dec 2005* |
| **Academic Developers (N = 3)** | | |
| Barb (University A) | Education Development Advisor | Model of off-campus learning (graphic)*  
Accounts of Barb’s online learning projects in Newsletters (2)* |
| Vicki (University B) | Professional Developer | Image grab of Vicki’s online subject: *Public Life, Text & Culture*  
Author Powerpoint: *Learning & Teaching: Theories, Policies & Practice*  
*The Blue Guide: Promoting and Enhancing Excellence in Learning and Teaching, 2006*  
*Learning and Teaching Support Functional Plan 2005-2007*  
*Learning & Teaching Policy 2004* |
| John (University C) | Academic Developer | Researcher/practitioner of this enquiry  
Author publications  
Author’s online learning resources: Hannon & Atkins, 2002; Atkins & Hannon, 2002 |
| **Academic Lecturers/Tutors (N = 13)** | | |
| Wendy (University C) | Lecturer, Business Communication | Wendy’s publications and thesis* |
| Asha (University C) | Lecturer, MBA Program | Learning guide to fully online unit, *Contemporary Issues in Project and Operations Management* |
## Appendices

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| **Lia (University C)** Lecturer, Commerce | - Study guide to Contemporary Issues in Project and Operations Management*
| - Unit introduction, assessment and criteria* |
| **Ron (University C)** Lecturer, Entrepreneurship | - Learning guide, assessment and criteria to fully online unit, Issues in Accounting Theory*
| - University personal web page and biography* |
| - Artefact is software for CDE Entrepreneurial Orientation Diagnostic* |
| **Francis (University C)** Lecturer, Marketing | - Online resource, Audience dialogue, http://www.audienceDialogue.net/
| - Simplified effectiveness checklist for websites* |
| - Specification of a system to assess a website* |
| - Design for a basic community information network* |
| - Five image captures of Audience dialogue online discussion* |
| **Laura (University C)** Lecturer, Communication & Media (sess) | - Virtual communities Editing User Guide* |
| **Alison (University C)** Lecturer, Communication & Media (sess) | - Paper for Faculty Teaching & Learning Colloquium 2005, Situating functional rhetoric* |
| **Jack (University C)** Lecturer, Communication & Media | - Six image captures of Jack’s wiki system* |
| - Introduction page to units on wiki* |
| - Sample image grab, Information Architecture and Design |
| - Paper for Faculty Teaching & Learning Colloquium 2005, Wikis for Learning: A Large Scale Deployment* |
| **Mick (University C)** Lecturer, Design & Architecture | - Project submission, Computer Aided Feedback and Assessment System (CAFAS)* |
| - Two refereed publications on CAFAs* |
| **Rebecca (University C)** Lecturer, Arts Marketing | - Written account in form of post-graduate assignment* |
| **Craig (University A)** Lecturer, Marketing | - Three image captures: Craig’s online discussion, mindmap of his unit* |
| - Faculty publication of his research interest* |
| **Fran (University C)** Lecturer, Health Sciences | - Publication of Clinical Pathway Audit Guide, Dept Veterans’ Affairs* |
| - Related publications by Edwina McConnell* |
| **Margaret (University C)** Lecturer, Health Sciences | - Margaret’s interview is associated with Fran |
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<td>Case study of Hive content management from UWA Library: information and case study*</td>
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<td>Two sample online discussion from vicnet*</td>
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<td>Four samples of podcasting instructional documents*</td>
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<td>Five online chat documents*</td>
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*Appendices*
Appendices

Appendix 4.2: Example of introductory communication
Interview questions for Wendy, emailed 5 August 2005

Hi Wendy,
I thought I would include some brief research background for you to contextualise the questions.

Broadly, my research topic is:
The virtualisation of work, and how information and communication technologies (ICTs) reconfigure professional practice, and open practice to digital networks and other stakeholders, and the responses of practitioners to this changing environment.

I am focusing almost wholly on online learning in universities and VET, and how these work environments reflect these issues in a profound way. Underpinning this focus is my view that online learning, or e-learning is a yet unfinished undertaking which embodies multiple interests and sometimes competing stakeholders.

I want to interview you about your work in online learning and computer mediated communication, by choosing a specific project or undertaking that you are currently engaged with and focusing on as a case of virtual practice. I am keen to look at intercultural issues in virtual communication spaces, if you agree.

The interview is semi-structured. These are some key questions, which focus, for convenience, on e-learning*. We do not need to ‘cover’ all questions.

**Your role as educator:**
Can you describe your role – it may be multiple - your area of expertise, your teaching and research areas

1. **First use.**
   Describe your first use(s) of e-learning technologies. What was it, when, was it successful and so on. How did you discover it?

2. **Changes in use**
   Have you discarded or shifted away from any uses of e-learning approaches or technologies? Why?

3. **A specific current use**
   Can you describe a current use of e-learning technologies or computer mediated communication that is significant for you? Briefly, how did this project arise, and what do you hope to achieve?

4. How does this project fit in with the organisation framework and IT system.

5. What has worked well in this project or related areas? What has been opened up by this engagement for you or others?

6. What hasn’t or doesn’t work well in this project or related areas? Has anything or anyone been constrained, excluded or foreclosed?

7. Can you describe any unexpected consequences of in your use of networked communication technologies in this project?

8. Can you describe any innovative uses, adaptations, or workarounds involving technologies for this project that you have discovered or used with some success?
Innovative uses include 'official' uses, which are supported and presented by your organisation, and 'unofficial' uses, which are those discovered through your own research and contacts.

9. What concerns you about where e-learning is heading? Can you comment on the direction of your work with e-learning.

* Definitions: E-learning can be described in terms of (i) approaches to teaching and learning – curriculum planning and design, collaborative uses, assessment, or (ii) the use of technologies –, learning management systems, discussion, blogs, document sharing systems, and so on
Appendix 4.3: Keyword frequencies for participants

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Highest freq: tech*, system, innovat*, communit*, institut*, flexib*  
# Alison & Laura were counted from one transcript, from one interview

### Academic developers

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Highest freq: tech*, system, institut*, communit*, flex*, innovat*, 
Appendices

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Highest freq: tech*, (system = flex*), innovat, institution,

### Managing academics

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Highest freq: system, innovat*, (tech* = institutio*), engag*

### Academics

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Highest freq: tech*, (communit* = system), innovat*, engag*, (flex* = workload)

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Highest freq: innovat*, tech*, system, institutio*
Appendices

Appendix 4.4: Extracts of interview transcript with Victor

Segment 1, p. 8 of transcript

Victor: We actually, for a few years, we ran a program for Adelaide Uni that was jointly taught by Adelaide and the University of Texas, and the University of Texas was on Blackboard and Adelaide Uni’s was on this new system we’d developed and sort of sold them basically. We had to get permission to develop it properly ourselves, we said we had, and the American’s said “Look, the only reason we wouldn’t use your system was because it wasn’t made in America” (0.5) you know so, you know, and that was when Blackboard was just on the ascendency, you know. So that decision was made, and then every year or so we’d have another look, you know, and at the moment with WebCT and Blackboard merging, the view around the table, people like B___ and P___ [xxxxx], who are pretty important people in those decisions, say “Well now is a good time to be sitting back and watching what happens” you know, and you know, in the emails, when sort of discussion on this announcement came out, I said “Look, now is the time that we look at the other source things” [JH: Mm], because I think, you know, Blackboard or Web CT will become bigger and bigger, more and more expensive; it will become like a PeopleSoft type [JH: Mm] monolith, and that will just be, you know, leave this huge gap underneath; they go up and in price and a big gap underneath for, the open source products [JH: yeah], so, you know Moodle, Sakai sort of things.

John: Yeah, and . there’s a lot more awareness of those options now than some years ago.

Victor: That’s right, yeah. So (1.0) I - we have avoided the question of “Should we -“ we haven’t avoided the question we’ve said “No, we’re not going to buy a product”, [JH: Mm] and I think it won’t be long before that question just won’t be asked anymore [JH: Mm] because people don’t want to buy a product. [JH: Mm] They want to buy lots of little things and customise them and make their own things as well, and then glue them all together. [JH: Mm] Which is where, you know that standards thing I sent you, where all the- talking about adopting all these standards about having things which you can glue together, [JH: yeah] and I think the idea that I would like to see is staff be presented with a, sort of a tablet of, you know, 50 different sorts of learning tools they could choose from, and they’d say “I’ll have that one, that one, and that one, and I’ll bring them together in this sort of way, and that’s what I will use for my teaching”, you know. [JH: Yeah] Again the academic makes the decision, you know, we provide the paint pots and they do whatever painting they want with them, [JH: Yeah] that’s sort of my philosophy with it.

John: Yeah, what about . I’ve been pondering, even reading some stuff about I know Blackboard brought out a thing that allows you to do a journal [V: Yeah] a journaling tool [V: Mm] that’s contained within a course, and so I would imagine say my teaching, I think a student will think “Well what’s the point of investing in this if it’s just going to stop at the end”, [V: yeah] especially where it’s applicable and it may connect with basically Humanities-types subjects, but it could be others. [V: yeah] Would that be, do you think that could be manageable, or would it just need go outside to Blogger?

Victor: No, we could do that. One of the rigidities that we did build in at the start was the course-based . [JH: Mm] rigidity, and that in some ways is a problem, not only because of, you know, everything is only in one course, but also people teach that course in so many different ways and so many different contexts, and that’s a problem as well. [JH: Yeah] You know, there is a tension between course-based . [JH: Yeah]structures and student life cycle .based stuff, [JH: Yeah] and I think you can have both, [JH: Yeah], I reckon you can have both. [JH: Mm]There’s those sort of journaling tools, stuff like
blogging is a bit different because it is public, and if it’s public, right, then I don’t, I can’t see a rationale why

Segment 2, pp. 9, 10
Victor: Yeah, well I mean there is stuff like that in the (strategic) plan stuff, like initially it was 2005, we were going to have um, online (2.0) presence for all courses or something, we did that, and then the current one is 2010, every students will do something online, [JH: mm] sort of a, you know, and that will be there and that can be interpreted-

John: In every program, every
Victor: I’m just trying to rem- it’s every.
John: I can check
Victor: I think it’s every . . every student.
John: Oh, every student, yeah.
Victor: I think that’s what it says.
John: Oh, every student, yeah.
Victor: I think that’s what it says.
John: I will take something online [V: yeah, I think so] . like Deakin. [quoting]
Victor: Yeah, but . we don’t really have the mechanisms to really check that either, so that is more a- more a vision thing than a, [JH: Mm] you know (3.0) but . although we’ve got that sort of big vision thing, there is a gap . still about sort of the online strategy, you know last year we had the big . online strategy consultation process. Have you had a look at those- some of those documents?

John: I have but I can’t recall them.
Victor: Yeah, I mean . we had a discussion paper, and lots of consultation, and people just basically said that things are OK, keep going, and from our point of view it was pretty assuring because people said what we’re doing at [this university] is fine, no problem, but on the other hand I would have like to have seen some sort of criticism because then, you had a bit more clearer direction of [JH: mm] what we need to do, [JH: mm] . . and I think that’s . part of the situation we missed a plateau and everyone is looking “Well, what’s next? What’s special?” [JH: mm] You know, they want the next silver bullet to transform education, you know, and that’s not going to happen, but we do need some more, you know, impetus and more innovation coming along, I think.

Segment 3, pp. 10-13
Victor: Um (2.0) I had pointed out to me, a UNESCO report . . [JH: mm] on sort of the state of learning, have you seen that?
John: Yes, I’ve read I’ve got that.
Victor: It’s funny, I didn’t even know it was out, until somebody pointed it out to me, because I remember doing the survey for the data in it, (laughs) because I filled in the, you know, the institutional survey thing you know, so it actually says some interesting things in there about [this university].

John: Oh really?
Victor: Yeah, if you get it up in PDF you can do a search for [Australian state], that’s why I like PDFs. [JH: yeah] You can read things really quickly.
John: Yeah, I’ve got a couple of chapters of that and [V: Yeah] it seems, yeah, it’s a very world view sort of thing.
Victor: broad brush. But the thing I was pleased about is that it says that [this university] is unusual in that it has clear targets in the staff development for online learning, in that we
actually want all staff, all the teaching staff, to be, you know, competent to a basic level when you're running an online course, you know, and they said that was quite unusual.

John: Really?

Victor: Yeah! So I think that's quite an interesting sort of finding, so, and I was pleased that I was pleased that's what we're sort of— that's how we like to be different because that's what we are trying to do. [JH: yeah] So it was good.

What stage are you up to with this? Are you sort of coming to the end of the data?

John: The data gathering yeah, and so I can start writing it and I've got, I think, against my earlier inclinations, the paper I deliver will be a paper itself, and it was a sort of quantitative survey but it will become, with a bit of add-on, a chapter in itself about communication kinds of things, [JH: yeah] and differences in internal and external students and cultural issues, and um, I might do a chapter on innovation in some way (xxxx) [V: Right yeah] Yeah, but I start writing next year.

Victor: I think there's actually a lot less innovation around now than there was when I started. [JH: Well] which is interesting.

John: Yeah, well that's a problem word now because when I raised it I think what do I mean do I mean- [V: yeah] my meaning's pretty old-fashioned, you know, playing with technology like I used to home web pages.

Victor: Yeah, learn new HTML tags and.

John: Mm Yeah. [V: yeah] But it also, I think and also I sort of have been part of producing that came out of the film and TV background, [V: yep] producing stuff that's funded, and I really noticed I produced things for the government or whoever for the institution and it would stop there and [V: yeah] it would be on a CDROM and it wouldn't be interactive [V: yeah] because they weren't going to support it, [V: yeah] and there's been no take-up, [V: yeah] or no attempt to measure something I'd take up from stakeholders^.

Victor: There's lots of those things around.

John: Yeah, and I think that's a part of the history that's [V: yeah] really a part of a training ground.

Victor: Yeah, the thing that I am interested in my research is at the moment is looking at the effect the quality assurance stuff is having on it^, and I'm developing this view that-

John: I've read that paper you wrote in it.

Victor: Oh right, that quality assurance stuff is sort of dampening down innovation, it's sort of putting boxes around things and constraining things to such a point

John: Someone said audit (culture) [V: yeah] makes it like innovation that fails.

Victor: That's right, so you know, it's sort of this ah (1.0) this tension you can feel at the moment, you know, we're all scared of terrorism and anything out of the ordinary, you know, it's this whole culture of 'I mustn't try it, it might be dangerous'.

John: Yeah, so what we're talking about is innovation that is. in practice and is strategic for, you know, [V: yeah, yeah] a particular area that's going to be a good practice in some way, [V: yeah] or. (solving problems)

Victor: (Well I mean this ) this place the great paradox is the lack of online in the offshore operations (1.0) you know, there's a huge paradox.

John: Ah yeah. You mean the stuff that's delivered …

Victor: Delivered offshore.
John: ... by tutors offshore?

Victor: Yeah, you know, and, you know, the amount of travel we still do, you know, when a lot, we're still doing a lot of stuff online . . [JH: yeah] and you know (1.0) I mean, it's only when you have SARS or something that you people say "Oh, any online stuff?", you know . [JH: yeah] It's interesting.

John: Because I've talked to a few people who are doing external courses from here, and they've got a really global bunch of people.

Victor: Mm. That's right.

John: (xxx) Icelanders, (xxx).

Victor: But that's external . if they're teaching offshore ...

John: That's not offshore, no.

Victor: That's right, it's that, so they've probably a student external who happens to live in Hong Kong, [JH: yeah] and they deal with them in all technologies, [JH: yeah] but they've got the group of students at Hong Kong Baptist [JH: yeah] they have to fly in and travel, and they've gotta be face-to-face with them [JH: yeah well that's] and, you know, like there's a contradiction there, its just. (short laugh)

Clear expression of bewilderment/exasperation by Victor

John: Well that's because of the arrangement, isn't it.

Victor: Yeah contract short stuff. (2.0) But, but . I think that's an excuse to a large extent, I don't think that (xxxx) they really wanted to do it. [JH: mm]. Um. . Mind y- personally I think the reason is that they will find it hard to get paid extra . to do more online stuff when they're not travelling. Having to travel means it's something special and you're, you got materials, you've got separate materials in your travel and (doing sessional) then you'll get paid (xxxxx).

John: This is from whose point of view?

Victor: From the lecturer's point of view.

John: (1.0) Yeah, but they're not driving it though are they?

Victor: (2.0) Well, um, yeah. [JH: yeah] At the sort of a program director . [JH: Ah] sort of level, yeah. I mean they- the program director will do the deal for a new program in a new location. So

John: Yeah, yeah So you ask then is it really necessary to do it that way?

Victor: Yeah, but I think if you are sitting at h- in the office and I've got a new offshore program, I'm doing it all in my office. People will say "Well (not giving you extra) money for that", [JH: mm] you know. [JH: mm] (laughs)

John: Well, yeah.

Victor: I mean yeah, it's interesting to look at some of the progress you've got to prove, the extra sort of levies that . program directors, course coordinators, get paid . for an offshore program, it's a motivation.

John: Yeah, oh well, organisational things sometimes . go above the pedagogical

Victor: Yeah. Just every now and then. (laughs loudly) Yeah. . Well catch you later
Appendices

Appendix 4.5: Coding notes for Victor

Several references in this appendix are available in Supplementary Appendix:

Confidential references

Notes post-interview
Referred to during interview

- His paper (2005) on quality
- Images of Med Rad PBL (problem-based learning) preset (unit of study online “template” for the Medical Radiation degree)
- Statement from Teaching and Learning Strategy 2006-8, University C, “The University’s commitment to online learning means that all programs will have some aspect delivered online.”


Xxxxx, I. (2005). Quality Assurance, Open and Distance Learning, and Australian Universities. International Review of Research in Open and Distance Learning 6, (1), March.


Themes
What is the main concern of this interviewee?

- V is concerned with how to get the systems of online ed and ICTs to work in a pedagogically effective manner, So how he is concerned with ICTs implementations and their scalability, sustainability and the extent of their takeup and use in the organization..
- UniCnet – how was it chosen, its vision, how to evaluate it.
- Learning objects, implement? takeup of?
- Innovation – adopters of two kinds – those who adapt existing ICTs to their own practice, and the weird & wonderful. Issues within institution - for creating best practice and dispersing it, and trying out – not supported so well.
- conflicts, eg. MS vs innovation
- Future directions.

For follow-up
Could ask about uptake on improving discussion tool
p. 4 lack of takeup with PBL template
Future of UniCnet
Outcome of trial of LCMS Hive and Learning Edge at University A

page 6: the culture change in ISTS. V states he “doesn’t know”, then speaks sotto voce. Where JH realises “Oh really?”

p. 10: “that standards thing I sent you” – his article from 2005
Mentioned
Appendices

- Proprietary: WebCT and Blackboard, Learning Edge and Harvest Road
- Open source: Moodle, Sakai, Blogger
- Inhouse: UniCnet

p. 12: “those future documents”

Yeah, but . . . we don’t really have the mechanisms to really check that either, so that is more a vision thing than a, [JH: Mm] you know (3.0) but . . . although we’ve got that sort of big vision thing, there is a gap still about sort of the online strategy, you know last year we had the big . . . online strategy consultation process. Have you had a look at some of those documents?

John: I have but I can’t recall them.

page 13: pointed out to me, a UNESCO report on sort of the state of learning. (D’Antoni, 2006)?

page 15: audit culture – origins see


Key question: how prof development adapts/adopts to ICTs in work practice

Follow-up result: 28 June 07: Victor confirmed my enquiry that the LCMS trials resulted in no further development in this area, except the library has taken an interest.

Coding notes: Victor (extracts)

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<td>- Early adopters – LMS ‘initially to link what’s existing to that, so hen at least, you know, things that the early adopters have already done’</td>
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<td>This ‘really hasn’t flown as well as I’d like, but I think the model is right, I’ve just got to get the hearts and minds behind it.’</td>
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<td>PBL template (Med Rad) ‘hasn’t really bitten as well as I would like’</td>
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<td>LMS: V states preference for an LMS as ‘not one controlling learning management system, but there is different tools that are available’</td>
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<td>Buy a product and integrate it, ‘you don’t use stuff (out of) the black box.’ Use as ‘building blocks’</td>
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<td>- standards: should but aren’t being followed by vendors ‘the vendors aren’t really playing that game well enough’, and vendors are ‘not trying hard enough.’</td>
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<td>Adopters/innovators: MS Exchange story of all staff emails, ‘the success of that was really a template for the future staff, so UniCnet and all the future things we’ve done’</td>
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<td>Open vs proprietorial:- ‘I just took advice on that, and I was getting Microsoft advice, so. But I think it was, I don’t regret that, I think its OK. I think now the open source stuff is really making a move, so that’s, you know, where we should be looking, but technically the problem is we’ve got Microsoft technology’</td>
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<td>Future: ‘I think it’s those extra add-on bits, there’s going to be a lot more useful stuff in the open source community (for) add-ons . than there will be in the commercial area, so I think, you know, when someone says “Look this is a great collaboration tool, which is an</td>
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<td>V want to use ‘open source stuff’, but separate infrastructures pose a problem.</td>
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<td>Model of addons rather than whole solution</td>
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<td>MEMO: Contrast to Paul’s</td>
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open source”, then it would be very hard for us to say “No, you can’t have that”. repertoire in Uni B

V miffed that UniCnet not appreciated *Announcement of merger Bboard & WebCT opened up gap for open source

A vision of LMS/networked learning which is not managed learning

- Uni Texas story
  - ‘monolith’ & ‘huge gap’: ‘when sort of discussion on this announcement came out, I said “Look, now is the time that we look at the other source things” [JH: Mm], because I think, you know, Blackboard or Web CT will become bigger and bigger, more and more expensive; it will become like a PeopleSoft type [JH: Mm] monolith, and that just will be, you know, leave this huge gap underneath; they go up and in price and a big gap underneath for the open source products, so, you know Moodle, Sakai sort of things.’
  - open source vs product: ‘glue them all together’: we have avoided the question of “Should we-“ we haven’t avoided the question we’ve said “No, we’re not going to buy a product”, [JH: Mm] and I think it won’t be long before that question just won’t be asked anymore … They want to buy lots of little things and customise them and make their own things as well, and then glue them all together’
  - present staff with a ‘tablet’ of ‘50 different sorts of learning tools’
- LMS philosophy: ‘the academic makes the decision, you know, we provide the paint pots and they do whatever painting they want with them, that’s sort of my philosophy with it.’
- LMS development choice: ‘One of the rigidities that we did build in at the start was the course-based rigidity’ – consequences for Uni C’s journaling tool
  - tension: ‘there is a tension between course-based structures and student life cycle based stuff, and I think you can have both.’

- journaling: the online journaling tool “is more about dialogue between people . inside the university” contrast to blogging which is public. Its take-up was low – the journaling project was done with D___ xxxx and Di Gxxxxx, in School of Social Work and Social Policy. V would like to ‘build it into a suite’.
  
  **Drive to go online**: For UniCnet came from ‘Heads of Schools, enthusiasts and from students too.’

  **Strategic plan targets**: re all courses online ‘there is stuff like that in the (strategic) plan stuff, like initially it was 2005, we were going to have um, online (2.0) presence for all courses or something, we did that, and then the current one is 2010, every student will do something online, … that can be interpreted’

  **‘there is a gap’**: ‘but, we don’t really have the mechanisms to really check that either’. There is a gap between strategy and reality, ‘although we’ve got that sort of big vision thing, there is a gap . still about sort of the online strategy’

- Need for innovation also p. 4 ‘the idea is to capture a good idea’

- Workload: ‘the main thing to get that workload is you’ve got to change what you do, not technically’.
  
  ‘Technology shouldn’t shape that too much’: V suggest that an automated ‘assignment system’, as Wayne Petarksi’s was, ‘is not going to solve that problem for you’. the problem being workload and massification of HE teaching. ‘People will say “I’m marking 3,000-word essays, I’m too busy”. Well yes, don’t have 3,000-word essays, you know.’

  Rather, the course structure be changed, ‘I think technology should really be way back from that, just support the change not be driving that, you know, because those decisions should be based on educational rationales.’

- Development of online learning strategy: in consultation process last year, there was a lack of criticism – implies development at ‘a plateau’, and pple ‘want the next silver bullet to transform education, you know, and that’s not going to happen’. V again expresses need for more ‘impetus and more innovation coming along, I think.’
### Appendices

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<td><strong>11</strong></td>
<td><strong>Ed Development:</strong> UNESCO report, ‘says that Uni C is unusual in that it has clear targets in the staff development for online learning, in that we actually want all staff, all the teaching staff, to be, you know, competent to a basic level when you’re running an online course, you know, and they said that was quite unusual.’&lt;br&gt;<strong>Innovation:</strong> ‘I think there’s actually a lot less innovation around now than there was when I started . [JH: Well] which is interesting.’&lt;br&gt;<strong>Takeup:</strong> JH mentions early digital educational content on CDROM that were funded but were not maintained, supported and evaluated later, V: ‘There’s lots of those things around.’&lt;br&gt;<strong>Quality assurance:</strong> is ‘dampening down innovation, it’s sort of putting boxes around things and constraining things to such a point.’&lt;br&gt;<strong>MEMO:</strong> Contrasting models – See Shephard (2004) on this contrast of approaches. V states that B____ moved away from content production because of online model derived from Uni C’s traditional distance ed activities and the ensuing bottleneck when that model transferred to an online context. Contrast with Paul’s support. Uni C does have simulations but these are incidental.&lt;br&gt;<strong>MEMO:</strong> standards – is this a case of ‘defective design’ by software companies to corral users&lt;br&gt;<strong>MEMO:</strong> Contrast to Paul: V puts the case that innovative directions can’t be refused because of the emerging impact of open source. Paul ‘guides’ people to the preferred choice from an ROI perspective, not on T&amp;L grounds. Until recently, when his role in infrastructure has been taken by someone else.&lt;br&gt;<strong>MEMO (9):</strong> Contrast with Robert’s negative view of the journaling tool (Coding notes: Victor, p. 9) as a waste of effort, Robert, ‘I think its crazy stuff, you know, even at the risk of . not producing exactly what the . academics who requested that wanted, you know, even if you only gave them 80% of what they needed, but you created a product that could be used broadly through the university, that would be a, you know, holistically, a much more sensible exercise.’&lt;br&gt;Re the online journaling tool, Robert: ‘I think the product is great, but I think it’s just really sad that we have this product that can only be used by one faculty or one course.’</td>
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<td>How is that different for other unis? V reference to “dampening” innovation, an audit culture makes innovation a point of non-compliance, cf Lou Zipin, McWilliam et al 2002</td>
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<td><strong>12</strong></td>
<td><strong>-risk averse culture:</strong> V follows his comment on quality with the ‘tension’ being felt with terrorism that, ‘it’s this whole culture of ’I mustn’t try it, it might be dangerous’.&lt;br&gt;<strong>great paradox</strong>: is that in this place the great paradox is the lack of online in the offshore operations, you know, there’s a huge paradox.’ JH is confused as to what this paradox is, ‘stuff that’s delivered offshore’&lt;br&gt;V distinguished offshore from external teaching, where offshore means flying teaching staff to, eg. HKBU, and teach face-to-face, ‘like there’s a contradiction there, it’s just’ (expression of exasperation). Issues here are ‘contract short stuff’, where the client body and program director find it convenient to organise contracts this way, and ‘do the deal’, and the level of the amount paid to the lecturer, ‘personally I think the reason is they will find it hard to get paid extra . to do more online stuff when they’re not travelling’. Whereas if the teaching was online, there would be not ‘extra money’, since ‘I’m doing it all in my office.’&lt;br&gt;<strong>MEMO:</strong> standards – is this a case of ‘defective design’ by software companies to corral users&lt;br&gt;<strong>MEMO:</strong> Contrast to Paul: V puts the case that innovative directions can’t be refused because of the emerging impact of open source. Paul ‘guides’ people to the preferred choice from an ROI perspective, not on T&amp;L grounds. Until recently, when his role in infrastructure has been taken by someone else.&lt;br&gt;<strong>MEMO (9):</strong> Contrast with Robert’s negative view of the journaling tool (Coding notes: Victor, p. 9) as a waste of effort, Robert, ‘I think its crazy stuff, you know, even at the risk of . not producing exactly what the . academics who requested that wanted, you know, even if you only gave them 80% of what they needed, but you created a product that could be used broadly through the university, that would be a, you know, holistically, a much more sensible exercise.’&lt;br&gt;Re the online journaling tool, Robert: ‘I think the product is great, but I think it’s just really sad that we have this product that can only be used by one faculty or one course.’</td>
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<td><strong>13</strong></td>
<td><strong>V</strong> cites the ‘levies that program directors, course coordinators, get paid . for an offshore program, it’s a motivation.<strong>&lt;br&gt;JH: ‘Yeah, oh well, organisational things sometimes . go above the pedagogical</strong>&lt;br&gt;V: ‘Yeah. Just every now and then. (laughs loudly)’&lt;br&gt;V peeved that online not taken up where it has a clear application.</td>
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Appendices

Appendix 4.6: Categories for Victor, Fran and Lia:

Categories for Victor

OPENNESS AND BOTTOM UP

LMS— the initial aim was very bottom up. “just to do something that was scalable” which links to existing home pages. LMS emerged not selected. (p. 1). ‘not one controlling learning management system, but there is different tools that are available’ (p. 4)

- LMS philosophy: ‘the academic makes the decision, you know, we provide the paint pots and they do whatever painting they want with them, that's sort of my philosophy with it.’ (8)
- LMS model openness vs closure: " very driven by a sort of openness philosophy." (JH) (2)
- Drive to go online: For UniCnet came from ‘Heads of Schools, enthusiasts and from students too.’ (9)

CONTROL & CONTENT

- PR vs loss of IP: VC, “why don’t we close it off  … And I’ve always taken a view that that what we get out of it is worth the loss of IP….  you get a sense of what’s there. (3)
- Control: one deliberate thing I did do was when I put the control in the hands of the lecturer.” (2)
- Content vs DIY: Contrasting models of academic control: some academics expect ‘a service to do stuff for them?’ (Shephard 2004) (2)
- control versus instructionally designed content: “could be looked on as pushing down the problem back to the lecturer” (2)
- Control model: a ‘basic presence’, Staff members can ‘advertise themselves,’ and courses. (3)
- Content model – editor’s model - produced bottleneck in online context (3)

ADOPTERS/INNOVATORS

- Early adopters – ‘and initially to link with existing to that, said at least, you know, things that the early adopters have already done’ (1)
- Early adopters/innovators: ‘I don’t think we cater for them well enough still (4)
- Innovators - template model: rather than a content project, have pple with ‘innovative ideas’ produce a template so all can access it, for ‘some diffusion’. This ‘really hasn’t flown as well as I’d like, but I think the model is right ‘the idea is to capture a good idea’ (4). Eg PBL Med Rad ‘hasn’t really bitten’
- Adopters/innovators: The story of MS Exchange (“the email client”) where all staff could receive emails, ‘the success of that was really a template for … all the future things we’ve done’ – eg. UniCnet
- Innovation: ‘I think there’s actually a lot less innovation around now than there was when I started . [JH: Well] which is interesting.’ (11)

FUTURE/LMS DEVELOPMENT

LMS: “dissatisfied with where it’s got to.” Eg. discussion group. “real primitive and out of date” (2)
- “I think the whole thing sort of plateaued, not just here but at lots of universities”
- hybrid model of development: ‘useful stuff in the open source community (for) add-ons’
- innovators: ‘it would be very hard for us to say “No, you can’t have that”, (5)
- Open vs proprietorial: ‘I just took advice on that, and I was getting Microsoft advice… I think now the open source stuff is really making a move, so that’s, you know, where we should be looking, but technically the problem is we’ve got Microsoft technology’ (5)
- standards: aren’t being followed by vendors ‘the vendors aren’t really playing that game well enough’ (4)
- LMS Review – nearly bought BlackBoard, then G___ customised UniCnet 1, - Uni Texas story, (‘the American’s said “Look, the only reason we wouldn’t use your system was because it wasn’t made in America” ’ ) (8)
- ‘monolith’ & ‘huge gap’: Commercial LMS are ‘like a PeopleSoft type monolith, and that will just be, you know, leave this huge gap underneath; they go up and in price and a big gap underneath for, the open source products, so, you know Moodle, Sakai sort of things.’ (8)
- open source vs product: ‘glue them all together’: the question of “Should we?” …I think it won’t be long before that question just won’t be asked anymore … buy lots of little things and customise them and make their own things as well, and then glue them all together’
- present staff with a ‘tablet’ of ‘50 different sorts of learning tools’ (8)

LMS Development choice: ‘Re University C’s journaling tool (8) ‘tension between course-based structures and student life cycle based stuff’, V states ‘can have both.’
Appendices

- journaling vs blogging: journaling ‘is more about dialogue between people. inside the university’, contrast to blogging which is public. V would like to ‘build it into a suite’. (9)

Development: consultation process 2004 implied development at ‘a plateau’, and pple ‘want the next silver bullet to transform education’. Need for more ‘impetus and more innovation’ (10)

Restructure: ‘huge cleanout’ – V reflects on ‘big cultural changes’ in 1997 ‘amazing to watch’ (6)

LCMS: not a ‘great education innovation’, but ‘I think we do need to have something to manage the content, for technical . re-use sort of reasons really.’ (6)

- make it invisible: ‘From OT staff, we need to sort of make it as invisible to the user as possible. And I certainly don’t want staff to have to tag objects and become librarians’ (6)

- ‘an object is an object’ ‘a semantic thing’ defining a learning object ‘not a big issue’ ‘you just put a wrapper around it’. Re LCMS ‘discussions are too technical, not educational enough I think.’ (7)

STRATEGIC

Strategic plan - targets: Re all courses online ‘there is stuff like that in the (strategic) plan stuff, … the current one is 2010, every students will do something online, … that can be interpreted’ (7)

- ‘gap’: ‘we’ve got that sort of big vision thing, there is a gap still about sort of the online strategy’ (9)

Ed Development: UNESCO report, ‘says that [UniC] is unusual in that it has clear targets in the staff development for online learning, … and they said that was quite unusual.’ (11)

- Takeup of e-learning: JH mentions early funded digital educational content on CDROM, Victor: ‘There’s lots of those things around.’ (11)

TEACHING ONLINE

Workload: not a technical issue ‘you’ve got to change what you do, not technically’. (10)

‘Technology shouldn’t shape that too much’: Technology ‘is not going to solve that problem for you’, of workload and large cohorts. ‘Well yes, don’t have 3,000-word essays, you know.’

- technology and teaching: ‘I think technology should really be way back from that, just support the change not be driving that… those decisions should be based on educational rationales.’ (10)

QUALITY

Quality assurance: is ‘dampening down innovation, it’s sort of putting boxes around things and constraining things to such a point.’

- risk averse culture: ‘it’s this whole culture of ‘I mustn’t try it, it might be dangerous’. (12)

‘great paradox’ - Offshore teaching: ‘the great paradox is the lack of online in the offshore operations, you know, there’s a huge paradox.’ flying teaching staff to teach face-to-face, ‘there’s a contradiction there, it’s just’ (expression of exasperation). V cites the ‘levies that program directors, course coordinators, get paid’, it’s a motivation, ‘whereas if the teaching was online, there would be not ‘extra money’, since ‘I’m doing it all in my office.’

JH: ‘Yeah, oh well, organisational things sometimes . go above the pedagogical V: ‘Yeah. Just every now and then. (laughs loudly)’ (12)

Categories for Fran

WORK PRACTICES: TEACHING ONLINE

- workload/efficiency: actual marking is efficient, but electronic marking requires significant processes before and after marking, ‘a significant amount of time before the fact’, and formerly administrative work is shifted to teaching staff.

- workload/online shift: Eg. 4000 assignments are marked via [online assignment system], the program driven by “economics”

- marginalised students Eg. exceptions: not accommodated by new systems, disadvantages students: conflict with university’s policy on equity

- workload – F had 13 discussion groups’, which is ‘time-consuming’

- personal interaction with ‘about 700’ students. Real issues on how to manage this

- group participation process online ‘very protracted’, much easier to solve problems FTF

- no expected technological literacy, spend more time online with students with problems (p. 10),

- ‘depersonalising the students’: CMC increases sense of distance for students,

- ‘so that’s wonderful’: designed courseware ‘scenariation’ interactive, which was ‘wonderful’, but, ‘the actual psycho-motor skill’ is replaced by ‘an activity on the screen’
Appendices

TEACHING ‘A HUMAN BASED PROFESSION’ ONLINE:
- Impact of computers at work- historical perspective over 20 years
- modelling: ‘how they develop those skills is modelling on our behaviour’ online, which is ‘less empathetic and more businesslike and efficient.’ ‘Reading’ the non-verbal, the ‘subtle cues’ of ‘visual assessment’
- ‘real skill’ of using technology: ‘to have it be able to acknowledge that humanity still,’
- ‘are we at the computer’: more time planning the use of technology, less time with student or patient.
- many participants in this professional encounter
- security of electronic records and confidentiality are issues not thought through
- ‘so internalised and automatic’: articulating one’s own practice - the difficulty of nurses to “define what they did and how they did it”, **See Valerie Adams (2007) paper

ASSESSING TECHNOLOGY
- “Our question”: ‘how do you teach the humanity, in terms of having it online’
- technology as adjunct: V proposes a ‘humanistic model’ which places technology off centre stage. Technology ‘as an adjunct to what we do not as a barrier.’
- ‘underlying political use’ of technology: V questions motives
- efficiency for who: Fran questions the change process, ‘an assumption that online is efficient’
- more standardisation less critical thinking: traditional practices have gone online
- ‘a form to fill out’**: choosing an intervention from menu selection, so one that is not on the list. See Dorothy Smith (1987)
- ‘clinical pathways’**: clinical pathways are ‘linked up to the financing of that care episode.’
- care may mean a ‘decreased benefit for the organisation’ Smith’s ‘objectified accounts’

Categories for Lia

PRACTICE: L’s background is higher education teaching and accountancy. Teaching internal and external online.
- attitude to online (3): ‘whether you do it online or you know, whatever, it’s all in the Web.’
- I am very very Web minded
- online discussion attitude (10): There is v little take-up. She sums up the issue in terms of students’ functional attitude, ‘You can’t expect that much, unless it is assessed’
- attitude of student online (11): L emphasises importance of attitude of external student in effectiveness of online learning, ‘quality’ of student can be high, ‘but if their attitude is not well motivated by themselves.’
- online learning/plagiarism with externals: L recalls ‘a lot of requests they ask me “Can you please help me in answering this assignment?” I said No I am not allowed to do it. That’s illegal.’
- large inconsistencies for students across marks in a course.
- teaching practice/case study approach: ‘everything is case study, everything is based on real life.’ (8)

ONLINE EFFECTIVENESS
Ineffective/effective online system (4): L contrasts Web system at La Trobe with University C an admin Webmaster as intermediary for uploading content for them. L felt v supported at Uni C.
- ineffective/effective online discussion: ‘there is no assessment in online discussions’: (5)
- managing students online: unofficially L gives marks for those (20%) who respond to topics via online discussion (6)
- effective online discussion (13): need to assess online discussion, ‘giving a percentage on the discussions is a good idea, … because of my experience that very low correlations between assignments performance and final exams performance’
- effective online discussion (13): what about students who can’t access it, ‘shift the weight of the assignment (to) 25 (2.0), and I’ll give this to discussions group, and it’s compulsory for them, but then I have to do a plan like tick, who has problem to sit regularly in front of the internet,’

STUDENTS & TECHNOLOGY
- students/technical issues: some ext students had recurring problems accessing the online discussion and submitting to [the online assignment system]
Appendices

- **marginalised students**: some ext students have work pressures so they genuinely cannot respond ‘in a timely manner’ (6)
- **deep learning/reasons for shallow engagement** (10): One is no internet access from home. Two is last minute engagement, ‘they just delay it until close to exams and then they read it.’
- **external students drop-out rate** (13): L confirms emphatically that there is ‘a large drop out rate’, She gives an example of ‘first assignment, I have 147 submitted assignment 1 from 214 students Then many students defer.

- **INTERCULTURAL ISSUES ONLINE**:
  - **- expectations**: globalised cohort, some particular expectations problematic. Eg. some Indians, ‘already registered as a chartered accountant’ complain (19 out of 1000 and ask for remark. They have different ‘education and work background, but with different situations different standards different rules.’ (7)
  - **teaching practice/intercultural** (8): case study provided 2 weeks in advance of exam. but still a lack of response. (Also ‘force’ on p. 10)
- **online learning/interculturality** (12): L only ‘technology problems, but apart from that, I have no problems.’ Eg. ‘in a very remote area if they are in Bangla Desh or if they're in India in a very very remote area.’

**ONLINE DISCUSSION/WORKLOAD**

- **/external** (8): **/online** (8):
  
  JH: It's very demanding? L: Oh god, I can't believe it yeah. I underestimated when the first time I got this assignment I said yes I accept it, and then I have Master class and then I have undergraduate 498 and I have Open University roughly about 220 Study Period 2 and 3.

  - **online discussion/external/response** (9): rate is v low, 4 comments out of 220, ‘how can I motivate students to give a response if I don’t give an assessment to the discussions group.’
  - can still confront or **guide** students FTF, ‘if someone, “I don’t know” or “I haven’t read that one.”’ it’s going to be embarrassed for that student, and even you can still guide them, “OK try it try it.”

  - **workload/coordination**: tutors don’t know how to respond, ‘ “What kind of answers can I provide to these students,” and in the end it is **me** who answer it.

- **marginal students/assess online discussion** (13): shift to but the marginal students, 'I'll give this to discussions group, and it's compulsory for them, but then I have to do a plan like tick, who has problem to sit regularly in front of the internet,'

- **ONLINE DISCUSSION VS FTF** (9): Yes, you can ‘force’ students in FTF setting, ‘Yeah! Exactly exactly. I mean but in face to face you can force, you can force “OK come on, I’m waiting for you.”

  - **online discussion/external/deep learning** (10): JH suggests that you cannot get ‘deep discussion analysis’ online, L, ‘I think I agree with that. Unless it is assessed, it's just not easy.’ Despite raising issues for a case prior to submission, there is v **little take-up**. She sums up the issue in terms of students’ functional attitude, ‘You can’t expect that much, unless it is assessed’

  - **difference in engagement** (10): L is baffled by difference between ‘Study Period 3, they're really really good group’. ‘But not in Study Period 2, I don’t know what happened I think its must be over commitment. No No idea.’

  - **online vs FTF/feedback** (11): L found ‘I did find a bit of very strong influence, very strong correlations between internal results and very less correlations between external results. It means that internals you still can kind of influence them and especially face to face tutorials not in lectures’.
# Appendix 4.7: Provisional categories by role (samples)

## 1. Academic developers

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| **Practice of teaching and learning online**  
LTs (learning technologies) for building communities. DIY approach (Vicki, Barb)  
- lead the innovative use of LTs JH, ' **Strategy: Reframe technology for pedagogy**  
- use of LTs to enhance/augment practice, a collaborative, COP approach  
- informal communication in initiating and building PD work (Barb)  
- adapting/applying LTs to local needs of practice (JH). | Vicki: DIY (do-it-yourself) **model** for enabling use of technologies for online courses - teaching as sharing content not delivery  
- Vicki reports staff reluctance in poor uptake of LTs – failure of enrolment of staff into independent practice of using technologies for teaching and learning.  
Barb: 'we are there to assist academics to move to flexible approaches to T&L'  
Barb: 'my real approach is to build their capacity'  
- 'we are chameleons', not 'technologists'. She deploys blended approach  
JH: pedagogical use of LTs, not technology-led  
JH: innovation as ‘opening people’s eyes’  
Vicki: takeup of learning technologies patchy,  
- finding a **sense of community** from ‘the use of impersonal marks on a discussion’  
Vicki: build online literacies with informal language. Also Barb informal building community (Vicki): occurrences: community words (11), sharing (5) | building community (Vicki): occurrences: community words (11), sharing (5) |
| **Engaging students** | | |
| Institutional demands  
- **Policy implementation** produces conflict with practice.  
**Workload**  
- JH: LMS brings a default pedagogy | - AD role of interpreting policy, enabling use of technology Vi  
JH: equity, inclusion and intercultural issues for large class teaching  
- Multiple stakeholder interests may not be in interests of T&L. JH  
- The **economic rationale** of flexible learning of Prog Dir George (JH) | - Enabling repertoire or **building community** & online literacies  
- Teaching as delivery model always available as a repertoire  
**workload** expansion tied to working with system technologies  
- **default pedagogy**: managing content & access metaphor which and marginalises person to person interaction (much work to counter this? how is LMS different to a textbook?) |
| **Management driven use of technology** (Barb) KS disavows tool focus, ‘the | Technology as big solutions, shapes |
| **Working with technological systems** | | |
### 2. Manager academics
*(Victor, Paul, Monica, Sylvia)*

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| **Teaching and learning online**  
- Institutional drivers for online learning model (Paul)  
- Bottom up model of LMS (Victor)  
- technology not driver (Victor) | Models of online learning: technology for delivery or for supporting teaching staff  
- Teaching as delivery: a model built around institutional goals which emphasises designed content for flexible delivery via online systems, a top down model of LMS (Paul)  
- A model where technology is a support, not a driver of change, ‘the academic makes the decision, you know, we provide the paint pots…’ (Victor)  
- Assessing deep learning by operationalising critical thinking, although it is very reductionist and very linear…’. (Monica) Monica modifies course by shifting to a more L-L interaction online | Teaching as delivery  
Gap between policy & implementation  
- “we do not have that kind of time in order to develop this change of learning culture” (Syl)  
- “there is a gap still about sort of the online strategy” and its implementation (Victor, p. 12)  
- a gap in takeup and training teaching staff to use online systems (Paul) |
### Appendices

<table>
<thead>
<tr>
<th>Category/Issue</th>
<th>Comments</th>
<th>Tropes and repeated terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional demands</strong></td>
<td><strong>Gap</strong> between policy &amp; implementation (Victor)</td>
<td>- developing an intercultural communication space (Syl)</td>
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<td></td>
<td>Online learning determined by infrastructure investment model (Paul), Efficiency needs of teaching online for large cohorts (Monica)</td>
<td><code>model informal language</code> to encourage free-form thinking (Mon) to achieve learning community</td>
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<td><strong>Contrasting models of academic control of content: Designed content vs DIY</strong></td>
<td>- Monica models teaching by shifting to more learner interaction online: ‘that relationship stuff’: what students <em>really</em> like is prompt response. (Mon)</td>
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<td><strong>Top-down vs bottom-up strategies for online learning</strong></td>
<td>- develop an intercultural communication space (Sylvia), or “third space” (Wendy)</td>
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<td>- LMS: institutional ROI model of investment. Technology use constrained within infrastructure needs (Paul)</td>
<td>- develop learning community</td>
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<td>- Paul’s preference, with an unlimited budget, for a ‘strong team of instructional design specialists who would work in a team environment with subject matter specialists’ to develop course materials. (Interview, Paul, p. 7).</td>
<td>Institutional commitment to learning technologies shapes support, compliance, and use</td>
</tr>
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<td>- A ‘training gap’ in institutional technology adoption at Uni A (Paul), ‘there is going to be a gap there’ (Paul), try to harness innovation to dissemination, build innovator/follower links Paul’s ‘drop to the lowest common denominator’. Hence limits to innovation, with LMS preferred over blogs or Moodle. Resistance &amp; poor take-up by staff (Vicki)</td>
<td>--&gt; top-down implementation and prescribed use</td>
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<td>- Hence limits to innovation: LMS vs blogs, Moodle</td>
<td>--&gt; resistance, poor take-up</td>
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<td>- the content model produced bottlenecks in production academics (who) expect ‘a service to do stuff for them?’ (Shephard 2004) (Victor)</td>
<td>--&gt; issues with innovation. Constrain within system?</td>
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<td>- <strong>Quality assurance:</strong> is ‘dampening down innovation, it’s sort of putting boxes around things and constraining things’ (Victor). Also Wendy.</td>
<td>Content development vs academic control - lecturer controls content development, can maintain Innovation vs risk averse culture</td>
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<td>- <strong>risk averse:</strong> ‘it’s this whole culture of ‘I mustn’t try it, it might be dangerous’ (Victor)</td>
<td>Efficiency re teaching online</td>
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<td>- innovation vs risk averse culture, ‘mustn’t try anything’ (V)</td>
<td><strong>Eg.</strong> economies of scale answering Qs. Mon contrasts FTF with online demands &amp; time.</td>
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<td>- international demand from Asian partners is for face-to-face not online (Syl's market research)</td>
<td><strong>Intercultural</strong> focus: ‘Our job is to have them to develop a <em>new</em> business and management culture which is neither Western nor Taiwan.’</td>
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<td>- ‘the great paradox is the lack of online in the offshore operations’ technological capability &amp; economic efficiency, and flying teaching staff to teach face-to-face (Victor)</td>
<td>- This is an intensive program, we do not have that kind of time in order to develop this change of learning culture” (Western model of learning) (Sylv)</td>
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<td>- teaching online ‘more time efficient’ (Mon). Eg. economies of scale answering Qs. Mon contrasts FTF with online demands &amp; time.</td>
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## Appendices

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<th>Comments</th>
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<tbody>
<tr>
<td><strong>- Working with technological systems</strong></td>
<td><strong>Closed vs open model of online learning</strong>&lt;br&gt;- <strong>workload</strong>: Technology ‘is not going to solve that problem for you’, of workload and large cohorts. ‘Well yes, don’t have 3,000-word essays, you know. (Victor)’&lt;br&gt;- limitations of ‘maturation’ of technology: LMS will evolve (Paul)&lt;br&gt;- <strong>Non-compliant</strong> technologies not supported due to issues re institutional strategy. (P)&lt;br&gt;- ‘additional availability’ (Centra) kept under the hat&lt;br&gt;- LMS as monolith ‘leave this huge gap underneath’ for ‘lots of little things and customise them’&lt;br&gt;- open source vs product: ‘glue them all together’&lt;br&gt;- development choice: ‘tension between course-based structures and student life cycle based stuff’, eg. Uni Cs journaling tool (8), Vic states ‘can have both.’&lt;br&gt;- learning object def: ‘an object is an object’: defining a learning object ‘not a big issue’ ‘you just put a wrapper around it’&lt;br&gt;- ‘the great paradox is the lack of online in the offshore operations’ flying teaching staff to teach face-to-face&lt;br&gt;- Conferencing caused discontent [regional campus]- internal politics played.</td>
<td>Technology as big solutions, shapes assessment via scale&lt;br&gt;rate of change of technology (Paul, Tom, Robert)&lt;br&gt;supported technologies and compliance&lt;br&gt;LMS monolith vs ‘little things’ and ‘glue them all together’ (Vic)&lt;br&gt;Codification, learning objects&lt;br&gt;Capability vs market demand</td>
</tr>
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<td><strong>Being an /reconfiguring the academic</strong></td>
<td><strong>Managing content vs encouraging innovation</strong>&lt;br&gt;- innovators: ‘I don’t think we cater for them well enough still’, and ‘it would be very hard for us to say “No, you can’t have that” (Vic, contrast Paul).’&lt;br&gt;- Lyn’s table reconfigures teaching online: what counts? Contrast with Fran. (Cf Gamliel &amp; Davidovitz, 2005)&lt;br&gt;- clash of East-West teaching cultures as well as business cultures. ‘Asking students to answer a question is like drawing blood from a stone.’ (Slv)&lt;br&gt;- intercultural interaction styles</td>
<td>LMS - managing knowledge vs innovation&lt;br&gt;- FTF vs online - efficiency and workload&lt;br&gt;- diversity in teaching online, eg. intercultural interaction</td>
</tr>
<tr>
<td><strong>- Actual vs virtual</strong></td>
<td><strong>Online learning as less real or as new forms of engagement</strong>&lt;br&gt;‘if its online all this discussion, participation, and challenge by words. It’s not as real.’ (Slv). Contrast with Monica’s quest for online dialogue for large cohorts, and Vicki’s building community via online literacies, (also Barb)</td>
<td>- online text not as real vs Vi’s building community via online literacies, (also Mon, Barb)</td>
</tr>
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</table>
### 3. Academics

(Wendy, Fran, Marg, Jack, Laura, Alison, Craig, Rebecca, Lisa, Asha, Francis, Ron)

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<tr>
<th>Category/Issue</th>
<th>Comments</th>
<th>Tropes ➔ repertoires</th>
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| **Models of teaching and learning online** | Models: Wendy - modelling complementarity, that deep relationship is central to learning, esp achieving intercultural third space  
- Fran’s humanistic model  
- Jack model is ‘learning community’, and ‘the wiki its all tied together’. contrasts with instructivist model, ‘no surprises, no uncertainty’, whereas wiki is flexible, responsive, adaptable and open to surprises. ‘My approach’: constructivism. Prefers SCL and groupwork, class to self-manage, ‘so that... if I take my hand off the controls, the things still run’  
- Francis’s model is ‘community building, community strengthening’ that is self-sustaining. Approach is that Web best works in conjunction with traditional media  
**How to**  
- approach is to use informal online language (Wen)  
- informal language: ‘the secret’ is ‘clear distinction between academic & non-acad’ (Rebecca)  
- ‘it’s about that engagement’: and the relationship they’ve built with you’. p-g course high levels of L-L interaction (Rebecca)  
- dialogue: ‘it’s about facilitating the conversation, whether it’s a face-to-face conversation or online written’ Asha  
- Jack – assignment developed openly in the wiki  
- **Operationalising interaction** model of ‘distributed learning’ (Asha): material online, weekly Q & A online, respond to student posts. Craig, also Mon. | Model of complementarity vs instructivist. Can deep learning be operationalised? Not without trade-off in time/workload  
Online system as instructivist, controlled T&L environment, vs constructivist, self-managed  
**How**  
Learning as developing community enabled by informal communication/dialogue  
Teaching online as engagement & participation |
| **Engaging students** | Engagement:  
- online discussion vs FTF - ‘you can ‘force’ students in FTF setting, but ‘can’t gauge those not engaging (in online discussion) unless you contact (email) (Ron). Discussion participation low unless assessed (Lia)  
- consequences: access of PPTs means participation in online discussion and attendance at lectures drops (Craig)  
- Choice/optional student: translates into optional attendance, since its ‘online’. Technology to not engage, ‘we’re giving them the technology to give them greater flexibility to be slacker.’  
- Optional student: long list post [fwd to JH] which complains about requirement for online interaction. Alison&Laura  
**Online vs FTF**  
- Low participation rate in online discussion/external:4/220 (Lia)  
- Packaged content ‘not that flexible’ (20): A flashy presentation forecloses interaction. (Craig)  
- Reb: p-g course was shifted from online to face to face, ‘a disaster’ | plagiarism shaping assessment, and so learning  
Optional student, ‘technology to not engage’  
lectures online: student expectation shift with online teaching |
## Appendices

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<th>Category/Issue</th>
<th>Comments</th>
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| **feedback**: influencing students - strong correlations with internal, weak with external (Lia) | - UniCnet, worked with external students but had to ‘build incentives’ linked to marks for them to use it. Lia  
- deeper learning online via asynchronicity. S uses analogy with letter writing developed a deep relationship (Asha)  
- S finds ‘more acceptance’ online in intercultural communication  
- S builds camaraderie in ‘cafeteria’ discussion’ (Lia) |
| **plagiarism/cheating**: ‘transparency of wiki and retrievable history makes it hard to cheat’ Jack | - Plagiarism/participation correlation: poor participation: poor attendance a consequence, (Craig)  
- plagiarism potential determines assessment shape – exam no internet  
- **Expectations of students**:  
  - Attitudes of external students: that I help with doing assignment. Lia  
  - First year student expectations: (Alison & Laura)  
  - expect 1-1 communication & prompt response. Some prefer phone, then email, then online discussion  
  - individualistic, focused on assessment, need to be persuaded into collaborative use of discussion list  
  - prefer ‘pick n mix’, shift to class attendance from mandatory to optional  
  - resist breadth of engagement – want to pick & choose, then demand go over basic concepts  
  - international students adapt to online discussion well  
  - academic needs to persuade (cajole, compile) students to their approach  
  - Craig: ‘a sort of squeeze’: Student as transactional/relationship: the optional student: “I can get this online”.’  
  - students’ work/life competing demands: ‘but you know, we can’t go there, so we, so that is a downside of having it, and they demand everything.’ |
| **Institutional demands** | Multiple delivery formats of teaching seen as equivalent – a course is a course, hides the invisible work of renewing for different format Rebecca  
**Delivery** | - Delivery afforded by online technology keeps impacting on pedagogy:  
‘Some of it is our fault. We took up Blackboard, we took up Blackboard, and we had a university-wide decision to have flexible learning.’ (Craig)  
- ‘depersonalising the students’: CMC increases sense of distance for students. Fran  
- **workload** increase in admin: system admin ex of loading 600 students one at a time, vis MIS. Fran |
| **Institution deems equivalence of online and FTF** | Institutional flexible learning policy frames T-L relationship. Delivery impacts on pedagogy  
- depersonalising students  
- ‘workload’ emerges when its increased. ‘workload model’ |
## Appendices

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<th>Category/Issue</th>
<th>Comments</th>
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<tr>
<td><strong>Participation rate</strong>&lt;br&gt;Assessment and incentive&lt;br&gt;- flexible learning consequences</td>
<td>- sustainability: Wendy’s 700 students offshore, ‘just maintaining the service is as tough as it gets.’&lt;br&gt;- machines take a lot of time, not factored in. ‘Time spent on admin &amp; reporting, ‘the word used around here is “relentless”.’ Marg&lt;br&gt;&lt;br&gt;<strong>Acquiring technology:</strong> Ex of new photocopiers and management recommended (default) university cost model.&lt;br&gt;Managing technology/online discussion -&lt;br&gt;- Adapting/managing the technology – a ‘logistics problem,’ ‘constraints of “default” order of discussion, need to “massage” text. Problems communication one to many, to multiple posts. (Craig)&lt;br&gt;- Technology ‘doesn’t support us’: cf little things become ‘major frustration’ (Craig)&lt;br&gt;‘these are just little things but it’s all we are working with Blackboard when we do this and we cannot change it, and none of the things I’m talking about so far is really big, but ‘some of these things are a major frustration when you’re trying to use it as a tool for education.’ (Craig)&lt;br&gt;- ’Machines take a lot of time’&lt;br&gt;- Technology - the little things</td>
<td>'Machines take a lot of time’&lt;br&gt;Engagement online - lurkers are there but not there&lt;br&gt;Technology - the little things</td>
</tr>
<tr>
<td><strong>- Working with technological systems</strong>&lt;br&gt;- Workload&lt;br&gt;- Working with LTs&lt;br&gt;- Assessing technology&lt;br&gt;- System project Mick’s CAFA, Entrepreneurship diagnostic&lt;br&gt;- open source LMS&lt;br&gt;- Mandated LMS&lt;br&gt;- Technology impacts pedagogy&lt;br&gt;LMS - model is excluding the teacher&lt;br&gt;- risk and trust: old model/”Barinas” quote&lt;br&gt;- rate of change of technology&lt;br&gt;- internationalising &amp; complexification of work</td>
<td>- Trade-off: The text response of email and discussion persist, take more time for deep learning…it’s a trade off: relies on self-directed learning far more than FTF teaching, so there is high drop-off rate, (uni’s equity and access issues are not well served. (AI &amp; Laura)&lt;br&gt;- best technology assessment process is interdisciplinary: cost, social, safety, environ, etc. Marg&lt;br&gt;- Fran, Marg suggests place technology off centre-stage, technology ‘as an adjunct to what we do not as a barrier.&lt;br&gt;- system project: CAFA automates marking standards, moderation and collaboration.&lt;br&gt;- Entrepreneurship database being designed – online innovation diagnostic. Issue is ‘lack of funds for material development’ Ron&lt;br&gt;- ‘system is to improve feedback and assessment methodologies by using information technology’, ‘the online system is efficient which will assist in reducing heavy workloads…’ Mick&lt;br&gt;- Open source LMS/wiki - wiki is ‘too open’ to offer support for others use. Jack&lt;br&gt;<strong>model of including/excluding the teacher</strong> – ‘overhead projector, which doesn’t marginalise the teacher’ compared to Powerpoint. Jack&lt;br&gt;- scaling up with wiki ‘not an issue technically’- wikis work based on trust, in contrast to LMS. Eg Jack’s use of open assignment process [post: has proved successful but risk of poor evaluations] Jack on LMS: ‘It’s just really cumbersome, and, I think they’ve headed off in the wrong direction’, and ‘really constraining’&lt;br&gt;- risk/compliance: ‘we all agree on the road rules, but we don’t have to all drive Holden Barinas. And that’s where, that’s the difference.’ Jack&lt;br&gt;- Tools ‘clumsy’, and ‘work on a model that tends to devalue the teacher. Jack&lt;br&gt;- Risk and trust: LMS based on the old model, ‘being overly concerned about people doing the wrong thing.’ Jack&lt;br&gt;- ’philosophy is embedded in the software’</td>
<td>engagement &amp; equivalence: online text response equals presence&lt;br&gt;Trade-off is time spent online for deep learning, and high drop-off for flexible efficiencies&lt;br&gt;technology as an adjunct, not central&lt;br&gt;CAFA and diagnostic to improve things – reduce workload - based on comparability and adaptability&lt;br&gt;LMS &amp; open source, ‘really constraining’ vs ‘too open’&lt;br&gt;‘philosophy is embedded in the software’&lt;br&gt;corporate systems mismatched with educational institutions</td>
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<td>Category/Issue</td>
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<td><strong>Impact:</strong></td>
<td>'Tools are not transparent, tools have an effect'. open-source has values of transparency, openness. Jack.</td>
<td>(C&amp;P). Eg Wimba, WebCT upgrades unstable.</td>
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<tr>
<td><strong>Rate of change</strong></td>
<td>A voice discussion board (Wimba) but that became problematic when the provider upgraded their software. Francis globalises his work, can now work anywhere, 'the international aspect', and opened up more work globally, eg. SIDA (10). Increasing 'complexification' of the Web and in organisations (25-6) Francis</td>
<td>relates to increasing 'complexification' of the Web and in organisations'</td>
</tr>
<tr>
<td><strong>Being an /reconfiguring the academic</strong></td>
<td>Agency of knowledge/content &amp; learning objects: mentoring vs delivery: decontextualised content devalues presence. Wendy. Why build standardised LOs when good content available? Practice/separated from knowledge (11): knowledge not held in individual. (Craig). Cyborg vision: 'If you know where to find it, you’ve got the knowledge.' (Craig). Sharing resources: Craig not concerned with other's use of his content, “they haven’t got my knowledge.'</td>
<td>Valuing/devaluing presence</td>
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<td><strong>Models &amp; values</strong></td>
<td>Francis’ model: internet ‘gift economy’: ‘my principle is the more you give away the more you get.’ Tanya: ‘bowled over by its potential’. ‘incredibly liberating – “the more that I put resources online the more uses I find for them.”’</td>
<td>separation of knowledge from practice</td>
</tr>
<tr>
<td><strong>Technology competes for attention, time and work</strong></td>
<td>Competing demands academic vs profession: nursing means managing technology as well as patients, ie, operating brands of machines Marg. Is a v proactive person. Liberating: ‘when we went from the physical to the digital or electronic, it was almost liberating.’ Tanya – FTF context. Generational resistance of staff: Asha’s generation ‘was the one that resisted.’ Except for Asha.</td>
<td>technology competes for attention, time and work</td>
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<tr>
<td><strong>Constructing exceptions &amp; marginalised students</strong></td>
<td>Innovation vs risk: The prospect of a upcoming class of 600 students puts pressure on him, ‘yeah it is a risk’ [Post: Jack used Moodle]. LMS/innovation/risk: Students could ‘trash’ wiki, ‘but they don’t.’ LMS model. ‘All of a sudden, there is no trust.’ Systems create exceptions out of</td>
<td>connection and interaction an issue online since there is lack of embodied presence</td>
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<td><strong>Workload: keeping up-to-date</strong></td>
<td>Valuing/devaluing presence</td>
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<td><strong>Valuing/devaluing presence</strong></td>
<td>Valuing/devaluing presence</td>
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<td><strong>separation of knowledge from practice</strong></td>
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<td><strong>systems create exceptions out of</strong></td>
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## Appendices

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<td>- Actual vs virtual</td>
<td>multiple delivery formats of teaching seen as equivalent – a course is a course, hides the invisible work of renewing for different formats Reb</td>
<td>population</td>
</tr>
<tr>
<td>- invisible work: FTF &amp; online not equivalent</td>
<td>invisibility/hidden nature of computer work: there hasn’t been a ‘technological assessment on computers in academic work’.</td>
<td>- risk of evaluation constrains innovation - lack of trust by institution</td>
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<tr>
<td>- Embodied learning of practice</td>
<td>best technology assessment process is interdisciplinary: cost, social, safety, environ, etc.</td>
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<td>- Flattening of teaching</td>
<td>Embodied learning of practice: Issues with ‘reading the non-verbal’ and modelling behaviour online</td>
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<tr>
<td>- Skills/work as virtual or embodied</td>
<td>Embodied learning of practice: Issues with ‘reading the non-verbal’ and modelling behaviour online</td>
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<td>- What can be done online better?</td>
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<td>- Operationalising: Uploading lecture file</td>
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4. Online support

5. VET Teachers
### Appendix 4.8: Categories and emerging discourses for each practitioner role

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<th>Practitioners</th>
<th>Categories/Issues</th>
<th>Emerging discourses of practice</th>
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<tr>
<td><strong>Academics</strong>&lt;br&gt;(teaching)</td>
<td>Massification and cultural diversity of student cohort&lt;br&gt;Diminished or constrained teaching ‘presence’ online&lt;br&gt;Hidden workload &amp; performativity. Ambiguity of ‘flexible’ (Willems). Valuing teaching practice online&lt;br&gt;Tension between innovation and compliance&lt;br&gt;The ambiguous student – learner or customer, the ‘optional student’</td>
<td><strong>Discourses of teaching online:</strong>&lt;br&gt;▪ “complementarity” (Wendy) and building relationships, engaging students&lt;br&gt;▪ technology delivery systems&lt;br&gt;<strong>Discourses of institutional practice:</strong>&lt;br&gt;▪ academic autonomy and disciplinary learning&lt;br&gt;▪ managerialism and performativity</td>
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<tr>
<td><strong>Academic Developers</strong></td>
<td>Lack of take-up and resistance to LMS. Top-down implementation – mandatory requirements and token adoption&lt;br&gt;Loss of autonomy for academics with designing learning content and codification.&lt;br&gt;Role ambiguity of academic developers – implementing/interpreting policy&lt;br&gt;Transformative experiences, disasters, workload</td>
<td>Enabling vs guiding discourse repertoires as competing orientations for academic development approach&lt;br&gt;<strong>Discourses of organisational change:</strong>&lt;br&gt;▪ Institution-wide strategies for training in learning technologies,&lt;br&gt;▪ academic autonomy in relation to use of learning technologies&lt;br&gt;Shifting from face-to-face to online teaching: implications and consequences, ‘hidden’ work.</td>
</tr>
<tr>
<td><strong>Academic Managers</strong></td>
<td>Gap between policy &amp; implementation: - ‘training gap’ and take-up of learning technologies; - ‘gap’ between policies and capability of system technologies&lt;br&gt;Mandatory requirements for teaching online: Scaling up online delivery&lt;br&gt;Splitting online teaching practice into design and delivery: autonomy of teaching&lt;br&gt;Managing innovation and handling compliance</td>
<td>Model of teaching as delivery: operationalising online teaching and interaction&lt;br&gt;Model of technology to enhance teaching and learning&lt;br&gt;Agency located in design of content or in teaching content</td>
</tr>
<tr>
<td>Practitioners</td>
<td>Categories/Issues</td>
<td>Emerging discourses of practice</td>
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| Online Support    | Online support role is to facilitate working with technologies  
Work with a mismatch in attitudes to learning technologies between management and teaching academics  
Work to self-sufficiency of academics or continual fix-up, ‘you’re never going to win’ (Robert)                                                                                                                                                                                                 | Competing views of online support  
Ways of relating to technology:  
- Institutional change management strategy for the diffusion of technologies  
- Facilitation of teaching staff to adapt to learning technologies  
Academic resistance or lack of interest in technologies  
Different terminology, different goals                                                                                                                                                                                     |
| VET teachers      | Conflicting models of online learning: Teaching as managing students vs learning.  
Students expectations: Their concept of (teachers’) space and time shaped by learning technologies                                                                                                                                                                                    | **Models of online learning:**  
- Controlled systems: Institutional needs drive learning technologies  
- Engagement with learning drives use of learning technologies as open-ended                                                                                                                                                                                                       |
# Appendix 4.9: Categories and repertoires (samples)

## Overall Summary

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>REPERTOIRES</th>
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<tbody>
<tr>
<td><strong>1. Teaching and Learning online</strong></td>
<td><strong>1. Enabling: Teaching as building relationship/community.</strong></td>
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<tr>
<td>Adapting/shifting teaching practice online</td>
<td>Accomplishment of repertoire: Relationship as core to teaching and learning</td>
</tr>
<tr>
<td>Tea as building relationship/community:</td>
<td></td>
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<tr>
<td>Teaching as building relationship/community:</td>
<td>Model of complementarity - that deep relationship is central to teaching</td>
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<tr>
<td>Teaching as flexible delivery:</td>
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<tr>
<td><strong>2. Engaging Students/Expectations:</strong></td>
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<tr>
<td>Student as learner/customer, the ‘optional student’</td>
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<tr>
<td>2. Engaging Students and managing expectations of students</td>
<td>Accomplishment of repertoire: ambiguous category of ‘student’ shapes approach to teaching and learning practice</td>
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<tr>
<td></td>
<td>- exceptions &amp; time taken with ‘squeaky wheel’</td>
</tr>
<tr>
<td></td>
<td>- ‘optional student’ student as learner/consumer</td>
</tr>
<tr>
<td><strong>3. Institutional-technology nexus:</strong></td>
<td></td>
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<tr>
<td>Discourse around implementation of learning technologies in the institution,</td>
<td></td>
</tr>
<tr>
<td>3. Guiding: Teaching as flexible delivery</td>
<td>Accomplishment of repertoire: flexible delivery of teaching and learning is goal</td>
</tr>
<tr>
<td></td>
<td>Institutional: economic vs educational rationale/ Controlled vs open systems</td>
</tr>
<tr>
<td></td>
<td>- LMS avoids teaching and its implications, institution’s view of Web Paula</td>
</tr>
<tr>
<td></td>
<td>- LMS as flexible delivery of designed/packaged content (Paul).</td>
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<tr>
<td></td>
<td>Model of including vs excluding the teacher; LMS a model that ‘tends to devalue the teacher’.</td>
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<td></td>
<td>- managerial perceptions of e-learning,</td>
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<tr>
<td><strong>4. Applying technologies in practice:</strong></td>
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<tr>
<td>(where technology comes first)</td>
<td></td>
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<tr>
<td>The discourse of practice is technologised</td>
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<tr>
<td>4. Technologising practice: (where technology comes first)</td>
<td>institutional inflexibility, where technology leads</td>
</tr>
<tr>
<td></td>
<td>- attitudes of academics to learning technologies. ‘still threatened’ Tanya.</td>
</tr>
<tr>
<td></td>
<td>- LMS limitations and constraints; LCMS as business plan</td>
</tr>
<tr>
<td></td>
<td>- Risk, trust &amp; compliance: Jack “Barinas”</td>
</tr>
<tr>
<td>CATEGORIES</td>
<td>REPERTOIRES</td>
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</tr>
<tr>
<td>5. Being an academic/equivalence and trade-offs</td>
<td>5. Collegial – sharing, mentoring</td>
</tr>
<tr>
<td>Discourses around being an academic</td>
<td>Accomplishment of repertoire: practice located in a scholarly and public community</td>
</tr>
<tr>
<td>Innovation/attitudes to technology:</td>
<td>Being an academic/ workload/ equivalence and trade-offs</td>
</tr>
<tr>
<td></td>
<td>- Valuing practice/Sharing knowledge</td>
</tr>
<tr>
<td></td>
<td>Virtual work/Interaction virtual/FTF: Online discussion vs FTF</td>
</tr>
<tr>
<td></td>
<td>- issue of virtual presence/engagement &amp; equivalence</td>
</tr>
</tbody>
</table>

1. Academic developers
2. Managing academics
3. Academics

<table>
<thead>
<tr>
<th>Category/Field of discourse</th>
<th>Repertoires as dimensions or dialectic</th>
</tr>
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<tbody>
<tr>
<td>Teaching and Learning online</td>
<td>Enabling: Teaching as building relationship/community – Guiding: Teaching as flexible delivery</td>
</tr>
<tr>
<td>Adapting/shifting teaching practice online</td>
<td>- model of complementarity: that deep relationship is central to learning. Achieving intercultural third space (Wendy). Fran’s ‘humanistic model’, Jack’s ‘learning community’ via wiki, ‘flexible, responsive, adaptable and open to surprises’. liberating Tanya</td>
</tr>
<tr>
<td></td>
<td>vs instructivist model: , controlled T&amp;L environment, ‘no surprises, no uncertainty’ Jack.</td>
</tr>
<tr>
<td></td>
<td>Rebecca: p-g course was shifted from online to face to face, ‘a disaster’</td>
</tr>
<tr>
<td>Academic-student nexus</td>
<td>Engaging Students – Managing students</td>
</tr>
<tr>
<td>Discourses around the student</td>
<td>Teaching as relationship/How to engage via learning as developing community, engagement &amp; participation enabled by informal communication &amp; dialogue Wendy, Reb, Asha, Barb, Vicki, - relationship, Wendy, Reb, dialogue - Asha. SCL, self-managed learning, Jack</td>
</tr>
<tr>
<td></td>
<td>diminished presence: ‘you can ’force’ students in FTF setting, but ‘can’t gauge those not engaging</td>
</tr>
<tr>
<td></td>
<td>Operationalising interaction Monic, Craig, approach to discussion model of distributed learning (Asha, Monica) Can deep learning be operationalised?</td>
</tr>
<tr>
<td></td>
<td>LMS: ‘really cumbersome’, ‘model that tends to devalue the teacher’ Jack</td>
</tr>
<tr>
<td></td>
<td>corporate model implications: a voice discussion board (Wimba) but that became problematic when the provider upgraded their software Alison &amp; Laura</td>
</tr>
<tr>
<td></td>
<td>rate of change Tom, Robert, Paul</td>
</tr>
<tr>
<td></td>
<td>attitude of students, eg. externals re help with assignment Lia. Need to persuade cajole...Laura, Rebec. Cf Paula. engagement &amp; equivalence: online text response equals presence (Laura)</td>
</tr>
<tr>
<td>Expectations of students:</td>
<td>1-1 &amp; prompt response, prefer different modes (Laura, Paula). individualised, assessment focused, surface engagement</td>
</tr>
<tr>
<td></td>
<td>‘optional student’, ‘pick n mix’, miss class then ask to go over it again</td>
</tr>
<tr>
<td>Category/Field of discourse</td>
<td>Repertoires as dimensions or dialectic</td>
</tr>
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</tbody>
</table>
| **Institutional-technology nexus**  
*Discourse around implementation of learning technologies in the institution* | Technologising practice  
- increasing ‘complexification’ of the Web and in organisations (25-6) Francis  
- low participation (Lia), access to PPT means attendance drops, packaged content ‘not that flexible’ (20) (Craig)  
- Scalability: Open source wiki is ‘too open’ for me to offer support for others use Jack.  
- ‘depersonalising the students’: CMC increases sense of distance for students, Fran  
- ‘Tools are not transparent, tools have an effect’. open-source has values of transparency, openness Jack |
| **Being an academic**  
*Discourses around being an academic* | Technologising practice – collegial practice  
- wiki approach – how should innovation be supported?  
- plagiarism shapes assessment, eg exam no internet  
**equivalence and trade-offs**  
- Institution deems equivalence of online and FTF: the invisible work of renewing for different format Rebecca  
- **Decisions re equivalence**: online text response equals presence: Email response = tutorial attendance, discussion board = participation (Laura)  
- The textual mode of email and discussion persist, hence care & protocols  
- takes more time for deep learning via online discussion, relies on self-directed learning far more than FTF teaching, so high drop-off rate  
- online teaching not valued as much – pay (Alison & Laura)  
- adapting/managing the technology – Ian’s workaround is trouble: a ‘logistics problem, ‘constraints of “default” order of posts in Blackboard, need to “massage” text. Technology ‘doesn’t support us’: cf little things become ‘major frustration’ Craig  
- **model of including/excluding the teacher**: a model that ‘tends to devalue the teacher’. ‘overhead projector, which doesn’t marginalise the teacher’  
- **Risk&trust**: scaling up with wiki ‘not an issue technically’. based on trust, in contrast to LMS model, ‘being overly concerned about people doing the wrong thing.’ Jack  
- **risk/compliance**: ‘we all agree on the road rules, but we don’t have to all drive Holden Barinas. And that’s where, that’s the difference.’ Jack  
**Valuing practice/Workload:**  
- sustainability: TB’s 700 students offshore, ‘just maintaining the service is as tough as it gets.’  
- machines take a lot of time, not factored in. ‘Time spent on admin & reporting, ‘the word used around here
### Appendices

<table>
<thead>
<tr>
<th>Category/Field of discourse</th>
<th>Repertoires as dimensions or dialectic</th>
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<tbody>
<tr>
<td></td>
<td><em>is “relentless”.</em> Margaret</td>
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#### 4. Online Support

<table>
<thead>
<tr>
<th>Category/Field of discourse</th>
<th>Repertoires as dimensions or dialectic</th>
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<tbody>
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<td>Academic-student nexus</td>
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<tr>
<td>Discourses around the student</td>
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<tr>
<td><strong>Institutional-technology nexus</strong></td>
<td>Technologising practice</td>
</tr>
<tr>
<td>Discourse around implementation of learning technologies in the institution</td>
<td></td>
</tr>
<tr>
<td>LTs limitations and constraints:</td>
<td>- training gap (Paul), loss of training ‘every six months’, esp sessional staff. LMS learning curve. Frustrations ‘academic who isn’t prepared to try’ Robert</td>
</tr>
<tr>
<td>LCMS as Business plan. LMS is ‘unmanaged’ content. ‘Outcomes are version control, shareability, reuseability. Some digital content is exported to provide a ROI.’ (Paul)</td>
<td></td>
</tr>
<tr>
<td>‘To disaggregate and repurpose more chunks and assets is said to remove contexts....’ Tom</td>
<td></td>
</tr>
<tr>
<td>Educational development</td>
<td>Enabling – Guiding: Models for online support</td>
</tr>
<tr>
<td>Discourses around educational development</td>
<td></td>
</tr>
<tr>
<td>enable academic staff – ‘facilitate training’ to ‘self-sufficiency’, ‘win them over’ (Robert, also Wayne, Vicki, Vict)</td>
<td></td>
</tr>
<tr>
<td>guiding: ‘primary use of e-learning ‘is as developers and designers of online content for delivery over the internet via a LMS’ (Tom)</td>
<td></td>
</tr>
<tr>
<td>Being an academic</td>
<td>Technologising practice – collegial practice</td>
</tr>
<tr>
<td>Discourses around being an academic</td>
<td></td>
</tr>
<tr>
<td>Role of support not educational, but ‘user experience’ (Rach), also Tom, but ‘grey area’ (Rob). Rob states he is closer to online specialists r. t. academics</td>
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<tr>
<td>Academic freedom vs content management</td>
<td></td>
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<tr>
<td>resistance/reticence to apply technology</td>
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<tr>
<td>agency of practice vs shaping of LMS/LCMS</td>
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<tr>
<td>Concept of lecture framed by technology: lecture recording purpose, ‘its mainly for reviewing, and it will be exactly like you are there at the lecture’ Rach</td>
<td></td>
</tr>
<tr>
<td>‘Academics generally are still threatened by technology and do not perceive it as enabling. ie. they are forced to use it by the institution.’ Tom</td>
<td></td>
</tr>
</tbody>
</table>
## 5. VET teachers

<table>
<thead>
<tr>
<th>Category/Field of discourse</th>
<th>Repertoires as dimensions or dialectic</th>
</tr>
</thead>
</table>
| **Teaching and Learning online**  
  **Adapting/shifting teaching practice online** | Enabling: Teaching as building relationship/community – Guiding: Teaching as flexible delivery |

| Academic-student nexus  
  **Discourses around the student** | Engaging Students – Managing students  
  - students’ attitudes differ between FTF mode and online. Students confuse, eg the LMS is always available, expectation of 24/7 availability. Paula |

| **Institutional-technology nexus**  
  **Discourse around implementation of learning technologies in the institution** | Enabling - Guiding institutional inflexibility vs innovation  
  - Tanya: managerial perceptions of e-learning, lip service, deployment to reduce expenditure.  
  - ‘there is always a danger in one size fits all … they want centralised control.’ Paula  
  - Resourcing online course development: ‘ , ‘pedagogy is too slippery a beast to deal with and most decisions are about expediency or showboating,’ Paula  
  - ‘Institutional vs Web: ‘the university sees the Web in a completely different way from the direction of open source and the development of the Web’ Paula  
  LMS: thinking behind: The interface directs the user.’ and ‘designers get trapped into a certain interface style (Paula, 3) ex of ‘defective design’ |

| **Being an academic**  
  **Discourses around being an academic** | Enabling: Teaching as building relationship/community – Guiding: Teaching as flexible delivery  
  - Re systems that constrain, they don't know what they have is broken because broken is all that they have ever known’ Jenny  
  - ‘Online counts less than FTF I don't think that online contact is really regarded as valid’ Paula  
  - **attitudes to learning technologies** ‘bowled over by it potential’. ‘incredibly liberating’. Tanya. Views WebCT as bottom up, issues is lack of funds for material development.  
  - **innovation**: ‘education shd be abt exploring new ideas & approaches, but IT 'won't support' eg. moodle, free software’. Paula  
  - **Sharing knowledge/IT projects (corporate)** need expert knowledge shared in mentoring roles. problem with an expert in a team who ‘keep knowledge to themselves’ Henry  
  - skills are quite simply lost when we don't practice in groups (Jenny) |
Appendix 5.1: Emerging themes for academic development

This appendix summarise the analysis of transcripts into
1. Initial grounded theory coding
2. Comparison of individual themes of academic development
3. Developing academic development themes

1. Initial grounded theory coding

Initial coding provided a total of separate 27 categories and 15 subcategories from the interview with Vicki, with the transcript of the primary interview comprising 11500 words. This does not include email correspondence and followup exchanges. Initial coding provided a total of separate 18 categories, 16 subcategories that were coded in the interview with Paul, the primary interview transcript comprising 9290 words.

2. Comparison of individual themes of academic development

<table>
<thead>
<tr>
<th>Engaging staff – PD model</th>
<th>Training people</th>
<th>‘Development of staff’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicki</td>
<td>Wayne</td>
<td>Paul</td>
</tr>
<tr>
<td>Vicki stakes a position with a tactic for engaging staff</td>
<td>Training people: Wayne refines model which may conflict with policy practices, ‘model we’ve got a professional development model towards online teaching and learning so that we are there to train people, get their skills up and assist where necessary, but not to. not in the main to develop content. and maintain content.’ p. 19</td>
<td>‘Development of staff’: ‘so there is going to be a gap there, well what you do about the gap (8)</td>
</tr>
<tr>
<td>‘to infiltrate departments’, ‘really seizing opportunities'</td>
<td></td>
<td>- Model of Ed Dev Unit: To support online teaching and learning: Paul describes a model of professional development which places system interoperability as a high priority. - Paul places LTS support role as an ‘emphasis on the design of courses rather than the production of courses’ (7). Resourc* 17 times</td>
</tr>
<tr>
<td>Vicki and Wayne present a model of ‘professional development’ that enables teaching staff to design and manage their own online courses (19), in contrast to instructionally designed courses as completed products,</td>
<td>‘Development of staff’: ‘so there is going to be a gap there, well what you do about the gap (8)</td>
<td></td>
</tr>
<tr>
<td>‘that’s just sort of disabling people, through the technology’ (18)</td>
<td></td>
<td>- Model of Ed Dev Unit: To support online teaching and learning: Paul describes a model of professional development which places system interoperability as a high priority. - Paul places LTS support role as an ‘emphasis on the design of courses rather than the production of courses’ (7). Resourc* 17 times</td>
</tr>
<tr>
<td>Building community: turning online teaching into building community</td>
<td>Strategy for development of staff: Preference is exemplar courses: Paul’s preference with unlimited budget is a ‘strong team of instructional design specialists who would work in a team environment with subject matter specialists’, ‘team environment’ of teachers working with instructional designers’ (9)</td>
<td></td>
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<tr>
<td>Confronting new identity formation online: Online communication provides unexpected encounters for both staff and students:</td>
<td></td>
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<tr>
<td>Grappling with policy: practice is adapted in the face of resistance by teaching staff to adopting online learning, and technological problems in the pedagogical use of the online learning system.</td>
<td>Wayne on mandatory training, ‘technically you’re supposed to’ p. 15, all in a state of flux’ p. 16 Wayne describes a conflict between instructional designers handing over finished and slick courses, and mutable, teacher owned courses</td>
<td>‘Guide people in certain directions’ (13)</td>
</tr>
<tr>
<td></td>
<td>Supporting the system and infrastructure</td>
<td>Supporting the system and infrastructure</td>
</tr>
<tr>
<td></td>
<td>‘A simpler system’: ‘talking about infrastructure here’ (1)</td>
<td>‘A simpler system’: ‘talking about infrastructure here’ (1)</td>
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<td></td>
<td>institutional commitment and ROI: - direction of institution: the ‘sunk cost to the system and that undoubtedly is playing a part in where institutions are going’ (in</td>
<td>institutional commitment and ROI: - direction of institution: the ‘sunk cost to the system and that undoubtedly is playing a part in where institutions are going’ (in</td>
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### 3. Developing academic development themes

**Emerging themes**

**THEME 1: Staff development for online learning**
What is model of PD: what am doing? Vicki and Wayne present a model of ‘professional development’ that enables teaching staff to design and manage their own online courses (19). Vicki comments on multimedia not taking up WebCT as its online T&L platform, ‘If we are going to model what we believe is good practice and is aesthetically pleasing and all those sorts of things. We can't use with Web CT. So we don't have much luck with that lot getting them to take that sort of thing up. Except for communication and discussion.’ (6).

Paul: ‘Development of staff’: what you do about the gap (8)
Model of Ed Dev Unit: To support online teaching and learning: Paul describes a model of professional development which places system interoperability as a high priority.

**THEME 2: Drawing together**
Engaging vs developing staff - Online teaching and learning strategies
Barb’s focus on enabling staff by engagement
Wayne’s focus on skills training
Paul’s preference for putting together expert teams to develop exemplar online courses as strategy for development of staff. Hence internal grants system and showcases. Paul draws on a body of literature that supports course teams among academics (Shepard 2004; Knight, Tait and Yorke, 2006; O’Connell et al., 2006; Kemmis, and McTaggart, 1988)
Conflict is content devt vs empowerment, and leaving developed courses unsupported

**THEME 3: Working with policy**
Grappling with policy: Ed developer practice is adapted in the face of resistance by teaching staff to adopting online learning
Guide people in certain directions (13) to supporting the system and infrastructure - institutional view on commitment to technology implementation and resourcing teaching and learning

**THEME 4: Reframing technology**
Reframing technology/reframing the user
Ambiguities and constraints
Anxieties about the training gap, and staff reticence
contrast the notion of developing staff with developing the technology, which is an ongoing activity in the direction of teaching and learning strategies, however, the institutional discourse emphasises developing staff to fit the shape of the technology. Hence ‘guiding people’

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<table>
<thead>
<tr>
<th>Reframing technology: Vicki provides instances of ambiguities in practice, as online learning technology creates new possibilities, and new problems</th>
<th>Limitation of technology: Future will resolve: re time to train in LMS, need to wait for WebCT to evolve Constrained use of technology: Limits to Innovation: Paul states limits to innovation within the teaching and learning context of the university, and circumscribes innovation within the university’s ‘institutional strategy’ (13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing knowledge and objectifying knowledge: trade-off where structure is privileged and the meaning and context are obscured.</td>
<td>Reusability: develop once and use by multiple people. Resourcing important for economies of scale, a subject may have ‘20 or 30 people delivering it’ (8) LCMS</td>
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</table>
### Appendix 6.1: Practitioners’ responses on student engagement

Summary of interview comments by practitioners concerning student engagement online

<table>
<thead>
<tr>
<th>Practitioners’ talk of students as:</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td><strong>student-centred learners, requiring new strategies for engagement</strong></td>
<td>55</td>
</tr>
<tr>
<td>• bringing new problems to learning</td>
<td>28</td>
</tr>
<tr>
<td>• constrained by institutional and technological processes</td>
<td>13</td>
</tr>
<tr>
<td>• raising issues of plagiarism</td>
<td>8</td>
</tr>
<tr>
<td>• international students unable to engage with deep learning</td>
<td>6</td>
</tr>
<tr>
<td><strong>a community of learners, engaging collaboratively online</strong></td>
<td>36</td>
</tr>
<tr>
<td>• collaboration online</td>
<td>15</td>
</tr>
<tr>
<td>• using online text in a way ‘not possible in face-to-face’</td>
<td>13</td>
</tr>
<tr>
<td>• international students interact online for a ‘deeper cultural experience’</td>
<td>8</td>
</tr>
<tr>
<td><strong>customers, engaging selectively</strong></td>
<td>28</td>
</tr>
<tr>
<td>• ‘individualistic’, ‘optional’ students</td>
<td></td>
</tr>
<tr>
<td><strong>the digital generation</strong></td>
<td>5</td>
</tr>
<tr>
<td>• the “Net generation”, having a “particular relationship to technology”</td>
<td></td>
</tr>
</tbody>
</table>

### Roles

- **teaching academics** = Asha, Craig, Fran, Francis, Jack, Lia, Rebecca, Wendy, Alison and Laura (sessional tutors)
- **managing academics** = Mgr: Paul, Monica, Sylvia, Victor
- **academic developers** = AD: Barb, John, Vicki
- **online support staff** = OS: Tom
- **VET teachers** = VET: Paula, Jenny
Students as student-centred learners, requiring new strategies for engagement  
- bringing new problems to learning  
  - textual mode of email and discussion persist, ... relies on self-directed learning far more than face to face (FF) teaching, so high drop-off rate, Uni’s equity and access policies not well served. (Alison)  
  - assessment paradox, there was a need to present an operationalised critical thinking to students (Monica)  
  - post-grads pre-read then discussion. It ‘worked so well online’ ‘so engaged’: but disaster brought to face to face mode. (Rebecca)  
  - deep/shallow learning: One, no internet access from home. Two, “most of the students because they delayed until the last moment to study”. Lia  
  - online discussion response rate is v low, low “motivation”, “one or two give comments and then a week after 4 give comments” (out of) 220 students). “In face to face you can force (them)”, but not online Lia  
  - Lia confirms emphatically that there is ‘a large drop out rate’  
  - Workload issues - gets engaged with students beyond institutional requirements, Asha, also Wendy, Lia, Jack  
  - “I mean personal interaction with a group of students of about 700 is pretty difficult”. Real issues on how to manage this online. Fran  
  - workload issues with loading 600 students one at a time, vis management information system (MIS). Fran.  
  - “In the case of teaching online, there are not the nonverbal cues, and shared expectations are not built up in the teacher student relationship”, “The staff/student relationship is harder to develop again this is more so for first years … The missing cues means there is more potential for misunderstanding – even knowing this and having strategies does not eliminate this possibility entirely..” Alison  
  - workload issues with online: conversation in class compared to online discussion, the need for accuracy online, time to type, prolonged nature of discussion, ‘a complex calculation’. (Rebecca)  
  - no expected technological literacy, spend more time online with students with problems. (Fran)  
  - group participation process online ‘very protracted’, “And it’s much easier just to get four of them in the room, and (its) pretty well solved in a half an hour face-to-face ”. Fran  
  - LMS constrains learning, it persists for the semester life of a unit rather than the student life-cycle, eg. journal tools (Victor Mgr)  
  - online discussion take-up: There is v little take-up unless discussion assessed Lia  
  - distributed learning: material online, weekly questions student has to answer three questions 3-500 words. Then respond to at least three other students work for assessment. Craig .  
  - risk of low participation - lurkers are there but not there (Lia)  
  - the pressure of the prospect of 600 student evaluations using the wiki, ‘yeah it is a risk.’ Jack  
  - Students could ‘trash’ wiki, ‘but they don’t.’ LMS model. ‘All of a sudden, there is no trust.’ Jack  
  - students who were not accommodated by new systems became exceptions, marginalised and disadvantaged (Fran): conflict with university’s policy on equity (Fran, Alison)  
  - external students had recurring problems accessing online discussion and submitting. Lia  
  - online is ‘depersonalising the students’: CMC increases sense of distance for students. Fran  
  - ‘because I think the risk is in training in something like WebCT and Blackboard, the focus is all on which buttons to press. … instead of being how students learn’. Paul, Mgr  
  - ‘skills are .. lost when we don't practice in groups’, podcasting project on disenfranchised, disengaged and marginalised VET students Jenny, VET  
  - ‘some degree of resistance to the use of recorded lectures by academics. They feel that students will not show to their lectures.’ Tom, OS  

- constrained by institutional and technological processes  
  - (i) meeting performance measures  
    - ‘that relationship to the student is so central to … good learning.’ contrasts with performative measures, ‘always trying to tick these boxes’ (p. 9) Wendy.  
    - the pressure of the prospect of 600 student evaluations using the wiki, ‘yeah it is a risk.’ Jack*  
    - an incident where poor student evaluations was related to structure: an online unit was transposed to face to face class. Rebecca  
    - ‘transaction’ students given the same weight in evaluation as ‘relationship’ students (Craig)  
    - ‘our present climate’? Possible poor student evaluations means managerial review and being told. ‘you must teach properly. Don’t, stop these new ideas’. Jack  
    - this is the ‘year of compliance’ Jack
Appendices

- online teaching is the central mode of delivery for some units, but valued and funded on a information transmission model in contrast with the uni’s policy on student-centred learning (John)
- (ii) mass learning environments
  - ‘forged all this common ground’ with 15 students by online interaction, but large class teaching ‘that’s a can of worms’ John
  - sustainability: Wendy has 700 students offshore via online learning, ‘just maintaining the service is as tough as it gets, and you’ve got turn-arounds of marking which are quite big.’
  - “I mean personal interaction with a group of students of about 700 is pretty difficult, you are not gonna have all of them at any one time”. Real issues on how to manage this online Fran*
  - large classes is the big question for equity and inclusion and intercultural learning Wendy
  - demanding? Lia: Oh god, I can’t believe it yeah… I have under-graduate 498 and I have Open University roughly about 220 … and I am the only one
  - workload issues with loading 600 students one at a time, using the management information system (MIS). Fran.*

- raising issues of plagiarism:
  - ‘when I chase plagiarism, it takes me an hour and a half at least,’ Craig
  - “we call them overseas students but they’re Asian students – now if you talk to Marcia Devlin about plagiarism – because those societies have a totally different way of thinking, and so we accuse them of plagiarism but they don’t understand what we’re talking about.” Craig
  - plagiarism potential determines assessment shape – exam no internet. Craig
  - instrumental approach: students’ expectations of help with assignments, evidence of plagiarism with external students. Lia
  - non-Western concepts of knowledge: Chinese students ‘have not been taught about plagiarism’. Sylvia, Mgr
  - ‘So from our point of view, the technology is there to detect the plagiarist …but we’re trying to encourage a different approach’. Vicki
  - “Can you please help me in answering this assignment? “ I said No I am not allowed to do it. And suspicions based on large inconsistencies for a student across marks in a course. Lia
  - motivation and plagiarism, students “just commit to get the degree, not the knowledge. I mean that’s terrible”. Lia

- international students unable to engage with deep learning
  - online learning not wanted by Chinese MBA. Sylvia, Mgr
  - the lack of analytical and critical skills. Asha
  - massification: Second language learners have vocab problems, and language level low for post-grad (Wendy)
  - Many students still very much chalk and talk, especially mainland Chinese students. Lack of critical thinking. Sylvia Mgr
  - motivation and plagiarism, students “just commit to get the degree, not the knowledge. I mean that’s terrible”. Lia *
  - non-Western concepts of knowledge: Chinese students they have not been taught about plagiarism Sylvia  Mgr*

Students as a community of learners, engaging collaboratively online

- able to collaborate online
  - a different assignment which is developed openly (in the class) in the wiki. Jack
  - ‘a lot of them are fairly self-reliant anyway’ re external students using the wiki Jack
  - ‘Students wrote a journal on the wiki. This was open to their peers’ Jack
  - wikis based on ‘trust’ and ‘following’, not managing and control, like a group blog. Jack
  - people could just go and do all their learning sitting in front of a computer, but they don’t. Why don’t they? Because they actually want human contact; they want to say “What does John think about this? Wendy
  - ‘discussion board has to be very very relaxed to keep them engaged.’ Rebecca
  - journal, website for a specified group, available to all as it develops within a learning community, rather than as a finished assignment document which is between the assessor and the student. Jack
  - ‘it’s about that engagement’: once set up, the group works out of itself. Rebecca
  - potential for ‘cafeteria’ discussion, ‘at the end of the course they seem to have built this camaraderie in there’. Asha
  - Francis’s model of online learning, “they’re going to learn as much from each other”. No LMS, his way based on a principle of simplicity and interaction, a “You set up a group email with half a dozen people, to communicate with each other on a listserv or something like that. and then a discussion board but a nice simple one” (Francis, p. 26)

290
‘they operate virtually autonomously’: post-grads need less support. Monica, Mgr
- with 510 students. ‘Scale is not an issue’ re collaborating via wiki. Jack
- ‘the learning is happening in the minds of the learners not in the tools.’ Barb, AD
- online model is ‘have students interact with each other.’ Paula, VET

- using online text in a way ‘not possible in face-to-face’
- opportunity for deep learning via informal writing to develop a learning community via synchronous communication (Asha, Vicki).
- engage students by building online literacies/informal language/dialect (Barb, Vicki, Asha, Monica)
- ‘a lot of student interaction between each other’ with post-grads online. Non-academic style, informal language. Rebecca
- informal writing style ‘actually frees your student communication’ Wendy
- ‘they got to know each other very well through writing’, and limitations of immediacy. Asha
- opportunity for deep learning via informal writing to develop a learning community via synchronous communication (Asha, Vicki).
- Vicki develops ‘other literacies’ in which ‘you write in different ways’ (genres) according to the ICT ‘tools available’, and use online text in ways ‘not possible in face-to-face’. Vicki
- Students that thrive online not more technically minded, but more comfortable with the written word, ‘perhaps it’s because with the written word we have time to reflect. Asha

- international students interacting online for a ‘deeper cultural experience’
- international students adapt to discussion well. Alison
- international students ... are quite keen on using discussion lists and chatrooms. Laura
- online interaction enables achieving ‘deeper cultural experience’ via third space in intercultural communication Wendy
- I/N students ‘want to engage with the new culture and engage with people, God forbid. I don’t know how you can do it in a big forum.’ Wendy
- ‘the issue of language’ for postgrad offshore students ‘didn’t come up’, because ‘everything’s online’. Monica, Mgr
- ‘astonished’ at international students ‘getting the same very engaged response’. Rebecca
- ‘they are so engaged … a lot of student interaction between each other’. Rebecca
- intercultural/local disparity: FTF class exhibits disparity in age, culture and experience, not so much online (Asha)

Students as customers, engaging selectively
- ‘individualistic’, ‘optional’ students
- 1-1 & prompt response, prefer different modes (Alison, Paula)
- “first year face to face are more individualistic, focused on assessment only, need to be persuaded into collaborative use of discussion list”. Resist breadth of engagement, (Alison)
- students as “transaction” customers vs “relationship” customers. CRM model (Craig).
- ‘pick n mix’, ‘this causes a slew of problems’, may miss class, basic concepts & ask to go over it again (Alison)
- students resist breadth of engagement, want to pick and choose. Alison
- online study buddies for online courses – some love it and some hate it (Alison)
- discussion board’s ‘uselessness’: students avoid using it, or replicate questions thus increasing workload (Alison)
- online … won’t suit all students it won’t suit all lecturers’. ‘and they drop out’. Asha
- students’ work/life competing demands Craig)
- instrumental expectation, ‘that I help with doing assignment’ (Lia)
- ‘what students really like is prompt response’ Monica, Mgr
- some prefer phone to email, and email to online discussion. Students consider email response is equivalent to tutorial attendance. ‘there are often quite a few students in any one intake who prefer to ring rather than email and don’t seem to use the online study guide or discussion list’. Laura
- one-to—one communication expectation for first year, rather than online discussion collaboration. Laura
- expectation that tutors respond almost synchronously, and that they will respond promptly. Laura
- Students ask "do we have to" questions, Ian states ‘but it is their choice, and so this online stuff becomes terribly difficult. We’re trying to give them flexibility’ Craig
- FTF/online difference: eg the LMS is always available, expectation 24/7 availability. Paula, VET
- students’ work/life competing demands (Craig),
- they cannot respond ‘in a timely manner’ Lia
- ‘There appears to be a definite shift from seeing class attendance as what one must do, to being something optional - for both online and face to face participation. This is the second year I’ve had students voice that they shouldn’t have to go to all the classes, instead should be allowed to pick n mix.’ Alison
- optional student- we provide them with the ‘technology to not engage’ (Craig), re flexibility needs, but ‘we can’t go there’. Choice of online translates into optional attendance. (Craig).
- Able to ‘catch up’: “I can get this online”. So students still ask basic questions in Week 7, ‘so we have this breakdown …not as a result directly of the technology, but they feel they can catch up in some of it, with the technology.’ (Craig)
- downloading & low attendance at lectures, “we had a university-wide decision to have flexible learning, whatever flexible learning is, online stuff so, you know, we can’t entirely blame the students” – ‘can see the change in society’ (Craig)
- Students have ‘socially’ accepted technology ‘in a different way than we’ve presented it here’ (Craig)
- ‘I think that is hard in face to face and online. I know that some students just hate the classroom thing and prefer to contact me electronically. I think that student motivation and readiness to embrace a concept is more important than online/offline.’ Paula, VET
- lack of deep learning online: I teach very factual type stuff (ok I know this is problematic) and students don’t want to discuss issues. they want to know when a test is coming. Paula, VET
- definition of flexible in terms of student choice and control re time, place or speed, pace. Barb, AD

Students as the digital, having a “particular relationship to technology”
- attitude ‘depends on what generation they came from.’ whereas ‘the young graduates wouldn’t know any other forms.’ Asha
- ‘generational difference’ re technology, they hold a ‘particular relationship with technology (Wendy)
- ‘The students differ. A generation ago they used to go and demonstrate and take over the Vice Chancellor’s office … now they march up to your door and say ‘Why didn’t you give me a better mark?’’ (Craig)
- their expectations are different, and some of them are certainly technology-based ones. “I can get this online”.’ Craig
- First year face to face are more individualistic, focused on assessment only, need to be persuaded into collaborative use of discussion list. Alison*

Red flag phrases
- we provide them with the ‘technology to not engage’, ‘but ‘we can’t go there’ (Craig).
- “Oh god, I can’t believe it yeah. 498 ug students, then class of 220 that’s terrible”. Lia
- ‘our present climate’ Jack
- ‘pick n mix’, ‘this causes a slew of problems’ Alison
- large class teaching ‘that’s a can of worms’ Wendy

* denotes a the repetition of a comment into another category. There were 8 comments so replicated.
Appendices

Appendix 7.1: Coding Notes for Jack
Extracts from Jack’s coding notes

Jack: Interview 21 October 2005
Jack has set up wiki interface with staff log in system. He set up a student log in, storage spaces, [Unit] Wiki and Infotrain Student Server
Currently (1 July 07), the are three staff members besides Jack using the wiki for their students.

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<th>Pg</th>
<th>Topic</th>
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| 4  | Wiki pedagogy – who is using wikis? ‘other people playing with it’  
   - ‘very very conservative’ re educational conferences. Jack posits ‘academic content’ with conservative vs ‘doing it’  
   ‘it’s very hard to go and give a paper on wikis, you can’t do a paper saying, oh I built a wiki, and wasn’t it great, and do you want to see what I did.’  
   ‘lone innovator’: At academic conferences, ‘there’s not that many people talking about wikis.’  
   LMS – ‘cumbersome’: ‘it drives me nuts. It's just really cumbersome, and, I think they've headed off in the wrong direction.’  
   - ‘LMS constraining’: ‘It is just really really constraining.’  
   - LMS contrast- constraining/openness: between wiki and UniCnet, ‘here, you know, I sit there, and I just type, and it goes on to a page and I create links and it's all just really quick and efficient, whereas (it takes) forever in UniCnet, you know, and going through these- this complicated path of menus and, just trying to do really simple things’  
   - General vs specific: wiki is ‘not predisposed to do anything.’  
   ‘so it's a very general tool. UniCnet is a very specific tool, and it's not correct to do what I wanted.’  | Jack is mistaken here Complicated path similar to WebCT |
| 5  | contrast: wiki is ‘presentation’s very well-organised’,  
   pages can be easily changed, ‘very simple security system’ avoids code. very flat – ‘everything on the table all the time,  
   - ‘mass processes’ – what about: UniCnet is ‘good doing surveys’, ‘the [online assignment system] thing, it’s sort of OK.’  
   - assignment model: ‘But, I have gone away from the model of students handing things up. When students have finished their work, they just, take the hands of the keyboard. Because their work is always here, and I can see them as they construct it.’  
   - journal, and tasks, ‘they have different things to do. And so, and its all assessable.’ all work is assessment  
   - Plagiarism/cheating: ‘all the other students can see his work, and he’s quite happy about that [JH: yes] and . it's reasonably hard for people to . cheat, really. I mean, they can collaborate, and they can look at each other’s work and be inspired by it [JH: mm], but to grab a whole slab of it^ and just throw it somewhere else.’  | Note democratic model of architecture inherent in all pages being open to all users Like W Ps automatic assessment of computer code (Victor interview), arguably this model, submission by ‘hands of the keyboard’, suits the specificity of the discipline. |
| 6  | large class: will do CS ‘I’ve got 600 students next semester which I will just do the same thing with.’  
   ‘everything will be open’, Little groups of 20, about 12 tutors, face-to face workshops,.  
   - attendance ‘really quite high’:  
   - no lectures, workshops at computer, ‘I try and organise it in | Had 510 students, went fine (Followup) |
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<th><strong>LMS - constraining/openness/cheating:</strong> ‘of course, you know, there is a history, and this is what has kept them honest’. The transparency of the wiki and the retrievable history makes it hard to cheat. Transparency makes students work open to all, ‘they are convinced that, you know, I spend all my days, um, there’s a log here what happens on the wiki. And shows whose doing what the moment, and they are sure that I know it all.’ Interests- ‘the trajectory that brought you to this’: M of Ed, influenced by constructivism, so - ‘that’s my approach’: SCL and groupwork, ‘in my teaching style, I find it incredibly hard work if it’s- if-I don’t like being the centre of attention all the way through, I don't like having the responsibility of being in charge of their every move.’ Prefers groupwork and relating to students, ‘So I’m much happier, you know, setting assignment (type), with getting them to work in groups [JH: mm], and so that, you know, if I take my hand off the controls, the things still run for awhile … and then you can sort of, you know, move around and you can talk to the students and you get to know them.’</th>
<th>Transparency short circuits the individualistic nature of assessment and the cover required for cheating by copying other students’ work. Motivation for groupwork is a constructivist one – works with online projects.</th>
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<td>8</td>
<td><strong>Wiki reason:</strong> ‘curious about wikis … and I looked through all the wikis that I could find, and this one here just felt the most comfortable.’ <strong>Technology &amp; teaching:</strong> ‘and I think a lot of the tools we have are really quite clumsy. And they tend to- they work on a model that . tends to devalue the teacher, you know, the importance of the teacher.’ Eg. film, language labs, overhead projector.</td>
<td>MEMO When do technological tools ‘marginalise the teacher’ His ref to history of technology in teaching?</td>
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<td><strong>- control/autonomy:</strong> model of including/excluding the teacher – ‘overhead projector, which doesn't marginalise the teacher’ compared to Powerpoint. Use of technology an attempt to make teachers conform via an ‘administrative reaction’ so the wiki,’ using this, I thought very much in control, I am the sort of centre of what’s-well not so much the centre but I'm in control.’ <strong>- institutional support:</strong> none. Jack describes himself as marginal, ‘no one’s saying stop it. … but no one’s saying do it… it’s a bit of a thing you know of being on the sideline but being harmless.’ <strong>Model of pedagogy:</strong> ‘we’re on a model that . very much worries about people doing the wrong thing … so we have these incredible um, mechanisms to stop people doing the right (sic) thing, whereas we should be encouraging people to do the right thing.’ <strong>- risk and trust:</strong> contrast tech-savvy students, ‘dreaming of ways to hack into the university network [JH: mm] to bring it all down [JH: mm], and they’re in this wiki . where, in a flash they could, you know, destroy the whole thing. But they don’t.’*</td>
<td>Technology imposed on teachers. *Implies the transparency of the wiki promotes trust, whereas the covert nature of the network encourages hacking. Also personalised project vs monolith</td>
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<td><strong>Innovation:</strong> ‘There is, I mean, a lot of room to innovate here and there is no one stopping me. But in our present climate though, I think, if you innovate, sometimes it might not go well.’ Jack cites an instance of a negative reaction and bad [unit] and [teaching evaluations]. The prospect of a upcoming class of 600 students puts pressure on him, ‘yeah it is a risk.’</td>
<td>What is ‘our present climate’? Possible poor evaluations or managerial review.</td>
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<td><strong>- support for innovation:</strong> Not encouraged, but not discouraged. [JH: mm]. Yeah And as long as things go OK, I think it will continue to be like that.</td>
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<td>LMS</td>
<td>For Jack, UniCnet is the same model, ‘it’s a home grown WebCT’. ‘When WebCT first came out, I thought it was quite good, you know, cos um. But now I would find it very (constrictive).’ Jack surmises at priorities of UniCnet makers, ‘I think maybe yeah maybe it’s reliability which is their focus, and I would probably, I wouldn’t make that my highest priority.’ Jack takes issue with one size fits all, ‘Yeah, reliability and consistency. Because they are obsessed with everything has to have the corporate look and feel. And I think, you know. we all agree on the road rules, but we don’t have to all drive Holden Barinas. And that’s where, that’s the difference.’ <strong>External students:</strong> Jack states with a mix of internal and external students, the latter are happy because ‘everything’s in one place’, and ‘everything’s on the wiki.’ However, wiki was written for internal students.</td>
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| **LMS/innovation/risk:** | Jack contrast the wiki to the LMS, ‘Surprisingly, it is both stable and reliable. But, you run the risk of, you know, I’ve got student there, who are writing things . and, I don’t know what they are going to write.’ Jack refers to ‘other people’ who would be ‘terrified’. This risk can be managed, ‘Although you can moderate it. … Well I can roll it back if I want to. But I’ve never had to.’ **Wiki infrastructure:** Jack installed the wiki using unix and PHP, and for staff to rely on IT staff would be frustrating, ‘most probably the IT staff the IT staff have got other demands, and if their jobs are prioritised to the sort of, you know, desktop support, and it’s not in, you know, sort of . building innovative unreliable systems.’  
- **Takeup of wiki:** ‘I think . what I see is when these things tend to get scaled up, they tend to turn into WebCTs and UniCnets.’ But Jack wonders if there is an alternative. JH asks if wikis can be a ‘model of the virtual community’  
- **Different model to LMS:** ‘there are other groups, you know, a sort of, research groups bigger than the University [JH: mm], who have more of an open source way of doing things’. Ex of FreeBSD |
| **Post Interview Follow-ups** | **Large class:** CS * with 510 students. ‘Scale is not an issue’ Jack means technically, ..  
**LMS/innovation/risk:** .. since he states that for 2007, ‘I won’t use wikis this year.’ Rather. the wiki will be for a common space for course development, for 13 tutors and course coordinators.*  
**plagiarism:** ‘Students wrote a journal on the wiki.’ This was open to their peers. Issues with copying? No, ‘they were not interested in each other. They were interested in themselves.’  
**compliance vs innovation**  
I told my tutors this year, ‘This is the year of compliance.’ The wiki will still be used, but lying low, using [online assignment system] for assessment submission (cf Jack’s def of assessment above, p. 5) ‘when the . Will use Moodle in ‘semester 2] of 2007.  
With UniCnet, you play it safe, so that students do work, ‘like clerical work.’ Jack will ‘teach old things, safe things, like text books are safe.’  
**MEMO:** The online teaching and learning environment is also the object of study **MEMO:** Barinas comment External students are mature age and ‘self-reliant’. Jack would ‘elaborate a lot more’ if written for them  
**MEMO:** Innovation is peripheral for IT, since it not standard **FreeBSD for example, [http://community.unixcities.com/](http://community.unixcities.com/) Of course there are open source transparent discovery/action research  
*In fact he did use it. The wiki is still in use for 2007, though in minimal form, not using the affordances of open communication for which is known, rather housing resources and providing a common development space for tutors, rather than students. Without support, the wiki project in the institution will fade. **MEMO (20): Conditions for wiki Moodle ‘clearly better thanUniCnet.’ **constructivist vs instructivist** environment. p. 20 Jack – that UniCnet is safe, not exciting for students, who cannot push boundaries. cf Engineering students who want to hack closed environments,
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<td>19</td>
<td><strong>Model/open source:</strong> Concerning UniCnet: ‘Tools are not transparent, tools have an effect. Whereas in the wiki its all tied together.’ Jack mentioned that the tool does affect the pedagogy. One way could be the design and presentation of an assignment which is developed openly (within the class) in the wiki then takes a public shape, where the student constructs a work – journal, website for a specified group – that is available to all as it develops, and takes shape within a learning community, rather than as a finished assignment document which is between the assessor and the student.</td>
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<td>MEMO: opacity vs transparency: Jack describes the opacity of LMS tools, blackboxed …</td>
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<td><strong>constructivist vs instructivist:</strong> In the old model (like clerical work’), ‘there are no surprises, no uncertainty.’ ‘Now’, with the wiki, ‘the curriculum can be more flexible.’ Jack is referring to the need to update and be responsive when teaching multimedia, since the Web and industry practices change so rapidly. <strong>LMS/innovation/risk:</strong> Students could ‘trash’ wiki, ‘but they don’t.’ Re LMS old model. ‘All of a sudden, there is no trust.’ The old model was described last interview as ‘being overly concerned about people doing the wrong thing.’ (p. 9) <strong>Philosophy/ideology in software:</strong> ‘The philosophy is embedded in the software.’ Jack gives the example of MS Outlook, and the language used in Meeting maker, which assumes your availability means you will be present for a meeting. Eg, a meeting maker positions you as a ‘required’ attendee, or an ‘Optional’ attendee.</td>
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<td>Also Latour’s (1999) delegation. For managers and administrators, the use of a shared calendar is normalised to a greater extent than a teaching academic, for whom a perception of autonomy in terms of time persists since so much of their time is predetermined by teaching commitments.</td>
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<td><strong>Stagnated/disabling:</strong> ‘Multimedia has matured’. Now that multimedia is not a new thing, and its position in universities is more tenuous, many technological uses become naturalised, and beneath our awareness (Merleau-Ponty, Ihde). See MEMO ‘Multimedia has matured. Actually stagnated’. Why are students using Dreamweaver? To write Web pages. All they need is Notepad and a graphics program.</td>
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<td>MEMO (21): ‘Multimedia has matured. Actually stagnated’.</td>
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<td>22</td>
<td><strong>Institutional support/risk:</strong> Relationship with FLC. Jack gets on well with Victor. Jack says Victor plays it safe: JH: Isn’t he generally sympathetic towards innovative uses of technology? JACK: Often the IT (in FLC) does stuff that he is not aware of. JH: How do the techs find our work and use of wikis? JACK: They find it interesting. Jack can continue as he likes with the wiki, unless something goes wrong This risk includes possible poor evaluations, hence his year of compliance. He mentioned, like last interview, the status of his work as unsupported, and tolerated. Jack is still alone with the wiki. Any work with the wiki is not part of his workload (workload is now a negotiated and defined list from a set of allowable items), and he is ‘not experimenting’ Jack says “we a still driving Holden Barinas.”</td>
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<td>Phil’s comment that, “Tools are not transparent, tools have an effect,” points to a difference in perspective or even worldview concerning how technologies are integrated into the lifeworld. A perspective that sees a technology, such as a LMS, as a ‘tool’ or a ‘platform’ with which to act on an already existing type of activity, such as teaching and learning, still holds technology as separate from human activity, and both avoids and fails to grasp how new technology shapes and changes our world. A worldview or program that sees technology is a ‘tool’ or ‘platform’, or as adjusting to an already existing type of activity (teaching and learning) fails to grapple with the issues new technology presents or the take-up of opportunities it presents.</td>
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Appendices

Appendix 8.1: LCMS pilot – Extract of interview with Tom

This transcript was checked after interview by the participant and returned with modifications by Tom in red (highlighted).

Preceding notes and actions
19 March 04: Met Tom, who has recently commenced a pilot CMS produced by a Perth company, Harvester. The CMS, or LCMS:
- organises learning objects in a repository, with metadata, with each learning object a collection of files, eg, html, ppt, gif, etc.
- organises clusters of learning objects into topics, modules, lessons or subjects
- provides metadata and version control of learning objects and topics
- interfaces with Blackboard and WebCT so that the LMS presents the required topic/subject from the CMS.

Tom says the pilot has commenced with subjects in Ebusiness at L_____, and content sharing works well.

T mentions 'issues' such as sharing of content: 'maybe an academic thinks "Why should I share content, since I wrote it."

Tom suggested I need to contact Geoff ____ re my idea of a research project which tracks this pilot. [subsequently obtained]

T referred me to
- The Learning Federation, DEST initiative from schools. www.thelearningfederation.edu.au
- COLIS s DEST funded initiative on repositories at Macquarie Uni, www.colis.mq.edu.au

Followup:
- need to check who are the educational developers – the Business Ed D Advisor, who is Arts, etc. These have academic status, but he said they were brought in too late to the project.
- Followup lecturers in September October
- Ask abut the breakdown of use of online e delivery across departments – some general stats.

Phone call May 2005: LCMS pilot (Hive) rejected due to ‘learnability’ issues – Hive was highly functional, but not easy to learn, and who would enter the metadata.

Interview with Tom
Tom’s office in Learning & Teaching services, EN Bldg, Ground Floor, 13 July 2004.

CONFIDENTIAL – These notes are part of the research data to be used under the conditions of the Faculty Ethics Committee of La Trobe University Faculty Human Ethics Committee

This account is written from notes taken during the interview. The questions appeared on paper visible to us both, from the document “questionsonlined.doc,” Not all questions from this page were asked.

The are two files which were obtained during this interview. They are:
- an image of the Blackboard LMS displaying their content links to Hive. The file name is Hive1.jpg
- an example of the metadata proforma. The file name is metadata V1_2_0.xls

Time: Start 11.06 am til 12.15 pm

JH introduced the interview based on the following written paragraph:
These questions are in three categories, concerning the context of this implementation of technology, the specific implementation itself, and your specific role.
Appendices

Questions on Context

JH: What are the drivers of this implementation? How does it fit with the departmental aims, and vision, KPI, etc?

Tom: Gary is a better person to answer, there are multiple viewpoints – one in education circles, there are drivers to have the ability to reuse content, for individuals or other people, a lot is available digitally online, and possible to re-use. The potential is very high to share amongst colleagues. This is a potential use for Hive, and the pilot will show how well hive can demonstrate reuse and shareability.

The current LMS, blackboard is well entrenched, and content is ‘unmanaged’. Only individual authors know their content. With the embracing of online learning, the potential for online volume to escalate is huge. The purpose of the pilot is, in part, content management. Outcomes are version control, shareability, reuseability. Some digital content is exported to provide a ROI.

using these environments brings other facts e.g. how I use content in my learning design, and impacts on pedagogy

JH: A technology implementation has stakeholders, some of whom are users, some are at a distance to its operation, but who have a strong interest. Could you identify these types of stakeholders?

TOM: Hive stakeholders are LTS, Centre for Ebusiness, the library – not a hands-on role at the moment but can impact on their services, and academics.

The application is open – online students and offline content i.e. printed content. Outcomes could be multiple formats. All content will be online.

Questions on Specific implementation

JH: A technology application is often described as a solution. If Hive is described as is a solution, could you tell me what it is solving?

TOM: Version control, management of all types of content, searchable, managing a collection.

JH: Do you think this implementation is successful? What does it do well, and what does it not so well? Who are the stakeholders in this implementation?

TY: A lot of work has happened with key stakeholders – us as implementers, with responsibility identifying a metadata schema, building the metadata profile, publishing the metadata to the system.

JH: What do you mean ‘publishing the metadata’?

TOM: Physical entry (of metadata). The team is the pilot study participants, the Centre for Ebusiness academics and assistant, and LTS is four people, myself as managing the effort, two people hands on building and creation, and a programmer/systems analyst.

Geoff B___ and Geoff A___ are business owners. They facilitated funding and strategic imperatives. So there are three camps, participants, the team, and management. I’m in the middle of these views.

At the end of the year the pilot will be finished and assessed

JH: There is a quote by Andrew Feenberg concerning the ambiguity of computers as educational technology, ‘Is it an engine of control or a medium of communication?’

TOM: It’s like the chicken and the egg. We are at the site of the engine of control, ‘taking control’ of content – Hive is very controlling – and if successful will be a medium of communication

Questions on interviewee’s specific role

JH: Can you describe how you see your professional practice at its core?
TOM: My role is to facilitate this pilot project. I don’t have the ability to reflect on pedagogy. We have Educational Development Advisors on the team as well. Within the pilot there are academics, and they get the group using content management because they understand the theory of reusable learning objects. So we didn’t have to convince them. There are two sides – on the theory group those who have done educational academic research, and the other group feed off that. There is a high level of understanding of theory already – the background, as LTS, is an advisor to online education.

With another group, you and LTS would take an advisory role. With Hive, my role is facilitating.

JH: How would you describe the knowledge inherent to your practice?

TOM: Practice? I’m a jack of all trades. So much involved in facilitating flexible learning, and online learning, mostly in the technical arena. My knowledge base stems from technical implementations from facilitating teams to develop interactives, simulations, streaming media. Not necessarily expert in anyone area, but the underlying principles.

JH: What do you mean by flexible learning?

TOM: Flexible versus online – (by flexible, I mean) students being able to choose the mode of learning, the time, place and mode, that is, digital or not digital.

JH: How do you apply the technology and resolve these two possibilities of ICTs: as a means of opening up an unfinished, adaptive space to be shaped by participants, or a means of reporting and organising into a set of predetermined outcomes, subject to the time constraints and imperatives of performance criteria?

TOM: Hive is about controlling content, but at a sub-level. the content is ‘the skies the limit’. Hive is about content. Its very controlling.

With learning objects and managing content, the big push is to make things to certain standards so that it can be interoperable.

JH: But what about context versus chunking?

TOM: To disaggregate and repurpose more chunks and assets is said to remove contexts. I am not in a position to debate it – I’m not married to either proposition, I am not an educationalist, but you need to embrace it. I consult them. Hive is the key thing – how it integrates with the LMS – Blackboard.

JH: Technology constructs the relations between the participant and a human user. I want to look at the language and the world Hive constructs using terms of identity.

What terms and language does Hive use for its participants, for
- teaching staff,
- technical support
- instructional designers,
- students,
- the learning space
- the subject
- subject matter and weekly topics
- Does it use the word teaching or education?

TOM: In terms of the users – groups, roles, users. I set up groups with members. A role has a person attached, eg., administrator, publisher, viewer, user. It does not use an educational metaphor. Hive is repurposed to the business environment, originally it came from and educational solution.

JH: Does Hive view learning as an conduit for delivery and measurement, or as an open, unfinished interactive space? Does it constrain or define identities of participants, and prescribe their range of actions?

TOM: It is too early to say - users are not hands on
Hive definitely constrains and define identities of participants, and prescribes their range of actions.

**JH:** Do you see yourself as a possible influence of creative disruption (a source of innovation), one who can point to new directions and uses that were not envisaged in the original design of the technology? Are there any work-arounds or adaptations you need to use or have devised?

**TOM:** A lot. There is huge scope for innovation – creative solutions.

**JH:** One view of technology holds that its design combines both technical needs and social needs. Could you accommodate this with Hive without much trouble?

**TOM:** One of the issues, because this is all very new, getting people to come on board is an issue - it took a while to get commitment outside LTS. Was this a directive? A proposition was put forward – it took awhile to be committed to a project - it took awhile to establish. That is part of my key role.

It was a staged sell: version control, being able to share it. The approach was from the bottom up – from the individual need to be persuaded.

For example, a subject viewed in Blackboard, comes from Hive. you can list the modules, and put content from Hive into Blackboard.

In Blackboard, open the My Subjects page, and there is a content link to Hive.

In a workshop for staff, they wanted to know:
How do I edit my content?
How do I publish my content? That is, put new content in

A more advanced use is version control, and the ability to share access across subjects.

You can also establish workflows – these are not tracked, when updated, proofed, then to put to the site – Hive can build in a constrained workflow. A forced workflow provides benefits. The potential is a controlled environment which helps sharing and updating.

**JH:** Can I see the metadata?
We can establish metadata. This aids discoverability, and is a concurrent development with metadata. This is the key to finding content.

**JH:** What are the roles on the team?

**TOM:** On the LTS team there is a systems analyst, two multimedia/web developers, two educational advisors – these have been minimally involved to date, and I am the educational development Officer, or team leader.
Supplementary Appendix: Confidential references

The ethics committee approvals for this enquiry, from each of the three universities, specified that participants and institutions be de-identified.

This confidential appendix identifies individuals and locations referred to in the following appendices:

Appendix 4.1


Appendix 4.5


Reid, I. (2005). Quality Assurance, Open and Distance Learning, and Australian Universities. International Review of Research in Open and Distance Learning 6, (1), March.


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310
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320


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