PERCEIVED AFFORDANCES AND LEARNING STRATEGIES OF MALAYSIAN UNIVERSITY STUDENTS IN WEB 2.0-BASED INFORMAL LEARNING OF ENGLISH AS A SECOND LANGUAGE: A MIXED METHODS STUDY

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BA Hons (Trans & Interpr), MA (Trans)

A thesis submitted in total fulfillment of the requirements for the degree of

Doctor of Philosophy

School of Education
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<td>COP</td>
<td>Communities of Practice</td>
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<tr>
<td>L2</td>
<td>Second language</td>
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<td>Edu</td>
<td>Educational</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>NCREL</td>
<td>North Central Regional Educational Laboratory</td>
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<td>EFL</td>
<td>English as a Foreign Language</td>
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<td>FL</td>
<td>Foreign Language</td>
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<td>O/L</td>
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<td>Qualitative</td>
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<td>Quan</td>
<td>Quantitative</td>
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<td>RQ</td>
<td>Research Question</td>
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<td>RSS</td>
<td>Really Simple Syndication</td>
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<td>SMS</td>
<td>Short Message Service</td>
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<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>Wi-Fi</td>
<td>Wireless Fidelity</td>
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<td>ZPD</td>
<td>Zone of Proximal Development</td>
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DEFINITIONS OF TERMS

The following terms are used repeatedly in this study.

**Activity Theory** – In Activity Theory people act with technology; technologies are both designed and used in the context of people with intentions and desires. “People act as subjects in the world, constructing and instantiating their intentions and desires as objects. Activity Theory casts the relationship between people and tools as one of mediation; tools mediate between people and the world”. (Kaptelinin & Nardi, 2006, p. 10)

**Blog** – “A system that allows a single author (or sometimes, but less often, a group of authors) to write and publicly display time-ordered articles”. (Franklin & Harmelen, 2007, p. 5)

**Informal Learning** – Learning which occurs independently of a formal curriculum and formal contexts, and includes in this study all forms of web 2.0 technology-supported learning through self-guidance, virtual communities of practice and collaborative problem-solving. Often, learning takes place without an explicit planned or enacted content, with no set time or place of learning and no explicit assessment of learning outcomes.

**Language Learning Strategies** – “Strategies are the conscious actions that learners take to improve their language learning... Because strategies are conscious, there is active involvement of the L2 learner in their selection and use. Strategies are not an isolated action, but rather a process of orchestrating more than one action to accomplish an L2 task. Although we can identify individual strategies, rarely will one strategy be used in isolation”. (Anderson, 2003, p. 3)

**Learning Manager** – The learner is responsible for her/his own planning, directing and completing learning experiences especially through social networking. Therefore, the learner gains initial confidence and critical thinking skills to learn in collaborative virtual spaces, while adopting contributing roles in learning activities online for self and others.

**Perceived Affordance** – The awareness of the actionable properties (functions and usability) of resources in the environment by an actor. When perceived, an affordance allows actors to take actions that may satisfy certain needs and a user can imagine what the object can allow them to do. In this study, the educational affordance of the technological tool is available and perceived by learner-users, enabling them to accomplish particular goals. Specifically, the perceived affordance refers to the detection of functions of the resources in Web 2.0 tools for achieving the informal learning for ESL purposes.
**Perception** – An integral part of human interaction with the world. It plays a key role in both carrying out actions and determining what the action capabilities of a particular individual are (Kaptelinin & Nardi, 2006, p. 81).

**Situated Learning Theory** – According to this theory, people share significant experiences and where learning takes place through increasing levels of engagement through Community of Practice (CoPs). In this study, learners believed that they gained awareness of learning objectives through conversations and social interactions and consequently improve their personality developments in terms of perceptions, reflections and valuable learning activities within everyday practice.

**Social Networking Sites** – Social networking sites are Web 2.0 based tools that allow users share a lot of private information including photos and personal details. Users get to know a lot about the private lives of others which poses major security and privacy risks. Examples of these sites are Facebook.com and MySpace.com (Franklin & Harmelen, 2007, p. 6).

**Web 1.0** – refers to the early stages of the World Wide Web. Web 1.0 is an internet server that supports formatted documents in hypertext markup language (O'Reilly, 2005).

**Web 2.0** – refers to “wisdom Web, people-centric Web, participative Web, and read/write Web. Web 2.0 harnesses the Web in a more interactive and collaborative manner, emphasizing peers’ social interaction and collective intelligence, and presents new opportunities for leveraging the Web and engaging its users more effectively… It’s a collection of technologies, business strategies, and social trends”. (Murugesan 2007, p. 34)

**Wiki** – “a system that allows one or more people to build up a corpus of knowledge in a set of interlinked web pages, using a process of creating and editing pages”. (Franklin & Van Harmelen, 2007, p. 5)

**Zone of proximal development** - refers to the idea by Vygotsky (1977) of the distance between what a learner can learn independently and what the learner can do with assistance.
PERCEIVED AFFORDANCES AND LEARNING STRATEGY OF MALAYSIAN UNIVERSITY STUDENTS IN WEB 2.0-BASED ENGLISH AS A SECOND LANGUAGE INFORMAL LEARNING: A MIXED METHODS STUDY

ABSTRACT

Recent advances in Web 2.0 technology offer an emerging social networking practice, authentic materials and contexts to promote learner independence and active engagement in informal ESL acquisition. The purpose of this study was to examine the effect of Web 2.0 technologies on Malaysian university students’ informal ESL learning practice. It focuses on specific aspects of the data that relate to the concept of the “perceived affordances of Web 2.0 tools and learning strategies for informal ESL learning”. The researcher applies a mixed-methods approach combining multiple data sources (i.e., on-line self-reported surveys and focus group interviews) and analysis methods. Questionnaires are used to generate quantitative data from the university student population (N= 400) through the on-line self-reported survey. Five in-depth focus group interviews comprising 20 students are conducted. This stage aims to contribute further insights into these issues. Finally, the analysis integrates the results of the two methods during the interpretation stage. A majority of the participants find their virtual sociocultural interactions mediated by Web 2.0 tools to be useful for motivating informal ESL learning and strategies. This study makes the case for Web 2.0 tools as familiar generative and expressive resources for informal learning processes by discovering the patterns of voluntary and spontaneous engagement. The research indicates that context-sensitive, Web 2.0 tools are preferred by learner-users especially for their online identities formation, their repeated practice and rehearsal of informal learning affordances, in relation to the development of both social and personal learning of ESL.

Keywords: Web 2.0, affordances, ESL, informal learning, learning strategies
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Signed . 

Date JANUARY 2013
DEDICATION

I dedicate this to my spirited children and treasures, Muhammad Luqman Imran and Muhammad Haqim Firdauz, for your gift of love, all the joy and I am blessed to have you in my life, and to my loving husband, Amir Bin Mustaffa, for his unwavering inspiration, infinite patience and for standing by me to the very end. This Phd endeavor would not have happened without his unconditional love.
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CHAPTER ONE: INTRODUCTION

In such a world, many will only dabble, some will dig deeper, and still others will master the skills that are most valued within the community… [In fact,] we may never know whether a tree makes a sound when it falls in a forest with no one around. But clearly, a [technology tool] does nothing in the absence of a user. (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2006, p. 7)

1.0 Introduction

Technology-mediated sociocultural practice requires the dynamic interplay of learner-users’ roles, learning contexts and technology tools. The intentions of users interact with the perceived features of these tools in enabling up-to-date personal experiences of informal learning and social networking available online. This study aims to explore the current perceptions among Malaysian university students about their informal learning and strategies of English as Second Language (ESL) learning via Web 2.0. As a tertiary language teaching practitioner who has experience and background in learning ESL in a Malaysian setting, this researcher is fully aware of the limitations of in-class learning. For example, the classroom contact hours in themselves are insufficient and limited, especially if the learner does not engage in any ESL learning activities outside class. Therefore, educational practices that provide opportunities for meaningful learning are needed beyond the classroom (Antenos-Conforti, 2009; Gardner, 2011). This meaningful learning experiences offer great opportunities for new, fun and interactive ESL learning experiences and daily learning motivation. Important factors in these Malaysian university students’ practices are their personal learning experiences and the
integration of many new, second generation media technologies, often called Web 2.0 tools. In this regard, the engagement with technology reflects learners’ personal attitudes and beliefs, which also influence interaction with others and offer technologically-mediated authentic opportunities of natural extensions of the classroom learning.

There is emerging confirmation from scholars that web technologies have evolved historically through powerful development of learning resources with unique functions such as communicating, storing and integrating different technologies. These provide useful leads to conceptualize how Malaysian ESL students utilize the tools for informal learning. In particular, higher education is now recognizing the roles of global knowledge-building technologies in formal and informal student learning (Ebner, Lienhardt, Rohs, & Meyer, 2009; Freishtat, 2009; Murray & Hourigan, 2010). The technologies also facilitate learning motivation and lifelong learning and enable collaborative community-building (Abedin, Daneshgar, & D’Ambra, 2011; Branch, 2012; Hoy, 2011). Thus, there is obvious potential within these new media resources to empower Malaysian ESL learners with authentic learning affordances such as to communicate, practice and rehearse through the multiple identities and learning strategies they adopt in the virtual environment. In order to achieve a sound understanding of the learners’ experiences and practices with Web 2.0 technologies, their daily learning culture as developed by the Web 2.0 media needs to be explored thoroughly. In describing informal learning via new technology, Sefton-Green (2004) writes, “whether voluntary, accidental, embedded [or] experiential” in learner-users’ social and cultural lives, the technology encompasses “wonder, surprise, feelings, peer
and personal responses, fun and pleasure” (p. 2). Informal learning can also take place in formal education settings, when motivation is focused on overcoming authentic problems with little instructional guidance (Ebner et al., 2009; Oblinger & Oblinger, 2005).

This research is undertaken to investigate the potential of Web 2.0 tools for informal ESL learning affordances and learning strategies among Malaysian university students. This research inquiry is broadly guided by the assumption that if learner-users (participants) are able to experience socially-driven Web 2.0 technologies, their behaviours and actions of perceiving affordances and strategies for informal ESL learning could be influenced in a positive way to support learning. The study’s assumption and mixed methods data collected have assisted in contributing to research through investigating four main research questions:

1.1 Research questions:

1. What are the trends and patterns of participants’ engagement with the Web 2.0 tools in terms of usage frequency, usefulness for their informal daily English learning, places of access, and perceived most used tool?

2. What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?
3. What are the perceived learning strategies used by these learner-users in the informal environment in question 2?

4. What are the implications of these findings for future use of Web 2.0 in the informal ESL learning or other related areas?

1.2 Background of the research

Research indicates agreement that Web 2.0 technologies challenge the ways people understand their daily practices and relationships, especially in communicating, sharing and collaborating (Dillard, 2011; Hernandez, Montaner, Sese & Urquizu, 2011; Owen, Grant, Sayers, & Facer, 2006). These Web 2.0 technologies are social, open and easy to use: thus they embrace the potentially active participation of all Malaysian university students outside the classroom. Consequently, the learners are able to utilise collections of technology resources to create and post content, collaborate on tasks in voluntary social networking for their informal ESL learning. O’Reilly (2005) notes that Web 2.0 was primarily formulated as a method of understanding a new edition of the web that allows the freedom to discover, modify, and redistribute information on a demand basis. The original idea of Web 2.0 as proposed by O’Reilly is as follows:
Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an ‘architecture of participation’, and going beyond the page metaphor of Web 1.0 to deliver rich user experiences. (p. 1)

According to O’Reilly, virtual communication is evolving from a basic platform of the web 1.0 (read-only environment) to Web 2.0 that enables individual participation including the “collective intelligence” and “architecture of participation” (2005, p. 1). This re-conceptualizing process of assessing the spaces in which users come to interpret themselves, others, and their own resources of production is critical in understanding how the read/write/view/listen via web meets the potential patterns of practice for Malaysian higher education ESL learners. These new sociocultural mediation tools are user-centred and often user-co-built (Jokisalo & Riu, 2009), so learner-users become active, self-motivated and independent learners. In this sense, these new forms of informal learning activities may highlight the rapid development of virtual communities of practice through adaptation of democratic cultures and their popularity among Malaysian ESL learners.

Meanwhile, in the Malaysian context, the evolving status of English and technology has been highlighted in Malaysia’s education plan: vision 2020, established by Tun Dr. Mahathir Mohamed, the former Prime Minister of Malaysia, aims to transform the state into an Information Technology (IT) based scientific society. “The realization of this vision required among others, a greatly expanded access to higher education, both
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through public and private sector provisions. This expanded access would in turn enable Malaysia to become a regional hub for higher education” (Tham, 2010, p. 111). Accordingly, all Malaysian universities currently offer technology-based education in the English medium. English language has become a global language and a compulsory subject in Malaysia. Although having been exposed to the language for 12 years of schooling before continuing at higher education, Malaysian students still face various technical and functional problems in mastering ESL due to a lack of opportunities to practice their skills outside of the classroom (Ngah, 2007).

As yet, the research on Web 2.0-based informal ESL learning in Malaysia is still in its early stages and mostly limited to contributing to the general affordances of Web 2.0 for formal education, not based on voluntary learning of ESL for Malaysian university students. It is important that practitioners, especially ESL educators, know what, why and how such technologies are being used to support informal learning, in terms of perceived affordances of Web 2.0, digital-age ESL learning strategies, and online learning communities. In this sense, Web 2.0 tools have the potential to influence Malaysian university students’ ESL learning in profound ways. However, the researcher cannot begin to understand and harness this potential until there is a deeper understanding, from students’ perspectives, of the ESL learning that takes place in these informal learning contexts. Therefore, effectiveness of Web 2.0 must be examined and surveyed from the user perspective so that these challenges present opportunities for both students and lecturers to work collaboratively to solve problems and reach goals (Armstrong & Franklin, 2008).
1.3 Theoretical framework

This mixed methods case study uses the multiple lenses of sociocultural theory and affordance theory as conceptual and interpretive tools, to capture the complexity and the fine-grained types of activities of these learner-users’ sociocultural experiences in informal ESL learning via Web 2.0. Affordance theory (Gibson, 1979; Van Lier, 2004) helps to provide a magnified close-up lens in relation to an individual’s collective practices and the self in a context perspective. Situated learning theory (Lave & Wenger, 1991; Wenger, 1998) and activity theory (Engeström, 2001; Leontiev, 1978; Vygotsky, 1978) are also viewed to highlight communal practices. A case will be put (in Chapter Three) for the value of combining these different lenses for the interpretive and explanatory outcomes of this study. The perceived affordances, limitations of Web 2.0 and learning strategies can be conceptualized as learning histories which are imported into the informal ESL learning activity and which have helped shape the learner-users’ engagement in the transformation of their shared learning objectives. The results of the participants’ careful thinking and internal rehearsal in learning are determined by the workability of their intentions in their sociocultural learning system. Learners’ intentions determine the activities acted upon and distinguish what, why and how the conscious actions of perceived affordances of Web 2.0 and strategies for informal ESL learning are performed.

These lenses, the researcher will argue, are useful to discern and describe the complexity of learning engagement in this a multidimensional research context including unseen activity, various degrees of participation in virtual learning
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communities, and potential changes in personal identity. These lenses also provide the basis for a model of sociocultural participation in a virtual learning environment drawing on patterns and interactions of Web 2.0 tools to situate ESL learning outside of the classroom. The study draws on Vygotsky’s (1978) perspective, on the value of tool-mediated learning with real practices and potential of this perspective for the conditions to be clarified. According to Vygotsky, human development is said to be historically and culturally situated through the social interactions and scaffolding from more capable others. Meaning-making and linguistic performance are co-constructed through internalization of actions and mental operations that develop from symbolic (language) or physical tools in the learner-users’ environment. Consequently, in Web 2.0-based informal learning activity, using ESL and Web 2.0 tools will no longer be a goal-directed process but a shift to self-regulated behaviours. Thus, it is important to explore further the sociocultural patterns that emerge among Web 2.0 tools, multi-dimensional learning contexts, and the learner-users themselves using the current theoretical framework of Web 2.0-based informal ESL learning as discussed in more detail in Chapter Two.

1.4 Potential significance of the study

This study is significant for several reasons. First, the findings have the potential to extend knowledge from present research about informal ESL motivation beyond formal settings and beyond understandings of attitudinal basics that sustain motivation. Second, second language (L2) educators will benefit from gaining a better understanding of the characteristics inherent in Web 2.0-based learning contexts that help support
independent learning of ESL. This knowledge will direct education practitioners and policy makers to integrate these factors into their formal activities and instructions, to promote students’ learning performance. The findings may also help in setting strategies to sustain the successful implementation of educational technologies in tertiary education, schools and student-teacher programs. Similarly, the results of the study can be of value to curriculum designers and educational technologies systems developers, especially in offering approaches for the design of web-based learning systems that would be more accessible to the twenty-first century learners.

Third, ESL learners in both formal and informal contexts will benefit from the findings of this study, especially for less motivated learners. It is vital for such learners to understand the factors that motivate others and in turn help promote their own learning motivation and their critical thinking abilities. Advancing research towards a better understanding of the informal contexts of learning, using the new interactive social networking tools of Web 2.0 within situated online contexts, may enable further development of theories of how learning is tied to the social and cultural contexts in which popular digital media are employed. These integrations will not only transform instruction in educational institutions, they will also develop learners’ sense of inquiry and engage learners in a competitive knowledge-based society. Web 2.0 technologies depend upon a set of new practices (Lee, McLaughlin, & Chan, 2008), and it is vital for researcher to examine how and why Malaysian university students learn through these technologies outside the classroom environment, in order to facilitate the design of new approaches in higher education.
1.5 Structure of the dissertation

This study investigates usage and engagement with Web 2.0 technologies among Malaysian university students in terms of emerging practices, perceived affordance of Web 2.0 technologies and learning strategies in relation to their ESL practices outside the classroom. Figure 1.1 illustrates the conceptual and research framework of the structure of this dissertation.

![Conceptual and research framework of the study](image)

Figure 1.1: Conceptual and research framework of the study
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This dissertation addresses the above conceptual and research framework, as shown in Figure 1.1, and is presented in seven chapters. Chapter One describes the background theory section, including research questions of interest, the multi-dimensional context of Web 2.0-based learning established from the outset of the research and the potential significance of the study. Chapter Two identifies relevant literature pertaining to these research questions. Chapter Three presents the theoretical basis of the study by illustrating the value of the integrated theoretical framework of activity theory, affordance theory, and situated learning theory. This integrated theoretical framework is employed in order to achieve a novel and resourceful perspective on the complexities of informal ESL learning mediated by Web 2.0 resources in learners’ daily lives. Chapter Four discusses the methodology of this study. It is based on a concurrent mixed methods case study approach in which equal emphasis is given to quantitative and qualitative methods. The data collection procedures include online surveys (self-reported questionnaires) for gathering quantitative data and focus group interviews for gathering in-depth qualitative data.

Chapter Five presents the results and outcomes from the quantitative data of the quantitative stage. Chapter Six reports on the qualitative phase of this study which provides in-depth and rich explanations of ‘why’ and ‘how’ the Web 2.0 tools were used by participants in their daily learning of ESL beyond the walls of formal learning spaces. Chapter Seven presents the discussion of the mixed methods case study through the theoretical lenses gained in the literature, and presents the research conclusions. These conclusions are followed in the same chapter by reflections on the research process, including a discussion of the study’s theoretical and methodological
contributions to knowledge, the summary of limitations, and recommendations for future work.

### 1.6 Summary

In Chapter One, the researcher presented the research questions, the conceptual and theoretical frameworks, the research background of the researcher, the potential significance the research, and provided an outline of the dissertation. The following chapter, Chapter Two, reviews the literature findings and the developing theoretical perspectives adopted regarding Web 2.0-based learning environments.
CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

In this chapter, the researcher briefly reviews broad learning frameworks to show the limitations of those frameworks in contributing to the present study before a case is presented. The chapter draws on current literature to provide a theoretical direction for understanding and interpreting Web 2.0-based informal ESL learning for Malaysian university students. The aim of this chapter is to review the literature critically at the intersection of four broad distinct theoretical fields, namely 1) history of educational technologies; 2) the millennial learners; 3) Web 2.0 affordances and limitations; 4) online learning strategies and their interconnectedness. These areas are reviewed through the particular context of university students as ESL learners and through the viewpoint of participants involved in the informal learning environment. Hence these four interlocking elements for this literature review can be illustrated thus in the following diagram which is meant to be indicative, rather than precise, in the interplay of the elements (Figure 2.1).
2.1 An overview of educational theories

This section sets out the theoretical orientation of this study as a sociocultural view of web-based learning. The section defines key theories of learning which have been or can be applied to observation of young learners’ informal interactions with web tools. These learning theories are important in helping the researcher draw links between Malaysian university students’ learning in these contexts and learning in any setting or those beyond the classroom. The main theories discussed here include behaviourism and constructivism, which stand in contrast to the educational theories of Vygotsky (1978). Next, the researcher examines theories of sociocultural theory which argue that we need to understand learning as a social process and to look closely at sociocultural contexts. Then, the section describes educational technology studies and the newfound
interest in the role of cultural and social contexts (Dale, 2010; Liu & Matthews, 2005; Kaptelinin & Nardi, 2006) which attempt to theorize the whole range of web technology-related experiences.

2.1.1 Behaviorism

Behaviourism is traditionally a theory underlying a curriculum-centred ideal of education. So far, behaviourism is still employed in instruction and is generally linked to the work of B. F. Skinner, who believed that teaching was a practice of setting up processes as a basis for learning. Learners can acquire skills by training and reinforcement that are shaped by the presentation of an underpinning stimulus for learners’ actions (Skinner, 1958). In this regard, Skinner assumed that higher order thinking skills, such as creativity and critical thinking, might additionally be cultured in this manner. He described three kinds of situations that can shape behaviour, namely positive reinforcement, negative reinforcement and punishment (Skinner, 1958).

Subsequently, educational technologies of today inspired by Skinner were based on the rigid ability of extremely basic editions of an educational “machine” such as easy feedback data (wrong answer/correct answer) pursuing the learners’ input across a task in order to encourage the student to take an active role in the learning process (Shield, 2000). Skinner (1958) notes the concept of a “Teaching Machine” as “in using the device, the student refers to a numbered item in a multiple-choice test. He presses the button corresponding to his first choice of answer. If he is right, the device moves on to the next item; if he is wrong, the error is tallied, and he must continue to make choices
until he is right” (Skinner, 1958, p. 971). We can clearly discern the similarities between the Teaching Machine and much of today’s instructional computer software, projected for underpinning student behaviour. Computers and educational technologies are far more complex versions of the Teaching Machine that guides us to conclude that some behaviourist concepts are quite significant in present educational scenarios. For instance, the use of drill and practice tutorials, with individual instructions and feedback drill and practice are still applicable in today’s instruction (Shield, 2000). Shield (2000) describes this kind of discovering, whereas a learner-user “is rewarded through an encouraging comment before moving on to the next learning objective” (p. 1). This practice exists such as in the use of the interactive computer and video games that are so highly engaging to young learner-users. Shield also points out that the students can discover easy skills and thoughts (for example, to memorize bits of information) as an initial attention procedure before the more complex knowledge can be internalized. As a consequence, the students are expected to have learned and reproduced the intended knowledge the teacher planned.

However, critics of behaviourism claim that this theory is not adequate to help the learners in real-life situations because it is impossible for students to discover all kinds of knowledge required in real-life settings from teachers or even from computers. For example, Shield (2000) is clearly talking about this issue when the learning activities become more advanced intellectual (cognitive) tasks, and the benefits become more challenging. Shield (2000) also highlights that in fact, “learning is a personal activity. It depends upon a series of factors that are often very difficult to control and manipulate”,
and thus inappropriately behaviourism is most useful “for factual and rote learning” (p. 1). In the same vein, the learners with different learning abilities require more than just behaviourist styles of learning. In this view, Dale (2010) quoting Dale and McCarthy (2006) reports that “… people have different learning styles and one approach will not suit” (p. 14). He refers to his study in which he found the “disparate learning abilities” of students meant that they did not all benefit from attending lectures. As behaviourism has been shown to have limited usefulness in university settings, constructivism will be examined as possibly a more suitable approach for theorising about learning in the subsequent section.

2.1.2 Constructivism

In contrast to both the behaviourist approaches to learning is the constructivist approach. Constructivism as a philosophical perspective contends that individuals form or construct much of what they learn and understand. It emerged as interest declined in behaviourist theory (Liu and Matthews, 2005, p. 387). Piaget and Vygotsky are major names associated with constructivism and their work on the development of the learner and the way knowledge is constructed forms the basis of this theory (Liu and Matthews, 2005).

By this, according to Liu and Matthews (2005), there are two branches of constructivism. One is cognitive constructivism, based on the work of Piaget. According to this theory, constructivists in education put more emphasis on the “intrapersonal” development because knowledge is “individually and idiosyncratically
constructed or discovered. Cognitive or radical constructivists consequently emphasise learner-centred and discovery-oriented learning processes” (Liu and Matthews, 2005, p. 387). Liu and Matthews (2005, p. 388) also criticise both behaviourist and cognitive constructivist approaches, for failing to define “the active role of the learning agent” based on individual variations and the impact of the sociocultural contexts in daily learning.

The other branch of constructivism is social (or realist) constructivism, which stems from Russian psychologist Lev Vygotsky’s (1978) work. Vygotsky (1962) “criticised the behaviourist approach as being too narrow, specialised, isolated and intrapersonal in standpoint” (as cited in Liu & Matthews, 2005, p. 387). Therefore, Vygotsky gives emphasis to the central role of the social environment in learning and considers learning as “a largely situation-specific and context-bound activity” (Liu and Matthews, 2005, p. 388). In this way, social constructivists argue that shared meaning occurs through social negotiation and that essential aspects of mental functioning in the individual derive from social life (Dale, 2010; Vygotsky, 1978). Consequently, various available digital technologies have been used as means for the sharing of perspectives and social communication among groups, thus the need to focus on social constructivism has grown substantially in education. Social constructivism is addressed in the next section.

2.1.3 Social constructivism

Vygotsky’s work (1896-1934) has led to the development of social constructivism through his theory of social cognitive development. From this paradigm, learning not
only occurs through the individual’s cognitive processes but also through social, historical and cultural contexts (through which the knowledge was constructed). In other words, cognition (mental, language, and social development) is mediated through social interaction among individuals’ collaboration and out of learners’ unique experiences. This is because “human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them” (Vygotsky, 1978, p. 88).

Furthermore, Vygotsky also acknowledges that social aspects play an important role in understanding the role of language and communication in intellectual development, as pointed out by Liu and Matthews (2005) as follows:

Language should not be seen as merely the accidental assembly of purely physical sounds and forms because any language system is at the same time the result of the whole developmental history of the language. To study a language is to study a meaning system as a consequence of historical development. Due to the historical aspect of semantics, the interaction between individuals and society is now placed not within constant parameters of stability but on a continuum of time and historical development. (p. 394)

Compared to traditional learning theories, contemporary studies into social-based learning have been meeting different challenges due to the social evolution as well as the impact of media technology. The theories emphasize the social nature of learning processes at an individual level, such as learners’ needs, motivations, perceptions, experiences, and adopting more pragmatic practices (Duke, 2010; Kaptelinin & Nardi, 2006; Liu & Matthews, 2005; Salomon & Perkins, 1996). As noted by Salomon and
Perkins (1996), the learning process is the ongoing development of “the learner’s active engagement in assembling, extending, restoring, interpreting or in broadest terms constructing knowledge out of the raw materials of experience and provided information” (p. 5). Therefore, in many ways, the use of Web 2.0 technologies clearly support social constructivist approaches to education by deeply engaging the learners in the learning context, especially in decision making and knowledge development (Duke, 2010).

In fact, the history of educational technology is not linear; it presents significant overlapping areas, but it still reflects fairly well the revolutions that took place in education as a scientific discipline over many years. The important field of research has greatly expanded from simple exercises based on fill-in-the-blank and multiple choice exercises, educational technologies have evolved into a field that now include virtual worlds and social media (Boruta, Chang, Gutl, & Edwards, 2011). These theories have been selected on their relevance to the argument that the author is making for a theoretical orientation for this study. Indeed, the learning task can be personalized to the learner’s skills rather than the learner having to fit in with the software designer’s generalized understanding of how learning ought to occur. The creation of these rich learning technologies needs to be fully integrated to allow for and extend existing learning environments (Shield, 2000). We can clearly see the relevance that social constructivist ideals have in today’s educational practices, as real-world social constructivist learning situations are more motivating to students through practical application of knowledge and as a catalyst of knowledge construction (Dale, 2010; Duke, 2010; Dunleavy, Dede, & Mitchell, 2008; Salomon & Perkins, 1996). In view of
that, the aim of social constructivist education is to develop learners who are able to engage in independent thought and knowledge creation.

2.1.4 Technology and learning: the influence of the sociocultural approach

As technology-based learning arises, the emerging virtual interactions between individuals ought to be investigated across suitable communal and cultural lenses (Kaptelinin & Nardi, 2006; Ullrich, Borau, Luo, Tan, Shen, & Shen, 2008). Parallel to the present advances in knowledge for worldwide collaboration, many researchers are discovering prospects in Vygotsky’s (1978) sociocultural thoughts concerning learning in a communal context (Dale, 2010; Lave & Wenger, 1991; Lantolf & Thorne, 2006; Wenger, 1998).

According to Kaptelinin and Nardi (2006) in their book “Acting with Technology”, the sociocultural approach helped shift the view of knowledge as a state, to knowing as an activity: a dynamic, intentionally and socially shared process. To be more precise, the introduction of sociocultural ideas represents ideal conditions for design and development of technology-based learning. Kaptelinin and Nardi acknowledge the importance of tools and technologies mediation, which influence the learning activity by developing and extending what learner-users can do as they come to appropriate new technologies (p. 267). This process inspires a view of learning reorganization and connection to resources, people and outcomes through the technology mediation. Moreover, the developments of more interactive technologies support learners to easily establish links and engage in collaborative activities. Such engagement is based on the
capacity to link technology mediated activity to the actual contexts of cultural practice where learners negotiate shared meanings and community-building (Kaptelinin & Nardi). Taken together, the sociocultural context as an overarching dimension affects all technology-based learning, relationships and engagement under a great variety of circumstances through mediating technologies.

In recent years, the nature of teaching and learning in higher education institutions has changed significantly including in Malaysia. Ngah (2007) acknowledges that the integration of technology into second language teaching and learning in this country has improved the instructional strategies considerably. Modern principles of teaching and learning are currently moving from the traditional recall of facts and grammar-translation methods into the areas of collaborative problem-solving and creative thinking which are very much needed in today’s knowledge-based economy (Ngah, 2007). Typical teaching and learning practices in Malaysia include technology-based strategies and activities in daily lessons, open communication, and formal assessment by using feedback to stimulate learners’ motivation and proficiency.

The evolution of social web and educational technologies has had a substantial impact upon learners’ engagement, thus instructors have had to update their teaching strategies (Dale, 2010; Franklin & Van Harmelen, 2007; Hernandez et al., 2011). Dale’s (2010) thesis examines the pedagogical framework for engaging the active learners using web tools. The pedagogical framework consists of three ideas drawn together that have emerged from the author’s research. Firstly, various learning paradigms must be recognized when determining pedagogical strategies to engaging with educational
technologies. Secondly, the thesis illuminates how the author’s research on Web 2.0-based learning technologies should embrace networked communities and learner empowerment. Thirdly, the inquiry on learning strategies is discussed according to the various learners’ behaviours and the application of numerous teaching and learning approaches. A set of practical recommendations based around institutional, instructors and learners’ viewpoints are discussed and strengthen the implementation of the framework.

Lee et al. (2008) confirm the value in Web 2.0-based education of socioculturally defined conversation, supported scaffolding and shared activity with others (including instructors, peers and community). In this sense, as communication is often shaped by different tools and technologies, the authors placing responsibility for inquiry based learning and active participation on the learner such as developing their self-direction, collective learning and personal learning styles. Moreover, the social constructivist principles in Web 2.0 enable community-building and the dissemination of learner-generated content. This in turn acts as a catalyst and support towards authentic, peer-to-peer learning especially for “idea generation, collective problem solving and reciprocal dialogue, as well as in the exchange and revision of ideas” (p. 513). As a consequence, learners are enabled to acquire the ability to shape their own informal learning trajectories as well as becoming actively involved with others “to scaffold cognitive behaviours and encourage collaborative discourse by establishing a shared goal, highlighting the importance of socio-cognitive dynamics and emphasizing the supportive role of information and communications technology as a mediating artefact” (p. 518).
In a similar way, Franklin and Van Harmelen (2007) suggest that a social constructivist approach has a central concept that knowledge is constructed by learners “in the context of and as a result of social interaction” (p. 20). Intrinsically, the constructivist approach is “particularly aided by Web 2.0 tools” (p. 20) such as Wikis and social bookmarking. A group of students may cooperate and construct an artefact in these tools and the teacher can act as a facilitator “who provides scaffolding in the same Wiki” (p. 20). The authors particularly note that an important aspect of the role of the learners within constructivist frameworks is to discover how they can appropriate the affordances of the web to mediate important learning interactions while making provisions for its limitations. This idea is matched with Salomon and Perkins’s (1996) view that learning is primarily centred on the types of activities that learners participate in and “the kinds of tasks they try to accomplish, and the kinds of intellectual and social activity they become involved in, in interaction with that which computing affords” (p. 3). Consequently, as rich and effective networks, learners can apply what they acquire, for instance, by evaluating understanding, establishing interactions (Arbaugh & Benbunan-Fich, 2007; Brown & Adler, 2008; Salomon & Perkins, 1996) and developing applications towards extended knowledge.

Finally, the essential argument of this thesis has been to make the case that novel and numerous kinds of informal ESL learning are occurring beyond the formal instruction system and that there is a need to research this subject. In looking at the historical examples of educational and technological-based behaviourism and constructivism practices, the researcher can begin to initiate propositions for the future of educational technology. Shield (2000) concluded that historically, both behaviourist and
constructivist learning theories contribute to the overall understanding of technologies-based learning. But at present, social constructivist theorists asserted activity system as the value of a unit of analysis (Kaptelinin & Nardi, 2006; Lantolf & Thorne, 2006; Reinartz, 2009). In this view, specific circumstances of an event or activity are essential to understanding how people act in their attempt to reach their goals. In effect, because consciousness is a product of society, we should explore the individual-in-social action. To conclude, the principle of situated learning community indicates that student higher order mental functioning has its roots in social relations. The mind, therefore, is distributed in society, and extends beyond learners’ cognitive activity. The theoretical orientation of this thesis as a sociocultural view of learning and further discussion on the implication of these ideas for this research has been set out in the next chapter (Chapter Three).

2.2 Web 2.0: The millennial learners

There is much to be understood about leisure or informal use of web opportunities by young people (Bartlett-Bragg, 2006; Oblinger & Oblinger, 2005; Tapscott, 2009). At present, it is clear that they are often enthusiastic and frequent users. It is also clear that they invest effort in creating an online identity that usefully interacts with their social life (Greenhow & Robelia, 2009) in the offline world. Increasingly, web services are offering tools that allow “Digital Citizens” to demonstrate good online practices and make visible to other members their preferences and interests. Greenhow and Robelia (2009) define this Digital citizenship as:
CHAPTER TWO: LITERATURE REVIEW

... young people’s ability to practice digital citizenship as including their developing awareness of social and political issues and online participation in public life. Moreover, quality online participation, in our view, entails demonstrating respect for the rights and responsibilities of self and others in the digital commons, including using and knowing how to use SNSs safely by adjusting privacy settings, downloading music and other media files legally, posting messages that are respectful to their online community, and encouraging others to practice responsible online behaviours. (p. 125)

In addition, the international public relations watchdog Trendwatching.com (2004) identified the emergence of a new generation of online citizens- “Generation C” (for “creative”, “content-driven” and “community oriented”). This generation shares a strong passion for knowledge transmissions and open-source software developments, which are enlightening the web applications (Brown, 2006; Tapscott, 2009). Oblinger and Oblinger (2005) said that relative to “familiarity” and “engagement” with web technologies in life, “Generation C” is matching with the “Net Generation”, “Baby Boomers” and “Digital Natives”. Basically, they move beyond individually-based interests and pursuits of advancements and entertainment towards a communal community of global knowledge creation and sharing. As a result, web tools and such generations have had a mutually dominant and “almost symbiotic relationship” (Oblinger & Oblinger, 2005).

Brown (2006) proposed the three key features of Generation C as follows: (i) extensively engaging with digital technologies in everyday life for socializing, learning and working, (ii) using multiple modalities and mental pathways for accessing, processing and generating information and knowledge and (iii) having strong preference for social connectedness and experiential learning. This new generation not only use but
are also active producers of content, information and knowledge (Oblinger & Oblinger, 2005; Tapscott, 2009). Furthermore, to have a voice in Web 2.0 multimodal generation, they must be able not only to use the technologies but to recognize issues that impact their communities and to be able to respond to contentious issues, while sustaining the spirit of a democratic public (Dietel-McLaughlin, 2010).

In the same vein, Prensky (2001) proposes Millennial Generation Learners as “Digital Natives” because they are “native speakers of the digital language of computers, video games and the internet” (p. 1). Prensky (2001) notes “Digital Natives” have spent their lives surrounded by cell phones, video games, and computers, and he asserted because of their immersion in technology, students now think differently than their predecessors. The students may know how to use web tools better than do their instructors and they can be the experts when required (Mortimer, 2010). This generation seems to use technology that they are comfortable with, to gather information, reflect on it and work with it, for example, to communicate visually through photos and videos (Oblinger & Oblinger, 2005). Specifically, the young people, including language learners that heavily engage with Web 2.0 tools, are considered as “Net Gen”, if they “crave interactivity… [and are] constantly connected and always on” (Oblinger & Oblinger, 2005, p. 2.6). These learners tend to be avid users of online collaborative technologies and are both users and creators of web content. They are using online collaborative technologies to communicate and express themselves.
2.2.1 Web 2.0: What to learn?

The value of current media technologies is how they expand networks “where users are acculturated into a process of engagement and knowledge transmission” (Freishtat, 2009, p. 242). The regular skills we learned in school can no longer be meaningful for a lifetime, so the focus must shift from how we learn to what we need to learn, and how we learn to learn.

Warshauer (2007) highlights the issue of what generation C students learn and how they learn in their daily schooling practices. Accordingly, ‘what to learn’ refers to the encoded knowledge, literacies, skills and capacities that schools need to help students develop in order to successfully participate in this digital, conceptual age. The ‘how’ of learning relates to the pedagogical frameworks and ensuing learning environments that best allow students to develop those literacies and capacities. Warschauer (2007) stated that, this includes a comprehensive framework describing essential factors of twenty-first century skills and literacies as published in The North Central Regional Educational Laboratory (NCREL) (2003). These skills are grouped into four main categories (p. 12):

i) Digital-age literacy including basic, scientific, visual, technological, economic, multicultural, and global awareness literacy skills.

ii) Inventive thinking including self-direction, adaptability, managing complexity, curiosity, creativity, higher order thinking, sound reasoning, and risk taking skills;
iii) Effective communication including interactive communication, teaming, collaboration, civic responsibility, social responsibility, personal responsibility, and interpersonal skills.

iv) High productivity including effective use of real-world tools, planning, prioritizing, managing results, and producing high quality products.

NCREL (2003) defines digital-age technological literacy as comprising “knowledge about what technology is, … how it can be used efficiently and effectively to achieve specific goals” and information literacy which refers to the competency to find, evaluate and use information appropriately within legal, ethical and social guidelines and cultural literacy (p. 15). In the same vein, the report explains that today’s learners need new tools to be able to pride themselves on using these skills. Visual, technological and information literacies are skills that can be developed in isolation. Warschauer (2007) also focuses on the importance of this information literacy in conjunction with functional, visual and technological literacies (terms such as multimedia literacy which he refers to as the ability to interpret, understand, design and create content that uses images, photographs, video, animation, music, sounds, text and typography).

Dweck (2000) elaborates two different ways to react to failure in the field of self-theories by recognizing two sets of qualities in learners: the mastery-oriented and the helpless. Mastery-oriented qualities are associated with adaptive responses to challenges and problems, self-confidence which in turn brings about a form of optimistic persistence and the ability to take risks in learning, primarily because failure is not viewed as a measure of personal inadequacy. By contrast, learners who predominantly
exhibit helpless responses are likely to experience intellectual paralysis when faced with challenging problems and find themselves in a position where they are incapable of drawing on their existing knowledge to creatively think about potential solutions (Dweck, 2000).

These characteristics are in turn influenced by the learners’ goal orientations which can be predominantly learning oriented or performance oriented. The learning oriented is associated with mastery-oriented qualities, where the learner is focused on increasing competence, learning new skills, understanding new concepts and essentially “to get smarter” (Dweck, 2000, p. 15). Dweck (2000) explained further that students who are performance oriented have a higher tendency to exhibit helpless responses in the face of difficult challenges, as a result of being primarily concerned with winning positive judgments about their competence (“to look smart”) (p. 15) and avoiding negative ones (“to avoid looking dumb”) (p. 15). Thus, with Web 2.0 tools, learners can participate and improve their individual learning abilities efficiently.

The above discussion raises the questions of how the millennial learners develop their sets of twenty-first century learning skills and literacies. The next section draws on prior studies to address the issue of ‘how to learn’.
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2.2.2 Web 2.0: How to learn?

In future, individuals require a different set of skills made mandatory by the complexity and pace of life and thus to learn in the face of amazing new digital technologies. These technologies have made networks not just possible, but a part of our reality. Siemens (2004) in describing this recent theory of connectivism considers how people, organizations and technology work collaboratively to construct knowledge. Siemens (2004) stated that “learning needs and theories that describe learning principles and processes, should be reflective of underlying social environments” (para.1). Thus, Siemens extends the learning ideas that have emerged since the introduction of widespread interaction and access to information through networks (para. 21).

Connectivism extends the social constructivist approach to teaching and learning. In this view, Siemens notes that the learning process must create interconnections for knowledge that is distributed over many actual and virtual locations so that maintaining these connections becomes a learning skill essential for successful participation in a technological information society. Ability to define ideas and concepts is a core skill for learners. Siemens underscores two vital skills contributing to learning are the ability to pursue up-to-date information and the ability to filter secondary and unimportant information. Simply put, “the capacity to know more is more critical than what is actually known” (para. 6). The ability to select valuable information and cultivate knowledge online is considered important to informal learning processes.

Anderson (2007) in the Joint Information Systems Committee (JISC) report highlights that Web 2.0 (based on concepts originally outlined by O’Reilly, 2005) possesses a set
of six key concepts or ideas that are changing the way some people interact in promoting social freedoms, interdependence and decision-making. The concepts are “Individual production and User Generated Content”, “Harness the power of the crowd”, “Data on an epic scale”, “Architecture of participation”, “Network Effects” and “Openness” that are affected by individual autonomy and engagement (Anderson).

Anderson also states (p. 53) how “the crowd, and its power, will become more important as the web facilitates new communities and groups”, which in turn will “challenge conventional thinking on who exactly does things”. In this sense, every learner-user can access, remix and re-create various rich data via Web 2.0 applications towards effective lifelong learning.

Central to the present discussions on how to learn with technologies is the concept of informal learning spaces in line with Oblinger and Oblinger (2005):

Informal learning spaces—those outside the classrooms—present particularly intriguing opportunities for pioneering and cultivating new teaching and learning practices. These spaces, while informal, are key areas for student academic work. Students spend far more time in these spaces than they do in formal classrooms. Research, Web browsing, writing, statistical analysis, and compiling lab reports all take place in the library, study hall, media center, dorm room, and learning commons. [Consequently, they] will easily “tune into” the virtual aspects of informal spaces. (para. 12.8)

In light of these issues, this study will consider how the university students’ decisions to adopt and use Web 2.0 are associated with the ways in which they evaluate the tool in terms of its ease of use and usefulness to their learning. These include opinions about what learners learn and how they learn (Warschauer, 2007), as well as opinions about how useful the Web 2.0 is for their: (i) ESL learning, (ii) socialization, (iii) exploration
and expression of opinions, and (iv) development of creativity and skills for informal learning in a naturalistic settings. In sum, if educators are going to understand the ways informal learning happens among virtual communities in Web 2.0 networks, it is necessary to pay attention to the ways university student-users construct meaning about their world.

2.3 The notion of affordances

Affordance has been increasingly applied to understanding the adoption of media technologies. Thus, there have been consistent calls for educators to consider the unique affordances and limitations of particular technologies when designing the appropriate learning experiences for students based on their educational goals and situation-specific tasks (Lantolf & Thorne, 2006; Van Lier, 2000, 2004). The concept of affordance was first proposed by J.J. Gibson (1966). Later, in his book “The Ecological Approach to Visual Perception” (1979), Gibson noted that “affordances of the environment are what it offers animals, what it provides or furnishes, either for good or ill … It implies the complementarities of the animal and the environment” (p. 127). To illustrate, an affordance of a chair is that it provides one with a place to sit and to stand on if extra height is required or a shield to avoid being injured if taming a lion. In a sense, the discovery of an affordance is the detection of the “meaning or value” of the objects of the environment relative to the goals, intentions, and influence of the individual (Gibson, 1979). A similarity must hold between the properties of the environment and the potential actions of the perceiver for it to be possible for an affordance to be recognized. Thus, affordances refer to the actionable properties (functions and usability) between the world and an actor. When perceived, in this way an affordance allows
actors to take actions that may satisfy certain needs and a user can imagine what the object can allow them to do.

Moreover, affordances of technologies have been defined as the “capabilities and limitations” (Gaver, 1991, p. 79) they offer towards a dynamic perception and action (a direct relationship) that make technologies easy to learn and adapt. Gaver (1991) explains:

An affordance of an object…refers to attributes of both the object and the actor. This makes the concept a powerful one for thinking about technologies because it focuses on the interaction between technologies and the people who will use them. (p. 79)

Others have extended the original idea of affordances to include the capacities of a media technology in facilitating or limiting different kinds of language learning (Lantolf & Thorne, 2006; van Lier, 2000, 2004). Similar to Lantolf and Thorne (2006), Van Lier (2000) defines an affordance as: “the environment [particular property] that is relevant to an active, perceiving organism in that environment. An affordance affords further action. What becomes an affordance depends on what an organism does, what it wants, and what is useful for it?” (p. 252). This notion of affordances is closely connected to the sociocultural view of learners as active agents and provides a conceptual framework for examining the relationship between the interactional environment and an active learner-user. From an ecological point of view, “if the language learner is active and engaged, he will perceive linguistic affordances and use them for further action” (Van Lier, 2000, p. 252).
Later, Van Lier (2004) suggested the term of “affordance” is defined as the “relations”, “possibility”, “opportunity”, “immediacy” and “interaction” (p. 91). This author explains that “it is action in potential and it emerges as we interact with the physical and social world” (p. 92). More specifically, affordance refers to how web tools enable or restrict the communication and interaction between the student and lecturer in an online class (Arbaugh & Benbunan-Fich, 2007; Ullrich et al., 2008). Another central thought of educational affordance is a connection between organism (learner) and the nature that supports a potential or awareness of action (Lantolf & Thorne, 2006) towards their learning goals. Interestingly, in relation to this, Van Lier (2004) notes that “language affordances, whether natural or cultural, direct or indirect are relations of possibility among language users” (p. 95). The educational affordance of the technological tool is available and perceived by learner-users, enabling them to accomplish particular goals.

In this thesis, it is acknowledged that Web 2.0 technologies play an important role in enabling specific opportunities for the learner-users to learn ESL outside of the classroom. Hence, affordances refer to the positive benefits flowing from the choice of Web 2.0 tools for achieving the informal learning for ESL purposes. Limitations refer to the opposite, namely the restrictions presented by the chosen technological tools. Apparently, “perception, action and interpretation are part of one dynamic process” (van Lier, 2004, p. 105). A probe into what users expect of the technology and how they juggle with the technology will reveal social and cultural assumptions, which in turn shed light on the practice pattern of the web usage. The following sections elaborate on positive and negative affordances of web tools towards informal learning framework.
2.3.1 Web technologies and learning affordances

Many formal institutions note that new educational models are required to meeting the requirements of millennial learners (Dunleavy et al., 2008; Lee et al., 2008). Today’s learners crave greater freedom and more engaging resources to learn in future (Gardner, 2011; Jenkins et al., 2006; Shihab, 2008), thus this calls for researchers to gain a deeper understanding of their potential for enabling choice, creativity and self-direction for learner-users. Drawing on present web-based research and practice, some examples of the affordances of web tools are as follows:

2.3.1.1 Content discovery

Web 2.0 tools provide flexible access to promote collective authorship and intelligence through interactive search engines and the world’s virtual library (Anderson, 2007). The downloading of multimedia files also offers an alternative curricular approach to traditional text-based learning materials which benefits students who have an audio-oriented learning style, and offers diversified learning activities (Jonassen, Howland, Marra, & Crismond, 2008). Similarly, Mortimer (2010) proposes using web tools in class offers learners an interactive learning environment in which highly visual and auditory learner-users can thrive. For example, the use of podcasting offers rich opportunities to collect material from many sources that fit their specific needs (Lee at al., 2008; Owen et al., 2006). Content publishing is instant, interactive and dynamic in Web 2.0 environment; thus individuals are able to create, publish or contribute to a
podcast worldwide (Jonassen et al., 2008). The ability to easily search, select, and reject content supports learners’ ownership over their own learning (Mortimer, 2010).

Furthermore, the Joint Information Systems Committee (JISC) report on Web 2.0 (Franklin & Van Harmelen, 2007) provided a series of recommendations for further research into the potential of Web 2.0 technologies for teaching and learning in Higher Education (HE). The report stated that “the possible realms of learning to be opened up by the catalytic effects of Web 2.0 technologies are highly attractive, allowing greater student independence and autonomy, greater collaboration, and increased pedagogic efficiency” (Franklin & Van Harmelen, 2007, p. 1). For instance, publishing and authorship in Web 2.0 involve manipulating a variety of alphabetic texts, video clips, and sounds to appropriate and reuse existing content (Dietel-McLaughlin, 2010). According to Ullrich et al. (2008) “most of this content is not designed for instruction, but is real world data, uttered by real people in real contexts” (p. 708). As a result, more people can create, assemble, organize and share content to meet their own needs and those of others towards the growth of user-generated content and context (Anderson, 2007; Boruta et al., 2011; Dietel-McLaughlin, 2010; Greenhow & Robelia, 2009; McLoughlin & Lee, 2007). In this sense, Web 2.0 tools provide contextually appropriate toolsets by enabling individuals to adjust and choose options based on their needs, goals and conditions, inspiring dynamic and multidirectional information flows.
2.3.1.2 Learning motivation

Web technologies are highly recommended for motivating students to practice language in natural settings (Boruta et al., 2011; Feng, 2009; Gee, 2010; Muehleisen, 1997). Using web tools as English learning tools facilitates learning satisfaction (Abedin et al., 2011) and strong intrinsic motivation for learning English. “Even when students are simply browsing, they are actively choosing what they will look at next” (Muehleisen, 1997, p. 1). This means that when learners are exposed to web tools, it is likely that they will feel active and motivated for learning English and as a result, their achievement will improve. Students may be familiar with a tool beyond the classroom and therefore, when they use it in school they will feel more motivated (Mortimer, 2010; Warschauer, 2007). Further, motivation is attributed to students finding web tools fun and interactive (Hernandez et al., 2011; Mortimer, 2010), especially where there was instant feedback while learning the English language. For instance, Muehleisen (1997) points out that “students quickly discover for themselves that a majority of the information on the Internet is in English; they also discover that they can use English as a means of learning about and communicating with people around the world” (p. 1). Similar to Gardner (2011), another research report also suggests that the motivating quality of the web tools is when students perceive it as exciting, as a tool for their future careers (Carbo & Antoli, 2011; Eberhardt, 2007) and “realized the importance of learning English as the global language” (Feng, 2009, p. 130).

Csikszentmihalyi, a professor of human development known for his studies of flow, and intrinsic motivation, conducted many studies which pertain to informal learning. Csikszentmihalyi (2002) found that a highly intrinsically motivating activity and
technology manipulation could encourage an individual’s sense of total participation, and thus promote pleasure and heightened interaction. This condition has been referred to as a state of flow and explains how playfulness and enjoyment is derived from a deep engagement with the perceived phenomenon. In this sense, a crucial source of internal rewards for humans is the self-engagement in computer activities which require skills just above their current level. Csikszentmihalyi (2002) also proposes that the optimal experience produced by intrinsic motivation occurs in terms of challenge where clear goals, achievable challenges and accurate feedback are all required to achieve a state of flow in an activity. Further, Csikszentmihalyi (2002) states that flow will only occur when there is a balance between challenge and skills. If the challenge is too high, frustration will occur. Conversely, if challenge is too low, it will cause boredom or de-motivation.

In a more recent article by Gardner (2011), the author reviewed the effects of Web 2.0 tools in four intensive English programs in Oakland, California with the intention of engaging and motivating students more thoroughly. Overall, most students were very positive and they seemed generally enthusiastic about using interactive Web 2.0 tools for language learning. Students indicated that they preferred using English online and Web 2.0 tools to express their creativity. This is because it is an effective way to learn English and technological skills simultaneously “to become more prepared for future academic and employment opportunities” (p. 53). Because students learn in many different ways, a majority of students found that using the web tool was helpful and motivating (Hoy, 2011; Gardner, 2011; Wilkerson, 2010), this result supports the idea that the Web 2.0 tools are effective, “fun” and “amazing” learning resources. The
greatest number of students in this study went online to use Google or Gmail, online dictionaries and Wikipedia. Simply put, the tools “are engaging students … require them to search out information, interview experts, connect with other students around the world, generate and share multimedia, assess digital documents, write for authentic audiences, and otherwise exploit the resources of the new participatory culture (Jenkins et al., 2006; p. 57).

Boruta et al. (2011) focus on recent research and development of an education tool based on Web 2.0 technologies to support English as second language (ESL) learning. Web tools allow for language learning as important social experiences because the tools are non-threatening, student-centred, support immediate feedback, and are effective for both self and peer correction. Based on domain-specific needs and related work which highlighted gaps and identified improvements in existing Web 2.0 tools, Boruta et al. suggest both functional and non-functional requirements as follows:
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<table>
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<th>Functional requirements:</th>
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<tr>
<td>enable synchronous collaboration and communication (share documents and images, real-time collaborative writing, chat)</td>
</tr>
<tr>
<td>enable asynchronous collaboration and communication (mail and mailing lists, forum, Wiki, document and image repositories)</td>
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<tr>
<td>support user customization (personalize personal pages)</td>
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<tr>
<td>enable group coordination (group calendaring, poll)</td>
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<tr>
<td>support media types (documents, images, videos)</td>
</tr>
<tr>
<td>provide language-specific tools (dictionary, spell checker, text to speech converter, translator)</td>
</tr>
<tr>
<td>support assessment, feedback and monitoring (evaluation/rating mechanisms, feedback, monitor user activity)</td>
</tr>
<tr>
<td>offer resources for learning/practicing English (links to language learning sites, reading, writing, oral and reading comprehension, grammar, spelling, pronunciation, etc.)</td>
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<th>Non-functional requirements:</th>
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<tr>
<td>offer a low-cost solution (combination of open-source and free technologies, incorporation of existing services and web-accessible tools)</td>
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<tr>
<td>are easy to set up and easy to use</td>
</tr>
<tr>
<td>provide scale and reliability</td>
</tr>
<tr>
<td>aim to be adaptable to different learning methodologies (offer flexibility to certain users, single sign-on)</td>
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Table 2.1: The functional and non-functional requirements of Web 2.0 tools for language learning (Boruta et al., 2011, p. 83)

The web tools help to create a community that offers an open platform for a broad user group supporting various English learning activities through communication and social interaction. For instance, web tools provide effective social network features where learners can find, organize, communicate and collaborate on material with friends and peers to develop learning satisfaction (Abedin et al., 2011), motivation and proficiency.
Learners may empower themselves through the use of a variety of language learning widgets, such as a translator, spell-checker, text to speech converter, English dictionary, information and exercises in support of English vocabulary, grammar writing and speaking. Many useful links are also helpful and appropriate for English game-based learning for diverse learners (Boruta et al., 2011). As a result, they will drive student motivation to support the development of meaningful engagement and language learning skills.

2.3.1.3 Communication

As one of the main aspects of informal learning, this affordance is evident in Web 2.0 (Ebner et al., 2009). As suggested by Lenhart and Madden (2007), these tools are useful for one-to-one, one-to-many, many-to-one and many-to-many modes of communication. Communications may be synchronous or asynchronous and may be private or public. Information can be presented in a range of formats (text, audio, visuals) and interactive contents (conversational artefacts). In such environments, users engage in current literacies for informal learning, communicative forms of behaviour and identity formation (Bartlett-Bragg, 2006; Ebner et al., 2009; McLoughlin & Lee, 2007; Greenhow & Robelia, 2009). Much informal learning that has always taken place now becomes more visible, but also creates more spaces for this to occur and begins to blur the boundaries between students and others in informal learning, as disclosed by Armstrong and Franklin (2008). This affordance will allow learners working individually or collaboratively, developing critical and reflective skills, learning by
doing and more positive experiences (Anderson, 2007; Brown & Adler, 2008; Oblinger & Oblinger, 2005).

From a linguistic point of view, a Web 2.0 tool is part of a broad communicative approach. Learner-users use language online not to complete tasks, but to communicate about their daily chores, activities, and current events, very much as they would do in their native tongue. Moreover, many of these online tools are free, offer the learner-users the opportunity to learn at any time (Boruta at al., 2011; Gardner, 2011; Madden & Fox, 2006; Ullrich et al., 2008). In the open community of Web 2.0 learner-users interact with other users from outside of the class, including native speakers of English. In turn, they can improve their communication skills concerning the real use of English. This is also beneficial because learner-users can pause from formal work and relax at any time they wish; in fact they are actually practicing and rehearsing their language learning skills (Ullrich et al., 2008). Web tool develops these skills over time with appropriate exposure to the target language. As a result, the tools engage the learners’ interest and diminish ethnocentric views of culture, promote critical thinking, and create connections with many other disciplines (Branch, 2012).

2.3.1.4 Reflection and identity formation

Research on educational reflection is well established; however, studies on the affordances of educational technology-based reflections have only just started. For example, Podcast helps learners to contribute and share their skills and knowledge with broader audiences, because they can record their own podcast for note-taking, curriculum feedback and experience sharing for personal reflection (Jonassen et al.,
It has been said that a picture is worth a thousand words; visual communication provides unique opportunities to express ideas through images. People use attractive images to help them convey specific information or express personal stories (Jonassen et al., 2008). Currently, more Web 2.0 tools are being made available inside institutions, as part of the learning management system or as separate tools (Armstrong & Franklin, 2008). As such, the formal tasks support the “grounded learners within the classroom community by providing an independent, yet collectively constructed, online environment where students could share cultural products that expanded on class themes and discussions” (Mills, 2011, p. 364).

Web tools can become partners with learners, especially in developing higher order learning (Salomon & Perkins, 1996). Subsequently, identity exploration and formation are facilitated by the projection of an individual’s identity, membership and feedback from others (Greenhow & Robelia, 2009; Mills, 2011). For instance, beyond the classroom “students used [Web 2.0] to depict physical, relational, and educational aspects of themselves but declined to reveal, or only hinted at, their sexual, ethnic, or occupational dimensions” (Greenhow & Robelia, 2009, p. 130). In this sense, learners developed and personalized their online profiles to explore their identities in a variety of ways. This is consistent with the findings from Pew Internet and American Life Project survey; 66 per cent of members in youth social networking activities reported limiting access to their profiles (Lenhart & Madden, 2007). For instance, users selectively disclose by filling out only certain information, such as their personal information and ignoring details. Users also may have one profile to work together with friends and another less detailed profile to interact with strangers. In this sense, as suggested by
Freishtat (2009), the learner-users use Web 2.0 tools according to “the prescribed ways of making meaning from popular culture” and “dependent on sociocultural expectations”…“They consumed identity and meaning, re-transmitting it through their performances” (p. 228).

Such practices of code-switching provide a sense of manipulation by allowing people to present different identities in different contexts and to adapt in a virtual community (Lenhart & Madden 2007). Indirectly, such individual ownership of web tools creates a space for learners to reflect and self-regulate their individual learning process (Cho, Cheng & Lai, 2009; Ebner et al., 2009; Salomon & Perkins, 1996). In this way, each user is able to publish their views, observations, and experiences, according to their own aims and skills (Dietel-McLaughlin, 2010). For example, Greenhow and Robelia (2009) confirm that Web 2.0 technologies are helpful “for self-discovery, personal expression, and self-presentation, but also to clarify, showcase, and develop their interests and abilities within a network that values invention and sharing” (p. 132). They also revealed that students independently show responsible uses of technology by helping each other in problem-solving and respectfully responding to others in meaningful learning (Dunleavy et al., 2008; Jenkins et al., 2006, Woo, Chu, Ho, & Li, 2011).

### 2.3.1.5 Collaboration

Most of the literature on cooperative and collaborative learning assumes that media technologies support learner-users in more challenging collaborative online activities (Al-Khatib, 2011; Anderson, 2007; Dale, 2010; Severance, Hardin, & Whyte, 2008;
Tapscott, 2009). Collaborative affordance of Web 2.0 media allows for data sharing through a range of software applications, where experts and novices equally can make their work available to the rest of the world (Shihab, 2008). In this way, users with similar interests also can learn from each other and actively contribute to the web-based content and knowledge (Arbaugh & Benbunan-Fich, 2007; Brown & Adler, 2008; Ebner at al., 2009; Lee et al., 2008). Students enjoy an interactive and collaborative environment when the Web 2.0 tools allowed for better sharing of thoughts and ideas, higher feedback rates from classmates, more collaborative learning, more sharing of opinions and critical thinking skills (Carbo & Antoli, 2011; Cho et al., 2009). These new digital learning tools help learner-users “stay on track, focused, and organized”… [Therefore], “the English class became more interesting … and much easier than before and allowed them to go deeper, in analysing the studied topics” (Shihab, 2008, p. 86). This affordance offered by web collaborative activities in virtual settings in turn will develop the learner-user’s capacities to contribute and distribute knowledge in that activity.

Prominently, among the most significant affordance of web tools is immersive collaborative simulation (Dunleavy et al., 2008). This study focuses on how students perceive the novelty effects of technology in solving a shared problem and learning. Results showed that during this activity, the students became highly engaged, enthused to learn, and worked together (through positive interdependence, reciprocal teaching and distributed knowledge) to solve their problem. Such promising affordances of technology are very “motivating” and offer “unique [sociocultural] opportunities to create authentic and novel learning environments” (p. 14). The real success is that it
helps in students learning skills of “critical thinking, problem solving, and communicating utilized through interdependent collaborative exercises” (p. 20). Again, this view suggests that technology-based learning involves social mediation and interaction for purposes of teaching and learning.

Web 2.0 provides tools for worldwide learning collaboration (Armstrong & Franklin, 2008). Learners discuss their learning, interact with capable persons, and help design learning resources. Learners have their say in deciding what is most useful to them. Researchers also confirmed that Web 2.0 collaborative tools increase the interaction between learners and their peers, learners and instructors, and learners with learning materials. Consequently, these tools create in-depth active learning involving authentic real-world activities (Abedin et al., 2011; Carbo and Antoli, 2011; Jonassen et al., 2008; Reinartz, 2009; Salomon & Perkins, 1996). For instance, these tools support students to work with their peers or other international students, which can enhance the awareness of cultural diversity (Jonassen et al., 2008). Today, this kind of learning seems to be happening in informal online learning communities (Brown, 2006; Freishtat, 2009; Jokisalo & Riu, 2009) where learners enthusiastically participate, collaborate, and passionately focus their creative energies in the form of individual and collective creative expression and activity (Dietel-McLaughlin, 2010; Geyer, 2008).

Compatible with the previous findings, the most recent study by Woo et al. (2011) found both students and their teachers perceived the exchange of comments through Web 2.0 (Wiki) platforms as beneficial to their collaboration and construction of their skills, including critical thinking and creative problem-solving. Overall, they enjoyed
using the tool and commented how it helped them to work better as a team and write better in English, encouraged peer-to-peer interaction, and facilitated online group work. The study observed three key affordances: educational, social (collaborative), and technological. The technological affordance of Wiki tracking system for instance, can help instructors to closely track the students’ progress (Ebner et al., 2009; Woo et al., 2011). This is including “charting the frequency of all members’ visits and postings, which helps students to perceive an overall picture of interaction and encourage further collaboration” (Woo et al., 2011, p. 52). As such, the array of mutual engagement within a community is clarified by Wenger (1998) as “talking about identity in social terms is not denying individuality, but viewing the very definition of individuality as something that is part of the practices of specific communities” (p. 147).

2.3.1.6 Social participatory and community-building

A concrete attempt to develop such a technology for community-building is the design of personal devices with built-in social functionality (Anderson, 2007; Cho et al., 2009) in a networked learning community (Brown, 2006). This sociability does not even need to be an explicit goal for a user, but is designed for just such an experience coming to a user’s mind while using a tool. In this sense, opportunities for online participation mobilize young people to social action through the new media, inspired by the “participatory cultures”. As Jenkins et al. (2006) define it,
A participatory culture is a culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created. (p. 3)

From another perspective, Lenhart and Madden (2007) and Lenhart, Kristen, Aaron, and Kathryn (2010) found that young users profoundly use web tools for personal expression and creative work. For example, Lenhart and Madden (2007) reported fifty-five per cent of all online American teens use online social media tools. Older youths, mostly girls (aged 15 to 17), are more likely to participate in these virtual communities through the use web tools and online profiles (p. 1). They stated that social web sites as spaces where users are freely creating and connecting each other’s profiles to make an interactive personal network. Other important findings from the study are that 66% of young people who have created a profile limit access to it and that 48% of them use web tools daily or more frequently. Lenhart et al.’s (2010) more recent study found that Facebook is the most popular social networking tool used among American teens. The other social media tools preferred and commonly used by them were YouTube, MySpace and Twitter for educational attainment regardless of sex and age specifically for higher education (Lenhart et al., 2010). Intrinsically, such affordance of Web 2.0 also supports Freishtat’s (2009) findings that “…in diverse communities and engagement…with diverse perspectives and experiences, and…self-authorship, learners can draw on components of critical transformational learning experiences” (p. 230) by using the web tools.
Similarly, Jokisalo and Riu (2009) emphasize that today Web 2.0 tools and collaboration is a current trend that is becoming a part of the communal fabric of globalization (O'Reilly, 2005; Owen et al., 2006). In the daily life of web users, Web 2.0 technologies establish through social network sites their own content creation, their sharing of portals and tacit knowledge application. Jokisalo and Riu (2009) introduced three web-based learning areas namely: i) Individual development across web-based discovering which involves learning-related hobbies generally, ii) Learning communities which refer to societies coordinated by people or clusters of people to meet, distribute and discover and iii) Communities which generate learning as a side effect. Noticeably, for as long as Web 2.0 has being available, young people have learnt informally through Web 2.0 active engagement for easy access to the wealth of information anywhere and anytime (Bartlett-Bragg, 2006; Greenhow & Robelia, 2009; Jokisalo & Riu, 2009; Selwyn, 2007, 2008). Web 2.0 tools are also extremely useful and of great potential for English learning because learners are naturally engaged when working with Web 2.0 tools (Shihab, 2008; Ullrich et al., 2008). All in all, most of these Web 2.0 activities support learning in an informal way in both individual and collaborative contexts by engaging essential social behaviour in individual learners.

These web technologies hold great potential for promoting social responsibilities including supporting engagement (Brown & Adler, 2008; Dale, 2010; Emerson & MacKay, 2011; Feng, 2009) in open community and democratic participation (Boruta et al., 2011; Dietel-McLaughlin, 2010; Jenkins et al., 2006). Furthermore, as learner-users act through participatory cultures, they can take action and increase their sense of efficacy. As a result, the strong sense of community that many young people experience
in these cultures may lead them to see the importance of community and their roles in the community of which they are members (Hernandez et al., 2011; Jenkins et al., 2006) through an interactive discursive platform of Web 2.0 (Dietel-McLaughlin, 2010). In a similar way, Web 2.0 is likely to become important in aiding learner-users in higher education. For instance, Web 2.0 is being used to support learners experiencing higher education (Anderson, 2007; Arbaugh & Benbunan-Fich, 2007) by providing beneficial information and by making friends before arriving at university so that they can quickly feel part of community to help each other (Armstrong & Franklin, 2008). This trend of emergent modes of communication, meaning-making and community-formation is enabled by Web 2.0 technologies within universities.

In addition, Geyer (2008) notes that the ease and ability to tap into the collective intelligence embedded in informal learning communities (online) seem to support explicit and implicit learning taking place outside of the traditional classroom and at an early age. In this scenario, the ZPD (Zone of Proximal Development) enables learners to have more control over what and how they learn by choosing their own ZPDs. They may even manipulate the ZPD's learning objects as necessary to facilitate their own learning needs. For example, a Google Alert is a service that allows users to receive the latest updates regarding any query or topic. Users can set up searches on news, blogs, groups, or the entire web and can be notified by email as updates occur or on a daily or weekly basis. Google Alerts object properties can be easily modified and fine-tuned to provide the results desired (Geyer, 2008, p. 31). As learners develop, they may decide to become a member of the more capable peer group in order to give back and to guide others or, indirectly they become skilful learners (Geyer, 2008). As a result, Web 2.0
tools magnify an idea of a “public” and what counts as public informal attitudes, discourse and cultural practices “in a world where the binary between life online and offline is becoming increasingly blurred” (Dietel-McLaughlin, 2010, p. 123).

Recently, Mills (2011) from her Facebook project found that the learner-users independently selected and shared French cultural products via Facebook in order to develop “identity formation”, relationships and “community of practice”. Mills also claims that Web 2.0 tools, especially Facebook, provides an interactive environment “for exchange of cultural multimedia, engagement in communication at the interpretive, interpersonal, and presentational modes, and self-direction in an autonomous yet collaborative learning environment” (p. 365). For instance, through the use of tagging feature in their memoirs, Facebook community serves to enhance a strong sense of ownership in the collective story and their characters’ identity. The development of a joint enterprise with common interests and goals could thus be further encouraged within this virtual community (p. 352). Therefore, these social networking tools offer authentic and unlimited opportunities for further learning, and foster multimodal literacy among the learner-users.

2.3.1.7 Independent and lifelong learning

Web 2.0 tools represent promising learning resources by aiding learners to find each other by the traces they leave of their asynchronous activity and through their visible presence synchronously (Anderson, 2007; Arbaugh & Benbunan-Fich, 2007). Therefore, these tools enable self-paced learners the opportunities to meet, work
together and negotiate the time and place for their cooperative and independent learning (for an examination, peer study groups and rehearsing presentations). In addition, Armstrong and Franklin (2008) and Abedin et al. (2011) suggest that Web technologies support learners with enriched up-to-date virtual learning environments towards increased interactivity, enlarged community-building, the sharing and exchange of resources and the arrangement of productive learning tasks. Also, web tools provide extra functionalities, which can be easily accessed and applied by learners without extensive introduction or training. “This self-directed learning context served as a complement to the classroom environment and established an interactive community where various resources and choices were readily available, and collective reflection, immediacy, and interaction were encouraged” (Mills, 2011, p. 363). As emphasized by Duke (2010), Web 2.0 tools are “better suited for use at home to support the process of learning, rather than for everyday use within the classroom” (p. 169).

Recently, Dale (2010) and Starkey (2010) point out that students appeared to be motivated to learn as they were using digital technologies. The novelty factor occurs when digital technologies are introduced and as the learning is novel, motivation encourages development of independent learning (Starkey, 2010). Knowledge is being constructed, managed, and distributed across an increasingly sophisticated array of networked resources that both facilitate and amplify intellectual curiosity, creativity, and innovation. Young people with the means and support to do so naturally look at the web as a tool not only to accomplish specific ends but to better understand themselves in a complex world (Geyer, 2008, p. 35). In this sense, web tools assist the students to manage their time and life effectively (Duke, 2010). This arises through leadership and
responsibility as students develop new ideas for content, deal with technological problems, and negotiate with group members while producing the final products (Carbo & Antoli, 2011; Jonassen et al., 2008). Such trends develop more open, personalised approaches to lifelong learning and the development of young people’s skills in creativity and innovation (Anderson, 2007; Tan, 2009).

In sum, Web 2.0 technologies offer a stimulating and valuable functionality at an extremely high level in which there is genuine engagement, connectivity and communication. Web 2.0 tools link minds, communities and ideas, while promoting personalization, collaboration and creativity leading to joint knowledge creation (Brown, 2006; McLoughlin & Lee, 2007). In a sense, “the concept of affordances can provide a useful tool for user-centred analyses of technologies” (Gaver, 1991, p. 79). The usefulness of the concept is improved when affordances of web tools are seen as being resources of an engaging learning context. However, it is important to remember that even if technology can be inspiring, the main focus in Web 2.0-based informal learning should still lie on the sociocultural needs of the learner-users. Although the potentials and opportunities of web tools to enable learning are great, the limitations of this web-based learning need to be disclosed too. Some of the false affordances are presented next.
2.3.2 Web technologies and learning limitations

This section presents limitations, obstacles or false attractions reported in the literature. As explained by Gibson (1979) and Gaver (1991), limitations or negative affordances are unpredictable results due to lack of information available or opposite consequences of perceived affordances (such as injuries and dangers). In this regard, it demonstrates inconsistencies or risks because the actual outcomes of the technology are different from the expected one and resulted only in superficial learning opportunities. Review of this literature shows various difficulties and constraints relating to web-based learning.

This literature suggests several obstacles to the conditions of good use of web tools and learner-users’ ability to take up the affordances of the web tools. In fact, Web 2.0-based learning environment expects a user to be an advanced learner and demands more responsibility and accountability. However, many young learners today are lacking in motivation to engage with technology-based education (Anderson, 2007; Jenkins et al., 2006). For some students, their preference is for face-to-face contact with their instructors and other students (Duke, 2010, p. 172), consequently, they “have been slow to integrate technology into everyday learning” (p. 173). In relation to this, researchers have discovered Web-based learning is mostly social and peer-based (Boudreaux, 2010; Gardner, 2011; Mills, 2011), so, it can bring negative aspects to the learner-users. For example, it causes low self-efficacy, an unwillingness amongst some learners to self-publish (Anderson, 2007), and fears around plagiarism, privacy and data protection (Dillard, 2011; Duke, 2010; Franklin & Van Harmelen, 2007; Ullrich et al., 2008).
Indeed, student behaviour was sometimes seen as a barrier to the use of digital technologies. For example, the web tool was restricted to instructor usage due to the inappropriate use by the students, and some technically-minded learners had caused restrictions on student access (Starkey, 2010). Moreover, Ullrich et al. (2008) argue that having the learners engaged in an open community can be distracting. In their study, they found that during Web 2.0 tools usage in classroom, learners sometimes posted messages in other languages that departed from the main goal of practicing English language. Additionally, immoderate contributions can be problematic if insulting content is posted. Within an online relationship, there are contradictory needs to be open and confidential because each Web 2.0 user may have a different level of comfort. As a result, “if the comfort levels are not the same within a relationship, it could lead to potential conflict or roadblocks for relationship maintenance” (Schultz, 2011, p. 11). In this regard, although Web 2.0 tools offer the opportunity to motivate students in extended collaboration beyond the formal space, “they do not offer the richness and immediacy of face-to-face communication and, thus, may not fully engage students” (Duke, 2010, p. 171). Thus, new technologies always require time and effort in order to take full advantage of potential benefits.

The web tools make it harder to access some types of educational response and information especially in the formal classroom. For instance, a lack of experience in using web tools to understand concepts or develop subject specific skills could be a barrier to using web technologies to create knowledge (Starkey, 2010). In addition, “meaningful social interactions”, “error correction”, and “negotiation of meaning”, did not happen in the formal (Facebook) context (Mills, 2011, pp. 364-365). Jenkins et al.
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(2006) assert, “instead of focusing on narrowing attention, young people [required to] respond to a rich media environment by multi-tasking—scanning for relevant shifts in the information flow while simultaneously taking in multiple stimuli” (p. 35). As a result, the rate at which web technologies are evolving concerns some learners, leading to a fear of being left behind. They must make do with an effort to discover the technologies and how they can be utilized efficiently in learning. Starkey (2010) writes that it is challenging to apply updated lessons beyond virtual spaces, especially for teaching and learning outside the university. The use of external arrangements can mean that students have to make use of countless extra user terms and passwords and their user space becomes fragmented.

Another noticeable barrier is the potential for plagiarism and copying from other websites. At the same time, most Web 2.0-based learners’ work is about content sharing and repurposing that can easily be seen by learners as part of a new teenage copy-and-paste culture. Therefore, guidelines may need to be made, either to redefine plagiarism, or to help learners overcome this culture in higher education environments (Franklin & Van Harmelen, 2007). For instance, with the rich amount of free material available on the web, learners might find it easier to simply copy the material and put it in their Wiki as their own (Boudreaux, 2010). However, sometimes misinformation might have occurred because some contributors go beyond knowledge seeking and bring in inaccurate information, gossip or jokes. Furthermore, some works do not cite appropriate sources. As a result, it is hard to validate the quality, credentials of the work, and sources (Weinstein, Denning, Horning, & Parnas, 2005, p. 1). Therefore, because anyone can access and modify the information that appears on sites such as
Wikipedia, students should never use these Wikis as sources of information to use or cite in an academic paper or research work (Boudreaux, 2010, p. 80). Moreover, researchers also indicated that a web tool has space restrictions; for example twitter’s 140 characters forces the learners to focus only on the topic, but does not allow them to clarify views in detail (Ebner et al., 2009).

Another challenge of Web 2.0 based learning is resources (Selwyn, 2008). The technological issues concerning Web 2.0-based learning system such as the required equipment, software and skills, the learning standards as well as the financial factors should be considered. Even with today’s increased access to computers, some students still do not have a computer to work with at home, and for some students going to the library or using a computer at school is not the most convenient choice to consider. For this reason, assigning an online compulsory assignment might prove to be problematic for these students (Boudreaux, 2010; Franklin & Van Harmelen, 2007; Mortimer, 2010). The potentially supportive nature of educational technologies is also reduced by the restricted access of these Web 2.0 practices throughout broad populations worldwide (Selwyn, 2008). Consequently these resources limitations will bring many difficulties, such as lack of student access and training, and shortage of support. This problem is usually an obstacle for schools, particularly in schools with more students with lower-socio economic status (Mortimer, 2010).

Another potential barrier to web-based learning is the use of the tool for both social and formal purposes. Armstrong and Franklin (2008) while surveying the use of Web 2.0
technologies for content creation as part of informal learning processes in Higher Education, funded by the Joint Information Systems Committee (JISC) reported:

The historically more certain boundaries where information and communications were controlled by universities are being lost … Students have yet to discover the full consequences of their public representations. The mind sets and frameworks of reference that we have used hitherto are no longer adequate. Many boundaries have become blurred; virtual and physical localities, professional and social lives, formal and informal learning, knowledge consumption and production. (p. 2)

The inquiry found that most learners wish to separate their (formal) learning from their personal life because they share these tools with their peers mainly for their informal links and entertainment. Some respondents report that the adoption of Web 2.0 tools as regular components of the formal educational offerings is likely to take away their privacy, safety and free access, because of its institutionalization and the inevitable need for Web 2.0 regulations (Armstrong & Franklin, 2008; Dietel-McLaughlin, 2010). Because Web 2.0 is essentially a stimulus for informal interaction, it would be inappropriate for instructors to integrate this practice in their formal lessons (Armstrong & Franklin, 2008).

Learner values and beliefs have been found to be important issues for the operative use of educational technologies. A recent study, Tan’s (2009) mixed method research, explores the students’ perception of the limitations and affordances of Web 2.0 tools when they engage with them as part of their daily schooling practice. On the whole, a majority of participants reported low usage levels, lack of perceived usefulness and an insufficiency of peer support in taking part in the learning media. These findings
indicate that obstacles around social collaboration, learning technologies and academic expectation pressures influence students' involvement with the Web 2.0 tools for learning. These limitations were identified in terms of three integrated barriers in schools:

(i) Social-reputational barrier such as cool/uncool judgment- the social unpleasant status, lack of popularity and network disadvantage of the Web 2.0 tools among peers;

(ii) Institutional-pedagogical barrier - students’ perceived the school culture and rules as authoritarian and punitive with negative effects on the student autonomy, motivation and engagement; and

(iii) Academic performativity barrier- academic performance and good grades are the main expectation of all students. Moreover, academic performance pressures exist in a packed curriculum with tight timelines. As well, Web 2.0-based learning was considered by the students as a waste of time and a potential distraction from real learning.

Overall, Tan’s participants (primary school students) simply refused engagement with the Web 2.0 tools for learning. The students tended to blame school custom, lack of resourcing, and teacher conflict for low application of Web 2.0 technologies in schools. Essentially, Tan’s study recommends good frameworks for the construction of questionnaires and interview instruments in order that the pattern of learning and affordances of students towards Web 2.0 can be examined.
In sum, this section has explored the important affordances and limitations inherent in the web-based learning in influencing the learners’ decisions on whether to use the tool in their learning. As presented, the web tools have many affordances for educational opportunities especially beyond the classroom. This presentation corroborates Ngah’s (2007) suggestion, “it is human communication and what we do with our technology that really counts … it is about the transformation of our patterns of social interaction – how we live and work through, with and around the technology” (p. 6). In contrast, web tools’ limitations (obstacles or impediments of learning opportunities) are illustrated through the vulnerable values and behaviours of the learners, lack of student participation, the uncertainties in higher education institutions, and the challenges faced in access, cost and technical knowledge for web-based learning. Overall, with these outstanding and wide-ranging affordances in mind, it is important to investigate the potentials and the limitations of Web 2.0 tools and how they may contribute to learning in the future.

2.4 Learning strategies

Learning strategies are the conscious beliefs and actions that learners set up to aid advancement of their learning. Advanced learners have a metacognitive strategy of monitoring their learning methods, are alert to demanded tasks, and have the capacity to adopt strategies to own their learning (Chamot, 2005; Macaro, 2001). In further detail, Anderson (2003) notes that:
The purpose of strategy use is to improve performance in the use of ones’ L2. Strategies are the conscious actions that learners take to improve their language learning. Because strategies are conscious, there is active involvement of the L2 learner in their selection and use. Strategies are not an isolated action, but rather a process of orchestrating more than one action to accomplish an L2 task. Although we can identify individual strategies, rarely will one strategy be used in isolation. Strategies are related to each other and must be viewed as a process and not as a single action. (p. 3)

There still appears to be discussion about what strategies and methods are appropriate to language learners and how they should be categorized and measured (Chamot, 2005; Macaro, 2001; Zimmerman, 2000a). In fact, there is a current lack of research on learner-users’ strategies in participating in Web 2.0 networking. What does seem clear, however, is that the studies of language learning strategies often bring up the concept of the good language learner. For example, Chamot (2005) refers to the good language learner as “one who is a mentally active learner, monitors language comprehension and production, practices communicating in the language, makes use of prior linguistic and general knowledge, uses various memorization techniques, and asks questions for clarification” (p. 115). He recommends, along with others in the field, that examining the types of strategies good language learners learners use would be a potential help to all language learners to become more dynamic (Chamot, 2005; Macaro, 2001; Zimmerman, 2000a). Language learners who discover various learning strategies are able to decide the best strategies for their own practice (Chamot, 2005; Hoy, 2011; Macaro, 2001; Zimmerman, 2000a).
In addition, all learners can improve through the use of metacognitive strategies such as being able to plan, monitor, and assess themselves throughout their learning lives (Anderson, 2003; Chamot, 2005). Anderson (2003) refers to meta-cognition as “thinking about thinking. He continues, “it is the ability to make [the] thinking visible. It is the ability to reflect on what you know and do and what you do not know and do not do” (p. 10). Metacognition is the skill of being able to reflect and evaluate of thinking that may result in learning organisation (Anderson, 2003, p. 10). It can be the skill to reflect all the known information and action in learning. Meta-cognition can be divided into five primary components: (1) preparing and planning for effective learning, (2) deciding when to use particular strategies, (3) knowing how to monitor strategy use, (4), learning how to organize various strategies and (5) evaluating strategy use. Each of these five meta-cognitive skills interacts with each other (Anderson, 2003). Anderson also (2003) focuses on mapping mental tasks and reflection in cognitive processes to provide a further insight into the learning possibilities. This allows an understanding of those processes which enable learners to perceive overall sociocultural strategies including social distribution (rules and roles) mediated by Web 2.0 tools for informal learning. In this regard, the learner’s aims, the learning contexts and the sociocultural values are likely to have an effect on the selection and appropriateness of language learning strategies. For example, good language learners may choose strategies that support them to learn individually instead of social strategies that empower collaborative learning (Chamot, 2005). Furthermore, because individuals vary in their choice of strategies, they may self-regulate learning to provide flexibility in exercising these strategies (Zimmerman, 2000).
2.4.1 Web-based language learning strategies

Many web-based learning experiences rely on feedback from others. In collaborative learning, a facilitator or capable peer supports regulation (Zimmerman, 2000, p. 25). The presence of a co-learner frequently supports self-direction in terms of cognitive conflict maintenance and collaborative explanation support. Co-learners who must set goals, confirm understanding and assess outcomes together sometimes turn into conflict and arguments (Zimmerman, 2000). It is not unexpected that web-based relationships involve protest and opposition as vital signs of democracy (Dietel-McLaughlin, 2010). Consequently, having a partner is crucial for individual learners to re-evaluate what they are doing and how they are thinking. When co-learners provide supports and guide each other’s engagement, such scaffolding is possible to influence the development of required understandings (Salomon, & Perkins, 1996) towards learning. Therefore, this strategy helps learner-users learn through observation, exploration, and willingness to use language without being afraid of making mistakes (Branch, 2012).

Web 2.0 tools also offer an interactive learning environment by challenging students to receive support for their learning (Cho et al., 2009; Emerson & MacKay, 2011). This is particularly valuable for the shy learners who are uneasy about communicating in class but who are eager to interact in real time with significant others in a globalized world (Dale, 2010; Shihab, 2008) in easier and more frequent approaches (Eberhardt, 2007). For example, by using micro blogging, the learner-users can prepare before responding, making them feel at ease in sharing thoughts without fear of disapproval or criticism and thus become more confident. They can also check a dictionary to define unknown words or expressions (Ullrich et al., 2008). The web tool also offers the opportunity to
send direct messages, as with email, so that only two parties can read the message. This is mostly helpful when a learner has a personal question or to explain a fact. The learners can use this service to communicate synchronously with each other. Also, the instructor can correct errors by forwarding a message to the learner without disturbing other learners. This strategy enables learners to be given guidance and direction on what is learnt (Dale, 2010).

English second language learning is a process that involves learning new skills, collective patterns, and cultivating the ability to transfer these skills from the classroom to the real world, where English may be used (Anderson, 2003). Web 2.0 deals with social, authentic use of English as a global language, thus intrinsically motivating the learner to access it for grammar, reading, pronunciation, vocabulary and listening practice. The most interesting feature of Web 2.0 is that there are no limits in retrieving and practicing in relation to promoting learners’ autonomy in terms of learning strategies and integrated language skills (Boruta et al., 2011; Shihab, 2008). For example, the editing strategies that are important are those on content (adding, reorganizing, replacing, and elaborating ideas) as well as form (syntax, spelling, punctuation, and formatting) (Woo et al., 2011, p. 51). In a Web 2.0 world, knowing, sharing and remixing are considered authentic practices that take place outside of classrooms, especially in higher education. By developing accurate multimodal literacy that includes a literacy of social codes and culturally relevant tools, learners will be able to think critically about the online spaces they occupy, and the values and narratives that shape their communities. Concepts like remixing are also useful in writing strategies, especially for source synthesis (Dietel-McLaughlin, 2010).
A leading authority for online learning strategies is Anderson (2003) who focuses on online English learning strategies. His study discovered that the majority of strategies used by both groups of participants (EFL and ESL learners) were problem-solving strategies due to the growth opportunities for English exposure through the media technologies. Examples of the strategies are “adjusting reading rate, rereading difficult text, and pausing to think about what one is reading” (p. 20). Anderson states that web tools as the sources of input for thousands of L2 learners play an increasingly important role in the lives of L2 learners around the world. A valuable finding of his study is the essential one of metacognitive strategies helping L2 learners to be aware, to engage and to improve their online learning ability. Anderson (2003) also considers online reading as a reading practice that is different to that of reading in print (p. 22). A main distinction between the readings is embedded in the context of online text that permits readers to make directional selections appropriate to their learning abilities and strategies.

Another important learning strategy that students commonly apply when using digital technologies is a trial and error strategy (Brown, 2006; Duke, 2010; Starkey, 2010; Ullrich et al., 2008). Typically this involved learners trying out something and if they could not do what they were aiming to do they would either look for online help or ask a peer. Included were some self-assessments so that the students could check their progress in learning (Starkey, 2010, p. 235). This approach has been found to be influenced by students’ active knowledge construction with digital technologies (Ullrich et al., 2008) outside the classroom (Duke, 2010) through participation in groups, frequent interaction, gaining feedback and connections to real-world contexts. “This is
likely what happens beyond the classroom environment when there are few people to explain” (Starkey, 2010, P. 237) and to guide students’ learning. This parallels findings from Ullrich et al. (2008) that web tools can be exploited during language learning processes as information sources, for example, using Wikipedia materials as an initial strategy to study concepts.

Mortimer (2010) found some important learning strategies for searching and selecting information on the web as demonstrated by young learners in her study. She suggests that learning styles and personal motivations influence the development and the application of strategies when independently seeking, selecting, and analyzing information via web tools that are perceived to be interesting and novel to them. Consequently, the learners were challenged to read for information and tended to use Google, opening links autonomously as a search engine. Thus they commonly relied on adequate, but basic, search terms. They knew how to skim over search results and choose appropriate sites based on search terms and the website descriptions by scrolling up and down mostly on their own. Another useful adopted strategy is purposefully clicking forward and back for a new search. Learners realized the importance of viewing more than one site for information gathering and knew when to stop searching. Most learners used more than one website to gather information on their topics. Thereby, they make use of “a much more sophisticated set of critical literacy skills to effectively seek, select, analyze, and apply information found online, as compared to the skill set required when reading print-based texts” (p. 139). Mortimer concludes that web-based learning is important to improve engagement and achievement among the learners.
Boudreaux (2010) claims that learners adopt certain strategies in the language classroom to interact (communicate and share more) and work collaboratively via Wikis. For example, they worked together to draft and revise their writing, and then worked individually. The learners reported on the need to appeal to the other person and to acknowledge their needs as a member of the group. Because learners are working more closely with each other to accomplish the goals of the assignment (Gardner, 2011), it is not surprising that they would offer to do more work or that they would be more interested in the needs of the others such as offering help (Boudreaux, 2010; Mills, 2011). Moreover, since this is an online environment, students are apt to be more polite and save their own positive face in this environment. At the same time, by viewing others’ responses, “learning can still occur and it is still beneficial to the student even though there is not much (if any) real communication about the way that the project will be done” (Boudreaux, 2010, p. 79). Another important strategy was trying to find mutual understanding and avoid arguments with each other (p. 62).

Interestingly, web tools also support language learning strategies including higher order creative thinking skills, cultural awareness and competency in understanding a learning community. Branch’s (2012) recent study examines the effectiveness of the web-based instruction in foreign language (Spanish) as a tool to help student communication and increase proficiency in the five curricular goals (the five C’s). The goals include communication, cultures, comparisons, connections, and communities. Importantly, the communication elements include reading, writing, speaking, and listening skills. The study discovered that students perceive using web tools as extremely positive learning
strategies and there was a significant improvement in students’ achievements of the five Cs of language learning. Moreover, “The combination of knowledge about foreign cultures and the ability to engage in comparisons and contrasts with one’s own will help students acquire [sociocultural] awareness … [and] engage in the construction of their own meanings about culture” (p. 31). The author proposes web-based language learning is important for worldwide social interaction and facilitating students to function better in an interdependent society. The tools can aid users in the learning process by providing them sufficient opportunities to observe, offering opportunities for dynamic practice and inviting meaningful participation. Once students are skilful, they can become more adept citizens of the community with better skills to transfer to other subject matter, more career prospects, and sociocultural consciousness which, in turn, creates a superior learning environment.

2.4.2 Web tools as learning strategies practice platforms

Today, several hundred Web 2.0 tools are platforms “to process knowledge” (Duke, 2010, p. 170) and have potentials in enabling language learning strategies.

2.4.2.1 Facebook

One of the most popular social networking tools is Facebook where higher education students are the most frequent users and increasingly spend their time (Carbo & Antoli, 2011; Dillard, 2011; Eberhardt, 2007; Freishtat, 2009; Lenhart & Madden, 2007; Schultz, 2011; Selwyn, 2007) “in various forms of informal and self-directed learning outside of formal classroom settings” (Freishtat, 2009, p. 2). As listed on the
facebook.com website, Facebook has established itself rapidly since February 2004 and has 500 million active users in the year 2011 (as cited in Schultz, 2011). The main elements of social networking, especially Facebook are as follows:

i) The profile - each user is stimulated to contribute personal details if possible and it “is comprised of identifiers that distinguish one user from another” (Dillard, 2011, p. 2). The profile includes interests, pastimes, e-mail address and preferences in the case of leisure communities (Armstrong & Franklin, 2008; Eberhardt, 2007; Mills, 2011). After a profile has been verified, new members are able to be in touch with existing members worldwide (macro context) by requesting that members join as their individual (micro context) friend. Learner-users could change their privacy settings to choose the individuals that are able to view their Facebook profile in order to protect their privacy (Dillard, 2011; Freishtat, 2009; Greenhow & Robelia, 2009).

ii) The network links or list of friends - all members are signified mainly by their contacts or network links starting from real individuals, inviting them to request others including strangers. In this regard, in a Facebook community, “the joint enterprise was participation, engagement, and mutual accountability in a global simulation context” (Mills, 2011, p. 363). A shared practice was developed as users created online profiles for their characters, interacted with co-participants, and posted their shared updates and wall postings on Facebook.
Furthermore, it is clear that Facebook was an important social tool of “popular culture” (Freishtat, 2009) used by the majority of the members especially to aid their transition to University (Armstrong & Franklin, 2008; Schultz, 2011). Selwyn’s (2007) research on university students’ use of one of Web 2.0 applications namely Facebook in the UK recommends that the educational nature of students’ Facebook use is profoundly casual such as discoveries in corridors, cafeterias and beyond the classroom. Accordingly, due to the convenience and popularity of Facebook usage, users might potentially depend more and more on Facebook, and use it to substitute supplementary forms of interpersonal contact that need extra effort. Thereby, most Facebook members “feel a sense of responsibility to participate on their friends’ walls, while others conversely think that their friends should feel that responsibility as well” (Schultz, 2011, p. 35).

In the same vein, Facebook has grown to embrace users’ social relationships by enabling learners to maintain their continuing connections with old and new friends. The importance of making new online friendships, intimate friendships and for keeping in touch (Dillard, 2011; Freishtat, 2009; Greenhow & Robelia, 2009) with friends (or network links) via Facebook is also noticeable. In fact, a challenging representation is developing whereby many users are not simply shifting offline contacts to an online way, or the other way round, but commonly most of them are engaging both at once (Selwyn, 2008). As these connections frequently tolerate physical separation, retaining social networks could aid students to fine-tune existing strategies (Eberhardt, 2007; Schultz, 2011) for lifelong learning.
2.4.2.2 Wikis

Wikis, as defined by Murugesan, are “simple yet powerful Web-based collaborative authoring (or content management) systems for creating and editing content” (Murugesan 2007, p. 35). Wikis facilitate collaboration and interaction, offer possibilities for immediate feedback, stimulate social connections and communities, and harness knowledge with no associated costs (Boudreaux, 2010; Jonassen et al., 2008; Tapscott, 2009). A Wiki is actually a modified web page allowing collaborative individual or group users as active volunteers to add, edit or remove online information at any time and from any location (De Wever, Van Keer, Schellens, & Valcke, 2011; Jonassen et al., 2008; Murugesan, 2007; Shihab, 2008; Tapscott, 2009). With basic typing skills, it is easy to create content and share information online by adopting available Wiki web sites, which may be available publically or accessible only with permission. Today, a Wiki is a tool that enables the collaborative creation of sets of web pages for learner-users and one of the most famous Wikis in the world is Wikipedia an online encyclopaedia (Wikipedia, 2012).

Wikipedia is a free multilingual encyclopaedia, authored by the public (anyone who has an interest in some topic). This largest of Wiki sites was launched in 2001 and has more than 19 million articles, in more than 270 languages, written collectively by volunteers worldwide (Wikipedia, 2012). An increasing number of Wikipedia articles are well-written and informative materials, for example the ‘Featured Articles’ and ‘Good Articles’. Almost all of its articles can be edited by anyone but in certain cases, Wikis still can support authentication because only certain members can modify certain pages. On a daily basis, hundreds of thousands of global users collectively contribute tens of
CHAPTER TWO: LITERATURE REVIEW

thousands of edits and publish thousands of their own first-hand articles (Wikipedia, 2012). Tapscott (2009) asserts, “Well, I say that 10,000 heads are better than two. There are a lot of smart people out there, and we should be using new technology to tap into their talent” (p. 91). For example, the capabilities of wikis to combine, collect and rebuild applications “in intelligent ways to help [learners] make smarter decisions” (Murugesan 2007, p. 37), include Facebook, and Twitter are valuable for language learning. Murugesan (2007) refers a mash up as “a Web page or Web site that combines information and services from multiple sources on the Web” (p. 36). Thus, the users learn more by collaboration in a knowledge-building community in which students are able to develop critical and reflective thinking skills.

Literature also indicates that the use of Wikis as writing dynamic Web applications in education improves writing strategies through collaborative group work (Boudreaux, 2010; De Wever et al., 2011; Jonassen et al., 2008). This collective intelligence process of creating a shared object of knowledge where changes of the articles can be tracked to the users directly is noticeably natural in offering great autonomy to the users (Murugesan, 2007). Editors in Wikis communities closely and promptly correct errors when notified. Weinstein et al. (2005) found that the accuracy of Wikis’ content were comparable to the Encyclopedia Britannica. Although not without risks in terms of expertise, coverage, volatility of information, Wikis have become very popular for fast and flexible retrieval of information and as tools for evaluative processing and higher order thinking (Weinstein et al.). Wikis can also be used in class projects to save a lot of time for managing group work and instructors can use wikis to supply writing activities (Boudreaux, 2010; Franklin & Van Harmelen, 2007; Shihab, 2008). It has been
suggested that Wikis have educational potentials especially in the language classroom by utilizing aspects of learners’ daily lives and taking advantage of the power of learners guiding other learners (Boudreaux, 2010; De Wever et al., 2011).

Recently, Woo et al. (2011) proposed that Wikis were helpful in facilitating learners to engage in fun learning and collaborative problem-solving. Those authors further argued that Wikis also facilitated scaffolding learners to achieve their critical-thinking and creative reasoning skills. For instance, the learners post peer comments in order to practice new vocabularies and grammar rules, use online dictionaries, extract main learning ideas from the web, analytically assessing appropriate facts and rehearsing to write better by sharing and observing instances from others. The open mechanism accomplished to help collaboration between learners, and the written conversation online assisted the reluctant or weaker learners with English. For example, the learners mentioned the ease of editing their work and posting photos, and noted that peer interactions encouraged prompt knowledge sharing among group members, such as through repetition and regeneration. Overall, Web 2.0 technologies provide resources that motivate learners’ strategies and encourage engagement in collaborative behaviour where “whatever challenges they encountered, they solved creatively in their own ways” (p. 48).

2.4.2.3 Twitter

Twitter is an important Web 2.0 tool that creates an environment in which users can interact in real and deferred time, thereby accommodating a virtual extension of the
physical classroom community (Carbo & Antoli, 2011; Ebner et al., 2009) by providing an opportunity for membership in the L2 community. Consequently, the tool supports informal learning strategies such as enabling immediate feedback, stimulating information awareness from peer learning activities and monitoring own learning progress (Ebner et al., 2009). This is also the evidence from Antenos-Conforti’s study (2009) that investigated the Twitter habits of L2 learners (22 university students) and influenced how they evaluate this tool for learning language and culture. Antenos-Conforti (2009) found that Twitter can transform social networking into educational networking because of its three key features, namely its participatory nature, authenticity of use and interactivity. Twitter was considered by those users essential for authentic daily language practice because it promoted robust exchanges. Twitter facilitated positive affective choice because while learners tweeted, they felt more relaxed and motivated to converse in L2 (Italian). Some learners remarked that tweeting improved their writing in L2 in terms of grammar and vocabulary. They also acknowledged that their teacher’s replies to their tweets benefited their learning and contributed to their knowledge of Italian culture. Overall, Antenos-Conforti (2009) recommended the interactive and dynamic nature of this Web 2.0 tool for language teaching and learning.

2.4.2.4 Blogs

Another Web 2.0 application is the use of blogs to promote educational learning goals (Murray & Hourigan, 2010; Ngah, 2007). The learner-users can upload their diary entries and, if they wish, publish them. Blogs are an excellent example of web services
which incorporate read/write characteristics to foster conversation instead of a non-
interactive information broadcast (Murugesan, 2007). In language learning, the blog
clearly has high potential for motivating university students, through the exchanging of
ideas, and also as a platform for self-directed language learning (Murray & Hourigan,
2010; Ngah, 2007). Thus, the potential impact of the blogging phenomenon upon
teaching and learning contexts reveals an important area for consideration for all
university educators (Murray & Hourigan, 2010).

There are some features of blogs that have proven most interesting in this respect. First,
blogs are free, and are relatively easy to create and update (Murugesan, 2007; Ngah,
2007; Shihab, 2008). Second, most blog software comes with a built-in back end of RSS
(Rich Site Summary), which allows readers to easily see when new postings have been
made (Murugesan, 2007; Shihab, 2008). This allows users to keep up to date with new
content as it is created. RSS feeds offer a great value to language learners feeds, for
example, “for getting news feeds, English word of the day, and notifications of new
podcasts, blog posts, and Wiki edits” (p. 96). Third, blogs provide links which facilitate
other bloggers to connect to individual posts from their posts, which in turn create
correspondence for socialization and for easy exchange of opinions (Ngah, 2007). At the
same time, being able to check their peers messages, would improve the sense of
community (Ullrich et al., 2008). As a result, like other Web 2.0 tools, blogs have been
identified as the most likely tool for future activities for collaboration purposes. They
provide an informal but rich learning source (Ngah, 2007; Shihab, 2008) especially in
developing reflective language learning strategies (Murray & Hourigan, 2010).
ESL learners could acquire the ESL (TL) at ease and at their own pace through language exploration by participating in blogs if exposed to peer-appropriate L2 conversational proficiency during the learning process. This finding was revealed by Ngah (2007) who explored the correlation between Malaysian students’ use of blogs and their ESL learning. Ngah notes there will be no fear of being corrected by a capable person because the initial focus was more on the content rather than the mechanical aspect of language. Therefore, the learners gained initial confidence and critical thinking skills to write in a public space open to comments from others, while adopting roles as contributors and not just consumers of information online. She further asserts that it is necessary for the learner-users to have access to knowledge in what they are going to write about by applying effective strategies, such as search, read, select, and to think before posting to ensure their writing is worth sharing. Overall, the research notes that blogs have been perceived as an interesting tool for promoting effective ESL learning strategies by helping students identify the strengths and weaknesses of their writing.

2.4.2.5 YouTube

The increasing attention paid to YouTube has led to a heightened awareness of and growing interest in individual learning strategies. For instance, Dietel-McLaughlin’s study (2010) examined the role played by use of YouTube in the complex connections between democracy and learning. YouTube is a popular video-sharing tool and allows other users to comment on that video content. Dietel-McLaughlin proposes that YouTube emphasizes the community-building and linking application of Web 2.0, as
the interactivity of such technologies supports learner-users’ interactions within complex networks in order to form communities surrounding shared interests.

YouTube … offers individuals from across race, ethnic, gender, ability, and class boundaries to view and upload clips that are of interest or significance to them … The reciprocal relationship between individual and community interests is also seen in the [YouTube] site’s consistent. (p. 104)

As a public platform, the tool provides space and opportunity for individuals to discuss social issues around rituals of appropriation, remixing, imitation and other refined strategies of composing. Users also post their own versions of favourite videos as responses to the original, thereby engaging themselves (and other viewers) freely and fully in ways that foster a sense of community within their culture of public sharing. Therefore, the value of YouTube cannot be overstated because learner-users can manipulate YouTube to voice “their private experiences into public view, which holds powerful pedagogical benefits” (p. 133). Thus, YouTube provides ample opportunities for practice in sustaining democratic culture especially for the extension of shared values and problem-solving. Furthermore, every learner is not only able to download complete courses and lectures for personal viewing but also they can make their presence known and their opinions felt by constructing and distributing these via various Web 2.0 platforms.
2.4.2.6 Games

Another growing academic interest is directed towards the learning potential of game-based learning (Feng, 2009; Gee 2010; Hoy, 2011; Selwyn, 2007, 2008; Wilkerson, 2010). Gaming is argued to offer a range of specific personal language learning opportunities and a highly flexible and engaging social space (Feng, 2009; Gee, 2010; Hoy, 2011; Wilkerson, 2010). In his thesis, Hoy (2011) acknowledges that:

In addition to posing well thought-out and structured problems, games must allow players to practice the skills required to solve these problems until their mastery has become “routinized.” Each successive challenge forces players to reconsider their mastery and consolidate it with newly acquired skills through repetition. In this way, players maintain and slowly develop expertise [because language learning] requires repetition and practice to master. (p. 89)

Collaborative networks in gaming can support informal learning in that the “learning in the meaningful context of the game did not occur consciously; rather, it was incidental and incremental” (Feng, 2009, p. 231). Therefore, games are tools for assisting learners build groups of practice through unlimited problem-solving, repetition, trial and error to construct rules and share knowledge. Indirectly they are perceived to contribute learning cultures (Feng, 2009; Gee 2010; Hoy, 2011; Selwyn, 2007, 2008; Wilkerson, 2010). For instance, learner-users can decide when and how to spend their time with activities they prefer in focusing certain aspects of language and information exchange (Gee, 2010) or reduce time spent with those they dislike (Hoy, 2011; Wilkerson, 2010). In the long term, this strategy increases learner success in autonomous language learning through independent practice (Hoy, 2011, p. 96).
Learner-users’ cultural reflection helps them to learn about “ways of life” and “ways of thinking” of native speaking people through the games as self-study tools (Feng, 2009). With different levels of proficiency, distinct roles and goals in mind, they “could personalize their learning experience, focusing on material and aspects of language that help meet their personal goals, academic or communicative” (p. 100). This finding is compatible with Wilkerson’s (2010) who claimed that,

language learning in this environment tends to be highly imaginative and interactive and works well for learners who enjoy tactical and visual sensations. Because learners can digitally touch, move, and build objects that teach them a … language, they can also see that language skills extend beyond text and speech into creation, of meaning, of space, and of interactions. (p. 134)

In a clearer view, Table 2.2 from Hoy (2011) notes several game-play strategies that contribute powerfully to language learning aims.
<table>
<thead>
<tr>
<th>Element</th>
<th>Definition</th>
<th>Application to Language Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>A virtual or physical representation of having accomplished something. These are often viewed as rewards in and of themselves.</td>
<td>Learners should be rewarded in some fashion with each success. Successful communication/task completion should not the reward in and of itself. Players want recognition.</td>
</tr>
<tr>
<td>Appointment Dynamic</td>
<td>A dynamic in which to succeed, one must return at a predefined time to take some action. Appointment dynamics are often deeply related to interval based reward schedules or avoidance dynamics.</td>
<td>Encourages routine play and can be applied to both linguistic and cultural content (holidays, daily routines), as well as instructional features such as practice and assessment.</td>
</tr>
<tr>
<td>Behavioural Momentum</td>
<td>The tendency of players to keep doing what they have been doing.</td>
<td>Establishing that routine play improves</td>
</tr>
<tr>
<td>Blissful Productivity</td>
<td>The idea that playing in a game makes you happier working hard than you would be relaxing. Essentially, we’re optimized as human beings by working hard, and doing meaningful and rewarding work.</td>
<td>Players must feel that what they are doing is useful and productive, but still fun. The game is an additional classroom, whether players realize it or not. Playing should be just as effective if not more so than other means of studying.</td>
</tr>
<tr>
<td>Companion Gaming</td>
<td>Games that can be played across multiple platforms.</td>
<td>Allows language learners with different play styles to interact. Care must be taken in designing a game that can address all aspects of language equally across supported platforms (mobile and browser).</td>
</tr>
<tr>
<td>Countdown</td>
<td>The dynamic in which players are only given a certain amount of time to do something. This will create an activity graph that causes increased initial activity increasing frenetically until time runs out, which is a forced extinction.</td>
<td>Though freely produced output should be observed, other means of practice and assessment should also be encouraged. Timed mini-games can be used for practice. More complex tasks can be given a larger timeframe for completion.</td>
</tr>
</tbody>
</table>
Epic Meaning

Players will be highly motivated if they believe they are working to achieve something great, something awe-inspiring, something bigger than themselves.

Go beyond individual language goals and encourage collaborative creation both of game content and linguistic meaning.

Fun Once, Fun Always

The concept that an action is enjoyable to repeat all the time. Generally this has to do with simple actions. There is often also a limitation to the total level of enjoyment of the action.

Simplicity of material should be paired with simple, yet enjoyable play, e.g. mini-games to practice spelling or vocabulary.

Progression Dynamic

A dynamic in which success is granularly displayed and measured through the process of completing itemized tasks.

Give learners a visual manifestation of their progress both within the game and linguistically, e.g. collecting words to complete a dictionary à la Pokémon. Focus should be on creativity.

Social Fabric of Games

The idea that people like one another better after they’ve played games with them, have a higher level of trust and a great willingness to work together.

Establish a language learning community, lowering the affective barrier and encouraging free language production in a safe environment.

Status

The rank or level of a player. Players are often motivated by trying to reach a higher level or status.

Hand-in-hand with achievement. Making certain aspects visible also encourages competition, further motivating some learners.

Viral Game Mechanics

A game element that requires multiple people to play, or that can be played better with multiple people.

Encourages communication and collaboration to complete a specific task.

Virtual Items

Digital prizes, rewards, objects found or taken within the course of a game. Often these can be traded or given away.

As with achievement, giving players some physical signal of their progress motivates them and others.

Table 2.2: The importance of motivational game-play elements and their language learning applications (Hoy, 2011, pp. 105-106)

In particular, research into how learners manage their learning behaviours has resulted in the recognition of specific strategies and attempts to classify them. Generally, the literature fits with Macaro’s (2001) argument: “One thing seems to be increasingly clear
and that is that, across learning contexts, those learners who are pro-active in their pursuit of language learning appear to learn best” (p. 264). This conclusion fits well into the framework of previous research literature that web tools support learners’ active and collaborative learning strategies through the repeated practice and frequent rehearsal towards meaningful engagement, critical thinking and independent learning cultures.

2.5 Summary

This chapter has presented an extensive review of both theoretical literature and empirical research. The review and synthesis of the most recent, most essential literature constructed four major themes of the study: (a) history of educational technologies; 2) the millennial learners; 3) Web 2.0 affordances and limitations; 4) online learning strategies and their interconnectedness. The researcher concludes this chapter with four important findings from the literature:

(i) As suggested by the literature, web tools offer potential ground for supporting individual personal learning (Severance et al., 2008; Woo et al., 2011). This in turn, empowers their perception and valuable activity exploration (Boruta et al., 2011; Gardner, 2011; Mortimer, 2010; Shihab, 2008). Consequently, individual learning is seen to be influenced by the environment and context;

(ii) The interaction within a community and a sense of belonging to a community are important to enable web-based informal ESL learning. As upheld by sociocultural perspectives (Arbaugh & Benbunan-Fich, 2007; Dale, 2010; Gee, 2010; Mills, 2011; Van Lier, 2004), the broader social,
cultural and historical context presents the robust frame which influence realistic meaning-making and behaviour during sociocultural interactions in wider range of educational settings. Thus, when individuals are motivated to learn, it is possible for them to perceive affordances, limitations and strategies for active learning. Also, it indicates the emergent literature from data analysis as a confirmation and validation of the knowledge area;

(iii) Demonstrated how new interactive technologies are vital aspects of transformation that need to transpire in learning beyond the classroom for risk-free practice; and

(iv) Highlighted literature and knowledge gaps in the field of technological application in conventional informal learning contexts.

This review of literature provides a context and groundwork for the current investigation that attempted to discover the affordances and the learning strategies in Web 2.0-based language learning beyond the walls of formal learning spaces. The following chapter details and justifies the theoretical framework of the study by introducing new literature related to the value of activity theory, affordance theory and situated learning theory. Additionally, the chapter presents theoretical lenses and analytical tools for understanding the complex, interdependent and context-sensitive nature of learner-users’ sociocultural experiences in web-based learning.
3.0 Introduction

In this chapter, the researcher reviews current thinking on key beliefs and behavioural practices regarding informal ESL learning via Web 2.0 tools, including the theoretical principles that underpin most Web 2.0-based learning research. This is undertaken to identify those principles that can best support and inform the proposed research. By examining out-of-class contexts, we can gain a deeper understanding of ‘how’ and ‘why’ Malaysian university students are engaged with Web 2.0-based learning of ESL beyond the walls of formal spaces, and which learning strategies they favour. A case has been put for exploring learners’ perspectives based on perceptions through narrative and reflections providing information that can then be interpreted and analysed, using activity theory frameworks, to make meaningful contributions towards a practical application of emerging Web 2.0 tools in informal ESL learning.

This chapter details the theoretical appropriateness for the research of these three constructs to justify their use. Following individual explication of these constructs, the chapter then details their interconnectedness and compatibility in this study. These constructs are then applied to data analyses in subsequent chapters.
This framework is multidisciplinary and draws on research theories from several distinct fields, namely activity theory and situated learning theory based on Lave and Wenger’s (1991) Community of Practice. Finally, an argument is put forward for the value of reviewing Web 2.0 practices from the perspective of affordance theory (Gibson, 1979). The theoretical framework of this study may be illustrated as in the following diagram. It is an indicative rather than precise diagram with regard to interplay (Figure 3.1).

![Theoretical Framework Diagram](image)

**Figure 3.1: Theoretical framework of the current study**

As indicated earlier, the researcher has chosen activity theory as both theoretical lens and analytical tool to frame the research. This theory can be represented by three distinct transformations (Engeström, 2001). These are respectively, work on mediation (Vygotsky, 1978), an inclusion of the social (Engeström, 1987; Leontiev, 1978), and an
expansion to consider these two activity systems (Leontiev, 1978; Engeström, 2001).

Activity theory is explained by Kaptelinin and Nardi (2006) as follows:

In Activity Theory people act with technology; technologies are both designed and used in the context of people with intentions and desires. People act as subjects in the world, constructing and instantiating their intentions and desires as objects. Activity Theory casts the relationship between people and tools as one of mediation; tools mediate between people and the world. (p. 10)

This framework uses activity as the basic unit for studying human practices. Activity in this context or what and how do learners learn, is reflected and motivated through actions as learners interact with their environment (Anderson, 2003). The following chapter subsection provides an overview of sociocultural theory, as well as the more specific analytical framework of activity theory as characterized by Vygotsky, Leontiev and Engeström, and its relevance and value in providing a conceptual framework for the current research. In this study, the participants’ use of Web 2.0 tools in different case studies are analysed through the lens of this combination of theories, thus enabling the researcher to analyse in some depth how Web 2.0 has mediated informal ESL learning activities, in different settings and for different learner-users, in terms of affordances and barriers. Although Web 2.0 was not initially constructed for learning purposes, learners manipulate whatever tools they have at their disposal, justifying a further examination of the specific ways in which learners use the available Web 2.0 tools.

3.1 Vygotskian sociocultural theory

Technological advancement has allowed many researchers to recognize the value of a sociocultural framework (Vygotsky, 1978, 1986) for understanding and considering learning in a social world and in the cultural contexts in which events occur (Kaptelinin
In this regard, the development of human culture occurs twice: on the social level, between people (“inter-psychological”); and on the individual level (“intra-psychological”) (Vygotsky, 1978, p. 57). In this way, “the individual could no longer be understood without his or her cultural means; and the society could no longer be understood without the agency of individuals who use and produce artifacts” (Engeström, 2001, p. 134). With reference to this, Vygotsky notes that, through a variety of roles, the learner is an active participant in the learning process, and knowledge building results initially from collaborative social interaction between people. As a result, individuals share their experiences and thoughts in generating collective thoughts.

To explore the employed activity theory approach, this section will first review two key concepts of sociocultural theory, namely mediation and activity theory; it will then explore how activity theory has been used in research of Web 2.0 tools for ESL learning beyond the classroom. Drawing on previous applications of activity theory and sociocultural studies, this study re-presents second language learning engagement research from a social constructivist perspective by situating learning via Web 2.0 activities in the activity theory framework to better understand learning strategy use as socially-mediated actions.

### 3.1.1 Mediation in sociocultural theory

An important aspect of sociocultural theory is the consideration that learning is a social process. In his work on the relation between thought and language, Vygotsky (1986)
sees mastery of verbal thought as a prerequisite for learning. Language is a cultural tool and used to facilitate the association between the individual language learner and “the social–material world” (Lantolf & Thorne, 2006, p. 199). In contrast, physical tools allow the learners to adapt and change “the way [they] live in the world” (Lantolf & Thorne, 2006, p. 199). Vygotsky also points out that learners already have previous experience of learning and building new knowledge, thus, learners’ intellectual development is reflected by their previous experience and the use of tools and cognitive resources. This also reflects the view of Anderson (2003) that focuses on mapping mental tasks and reflection in active cognitive processes to provide a further insight into perceiving the learning possibilities around them. The role of such historical-cultural development in learning has been explained by Vygotsky (1986) as follows:

Verbal thought is not an innate, natural form of behaviour, but it is determined by a historical-cultural process and has specific properties and laws that cannot be found in natural forms of thought and speech. Once we acknowledge the historical character of verbal thought, we must consider it subject to all the premises of historical materialism, which are valid for any historical phenomenon in human society. (p. 94)

Central to a sociocultural theory (as noted in Chapter Two) is the idea of new learning that young learners experience in the virtual learning environment which will not be internalized until it is considered within the context of what the learner already knows (Duke, 2010; Kaptelinin & Nardi, 2006; Salomon & Perkins, 1996). In this vein, informal learning provides a ground for learner-users in the Web 2.0 environments to consider what they know, the new knowledge that will be acquired and how it can bridge the gap to what is not known. While ESL learners use different mediating tools in learning beyond the classroom, the Zone of Proximal Development (ZPD) is ideal to
represent the domain where learners share their knowledge and skills with peers and more capable others (Dale, 2010; Geyer, 2008). Vygotsky (1978) explains the concept of ZPD as the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 86). Cognitive support from a more capable person can expand a learner’s personal learning or problem-solving abilities and help to promote newer and more advanced behaviours for meaning-making and reflection on new knowledge (Greenhow & Robelia, 2009; Mills, 2011). In the current study, such sharing and encouragement underpin the educational use of Web 2.0, allowing learners to build on prior knowledge and experiences and extend ZPDs, which are primary to the development of new knowledge for independent and informal learning in the future. Consequently, learners gain an awareness of the objective environment through speech and social interaction and consequently shape their personality development in terms of perception, reflection and valuable activity. From this perspective, Vygotsky’s concept of mediation contributes to the problem-solving approach in learning.

Vygotsky (1978) also states that human behaviour is essentially built upon reflection because the learner is able to make indirect connections between incoming stimulation and their individual responses through various mediating links. Alongside such a perspective, Vygotsky (1978) proposes that higher mental functions and human actions are mediated by two types of tools, namely technical and psychological. Technical tools are externally oriented at the object of activity whereas signs (psychological tools) are internally oriented at the subject of activity. Due to some ambiguity in the activity
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theory literature about the term “sign” of the activity, for the purposes of clarity, in this thesis, the researcher will refer to “sign” as “cognitive resources”. Learner-users can control their behaviour from the outside via Web 2.0 tools and regulate their minds from the inside through the use of cognitive resources. Thus, the most important aspect of tools highlighted in this study pertains to qualitative transformation resulting from the introduction of Web 2.0 tools as mediation in the social networking and the thinking practice of ESL learners leading to informal ESL learning. Vygotsky’s concept of mediation is here illustrated as in Figure 3.2 as follows:

![Figure 3.2: Graphic representation of Vygotsky’s concept of mediation (Adapted from Engeström, 1987)](image)

The above figure represents Vygotsky’s concept of mediation which relates a subject (a person or persons), an object (an objective or goal) and tools that mediate the action. In this sense, the concept of mediation emphasizes a dialectical relationship between humans, society and culture as the catalyst that advances them through the regulation of
mind from both the outside world of objects and situations and the inside mental world through the use of tools and cognitive resources. Thus, mediation in this context is the means that “breaks down the Cartesian walls that isolate the individual mind from society and culture” (Engeström, 1999, p. 29). Kaptelinin and Nardi (2006) also write that “the main idea was the need to consider the human use of technology within a wider context of human interaction with the world: an interaction mediated by technology” (p. 74). Therefore, the major potential contribution of Web 2.0-based learning can be argued as contributing to building knowledge and developing learner-users’ daily sociocultural practice.

Activity theory studies of learning involve analyses of artefact-mediated activity, situated in cultural and historical contexts, with an emphasis on social mediation processes (Kaptelinin & Nardi, 2006; Lantolf & Thorne, 2006). Supporting this, the principle of mediation provides a lens for examining participants’ ESL learning out-of-class by suggesting that learner-users are active agents strategically appropriating the social cultural tools of Web 2.0 in social networking. Vygotsky’s (1978) activity theory represents the basic relationship between a subject (individual or group) and a cultural artefact (a physical or cognitive tool) in order to transform an object (a goal, objective, purpose or problem). However, Vygotsky’s (1978) basic representation of activity does not fully account for the relationship between an individual and the environment. Therefore, the analytical framework of this study outlines and considers the key contributions made by Leontiev (1978) and Engestrom (1987, 1999) to activity theory in this domain.
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3.2 Activity theory: Leontiev and Engeström

This section will clarify two types of activity theory, namely Leontiev’s (1978) and Engeström’s (1987, 1999). Both theories focus on human cognition in context studies. Leontiev’s (1978) activity theory highlights the motive, the goal and conditions of the activity within the cognition and context framework, while Engeström’s (1987, 1999, 2001) activity theory emphasizes the mediating resources and the community feature of the activity in its exploration of the human mind in the society. This emphasis on tools, including Web 2.0 artefacts, as mediators of activity focuses attention on the activity itself as well as the interaction between the learner-users and the Web 2.0 tools. The learner-user is seen to be doing something other than using the Web 2.0 tools. In this regard, the Web 2.0 is the tool through which the learner-users achieve their objectives. According to this perspective, evaluation of Web 2.0 artefacts should focus not only on identifying usability issues, but also on examining how well the tool supports the learner-users’ informal learning activities of ESL.

3.2.1 Leontiev’s activity theory: Motive, goal and conditions

Leontiev (1978) developed the two additional concepts of “activity” and “action” in support of Vygotsky’s ideas to further explore the genesis and mediation of mind in situated contexts, and proposed a formal theory of activity. Leontiev’s activity theory is functionalized through three layers of analyses (Kaptelinin & Nardi, 2006). Each layer of the structure consists of one construct (activity, action and operation) and its variable (object, goal and condition). The structure of Leontiev’s activity theory is summarized in Figure 3.3 as follows:
In Leontiev’s (1978) theory, the level of activity emphasizes the reasons for the activity being performed. The activity is motivated by needs such as biological needs (for example, hunger) or culturally constructed meaningful needs when they are directed at specific objects (motives). Thus, in the current study, the activity and actions (to perceive affordances and adopt learning strategies) of Web 2.0 are identified through the object-related motive, and the motive is realized in the goal-oriented action and under particular conditions. As a result, learner-users need to actively adapt their learning environment for successful informal learning construction. Therefore, this study will uncover the learners’ goals and motives within Web 2.0-based informal ESL learning circumstances in order to understand the performance of a learner-user in that particular situation. The goal is determined by conditions and also influences the actions and activities (Leontiev, 1978; Kaptelinin & Nardi, 2006). In other words, the levels of
operation or routine processes that are used describe how the action is performed within the available conditions. Leontiev also highlights the holistic nature of activity systems and the continuous transformation between the three layers, namely the activity, the action and the operation. Thus, Leontiev illustrates the difference between individual and collective actions and how they relate to one another (Engeström, 2001). Moreover, the internal negotiations of such a system are the motive to force change and development of the activity.

Activity theory focuses on “human intentionality” (Kaptelinin & Nardi, 2006, p. 10). Therefore, the tools are “for purposeful”, “intentional” (p. 203) and conscious activities that contribute to learner-users’ daily engagement. Kaptelinin and Nardi (2006) describe “consciousness” as “the enactment of our capacity for attention, intention, memory, learning, reasoning, speech, reflection, and imagination” (p. 8). Web 2.0 activities include operations and conscious actions where there exists intentionality influenced by the individual differences, past experiences, and the affordable conditions of the context. The main difference between operations and actions is that operations have a routine nature and require the subject’s automatic attention, whereas actions involve conscious doing (Kaptelinin & Nardi, 2006; Leontiev, 1978). Thus, actions, when they become regular ways of doing things, no longer require conscious attention and intention in their performance and become operations (Kaptelinin & Nardi, 2006; Leontiev, 1978). For example, in the multi-dimensional context of this study, an advanced ESL learner may not pay attention to grammar while being engaged in Facebook conversation.
In Web 2.0 activity, the unit of analysis is the whole activity of the subject, which implies the active participation of the subject. Thus, the activity is broken into the analytical components of subject (ESL learners), tools (Web 2.0 tools and ESL), object (informal ESL learning) and the affordable conditions of the context. The unit of analysis is expanded from analysing the individual as a single learner by incorporating the learner’s mutual engagement in communities of practice (Lave & Wenger, 1991; Wenger, 1998). This means including the learner’s ability to act in order to fulfil learning objectives (Anderson, 2003). Therefore, the individual user has his own motives for choosing to participate or not participate in Web 2.0 activities, his own motives and intentions (Kaptelinin & Nardi, 2006). This allows an understanding of several aspects of reflective behaviour (Anderson, 2003), including choice of activities and tools, goals and continuing participation. This multi-layered analysis is helpful in understanding how activities can be illuminated into the conscious steps, automated routines of the individual and dynamic motives and object-oriented actions within the context of the activity. Therefore, some actions with Web 2.0 tools may, over time, become routine processes that no longer require conscious awareness among learner-users.

In the following section, the researcher draws on Engeström’s activity theory as the conceptual framework underlying this research, because it points to a necessary direction for understanding the complex, evolving system of informal ESL learning mediated by Web 2.0 tools. This approach provides a broad conceptual tool for thinking about the relationship between informal learning, the learners, and the resources available to the learners such as the online community and social network.
3.2.2 Engeström’s activity theory: mediating resources

According to Engeström (1987), activity theory extends Vygotsky’s concept of mediation by adding the construct of “community” in its triangular model to represent the structure of a collective activity system. It adds another three mediators, namely community, rules and division of labor to it. By situating mediated actions and including other people as constituents of the activity system, Engeström emphasizes the societal and collaborative nature of mediated actions and offers a better framework (see Figure 3.4 below) to understand how human cognition is mediated and distributed in communities (Engeström, 1987, 1999).

![Mediating artefacts: tools and signs](image)

Figure 3.4: Activity system (based on Engeström, 1987, 1999)

As shown in Figure 3.4, according to activity theory, all human activity is considered to be object-oriented (Leontiev, 1978; Engeström, 1987, 1999; Kaptelinin & Nardi, 2006) and subjects’ actions towards objects in an activity system are mediated by four interrelated mediators namely mediating artefacts, rules, community and division of labor. In other words, this theory highlights the activity directed towards an objective (goal) and
carried out by a community (object-orientedness). Mediating artefacts include technical artefacts (tools) and psychological artefacts (cognitive resources). In informal learning activities of ESL, technical artefacts can be computers, the Internet, Web 2.0 tools such as Facebook and YouTube while psychological artefacts include language, music and multimedia materials. Engeström (1987, 1999, 2001) also outlines the dynamic nature of the relation between the mediating artefacts which involve both external implements and internal representations. These functions and uses are in constant flux and transformation as the activity is mutually inter-related. An internal representation becomes externalized through speech, gesture, writing and manipulation of the material environment and vice versa, external processes become internalized. In order to understand individual learners’ actions and interactions, one must know the context in which those actions are embedded, namely a clear and systematic picture of activity (Engeström, 1999).

Rules are rather loose conventions guiding the individual’s actions and interactions within the system of activity. The rules or regulations in an activity system can consist of informal and implicit ways of doing things (Engeström, 1987). Community is included in an activity system to emphasize the communal nature of cognition and learning and subjects as constituents of the community. For learner-users, their Web 2.0 communities are probably composed of lecturers, classmates, friends from other universities, virtual groups and family members. Division of labor is also referred to as “roles” describing the continuously negotiated distribution of powers and responsibilities among the Web 2.0 participants. Learners can take on multiple roles such as editors, gamers, good and weak ESL learners. In the context of a Web 2.0
activity system, community refers to the group of individual users of the Web 2.0 activity system who are motivated by the same objective (learning ESL beyond the classroom) and demonstrate orientation to the same objective. As a result, the Web 2.0 community shapes and directs the individual and the collective ESL activity beyond the classroom.

It is important to note that the interaction of these four mediators in activities should be perceived holistically as a collaborative knowledge construction process as each element in the activity system is in constant interaction with the others. Activities are open systems and when a new element enters into the activity system from the outside (for example, the criticism and contradictory ideas from peers), a secondary contradiction (for example, the rules or new identity) appears between the elements. Such contradictions represent disturbances and conflicts in activity systems (Engeström, 1999, 2001). In this way, Wenger (1998) confirms that “interrelations within the community did not always arise out of mutual support and interpersonal allegiance, but sometimes through conflict, disagreement, and challenge” (Mills, 2011, p. 364). On the other hand, they can generate innovative attempts to change activities and be used as a catalyst for growth (Engeström, 2001, p. 137). Therefore, under the guidance of this theory, the research should not only focus on how artefacts and contextual components mediate interactions, but should also focus on how these mediators get expanded through interactions.
Overall, Engeström’s activity theory is a theory of object-driven activity and it is important to identify the various mediating resources (Web 2.0 tools and language) that contribute to the production of the object (ESL learning) in the activity. The process of enabling conversation among Web 2.0 users to trigger deep reflection on the various possibilities for Web 2.0 tools integration in informal ESL learning in Malaysia constitutes the focus of this research. By this, the use of mediating resources that influence the nature of external behaviour and also the mental functioning of individual learner-users will be revealed. Through adapting Engeström’s activity system, Web 2.0-based informal ESL learning can be illustrated as an activity system as represented in the following section.

3.2.3 Re-conceptualizing the activity of perceiving ESL learning affordances and strategy research from a sociocultural perspective

The current research aims to add to previous literature on activity theory research on perceived affordances for informal ESL learning and strategies mediated by Web 2.0 tools. The study of Web 2.0-mediated environments using this holistic approach centres on the belief that meaning is located in the relationship among the components in the entire system of activity. In this way, these “units of activity” are dynamic, shaped by the purposes, tools and motivation of the learners involved (Reinartz, 2009, p. 133). Further, Malaysian university students’ ESL learning activities via Web 2.0 tools in a general academic setting (outside of the classroom) could be manifested in the activity theory framework as shown Figure 3.5 as follows:
In this system, participants (ESL learners) are treated as subjects through whose eyes the researcher looks at several activity systems which emerge as important for understanding their informal ESL learning via Web 2.0 tools. Thus, this study will consider the individual learners’ own interpretation and reflection (Anderson, 2003) on Web 2.0-based learning environments in terms of the learning possibilities and strategies, whilst learners are mediated by artefacts which comprise tools (Web 2.0 tools such as online dictionary, Facebook, e-mail, games, YouTube, online news and Wikis) and cognitive resources (L2, L1 and non-verbal signs). These mediators allow for learners to control their own behaviour, in using and creating artefacts for ESL learning out-of-class. In this sense, learners are not learning in isolation because via social networking of Web 2.0, they communicate with other community members such as
their lecturers, classmates and peers (Antenos-Conforti, 2009) through discussion, sharing and error correction.

Furthermore, these learners compete with their peers for proficiency, online recognition and satisfaction in using ESL learning affordances and strategies online. Learners follow specific learning rules such as genres to serve social purposes; for example, good learning imposes high demands on language and linguistic skills including content, organization, grammar, mechanics and style. In this regard, the Web 2.0 tool is a learning activity system that offers university students a specially designed environment in which to explore a variety of ESL interactive activities for revising and re-checking as they wish, anytime and at their own speed (Anderson, 2003; Antenos-Conforti, 2009; Boruta et al., 2011; Shihab, 2008; Woo et al., 2011). The interaction via these Web 2.0 tools serves as a stimulus that affects participants’ informal ESL learning from the outside by presenting the kind of learning practice accepted and expected by the wider Web 2.0 communities. In other words, Web 2.0 tool use occurs within a social system of other users, and learners can be easily influenced, not only by what other users are doing, but also by how they feel about it. Social rules guide what is acceptable (for example, how to use Web 2.0 tools, who is allowed to email whom and what kinds of writing format should be used). Therefore, the user’s behaviours in relation to Web 2.0 tools are the “integration of socially and culturally constructed forms of mediation into human activity” (Lantolf & Thorne, 2006, p. 18).
In current Web 2.0-based informal learning activity, the learning flow is designed basically in an individual role structure (division of labor). This includes learning manager and second language learner, final year university students as well as future TESL teachers. Thus, the roles learners take in the community mediate their learning and successful negotiation of the complexities and challenges associated with Web tools and practice (Wenger, 1998). Hence, this study needs to analyse the multi-dimensional context in which interactive practices under investigation are embedded. By this, activity theory clarifies connections between activity systems, filling a need to examine the inter-relationships between the “local” phenomena and “larger social-cultural-historical structures” (Lantolf & Thorne, 2006, p. 222).

Particularly, the main benefit of adopting this framework for the analysis of learning via technology tools-in-use lies in the powerful lens it provides for describing the complexity of learning engagement in the larger social context (Kaptelinin & Nardi, 2006, p. 6). In a sense, this study can include not only what occurs in the Web 2.0 environment and everyday individual practices (micro view) but what occurs beyond the Web 2.0 setting (macro view) as learners cope with study, social and family commitments. Thus, it can access many aspects of participation including unseen activity such as reading texts and navigating through a website and reflecting upon ideas while using Web 2.0, various degrees of participation (including passive and active resistance to informal learning) and changes in personal identity. Indeed, “a robust theoretical lens [of] Activity Theory … can potentially augment the understanding about how to harness [Web 2.0 tools] towards meaningful authentic learning” (Reinartz, 2009, p. 132). The use of activity theory also generates a massive amount of related
information which enriches and expands the primary research (Engeström, 2001; Kaptelinin & Nardi, 2006). Additionally, Engeström (2001) contributes to the important concept of multi-voiced interpretation that includes the voices of the past, namely the contextual beliefs, expectations and values of participants which can be imported into current activities (p. 136). Consequently, the interpretation shapes, captures and reflects a real process of informal learning via Web 2.0.

While acknowledging that activity theory is primarily a descriptive tool (Reinartz, 2009) rather than a prescriptive theory, some general implications for methodology have been drawn. These implications concern the need for researcher reflexivity, the need to study real-life contexts over a period of time, and the need to employ a variety of data collection methods to include many different perspectives from participants including their unique personal histories. Thus, activity theory is compatible with multiple methods research design (surveys and focus group interviews) of this study that gather data from a variety of individuals, methods and interrelated perspectives (as detailed in Chapter Four). Under this framework, the researcher argues that the manipulation of Web 2.0 tools as ESL learning tools can generate changes in learners’ behaviour. So, the research findings for a single case with several embedded sub-cases will be analysed. Then, the findings will be grouped and given meaning using activity theory as an interpretative tool and the interpretative commentary will draw upon the concepts of ESL learning possibilities and strategies to enrich understanding. Consequently, the researcher can see the dynamic relations among the different elements of the activity and thus increase understanding of the research problem (Reinartz, 2009). In this regard, the research attempts to capture the learning processes and learner interactions between,
among and within the entire learning environment specifically on how Web 2.0 shapes ESL learners’ activity, and what types of activity it enables and limits within its sociocultural context.

In addition to activity theory, this study also relies on another theoretical concept, namely situated learning theory. Consistent with the notion of learning that is based on activities situated in authentic contexts is the view that learning is driven by the goals and purposes that are valued in a Web 2.0-based community of informal learning practice. In the next section, the theory of situated learning and community of practice is discussed in order to demonstrate its usefulness in the future interpretation and analysis of the data.

3.3 Situated learning and communities of practice (CoP) theory

Lave and Wenger (1991) provide a very popular definition for the types of situated contexts where people share significant experiences and where learning takes place through increasing levels of engagement through Community of Practice (CoPs):

[Community of practice] does imply participation in an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their communities (...) a community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage. Thus, participation in the cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice, its power relations and its conditions for legitimacy define possibilities for learning. (Lave & Wenger, 1991, p. 98)
Under this conceptualization, individual actions are now embedded within and obtain meaning from a community of people who are directed towards the same object. Informal learning within these COPs depends on the kind of participation in these settings. In this learning environment, as the newcomer (novice) learners join the CoP, they become more active, by doing and engaging within the culture in authentic and valued tasks, and thus eventually taking the role of expert or old-timer in order to make learning meaningful. For Lave and Wenger (1991, p. 29) these processes of "legitimate peripheral participation" are generally unintentional. Consequently, the expert and old-timers assist the other users of Web 2.0 to construct their meaning through the sustained community. Thus, CoPs such as Web 2.0 communities have potential for situated learning environments to arise anywhere, anytime and on demand, thus learning occurs as a result of the user’s aim to participate in these communities. Consequently, parts of each user’s personal environment overlap allowing for shared practice and mediation by tools, roles and material resources (Mills, 2011).

Malaysian university students, as users engaging with the Web 2.0 tools for informal ESL learning, demonstrate some of these characteristics: they share tools and artefacts developed by peers and capable persons and interact with each other in authentic practices. It would seem therefore that the potential for a CoP, both at the university and more broadly, is present. In this view, as all users are potential learners, active participation in a Web 2.0 CoP is needed mainly for sharing knowledge and developing ideas, guidance and feedback. Moreover, reflection is a meta-cognitive activity that is crucial for the personal learning process (Anderson, 2003). Within the scope of this study, social interaction and reflection are considered as personal and communal.
activities of informal learning. Consequently, knowledge building can be appropriately applied to Web 2.0 environments where Web 2.0 tools and affordances enable engagement in informal learning activities and users have the freedom and choice to move beyond mere participation in groups and communities to become active creators and reflectors of knowledge artefacts. Because the community is built on collective activity, informal learning mediated by Web 2.0 tools involves relationships, the building of an identity, and knowledge in relation to the community and the growth of particular practices (shared repertoires of learning ESL via Web 2.0 tools, informally).

This research would benefit from a further fine-grained study of the interaction between these learner-users and Web 2.0 tools. Therefore, to analyse how the Web 2.0 as cognitive tools and properties of the situation are interrelated with users’ behavioural intention of use (purposes) in supporting learner-users in continuing to practice, it is useful and appropriate to apply the concept of affordances. This is addressed in the following section.

3.4 Web 2.0 activities considered from the ecological perspective

As explained earlier in Chapter Two, Gibson (1979) first coined the term of perceived “affordances” as the process of acquiring information and of action to allow individuals to serve their ecological needs. In the current study, the affordances of Web 2.0 are perceived by users and reported upon to give an on-going account in terms of what can be done with them, and in terms of change or adaptation to the environment for ESL learning. “Since affordances are a property of interaction between an animal and the
world, an animal cannot engage an affordance without perception” (Kaptelinin & Nardi, 2006). In this sense, the term affordance refers to the actionable properties between an object (Web 2.0 tools) and actor (ESL learners). When perceived, affordances of Web 2.0 allow learner-users to take actions that may satisfy their informal ESL learning needs.

At this point it is necessary to consider the suitability of the Gibsonian ecological approach to psychology as a part of the theoretical framework for the present research. As outlined in the previous part (Chapter One), the general aim of this research is to identify the use of Web 2.0 tools for informal ESL learning (daily learning affordances and strategies) among Malaysian university student. To this end, an assessment of the nature of the sensitivity of perceivers to the ESL learning affordances and the strategies that distinguish them, as provided by Web 2.0 activities, is the central focus of the strategy adopted for the empirical components of this work. This idea is consistent with Gibson’s emphasis on understanding how the learning environment supports cognitive activity. This approach falling within the domain of motivational, individual and social perception shows a clear association with the ecological approach in that knowledge about others is considered to be perceptually based (Van Lier, 2004). Consequently, for a perceiver there may be considerable advantage in knowing the motivational state of interaction partners as a means of knowing their properties and thus the relevant opportunities (and allowable actions) for interaction with these individuals towards meeting their informal learning aims.

As discussed in previous sections, the ecological approach to psychology requires the researcher to consider the perceiver-environment interaction for analysis (Gaver, 1991;
Gibson, 1979; Van Lier, 2000, 2004). That is, a coherent explanation of a psychological phenomenon requires that the properties of the learners, in concert with properties of Web 2.0 tools, be taken into account. Before examining the nature of the learners-environment relationship more closely the researcher must, at the beginning, understand what is available for perception (i.e. the informational properties of the environment), in combination with the sensitivity of the learners to such properties. Only in this manner can the mutual, reciprocal relationship between the learners and its environment be properly understood in terms of a genuinely ecological approach. In terms of social affordances (even if he does not use the terms exactly), Gibson (1979) argued that other people also offer shared and reciprocal affordances, “When you touch them, they touch you back, when you hit them, they hit you back; in short, they are interacting with the perceiver and with each other. Behaviour affords behaviour … ” (p. 135). As a result, “the possibilities for action in these contexts are apparently determined by culture” (Kaptelinin & Nardi, 2006, p. 81). Thus, within an activity system, social interaction with each other allows individuals to better see the available affordances of Web 2.0 tools for informal learning material resources and meaningful authentic learning trajectories in order to empower them as individual learners.

Furthermore, in Gibson’s original definition, affordance equates to “action possibilities” possessed by an object or the environment, which are independent of the actor’s awareness, perception or ability to uncover these possibilities and to allow actors to take actions that may satisfy certain needs (Van Lier, 2000, 2004). In this research context, when learners utilize various Web 2.0 resources, they satisfy their motivational needs to the extent that they feel enjoyment and want more. Therefore, they are motivated. So
the ultimate goal of using these tools is to achieve high motivational affordances towards their informal learning improvement. This is to imply the relevance or utility of Web 2.0 tools as learning artefacts that often stand in for the informal ESL learning. The tools are useful to those who perceive them. In this vein, the affordances of Web 2.0 are changed dynamically in the interplay of learner-users’ roles, learning objectives, culture, ESL strategies, co-participants and material resources. Web 2.0 activities, like finding, selecting, using and evaluating tools and material resources, have affordances related to the informal learning environment. Thus, learning practices are altered by the affordances of the Web 2.0 tools and what they enable learner-users to do.

Importantly, Reinartz (2009) suggests that “[Web 2.0 tools] provide innovative ways to think, create, and use media dynamically … [thus,] it is important to consider … how user purposes and objectives contribute to their evolution into meaningful, authentic cultural practices” (p. 140). In a sense, every learner-user working on the same operation may generate diverse activities that would include checking the entire conversation, watching the posted videos and photos by clicking and scrolling through the screen. Thus, “through a process of reflection … beyond what the designers had envisioned” (Kaptelinin & Nardi, 2006, p. 230), the same feature of the Web 2.0 tools may offer different affordances to different learners (Antenos-Conforti, 2009) or to the same learners at different times. For instance, the same Wiki page being read by different users may offer a site for learning new ideas for one language learner-user, for composing writing and for information searching for another user, and so on (Woo et al., 2011). In all cases, the Wiki page is the same because its properties do not change. However, different properties of the Wiki page are personalized and acted upon by
different users of Web 2.0. So, Web 2.0 tools provide opportunities for various actions for the benefit of the active learner-users of Web 2.0 at a level which should be expected to change with age, expertise, social structure, and culture. Therefore, this study aims to understand further whether and how these learner-users come to see and act upon certain aspects of Web 2.0 as affordances.

This research explores the way in which technology can be used to bridge different locations and how it might adapt or help learners to adapt a learning context to meet their needs. Instead of solely considering Web 2.0 tools and properties, researchers can consider how they shape ESL learners’ activity; for instance, what types of activity the tools facilitate and constrain and how the values of the Web 2.0 tools interact with sociocultural contexts. It is argued that different Web 2.0 tools have varied affordances and these affordances are embedded in learner-users’ sociocultural contexts. In other words, they have particular properties that allow certain actions to be readily performed with them and which therefore push behaviour in certain directions towards ESL learning. This research is concerned with how Web 2.0 tools are shaped by users and adapted to their learning objectives. However as noted above, it also emphasizes the mutual nature of this process by describing how the Web 2.0 tools or artefacts in turn affect and change the learner-users’ actions and their environment. In this view, users interact as they choose which tools mediate their purposes and what they perceive as the most positive and rewarding learning return possible. Thus, this combination of theories can be a ‘common lens’ for seeing why learner-users get ‘hooked’ on these tools and why they keep trying or doing.
3.5 Conclusion

In conclusion, activity theory is a framework which allows the researcher to approach phenomena in a holistic manner. The researcher found such an approach necessary in the study of complex phenomena, with the view that activity needs to be studied in such a multi-dimensional context as Web 2.0-based informal ESL learning among Malaysian university students. Also as a review of activity theory makes evident, an ESL study that examines in detail specific aspects of human practice may provide deeper insights when informed by more than one theory. This greater depth can be achieved by complementing the research methodology with alternative approaches, the focus of which allows the details of L2 learning to be addressed as embedded within activity. Therefore, the theories of affordance and situated learning are other complementary theoretical frameworks that will allow an in-depth investigation and analysis of an ESL-based out-of-class activity via Web 2.0 tools. Affordance theory helps to provide a sharper look at individual collective practices whereas situated learning theory and activity theory focus more on group practices. This framework provides potential for generative leads and a systematic approach for combining these different lenses for multidimensional aspects of these practices.
CHAPTER THREE: THEORETICAL FRAMEWORK

The main purpose of this research is to describe the interactions between the ESL learners and their tools and resources and to explore how activity is shaped (enabled and limited) by these factors, and examine what are the learning strategies employed. The researcher sets out to describe this approach to understanding the domain of Web 2.0-based learning with a theoretical position that is rich enough to capture the complexity of the learners’ activities and the contexts in which they occur. Finally, this research will explore how Web 2.0 tools can be optimized to support learner-users’ informal ESL learning in the future. As a theoretical and methodological lens for characterizing and analysing the participatory unit, activity theory re-presents conceptions of participation by going beyond individual actions and mental processes and asserts that the minimal meaningful unit of analysis is an activity system (Reinartz, 2009). The unit of analysis is widened from viewing the individual as a “single learner-user” to including the learner’s practice in relation to activities in communities of practice (Lave & Wenger, 1991; Wenger, 1998). Thus, it provides a more expansive and holistic conception of participation that can take account of individual and social factors, and recognizes the sociocultural nature of learning towards deeper understanding of larger practices, the object and the means of mediation (Engeström, 2001; Kaptelinin & Nardi, 2006).

In sum, in this chapter, the researcher has argued for the value of activity theory, affordance theory and situated learning theory as promising theoretical lenses and analytical tools for understanding the complex, interdependent and context-sensitive nature of learner-users’ sociocultural experiences. This integrated framework allows for capturing the complexities of learner-users’ active participation and interaction with the
CHAPTER THREE: THEORETICAL FRAMEWORK

Web 2.0 activities as an important determinant of Web 2.0 affordances and strategies for informal ESL learning. This chapter has put a case for the use of these constructs individually and collectively. The following chapter discusses the research methodology, the design chosen and data collection methods to explore in more depth the research questions guiding this research inquiry, and the applications of these constructs to these analyses.
CHAPTER FOUR: METHODOLOGY

4.0 Introduction

This chapter provides an overview of the research methods for the thesis. It explores the research purpose, questions, and context for the study. Further, it describes the research design and the methods of data collection and analysis used to pursue the research objectives and address the research questions. Through a mixed methods approach, this study aims to analyse the current perceptions among Malaysian university students about their informal learning and strategies of ESL learning via Web 2.0. Probing their informal learning practices using mixed methods provides a valuable basis to explore the context-interdependent and complex nature of the Malaysian university learners’ practices. The mixed methods are intended to generate various data in a single study (Denzin & Lincoln, 2005). The quantitative data have been generated for studying the larger population, and this aspect is designed to ensure objectivity, generalizability and reliability in relation to broad patterns of practice. The qualitative data have been generated to best suit the aspect of the study investigating participants’ subjective experiences of the external world. This chapter concludes with a discussion of ethics as related to this research process.
4.1 Purpose of the study

As outlined in Chapter One, this mixed methods design study aims to explore the current perceptions among Malaysian university students about their informal learning and their strategies of ESL learning via Web 2.0. The central interest of this study is in the negotiations and accommodations of engaging with this innovation and the resultant changes to practices, skills and strategies, embedded within daily out-of-class learning practices. Another interesting aspect, more specifically in relation to informal learning generally, is the conviction that learning does not occur just in the classroom but that it is what has happened outside the formal classroom in learners’ everyday lives that has the stronger impact (Sefton-Green, 2004; Selwyn, 2007). There is the possibility, therefore, that some learners prefer and concentrate more on informal language acquisition, especially those who are more independent and self-motivated, and that this might affect their perceived learning affordances and strategies. In order to address this inquiry, the researcher examines the Malaysian university students as ESL learners from generally a sociocultural perspective and, more specifically, through an activity theory lens. Reinartz (2009) describes activity theory in relation to Web 2.0 practices:

To access these dynamic, collaborative, and contributory processes, Activity Theory provides a useful lens to better analyse and describe the complexity of learners in action with others and with media while proceeding on their learning trajectories. Moreover, Web 2.0 tools and practices associated with them allow [learners] to engage in tensions that are centred on content-related challenges while generating new social-action genres and practices. (p. 140)
CHAPTER FOUR: METHODOLOGY

In the current research, the approach to taking context into account is founded on a sociocultural perspective, as discussed in Chapter Three. The central study object in the current research is the use of Web 2.0 tools as learning resources. The researcher has proposed to study learning as activity (see section 3.3.3); it is the learners’ engagement with learning resources that is important for the researcher. This is consistent with a system focus on the relationship between intended and actual use of artefacts. As noted in section 3.6, a sociocultural and affordance theory perspective thus gives priority to the study of Web 2.0 tools in use, and focuses on learner-user interpretations and meanings, situated in the context of the Web 2.0-based informal ESL activities. The researcher believes that this informal learning trend that enables technologically-mediated authentic opportunities of natural extensions of the classroom learning is important as it is also a development towards a more holistic picture of learning. It is therefore important to examine what, why and how learner-users engage with the tools available to them. This inquiry is focused on using the theoretical framework described in the preceding chapter.

4.2 Research questions and instrumentation

As proposed by Creswell and Tashakkori (2007) and Onwuegbuzie and Johnson (2006), this mixed methods study addresses multi-dimensional research questions that are suited to this approach. In this regard, the central research question considers how ESL learners (Malaysian university students) account for the affordances of Web 2.0-based ESL learning and strategies when they engage with these tools in informal, learning settings.
CHAPTER FOUR: METHODOLOGY

This research inquiry is broadly guided by the assumption that if learner-users (participants) are able to experience socially-driven Web 2.0 technologies, their behaviours and actions of perceiving affordances and learning strategies for informal ESL learning could be influenced in a positive way to support learning. The study’s assumption and the data collected through mixed methods have contributed to this research by aiding the investigation of four main research questions:

1. What are the trends and patterns of participants’ engagement with the Web 2.0 tools in terms of usage frequency, usefulness for their informal daily English learning, places of access, and perceived most used tool?

2. What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?

3. What are the perceived learning strategies used by these learner-users in the informal environment in question 2?

4. What are the implications of these findings for future use of Web 2.0 in the informal ESL learning or other related areas?

As shown in the following figure, Figure 4.1, the first of the research questions is linked to the quantitative phases of the study. The second and third questions are linked to both quantitative and qualitative phases of the study. Research question four is addressed in the concluding re-descriptive/theorizing phases of the study.
4.3 Research methods

A mixed methods approach to research has gained an expanding interest and widespread acceptance in recent years. Thus, it is essential for all researchers to pay attention to the clarification of and justification for their approach (Creswell & Tashakkori, 2007; Mackenzie & Knipe, 2006; Onwuegbuzie & Johnson, 2006). In order to offer a clear foundation for the research, the following sections present the definition, advantages and justification for mixed methods and for such a research design.
4.3.1 Definition of mixed methods research

Various definitions of mixed methods research have been acknowledged over the past two decades, focusing on what is being mixed in mixed methods research. Creswell and Plano Clark (2007) and Onwuegbuzie and Johnson (2006) examine various viewpoints that mixed methods researchers have adopted when discussing and writing about this topic. In a clear description, Creswell and Plano Clark (2007) explain mixed methods research as follows:

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Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology it involved philosophical assumptions that guided the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in the research process. As a method it focused on collecting, analysing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise was that the combination of quantitative and qualitative approaches provided researchers with a better understanding of their findings than might the use of one or the other approaches. (p. 5)
```

The integration of both quantitative and qualitative methods within the current research fits this depiction of mixed methods and philosophically draws on pragmatism. The multi-dimensional study seeks answers to complex questions. The use of multiple theoretical lenses is also presented by a relevance approach. An example in this study is the adoption of Anderson’s (2003) account of cognition, metacognition and reflection with regard to students’ individual online informal learning strategies. This theory of learning processes complements sociocultural theory that guides an understanding of the collaborative and social practices of online communities. The fundamental principle of mixed methods research is to combine the different strengths of quantitative methods (large sample size for generalization) with those of qualitative methods (small sample
size for in-depth research). It is this fitness for purpose and combination of methods (quantitative and qualitative) that draws the researcher to mixed methods in research.

4.3.2 Advantages and justification for mixed methods

In the current study, the researcher utilizes mixed methods research for four key reasons as outlined below.

A mixed methods approach addresses different worldviews and paradigms, and enables intervention and diverse ways of knowing and valuing (Creswell & Plano Clark, 2011). This approach to a mixed methods study is suited for such research with multiple, interrelated objectives. Mixed methods are most appropriate when the objectives reflect very different requirements, in exploring and measuring different aspects of the research problem. In this research, those aspects include whether there are differences in the perceived affordances of Web 2.0 tools and strategies for informal ESL learning, and, if so, how and why. It was apparent that each objective required different methods, but also that each objective could not be achieved in isolation. Data generated for each objective would be required to support the other objectives.

Mixed methods can address more complex questions than one can answer with a purely quantitative or qualitative study. As proposed by Creswell and Tashakkori (2007) and Onwuegbuzie and Johnson (2006), mixed methods research needs to start with a mixed methods question (embedding both qualitative and quantitative questions), whereby the questions achieve an integration of different aspects of the alternative methods used. This perspective also corresponds to the definitions and designs of mixed methods.
CHAPTER FOUR: METHODOLOGY

research as the latest methodology that emphasizes the combination or mixing of the qualitative and quantitative methods, data or findings. Overall, Creswell and Plano Clark (2007) state that mixed methods research is “practical in the sense that the researcher is free to use all methods possible to address a research problem” (p. 10).

It is essential to generalize and contextualize in order to add to validity and credibility of findings through mixed methods to avoid the risk to validity (Denzin & Lincoln, 2005; Onwuegbuzie & Johnson, 2006). It matches with the strong conception of mixed methods evaluation defined in this study which is characterized by purposes of complementarities by measuring and enhancing explorations of different aspects of a phenomenon and mixing these for comparison. Under this strong conception of mixed methods is the main feature of combining findings from the qualitative and quantitative components of the study. A clear rationale for the integration of the methods and results lays the basis for an effective synthesis of the findings. For this research, the importance of mixed methods research is the combination of two methods with the goal of providing readers with a better understanding than can be provided through a single method (Creswell & Plano Clark, 2011).

The integration of data collection and analysis provides strengths that offset the weaknesses of one sole method. Moreover, as the quantitative and qualitative approaches provide different perspectives, the researcher may use results from one method to elaborate or clarify results from another method (Creswell & Plano Clark, 2011; Onwuegbuzie & Johnson, 2006; Patton, 2002). Although every method has its weaknesses, combining methods enables the researcher to compensate by
counterbalancing the relative strengths (Creswell & Tashakkori, 2007; MacKenzie & Knipe, 2006). For instance, quantitative studies have been criticized for lacking contextual realism, and reporting generally excludes quotations from participants (so, the voices of participants are not directly heard). These are strengths of qualitative research, but qualitative research also has weaknesses of its own. For example, in a qualitative study, the researcher has control over data interpretation and has difficulty in generalizing findings to a large sample size (Creswell & Plano Clark, 2011). Therefore, a mixed methods approach in the current research supports the researcher to provide more evidence than through a single method study (Creswell & Tashakkori, 2007; Onwuegbuzie & Johnson, 2006).

Having considered the advantages of mixed methods research, the researcher turns to briefly consider the suggested mixed methods design for the current research.

### 4.4 Design of the study

#### 4.4.1 Mixed method research design

A vital consideration in pragmatic mixed methods research is the relationship between the research question/s and chosen study design. Once the area of research has been refined, the researcher will be more able to select methods that best fit between question and design. The emphasis within pragmatism is therefore on using whichever methods will generate suitable data for the research question (Denzin & Lincoln, 2005). As the introduction to this thesis highlighted, the goal of this research is to provide high quality data on perceived affordances of Web 2.0 tools among Malaysian university students, in
relation to informal learning of ESL and learning strategies. To achieve this goal, the researcher has adopted a concurrent mixed methods design. Theoretically, this type of design is selected when the researcher uses two different methods in an attempt to confirm, cross-validate, or corroborate findings within a single study. This design generally uses separate quantitative and qualitative methods as a means to offset the weaknesses that lie within one method with the strengths of the other method. Each method of data collection is concurrent, occurring during the same period of the study (Creswell & Plano Clark, 2011).

Researchers have pointed out that despite the benefits of concurrent data collection design, weaknesses are evident and must be carefully weighed. In terms of data analyses (quantitative and qualitative data), it is possible that one form of data collection might introduce bias that would confuse the results from the other form of data collected from the same participants (Creswell & Plano Clark, 2007, 2011). It is important to discern the issues of the added resources, time and expertise required in mixed methods research. Additional time is necessary due to the increase in participant numbers and the extra burden in carrying out questionnaires and conducting interviews (Creswell & Plano Clark, 2011). On top of this, mixed methods research requires knowledge of both quantitative and qualitative research. Also, it is important to be able to judge whether mixed methods research adds any further value to readers’ understanding and interpretation than would a purely quantitative or qualitative study. Both instruments of the study are reliant upon self-report. Readers may query the degree of trustworthiness in the participants’ responses because what the participants say about what they do may not really be what they do. For example, it may be challenging for the participants
(especially young learners) to think in a very detailed way about their learning strategies or to be able to articulate the strategies that might be used almost accidentally. Some participants may feel pressured by their peers into not telling the truth and can only report the general approaches they have used (Macaro, 2001) in the focus group setting. Each of these methods has restrictions, but at the present time they are the best approach available to the researcher to generate insights into the hidden mental processes of learning and the strategies of learners (Chamot, 2005, p. 113).

With these issues in mind, the concurrent mixed methods design (Creswell & Plano Clark, 2007, 2011) was selected to address different phases in the research and to provide a cautious approach to form a final interpretation. The visual model, shown in Figure 4.2, exemplifies the concurrent mixed methods approach as used in this study.

Figure 4.2: Concurrent mixed methods research design with merged results
As shown in Figure 4.2, the quantitative and qualitative data are collected at the same time within the study. The quantitative data is collected from individual learner-users engaging in ESL learning mediated by Web 2.0 tools beyond the classroom. The vehicles for data collection are online surveys using Likert scales for the quantitative information. The qualitative phase employs qualitative methods in order to produce superior richness and depth of examination of the individual experiences of participants. Because every individual experience is a unique social construction process of the participants involved, these qualitative data are needed to build on the quantitative results. Qualitative data is gathered from responses in focus group interviews. Integration of these phases is carried out through five procedures: in the research questions, its unit of analysis, the samples chosen, the instruments and data collection methods used, and in the analytic strategies employed (Yin, 2009). This case study analysis uses appropriate descriptive statistical analysis on numeric questionnaire data to identify and report usage patterns. These are supported by selected illustrative quotations and themes of focus group interview data, which are used to tell the story of the individuals and groups involved.

The research questions focus on learner-users’ perceived informal learning of ESL and learning strategies via Web 2.0. The questions equally emphasize the process and the outcomes. By using one unit of analysis – the case of informal ESL learning phenomenon in the form of Web 2.0 affordances and the practice of learning strategies among ESL learners – the samples have been converged in a concurrent mixed methods design.
4.4.2 Case study design

This is a case-study-based inquiry in that it refers to “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident” (Yin, 2009, p. 18). One of the important advantages with case study research is that it allows the researcher to acquire detailed and holistic descriptions of the unique characteristics of a case of complex social behaviour (Denzin & Lincoln, 2005; Yin, 2009). An important point is to consider the collected data (integrated quantitative and qualitative methods) into a single case study method enable the researcher to study many different aspects (Yin, 2009, p. 23). As a result, the investigator has been able to develop a greater examination of how and why Web 2.0 tools are perceived by the learner-users (Malaysian university students) as supporting affordances and strategies for their informal ESL learning. With these basic tenets of a mixed methods case study in mind, the researcher has determined that the research questions being asked are best designed to guide in-depth research and to contribute to the validity of the research.

Yin (2009) also states that case research is suitable for studies that are in their early or formative phases or when the researcher has little control over events, especially where the experiences of the subjects and the contexts within which they operate are important. Thus, the case study approach is helpful in identifying and exploring areas for further research and in aiding hypothesis generation for contemporary events. This idea is supported by Duke (2010) and Feng (2009) who comment that a mixed methods case study approach may provide a greater understanding of best practice and how this is employed in various contexts. This research is conducted in an attempt to gain insight
CHAPTER FOUR: METHODOLOGY

into the perceptions of the participants (the Malaysian university students) within their natural contexts and settings (informal context and with limited manipulation from an external party). In this regard, the study provides a better examination and systematic views of the effects of interactive Web 2.0 technologies on informal ESL learning affecting Malaysian university students outside the classroom.

Furthermore, this study proposes to use an activity system as the case study unit of analysis. This activity system is directed towards an object (informal ESL learning mediated by Web 2.0 tools) and the subjects can be defined as the learner-users (Malaysian university students) engaged in this informal learning activity. The process of transforming the object (engaging in the informal learning activity) is mediated by many tools including physical tools (for example, computers and Web 2.0 tools) and cultural resources (for example, ESL learning affordances and strategies). A single case study approach was chosen with more than one unit of analysis (Yin, 2009, p. 50) for each embedded case study the phenomenon which is to be studied being a single activity or short sequence of learning activities, undertaken by participants.

Accordingly, a single case with embedded case studies has been chosen in order to best facilitate students from each university to tell their stories, contributing a comprehensive story of the use of Web 2.0 tools in the informal ESL learning in Malaysia. As the story of each learner-user unfolded, opportunities for identifying examples of best practice of informal learning emerged. The selection of the learner-users was undertaken in a way that attempted to achieve representativeness of the range of approaches of these learners, to gain a diverse sample broadly typical of ESL.
learners. In the final analysis, therefore each study was not only about individual learner-users, but broadly speaking, also about learner-users of Web 2.0 for informal ESL learning. Thus they speak for themselves as individual learners and also as a collective voice for the ESL learners in Malaysia.

In the following section, this research design provides the framework for the research phases, tasks and outcomes.

4.4.3 Research phases, tasks and outcomes

The research has been implemented in a mixed methods design, which is a concurrent merged design (refer to Figure 4.2). Therefore, it occurs in concurrent phases with both methods weighted equally.

In the quantitative phase, self-report questionnaires were used to generate quantitative data from the university student population (N= 400). The questionnaires focused on how the Web 2.0 tools have been utilized by university students with reference to previous studies on web-based informal ESL learning. The self-reported questionnaires for perceived affordances of Web 2.0 for informal ESL learning were adapted from Antenos-Conforti’s (2009) previously used survey questions. This study used Anderson’s (2003) framework for the adapted questions on perceived learning strategies. Through the use of Likert scales, the numeric data from the survey included responses to items that measured: students’ learning usage behaviours in terms of patterns related to their daily engagement with the Web 2.0 tools; students’ evaluation of the Web 2.0 in terms of its perceived affordances and usefulness for their informal
CHAPTER FOUR: METHODOLOGY

ESL learning; and students’ online learning strategies. In order to ensure anonymity and frank responses, participants did not provide their names and were assured in the accompanying letter that their answers were totally confidential. The statistical techniques and the results of this quantitative phase have been reported and discussed in Chapter Five.

In the qualitative phase, focus groups were conducted in English, to minimise potential translation problems. This phase aimed to contribute detailed insights into these learners’ beliefs and their real sociocultural practices. This is done by shifting the analysis from individual behaviours to shared social and cultural reasoning practices for the engagement with the Web 2.0-based informal ESL learning. Illuminating the perspectives of university students seems vital in order to explore the cultural and hidden details that influence university student learning with Web 2.0 tools. Focusing on five in-depth focus groups, comprising a total of 20 students, enables this research study to gain insights about university students’ individual experiences, to further explore what is in the minds of those many students who are learning informally via these tools. All responses were recorded by using audio and video recorders and then transcribed. The qualitative phase complemented the quantitative phase by revealing the experienced realities of these students’ daily social learning practices. The results and findings from this qualitative phase have been reported and discussed in Chapter Six.

Finally, the analysis integrates the findings of the two methods during the interpretation phase. The interpretation utilizes the convergence of the results to strengthen the sociocultural knowledge claims of the study. In this regard, the re-description/theorizing
phase reviews the empirical results from the previous phases with regards to the broad issues and theoretical underpinnings of the study. This allows for the development of theoretical propositions related to the learning complexities of Web 2.0 innovation within the current informal learning practices. Consequently, this study provides implications for educational policymakers and practitioners for more effective usage of Web 2.0 technologies for informal learning. The research phases of this study and their corresponding research tasks and outcomes are shown in Table 4.3 as follows:
CHAPTER FOUR: METHODOLOGY

## Data Collection

<table>
<thead>
<tr>
<th>Quan &amp; Qual Process</th>
<th>Quantitative Phase</th>
<th>Qualitative Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Collection</strong></td>
<td>Administer self-report questionnaire to final year Malaysian university students as ESL learners population (N=400) (see Chapter Four).</td>
<td>Conduct focus group interviews with sample of learner-users who had completed the online survey (N=20) (see Chapter Four).</td>
</tr>
<tr>
<td><strong>Data Analysis</strong></td>
<td>Perform appropriate descriptive statistical analyses on numeric questionnaire data (see Chapter Five).</td>
<td>Mixed data from questionnaires and interviews to accentuate areas of compatibility, significance and/or divergence (see Chapter Six).</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Identify usage patterns related to learner-users’ use of and engagement with the Web 2.0-based informal ESL learning. Determine the extent to which measured personal, social and technological factors predict learner-users’ engagement with the Web 2.0. Capture the online learning strategies of the participants (see Chapter Five and Chapter Seven).</td>
<td>In-depth and rich explanations of why and how the abstract numeric narratives (Web 2.0 usage patterns, trends &amp; predictors) identified in quantitative phase are experienced, accounted for and made sense of by learner-users in the enacted realities of their daily social practices with Web 2.0 for informal ESL learning. Fresh insights into the learning affordances and learning strategies experienced by learner-users in engaging with a Web 2.0 tools as part of their daily ESL learning practices (see Chapter Six and Chapter Seven).</td>
</tr>
<tr>
<td><strong>Theorizing/ Re-descriptive Phase</strong></td>
<td>Re-examination of various data corpuses and findings using appropriate theoretical lenses. Develop theoretical propositions related to the Web 2.0 perception within established conventions of current informal learning. Scholarly recommendations that assist policymakers and practitioners move towards more effective and sustainable integration of virtual learning technologies in formal learning contexts (see Chapter Seven).</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3: *Concurrent mixed methods design with merged results*

### 4.5 Data collection procedures

Based on the mixed methods approach discussed above, data were collected using a combination of a student self-reported questionnaire and focus group interviews. Each
of these numeric and textual data collection procedures and corresponding analysis is explained in the sub-sections that follow.

4.5.1 Quantitative phase: online survey

4.5.1.1 Participant identification and access

The distribution and collection of these surveys took place at the end of the second term of 2010/2011 academic year. Approximately 400 participants (final year students) were selected from eight public universities in Malaysia. A final year student cohort was chosen because they were likely to have more linguistic competence and motivation than younger students. They were expected to have a better understanding of their future careers, their attitudes would be different than younger fellow students and that would influence their informal learning processes via Web 2.0 technologies. Approvals from universities were obtained prior to collecting data for this phase. Five TESL lecturers and three non-TESL lecturers were approached by the researcher to seek their cooperation. The students of lecturers who agreed to assist the researcher were asked to participate in the online survey phase. Once the lecturers agreed, the researcher randomly chose eight sections of final year undergraduate course students to whom to administer the survey.

The survey instrument was administered during class time and required approximately 15 minutes to complete. The online survey of this study utilized Survey Monkey, a commercial survey tool. It was the researcher’s goals to compile a questionnaire that
participants could answer quickly (time, energy and cost saving) and that would contribute significantly to the ease of data collection. Instead of the researcher having to enter data from each of the returned questionnaires, this approach allowed participants to type their own input directly into the system, where it was stored and retrieved exactly as they had entered it. Participants had been told that, by clicking the link online which took them to the survey, they were consenting to the terms of the research agreement in the cover letter. The main feature of this online survey is the IP address, to which responses in the sections of the survey are matched. Consequently, reminders were sent to the entire sampling frame with this statement at the end of the introductory paragraph: If participants have already answered that survey, they were thanked and need not read further.

The sample for the study was determined by identifying the number and the course of students to be surveyed in each of the universities with a consideration of the university location, whether it was in Multimedia Super Corridor, MSC area (Kuala Lumpur) or non-MSC area (Terengganu) as follows:
### University Based on Location and Course

<table>
<thead>
<tr>
<th>MSC area (Kuala Lumpur)</th>
<th>Non MSC area (Terengganu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Malaya (UM) TESL (50 participants)</td>
<td>University Malaysia Terengganu (UMT) Other courses (50)</td>
</tr>
<tr>
<td>University Putra Malaysia (UPM) TESL (50)</td>
<td>University Darul Iman (UDM) Other courses (50)</td>
</tr>
<tr>
<td>University Kebangsaan Malaysia (UKM) TESL (50)</td>
<td>University Technology Malaysia (UITM-Dungun) – Other courses (50)</td>
</tr>
<tr>
<td>University technology Malaysia (UITM) TESL (50)</td>
<td></td>
</tr>
<tr>
<td>International Islamic University Malaysia (IIUM) TESL (50)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4: University based on location and course

#### 4.5.1.2 Research constructs and measurement scales

In constructing the student self-reported questionnaires, the researcher took into consideration demographic factors and web usage information. While selecting the participants, due care was taken to balance numbers of male and female participants. In addition, another consideration of this study was students’ perception relating to learning affordances of Web 2.0 for informal ESL learning and their learning strategies. The questionnaire contained some closed questions which offered two choices but predominantly statements were included that used a 5-point Likert scale (refer Table 4.5 below). This allowed the participants more choice to rate the degree to which they may
have agreed or disagreed to a given statement. The scale also incorporated a middle
neutral response to reduce positivity bias.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.5: Five point Likert scale of the study

Section 1: Demographic information and patterns of engagement

The first section (participants’ background information) consisted of two parts (part A and part B). Part A section 1 comprised three questions and was designed to obtain a general demographic profile of the student-participants (Questions 1-3). In seeking to gather demographics regarding the sample population, questions included their sex, course and university. Demographic information is used in this study to classify these participants into these three categories (refer Table 4.6). Demographic information was included to consider the possibility of influences on perceived engagement with Web 2.0-based informal learning of ESL among participants by sex, course and university.
CHAPTER FOUR: METHODOLOGY

<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Description</th>
<th>Measurement scales and items</th>
<th>Source of scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic information</td>
<td>Refers to the extent of Web 2.0 use measured by the learners’ demographic factors in terms of: i) Sex ii) Course iii) University</td>
<td>Likert scale 1 (Strongly Disagree) to 5 (Strongly Agree) 1. Sex: 1. Male 2. Female 2. Course: 1. TESL 2. Non-TESL 3. University: 1-5 (MSC area) 6-8 (Non-MSC) 1. UKM 2. UM 3. UPM 4. UTM, Shah Alam 5. UIAM 6. UITM, Dungun 7. UMT 8. UDM</td>
<td>3 items were self-developed, to reflect the various factors of learners’ demographic in using Web 2.0</td>
</tr>
</tbody>
</table>

Table 4.6: Constructs and measurement scales for participants’ demographic information (Section 1-Part A)

The remainder of section 1 (Part B consists of questions 4-7) aimed to obtain data on the patterns of Web 2.0-based learning outside class such as the frequency of Web 2.0 use, the proportion of English knowledge that was gained from Web 2.0 experience and the most frequently used of Web 2.0 tools for ESL learning. There are four items in this section as outlined in the following Table 4.7:

<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Description</th>
<th>Measurement scales and items</th>
<th>Source of scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web 2.0 usage beyond classroom</td>
<td>Refers to the extent of Web 2.0 use measured by the learners’ perceived affordances in terms of: i) Frequency (how often the learner uses the Web 2.0 tools). ii) Perceived usefulness of</td>
<td>4. How frequently do you use the web? (Check one.) 1. Once a day 2. Several times a day 3. Once a week 4. Several times a week 5. Once or twice a month 6. Other, please specify.......</td>
<td>4 items were self-developed, to reflect the various features of learners’ Web 2.0 dispositions for English learning outside the classroom.</td>
</tr>
</tbody>
</table>
CHAPTER FOUR: METHODOLOGY

Table 4.7: Constructs and measurement scales for participants’ patterns of Web 2.0-based learning outside class (Section 1-Part B)

| Web 2.0 for their informal English learning. | 4. Disagree | 5. Strongly disagree |
| i) Places for their informal learning mediated by Web 2.0. |
| ii) The most used tool for their English learning beyond classroom. |

6. In which of the following places do you use web for English informal learning. (Circle all that apply).  
   1. At residence  
   2. At public library  
   3. Hostel  
   4. Cybercafé  
   5. At university  
   6. Other, please specify........

7. What is the tool on the web do you use most for your English informal learning. (Please √ only one answer).  
   1. Blogs  
   2. Wikis  
   3. Facebook or other social networking tools  
   4. Delicious or other tagging tools  
   5. Other, please specify.......  

Section 2: Perceived learning affordances

The second section aimed to provide data regarding students’ perceptions towards learning affordances of Web 2.0 for their informal ESL learning. The questions used in the survey were adapted from Antenos-Conforti (2009). Changes were made to the adopted version of the original instrument to allow for the meaningful and appropriate interpretations to be made according to the key term concerned, namely “perceived affordances”. This questionnaire was developed to address the potential of Web 2.0 tools as tools for social and individual ESL learning networking in particular. This was an important change, to better ensure that the new adapted version of instrument for this study was valid to measure what was required. There are 16 items in this section as outlined in the following Table 4.8:
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<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Description</th>
<th>Measurement scales and items</th>
<th>Source of scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Affordances</td>
<td>Refers to the learners' perceived relative advantages and the benefits associated with the use of the Web 2.0 tools for their learning purposes, in terms of:</td>
<td>8. Web 2.0: 1. Enables me to have more interesting English learning experiences than learning in the classroom. (Social) 2. Supports my knowledge of English grammar and vocabulary. (Personal) 3. Allows me to get a more direct experience of English culture and people. (Social) 4. Allows me to work at the time that suits me best. (Personal) 5. Allows me to work at the location that suits me best. (Personal) 6. Allows me to work at the pace that suits me best. (Personal) 7. Supports proficiency in English. (Personal) 8. Supports my motivation in learning the language. (Personal) 9. Enables me to become more independent learner. (Personal) 10. Allows me to learn collaboratively. (Social). 11. Enables me to get more opportunities for personal feedback on my English. (Social) 12. Allows me to monitor my learning progress closely. (Personal) 13. Enables me to reflect on what it means to be a language learner. (Personal) 14. Allows for communication online to increase learning potential. (Social) 15. Enables me to increase my time on learning. (Personal) 16. Allows for constant practice and support of language skills. (Social)</td>
<td>Items were adapted from Antenos-Conforti (2009). *Only four original items have been omitted due to their overlapped meanings compared to the other available items.</td>
</tr>
</tbody>
</table>

Table 4.8: Constructs and measurement scales for participants’ perceived affordances of Web 2.0 for informal ESL learning
Section 3: Online learning strategies

This study has adapted the *Survey of Online Reading Strategies Scales* (OSORS) (Anderson, 2003) for use in the data collection instruments. The adaptation was named the Online Survey of Learning Strategies (OSOLS) to distinguish it from the OSORS. OSOLS allows the researcher to characterize learners’ reports of their English learning strategies (social and personal strategies) while using Web 2.0 tools outside of the classroom. The researcher developed the second part of the instrument. The aim of this instrument was to capture learners’ overall judgements about the value of their experiences of Web 2.0-based learning beyond the classroom for ESL learning. In particular, the researcher wanted students’ responses to reveal whether or not their use of Web 2.0 technology was worthwhile and enhanced their engagement in informal ESL learning activity.

As referred to briefly in Chapter Two, Anderson (2003) states that metacognition “is the ability to reflect on what you know and do and what you do not know and do not do” (p. 10). This cognitive perspective contributes to an understanding of sociocultural learning in terms of reflection on practice. It provides a complementary lens to identify patterns of engagement with Web 2.0 tools, and to indicate their usefulness for daily informal learning. The adapted OSORS (Anderson, 2003) consisted of 38 items that are valuable to measure learning strategies. The most interesting aspect of the strategy, providing support to the category of informal learning strategies of ESL in the present study, is the concept of metacognition. The importance of metacognition in personal language learning has been clarified by Anderson (2003) who argued “once a learner understands how to regulate his/her own learning through the use of [metacognitive] strategies,
language acquisition should proceed at a faster rate” (p. 9). This is because metacognitively-aware learners know what to do when they have problems as they utilise strategies for independently trying out what they need to do (Anderson, 2003; Chamot, 2005; Zimmerman, 2000). Importantly, Anderson (2003) proposes that metacognition can be divided into five primary components (see Section 2.5). In this sense, it is the blending of all five into a combined view that may provide the most accurate representation of metacognition. The use of metacognitive strategies ignites learners’ thinking and can lead to deeper learning and improved performance, especially among learners who are struggling (Anderson, 2003; Chamot, 2005; Macaro, 2001).

In the context of this study, interactive Web 2.0 tools in the sociocultural learning environment play a role in supporting learning by reflecting all five primary components of metacognition as suggested by Anderson (2003). Consequently, learners do not learn solely from engaging with Web 2.0 technology, but they also learn through thinking and reflecting as they must perceive and evaluate their strategies of Web 2.0-based informal ESL learning. Reflections about their own and others’ sociocultural learning experiences and beliefs are important in order to construct their knowledge about their own informal learning. Therefore, web technological tools may be employed as enablers and motivators of thinking and knowledge building for empowering learner-users to be independent in their own language learning (Boruta et al., 2011; Feng, 2009; Gardner, 2011; Gee, 2010). The following Table 4.9 illustrates a brief description of these research constructs and their respective measurement items in the quantitative self-reported learning strategies.
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<table>
<thead>
<tr>
<th>Research constructs</th>
<th>Description</th>
<th>Measurement scales and items</th>
<th>Source of scales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online Survey Of Learning Strategies (OSOLS)</strong></td>
<td>A total of 24 items of OSOLS with the new learning strategies categories were adapted. Refers to the learners’ strategies for their ESL learning purposes beyond classroom, in terms of:</td>
<td>1. I have a purpose in mind when I learn online. <em>(Personal)</em>&lt;br&gt;2. I communicate in English with other learners online. <em>(Social)</em>&lt;br&gt;3. I communicate in English with native speakers of English online. <em>(Social)</em>&lt;br&gt;4. I take notes while learning online to increase my understanding. <em>(Personal)</em>&lt;br&gt;5. I think about whether the content of the online material fits my learning purpose. <em>(Personal)</em>&lt;br&gt;6. I try to get back on track when I lose concentration. <em>(Personal)</em>&lt;br&gt;7. I print out a hard copy of the online material then underline or circle information to help me remember it. <em>(Personal)</em>&lt;br&gt;8. I use reference materials (e.g. an online dictionary) to help me understand what learnt online. <em>(Social)</em>&lt;br&gt;9. I use tables, figures, and pictures to increase my understanding. <em>(Social)</em>&lt;br&gt;10. I stop from time to time and think about what I am learning online. <em>(Personal)</em>&lt;br&gt;11. I use context clues to help me better understand what I am learning online. <em>(Social)</em>&lt;br&gt;12. I paraphrase (restate ideas in my own words) to better understand what I read online. <em>(Personal)</em>&lt;br&gt;13. I go back and forth in the online material to find relationships among ideas in it. <em>(Personal)</em>&lt;br&gt;14. I check my understanding when I come across new information. <em>(Personal)</em>&lt;br&gt;15. When online text becomes difficult, I re-read it to increase my understanding. <em>(Personal)</em>&lt;br&gt;16. When I learn online, I guess the meaning of unknown words or phrases. <em>(Personal)</em>&lt;br&gt;17. I can distinguish between fact and opinion in online material. <em>(Social)</em>&lt;br&gt;18. When learning online, I think about information in both English and my mother tongue. <em>(Social)</em>&lt;br&gt;19. I practice the sounds of English online. <em>(Social)</em>&lt;br&gt;20. I watch English language program /movies online. <em>(Social)</em>&lt;br&gt;21. I try to find as many ways as I can to use my English online. <em>(Social)</em>&lt;br&gt;22. I publish my ideas and responses online. <em>(Social)</em>&lt;br&gt;23. I voice my opinions in English online. <em>(Social)</em>&lt;br&gt;24. I get more ideas on how to learn well online than learning in the classroom. <em>(Social)</em>&lt;br&gt;18 items were adapted from Anderson (2003)</td>
<td>6 added items (19-24) refer to the level of social support that the learner perceives in the use of Web 2.0 for their informal English learning. Only 6 items (19-24) were self-developed, to reflect the various dimensions of learners’ learning strategies.</td>
</tr>
</tbody>
</table>

| Table 4.9: Constructs and measurement scales for participants’ learning strategies for Web 2.0-based informal ESL learning |  |  |  |
4.5.2 Qualitative phase: focus group interviews

In this section, the researcher presents data collection purposes and procedures for focus group interviews in the current study. It is important to remember that “qualitative methods are more sensitive to and adaptable to the many mutually shaping influences and value patterns that may be encountered” (Lincoln & Guba, 1985, p. 40). Therefore, it is important for the researcher to be aware and carefully organize these focus group interviews as part of the qualitative research method.

4.5.2.1 Participant identification and access

Twenty participants (final year student-teachers) from five universities offering a TESL course in the MSC area and federal territory of Kuala Lumpur and Selangor were chosen as the participants in this current case study. As suggested by Kitzinger and Barbour (2001), focus group interviews typically require participants who have insight, experience or knowledge that is relevant to the research topic (p. 151). Each student teacher’s background and personality is unique because each was placed into an ESL practice teaching situation. It is for this reason the researcher believes it is important to take account of the student teachers’ thoughts, experiences and reflections especially as competent TESL learners and as ESL future teachers. These populations are also conveniently accessible to the researcher. A letter of invitation, providing details about the session, location and topics of discussion, was sent to each potential participant.
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The focus group participants contributed to the online survey and were chosen in order to learn more details about their informal learning practices with Web 2.0 tools. The selection was made from volunteers of interested students at the universities offering TESL courses along with recommendations from their lecturers. Five groups of four TESL students who had been highly recommended by lecturers were chosen for the interviews. The interviews were scheduled according to students’ availability. Thus, varied free time schedules were created for the session times for interviews and included “open hours” (such as, times when no classes were scheduled at the university). The number of participants is based on Barbour’s (2007) recommendation of sampling, three to eight participants for each group. In terms of the number of focus groups to utilize, Barbour (2007) states that “there’s no magic number and more is not necessarily better” (p. 59). Rather the choice is reliant on the research topic, as well as the desired comparisons across groups, types of data to be generated and forms of analysis to be carried out among others. Each interview required approximately 60 minutes. Interviews were transcribed and manually coded by the researcher.

4.5.2.2 Advantages and justification for focus group interviews

The use of in-depth interviews as a valid data collection method within the case study approach is widely documented (Barbour, 2007; Denzin & Lincoln, 2005; Yin, 2009). In this case, the researcher chose to use a ‘focus group’ strategy as a procedure rather than a one-to-one semi-structured interview. The justification for the selection of the focus group is because the researcher wanted to obtain rich information and in-depth perspectives based on the students’ own first person viewpoint. This would help the researcher in identifying the reasoning practices underlying student survey responses. It
is also important to discover any significant issues that related to students’ evaluation of and engagement with the Web 2.0 tools, which may not have been adequately reflected in the survey responses. Thus, data from the focus group interviews have been mixed with data collected from the self-reported questionnaires.

The decision to use focus group interviews was based on a number of advantages (Barbour, 2007; Patton, 2002). These include their flexibility and the collection of the opinions of a greater number of participants compared with individual interviews. Further, focus groups allow for more responses. Instead of the researcher inviting each participant to answer, research participants are also encouraged to communicate among themselves such as asking questions and adding on each other’s points of view (Denzin & Lincoln, 2005; Kitzinger & Barbour, 2001). The method is particularly useful for exploring participants’ knowledge and experiences in detail, especially what, how and why they perceive in a certain way (Barbour, 2007). Focus groups are convenient in assisting interpretation of the numerical findings obtained in the online survey and in enhancing depth in the final interpretation (Barbour, 2007; Kitzinger & Barbour, 2001). Focus group data provide a valuable source against which survey outcomes could be considered in the search of possible explanations for different positions taken by participants in the survey for the purpose of reliability.

4.5.2.3 Focus group procedures

In the current research, the interview protocol mirrors the quantitative instrument. This instrument’s subscales were used to create interview questions. The interview questions were phrased as open-ended questions to elicit information from participants. The two
instruments (utilised through the concurrent quantitative and qualitative phases) were designed to measure the same concepts. Once the interview questions were finalized they were compiled into an interview guide for the focus groups. The following interview questions were adapted from Antenos-Conforti’s study (2009) and were used as a guide for the focus group interviews. The use of a semi-structured topic guide that consists of a few targeted brief questions and well-chosen stimulus materials has a significant bearing on the quality of the focus group discussion, according to Barbour (2007). The focus group topic guide for this qualitative phase consisted of three questions based on hypothesised situations as listed in table 4.10 below.

<table>
<thead>
<tr>
<th>Hypothesised situations</th>
<th>Questions (and prompts, if any)</th>
</tr>
</thead>
</table>
| Situation 1: Future of the web in daily learning | 1. In your opinion, what is the future of web in your daily learning for the year 2020?  
2. What role does the web play in terms of informal ESL learning and daily life in general?  
3. What place does the web have in the lives of the ESL students?  
4. Does having web access affect their learning strategy? If yes, how? |
| Situation 2: You as future parent | 1. Would you support your child’s participation with Web 2.0-based informal ESL learning? Yes or no and why? |
| Situation 3: You as senior university student | 1. Would you participate in Web 2.0 activities toward ESL learning improvement? Yes or no and why?  
2. Could you describe the process/tactics/plan you have used when learning online outside of the class? |

**Closing:** Do you have any questions or concerns about the process?  
Thanks for giving me your time for this interview.

Table 4.10: Focus group topic guide
In order to minimise the possibility of researcher and group bias, most participants were invited to comment individually on a summary of the discussion. This gave them an opportunity as individuals to check on the researcher’s reconstruction of the discussion and to shed light on any misunderstanding of what was said or on any bias that may have resulted from one dominant group member. The focus group questions were deliberately kept as open as possible to allow participants to use their own words and raise issues of personal relevance. Allowing participants to decide the directions of the response reveals what is in their minds and the sociocultural assumptions with which they are working (Barbour, 2007). It also encourages responses based on their particular context, which acknowledges the situated nature of learning and the impact that context has on perceptions. Further, to ensure some comparability across the five groups, the researcher uses a common introductory statement and the same questions in each group.

In brief, this is a study focusing on learner perceptions of Web 2.0-based informal learning engagements. In order to gain a deeper level of investigation about how interactions with Web 2.0 tools actually contribute to the informal ESL learning (perceived affordances) it was appropriate to use qualitative methods. Strauss and Corbin (1998) proposed, “Qualitative methods can be used to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional research methods” (p. 11). Thus, qualitative methods such as focus group interviews are justified in this study to further investigate the phenomenon of Web 2.0 engagement for informal ESL learning. To ensure the reliability of mixed methods design a pilot study was carried out.
4.6 Pilot study

A pilot study was carried out by utilizing the concurrent mixed methods approach. This next section describes the pilot study conducted for this research.

4.6.1 Pilot study of questionnaire

Initially, a pilot study was conducted to test the administration of the validity and reliability of the self-reported questionnaire (Creswell & Plano Clark, 2011; Denzin & Lincoln, 2005), using the statistic, Cronbach’s alpha. Ten volunteers participated in this research piloting phase. The piloting brought about many benefits; for example, the researcher was able to decide on characteristics of questionnaires that needed to be adjusted or kept, such as the appropriateness of the questions or the language used, for the purpose of this study. Simultaneously, the pilot study participants provided important feedback on the instrument, especially with respect to layout, instrument application technique and the time needed to complete the questionnaires.

4.6.2 Pilot study of interview guide

During the pilot interview phase, the instrument was used with ten learner-users across two groups, representing their population characteristics but not part of the sample. They were interviewed through focus groups for 30 to 40 minutes and provided feedback, such as that regarding timing of the interview, whether there were questions that they did not understand or that could be improved, and whether the questions would be able to bring out varied answers. As these participants were also engaged in similar learning activities and experiences, they were considered an appropriate group with
whom to test whether the basic premise of the study, that the conceptual framework would form a systematic basis for gathering data about the experience of Web 2.0 mediated environments for informal ESL learning research, was practicable. The opportunity also arose to identify any particular issues that would be valuable to follow in more depth or would form a particular barrier to the investigation, for instance, as interview questions were refined and interviewing skills were improved.

4.7 Validity and reliability of the study

In the current research, validity refers to the degree to which the study precisely reveals or assesses what it supposes to measure. Validity, according to Creswell and Plano Clark (2007), can be considered to have been achieved when “the researcher can draw meaningful inferences from the results to a population” (p. 133). However, reliability refers to consistency, to obtaining the same result again. The researcher determines the reliability and validity of data for this study through procedures as follows:

i) Clarification. The researcher’s reflexivity (attitudes, backgrounds and experiences) may enhance the strength of interpretation and credibility of the study (Patton, 2002). Moreover, the concurrent design of this study in which quantitative and qualitative data were collected at the same time and integrated in the interpretation of the overall results, reduces possible biases and ensures the reliability of data interpretation (Creswell & Plano Clark, 2011; Patton, 2002). Strauss and Corbin (1998) also suggest that “experience and knowledge are what sensitize the researcher to significant problems and issues in the data
and allows him to see alternative explanations and to recognize properties and dimensions of emergent concepts” (p. 59).

ii) Transferability. Themes will be constructed from descriptions and codes found in the data. Lincoln and Guba (1985) discuss the issue of transferability in qualitative research such that “the burden of proof lies less with the original investigator than with the person seeking to make an application elsewhere. The original inquirer cannot know the sites to which transferability might be sought, but the appliers can and do” (p. 298). In order to make possible transferability, the researcher is responsible to include “sufficient descriptive data” (p. 298). With this in mind, rich and thick description of the findings has been provided for the reader, with sufficient context to assess the similarity and applicability of the study to other settings, thus enabling transferability (Denzin & Lincoln, 2005; Duke, 2010; Lincoln & Guba, 2005).

iii) Peer debriefing. Peer review was undertaken to provide error corrections, add detail to the data set, and suggest additional information, in order to increase the reliability of results. Several colleagues who were doctoral graduates from the Faculty of Education at La Trobe University and who had conducted their own research using mixed methods research helped to serve as peer reviewers.

iv) Attentive engagement and careful reflection. Most of the data came from the students’ perceptions of their experience and were reliant on participants’ abilities to accurately articulate those experiences. Data collection and analysis
have been carefully designed for a possible reproduction across the sub-cases (Yin, 2009). Similar questions have been asked both in the qualitative and the quantitative phases in each sub-case of the study and the data gathering methods have been repeated identically where possible. Moreover, the validity and reliability of the instrument construction was tested through using validated survey items, pilot testing the survey and following the focus group interview guide. As suggested by Strauss and Corbin (1998), the researcher used her research skills, wide perspectives from the literature and multiple resources to develop her theoretical sensitivity and awareness, especially in the data analysis procedures. The researcher employed three compatible theoretical perspectives, namely activity theory, situated learning theory and affordance theory, to systematize the processes of gathering and analysing the data. The conceptual framework drew on these three different lenses that are themselves applied in a range of situations, although details may change in different environments. In the following section, the researcher discusses the processes of data analysis adopted for this study.

### 4.8 Methods of analysis

Lincoln and Guba (1985) posit that “data are, so to speak, the constructions offered by or in the sources; data analysis leads to a reconstruction of those constructions” (p. 332). Drawing from this idea, this section discusses the theoretical basis of mixed methods data analysis and the actual process used to analyse the data gathered during the study. Many of the issues discussed in this section relate directly to the researcher’s role in the research process. It is the researcher who, as the primary driver of research, guides the
process of data gathering and serves as the instrument of data analysis (Creswell, 2003). Thus, these issues are important for the researcher in explicitly linking the theoretical perspectives, the research questions, the analysis and the final report of findings in research. As the unit of analysis within the case study, the activity system is directed towards the informal ESL learning activity (mediated by Web 2.0 tools) as experienced by the selected ESL learners. Any data perceived to be connected to the activity were included in the current analysis. Detailed discussion relating to the theoretical framework was provided in Chapter Three. Figure 3.5 refers to the Web 2.0 learning activity systems and identifies the inter-related key elements including the interaction of the personal system and social systems with the environment. Full understanding of the context guides the analysis and any conclusions made about the data must be distinguished and clarified in regard to the multi-dimensional context from which the data were gathered.

4.8.1 Quantitative data analysis

Within this embedded case study, data analysis has been conducted for the quantitative and qualitative data separately, and then the quantitative and qualitative results have been compared using a method discussed by Creswell and Plano Clark (2007, pp. 136–142). In the quantitative phase, online survey data were analysed through statistical methods of descriptive analysis using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics is used to organize, summarize and describe the responses of the participants. More importantly, the processes of organizing numerical data allow the researcher to draw conclusions and make informed decisions about the validity of study. These data were used in the quantitative and mixed methods analysis phases.
Moreover, the researcher investigated the change in learners’ responses to 24 items from the pilot study and established that, though the learners’ views changed over time, the structure of expressed perception represented by the 24 statements remained fairly constant. Consequently, there was good reason to think that these 24 statements were robust in combination as a tool for capturing important dimensions of learners’ reported experiences.

The development of the research questions was guided by the integrated theoretical framework. Constructs from the relevant literature and the integrated theoretical framework were used to develop and adapt sections of the survey instrument for the collection of the quantitative data. Similarly, categories for analysis also arose from these theory-based constructs. Themes which emerged as patterns of participants’ Web 2.0-based learning out-of-class were formed from constructs developed from the literature by the researcher to reflect their various learning experiences (see Tables 4.7, 4.8 and 4.9). The analysis of both, sections 2 (perceived learning affordances) and 3 (online learning strategies) used similar categories, namely social and personal themes. The sociocultural theoretical lenses of activity and situated learning aided in formulating a meta-analysis of the wider Web 2.0-based informal ESL learning of the activity system. These macro lenses gave rise to the theme of perceived social transformation for learning affordances analysis and social language learning strategies for investigation. This was further divided into a number of sub-themes according to the constructs of perceived affordances, provided by Antenos-Conforti (2009) and language learning strategies, provided by Anderson (2003). This quantitative data collection instrument was modified for use in this study by the researcher (see Tables 4.8 and 4.9).
For example, the sub-themes for perceived social learning affordances include perceived collaboration and repeated practice with tools. A finer grained analysis was provided through the use of affordance micro theory to analyse the individual perceptions in terms of perceived personal learning affordances and personal learning strategies. Detailed discussion relating to this quantitative analysis is developed in Chapter Five.

4.8.2 Qualitative data analysis

After the focus group data were transcribed, the researcher then analysed the transcripts following the dynamic and fluid coding procedure called initial coding, focused coding and theoretical coding, as suggested by Saldaña (2009). Coding refers to assigning “a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (Saldaña, 2009, p. 3). The analytical methods for this study consist of two major cycles, first and second.

In the First Cycle Coding, the researcher used the initial coding process (line-by-line coding of each interview transcript) to examine the individual parts of the qualitative data from the focus group interviews. This approach includes generating and comparing common categories or broad themes (Saldaña, 2009), such as social and personal clues around affordances and systematically identifying pattern of analysis.

In Second Cycle Coding, focused coding was used for selecting and grouping the concepts and categories into well-defined themes (see Table 4.11). Using the research
questions identified in Chapter One, the researcher was able to categorize, classify, integrate and reinterpret the data from various perspectives for deeper meanings. The latter stage is theoretical coding which involved thematic analysis by linking themes into an explanatory theory that would describe and interpret the aspect of the phenomenon being studied (Saldaña, 2009). According to Saldaña (2009), “a Theoretical Code functions like an umbrella” that is inclusive of the other themes that has arisen from the data (p. 163). The researcher was not expecting to generate a new theory with this project; instead, the goal was to search for repetitive themes and compare the patterns in the data with the existing theories in the literature to extend and to revise them into the new area of Web 2.0-based informal ESL learning. Data analysis identified two main themes (see Table 4.11 and 4.12) under which specific learner perceptions were classified.

<table>
<thead>
<tr>
<th>Theme 1: Perceived learning affordances of Web 2.0 tools</th>
<th>Code</th>
<th>Examples of description of learner perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived social transformation (ST)</td>
<td>ST</td>
<td>- Enables global communication.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Allows for community-building.</td>
</tr>
<tr>
<td>Perceived personal learning (PL)</td>
<td>PL</td>
<td>- Allows for real, self-paced and daily learning.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Enables independent and lifelong learning.</td>
</tr>
</tbody>
</table>

Table 4.11: Significant Codes for Focus Group interviews (Theme 1)


<table>
<thead>
<tr>
<th>Theme 2: Perceived language learning strategies</th>
<th>Code</th>
<th>Examples of description of learner perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web 2.0 Tool-mediated strategies</td>
<td>W2</td>
<td>- Online dictionary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Facebook</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- E-mail</td>
</tr>
<tr>
<td>Community-mediated strategies</td>
<td>COM</td>
<td>- Discuss</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Share</td>
</tr>
<tr>
<td>Role-mediated strategies</td>
<td>R</td>
<td>- Learning manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ESL learner</td>
</tr>
</tbody>
</table>

Table 4.12: Significant codes for focus group interviews (Theme 2)

The integrated framework provides a representation for generating themes of a systematic nature for aspects of engagement that are schematized as personal learning and social transformation. For example, the value of the affordance theory was that it enabled the researcher to understand the individual perceptions about particular rewards of specific Web 2.0 tools for informal ESL learning. This assists the analytical process through the generation of personal learning subthemes such as self-pacing and independent learning. Similarly, sociocultural theories, namely activity theory and situated learning theory, provide a framework for generating subthemes of a systematic nature for social engagement, for example, global communication and community-building. This integrated framework also allows for description of learning strategies not only of individuals but also those strategies shared among participants including Web 2.0 tool-mediated, community-mediated and role-mediated strategies. These three major themes of learning strategies emerged and gave rise to a series of subthemes. For
example, the generation of community-mediated strategies encompassing subthemes of discussion and sharing.

Using a common theoretical framework, the themes identified in this qualitative phase were incorporated into the mixed analysis phase to further enrich and provide evidence for the conclusions that have been drawn. The visual diagram (Figure 4.2) is a model of the mixing of the two concurrent phases (Creswell & Plano Clark, 2007). The research focuses on the inferences that would be made in the quantitative and qualitative study to consider whether they reveal the same or contrasting findings with regard to learners’ perceived affordances of Web 2.0 tools for informal ESL learning, the learning strategies utilized, and larger system patterns. In each of the findings chapters, the researcher has included verbatim quotes from the interviews to provide “rich and thick description” (Creswell, 2003, p. 196). Selected extended quotes from the interviews are used to represent the wider focus group views in order to illustrate patterns of confirmed perspectives on perceived affordances and learning strategies. Brief quotes of words and phrases are incorporated into the analysis to characterize the individual responses and to state the general majority view. Because the topic of this study has been relatively unexplored thus far, particularly in this specific combination, a thick description of the learning environment is necessary to provide readers with information to determine not only what each environment is capable of but also how and why the learners might use Web 2.0 tools for learning ESL outside of the classrooms. This thick description assists the researcher to provide a rich narrative of all environments while also enhancing the reliability and validity of this study (Lincoln & Guba, 2005). Overall, the researcher set out to ensure that the current research writing can clarify the phenomenon of the case, to
help readers extend their understanding of the phenomenon and to discern new meaning.

4.9 Research ethics

To ensure the credibility of the research, it was critical that the research be conducted in an ethically sound manner. Ethics issues arising from the use of human subjects for their perceptions, feelings and opinions are likely to exist in research. Consideration of these ethics thus served to guide actions and decisions related to the research process. Patton (2002, pp. 408-409) provided an ethical issue checklist, which highlighted a few main aspects, namely: explaining purposes; risk assessment; confidentiality; informed consent; data access and ownership. The researcher sought research ethics approval according to the university’s regulations.

Evidence of ethical approval of this human research by La Trobe University is provided in the appendices: Research ethics approval (see Appendix A), participant information sheet and consent form (see Appendix B), and participants’ online survey guide and consent form (see Appendix C). The focus group interview guide and consent form for participant is attached as Appendix D and participants’ self-report questionnaire is attached as Appendix E. The participant information sheet refers to ethical issues, such as the research purpose, right to withdraw and confidentiality. Participants were asked if they agreed to the interview being recorded to enable the researcher to transcribe the data accurately for analysis. In mid-August 2010, the researcher obtained the approval of the Education Faculty Ethics Committee of La Trobe University to commence data collection. This permission was merely the first part of ethics approval. The researcher
had also completed a series of ethical approval applications for permission to be on site collecting data. This is including obtaining authorizations from the Malaysian Ministry of Higher Education (see Appendix F), Malaysian Economic Planning Unit (see Appendix G) and participating universities (see Appendix H).

This study attempted to ensure participants were willing volunteers and that their identities were kept confidential throughout the study. Thus, participants were required to read a statement of informed consent at the beginning of the online survey and needed to click a link, indicating their agreement to the terms of the consent, before they moved to the survey. At any point, participants could skip questions or leave the survey without completing it. During the introduction of the focus group discussions, the selected participants read and signed a second informed consent document before being interviewed for the qualitative phase. They were clearly advised that they were able to decline from answering particular interview questions and were able to withdraw from the study if they chose. Pseudonyms were assigned to all participants to maintain confidentiality. After transcription, interview data were submitted to participants for their verification. At the end of the study, findings will be shared with research participants.

4.10 Summary

Mixed methods research offers a well-justified, appropriate and useful approach to addressing many educational research questions. The various philosophical and theoretical foundations of the mixed methods approach are required to address practical considerations inherent within a multi-dimensional approach, particularly the combining
of quantitative and qualitative results. Within this study, concurrent mixed methods of data collection are used in an embedded case study design as the approach to inquiry about the perceived affordances of Web 2.0 tools and strategies for ESL learning outside the classroom. Combining methods (in this case, quantitative and qualitative methods) enables the researcher to conduct a thorough and fruitful investigation of issues.

In this chapter the researcher described the methodology used in the study. The following chapter presents the quantitative findings of the study.
CHAPTER FIVE: QUANTITATIVE RESULTS

5.0 Introduction

As explained in Chapter Four, this study examined the current perceptions among Malaysian university students about their informal learning and strategies of English as Second Language (ESL) learning via Web 2.0 tools. This mixed methods case study approach utilized a combination of quantitative and qualitative findings to corroborate and complement the results, thus adding to the validity and reliability of the proposed research. This chapter presents the quantitative findings which contribute to this study with broader-based online survey material. The present study initially makes use of a quantitative self-reported questionnaire that has been administered to approximately 400 final year Malaysian university students, all ESL learners. The questionnaire has the benefits of allowing comparison across large numbers of participants in terms of the perceived affordances of Web 2.0 and the strategies used in socially and culturally mediated informal learning activities. Pertaining to this, a range of aspects that bear on participants’ preferences, such as whether to engage or not to engage with Web 2.0, are crucial to exploring how these Web 2.0 tools can be used for informal ESL learning.
In doing so, this chapter addresses research questions 1, 2 and 3, which guide the quantitative phase of the study:

1. What are the trends and patterns of participants’ engagement with the Web 2.0 tools in terms of usage frequency, usefulness for their informal daily English learning, places of access, and perceived most used tool?

2. What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?

3. What are the perceived learning strategies used by these learner-users in the informal environment in question 2?

The findings from the self-reported questionnaire reported here give a general picture of the degree of participants’ perception and engagement with the Web 2.0 tools. Tables 4.6, 4.7 and 4.8 provide descriptions of these research constructs and their respective measurement items in the quantitative self-report questionnaires.

The data collected from the online questionnaires in the quantitative phase of the research were coded and analysed using the SPSS software to produce numerical indicators such as frequencies, percentages, means, and standard deviation. In order to describe the participants, descriptive aspects and frequencies were conducted on all major dependent variables. In addition, correlational analyses were conducted. The
self-reported questionnaire contained nine Likert questions relating to the learners’ responses about the use of Web 2.0 tools for ESL learning. The findings are divided into three parts. The first part presents the demographic information of participants who consented to participating in the research by sex, course and university. The remainder of section 1 reports on the data on the general experience of using Web 2.0 tools such as the frequency of Web 2.0 used, usefulness for their informal daily ESL learning and the most frequently used of Web 2.0 tools for ESL learning. The second part discusses the participants’ perceptions toward learning affordances of Web 2.0 for their informal ESL learning. The third part is a discussion of the findings regarding the participants’ online learning strategies.

5.1 Testing Reliability

Students’ responses to questionnaire items were tested for reliability using Cronbach’s alpha coefficient (α) test that measures the internal consistency of students’ responses and the correlation of one particular scale with other scales that aim to measure the same phenomenon (Garson, 2010). In the current study, the researcher carried out a reliability analysis of all the 16 item scale of Web 2.0 learning affordances and participants’ 24 learning strategies. The Alpha for these scales was 0.921 and 0.836, which was high. This value is over the border line of what is normally considered as a conventional cut-off criterion for a good scale 0.7 or 0.8 (Garson, 2010), leading the researcher to conclude that the scales were highly reliable. The researcher examined each of the 16 items of Web 2.0 affordances and of participants’ 24 learning strategies in turn to identify whether the Alpha for the scale as a whole would be improved by the
deletion of an item. None of the items met this condition for deletion, so all items are retained in the overall measure.

5.2 Demographic information

In this section, key demographic variables such as sex, course and university can offer significant data about the features of the population under study. A total of 400 final year Malaysian university students as participants responded to the online questionnaire instrument. Of the 400 total participants, 294 students (or 73.5%) self-identified as being female and 106 students (or 26.5%) as male. Additional demographics revealed 250 Teaching English as Second Language (TESL) students from MSC area (or 62.5%) and 150 Non TESL students from non-MSC area (or 37.5%) from eight Malaysian universities responded to the survey. However, this study found that there were no significant differences between groups of students by sex, courses and universities with regard to perceived affordances of Web 2.0 and ESL learning strategies.
5.3 Students’ engagement with and evaluation of the Web 2.0 for their informal ESL learning

5.3.1 Patterns of Web 2.0 engagement

This section addresses research question 1: “What were the trends and patterns of participants’ engagement with the Web 2.0 in terms of usage frequency, usefulness for their informal daily ESL learning, places of access and perceived most used tool?” In relation to this, the participants’ usage level patterns for informal daily ESL learning with the Web 2.0 tools are shown in Figure 5.1 as follows:

![Web 2.0 Tools Usage Frequency](image)

**Figure 5.1: Participants’ usage levels of the Web 2.0 tools**

It is clear from the usage trends revealed in Figure 5.1 above that the reported level of participants’ engagement with the Web 2.0 was overall high, with the majority of participant-users (75.3%) accessing the Web 2.0 tools “several times a day”. This usage
level measure was considered as the highest/maximum for users; this is an important finding, given that this particular digital student identity appears congruent with that suggested by the present literature on individual attributes and technology usage for learners’ daily learning (Eberhardt, 2007; Greenhow & Robelia, 2009; Madden & Fox, 2006; Oblinger & Oblinger, 2005; Tapscott, 2009). Likewise, Prensky (2001, p. 1) used the term “digital natives” to describe the student group that grow up in a rapid technological world and digital information technology growth. In contrast, only a minority of participants, approximately 1%, reported that they accessed Web 2.0 tools once or twice a month; these could be grouped as non-users. Considered together, this quantitative response points to the need to probe more deeply into learners’ accounts of why and how Web 2.0 tools come to hold their viewpoints and make particular choices associated with Web 2.0 tool usage.

The quantitative analysis of the numeric data indicated positive engagement and interest trends on the part of the Malaysian university students’ community towards the Web 2.0 tools for their informal daily ESL learning. In this sense, from the data it is possible to argue that student-participants had advanced understanding of informal learning processes because they could perceive the connection between these types of activities and the new knowledge gained. As illustrated by Figure 5.2 below, at the outset of the study a large percentage of the students was generally enthusiastic about the benefits of the Web 2.0 and rated it as useful for their daily ESL learning practice. The results show that 97% of participants strongly agreed or agreed that “Web 2.0 is useful for their informal daily English learning”. In contrast, a minority of the participants of approximately 1.0% were negative in response to the statement, whilst only 2%
responded as not sure. These divergent views provide a prime example of the importance of establishing networks that allow learners to come together around common topics of interest as a strategy to support each other.

![Web 2.0 tools are useful for daily informal ESL learning](image)

**Figure 5.2: Students’ interest level in Web 2.0 tools for their informal daily English learning**

### 5.3.2 Places

In light of the patterns of high learner engagement in the Web 2.0-based informal ESL learning, responses to question 6 (places for ESL learning beyond classroom via Web 2.0 tools) are worth noting. It is clear in the following Figure 5.3 that university was the most popular location to access, rated by the participants as 32%. The second place favoured for their usage of the Web 2.0 tools was their residence (29%). The hostel was the third choice of place to learn ESL informally via Web 2.0 tools (20%); another 10%
of the participants preferred the public library while the remainder (9%) undertook such learning in cybercafes.

![Pie chart showing places for using Web 2.0 tools to learn ESL outside of the classroom](image)

Figure 5.3: Places for ESL learning beyond classroom via Web 2.0 tools

### 5.3.3 Tools

Students were asked to select the main Web 2.0 tool that they used for their informal ESL learning. Participants’ responses are displayed in Figure 5.4 as follows:
Figure 5.4 shows that Facebook/other social networking tools were rated with the highest percentage (62.3%) as the most popular activity and the most beneficial tool for their informal ESL learning. Selwyn (2007) asserted that “Facebook offers perhaps the most appropriate contemporary online setting within which to explore how social software applications ‘fit’ with higher educational settings and communities of educational users” (p. 3). Other previous studies have also supported this finding (Carbo & Antoli, 2011; Ebner et al., 2009; Lee et al., 2008; Schultz, 2011). The next highest percentage response was Wikis with 21.5%. The Web 2.0 tool for which the students responded with the lowest percentage was Delicious/other tagging tools, with 2%. The data here suggest that participants found the Delicious/other tagging tools features to be uninspiring and not useful for their ESL learning outside the classroom. In summary, while the use of Facebook was rated extremely high, the use of Delicious was rated very
low. These findings show that Facebook/other social networking tools were considered and utilised not only as social tools but as helpful in Malaysian university students’ informal ESL learning.

5.4 Students’ evaluation and perceived affordances of Web 2.0 tools for informal ESL learning

To construct a measure tapping learners’ overall evaluation about their perception of the value of Web 2.0 learning affordances, the researcher took responses to the 16 Likert statements for analysis. The value of the mean represents the degree of agreement ranging from 1 (strongly disagree) to 5 (strongly agree). An average score above 3.00 shows the tendency towards positive perception and an average score below 3.00 demonstrates a negative tendency. By calculating the average score of the items that formed particular affordance statements, a mean subscale score can be calculated (see the following Table 5.1). This provides an insight into the extent of the learners’ behavioural intentions and their perception of each of the Web 2.0 affordances.
## CHAPTER FIVE: QUANTITATIVE RESULTS

(Statement number =16)

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enables me to have more interesting English learning experiences than learning in the classroom. (Social)</td>
<td>4.43</td>
<td>0.64</td>
</tr>
<tr>
<td>2</td>
<td>Supports my knowledge of English grammar and vocabulary. (Personal)</td>
<td>4.26</td>
<td>0.71</td>
</tr>
<tr>
<td>3</td>
<td>Allows me to get a more direct experience of English culture and people. (Social)</td>
<td>4.15</td>
<td>0.67</td>
</tr>
<tr>
<td>4</td>
<td>Allows me to work at the time that suits me best. (Personal)</td>
<td>4.41</td>
<td>0.64</td>
</tr>
<tr>
<td>5</td>
<td>Allows me to work at the location that suits me best. (Personal)</td>
<td>4.43</td>
<td>0.60</td>
</tr>
<tr>
<td>6</td>
<td>Allows me to work at the pace that suits me best. (Personal)</td>
<td>4.37</td>
<td>0.65</td>
</tr>
<tr>
<td>7</td>
<td>Supports proficiency in English. (Personal)</td>
<td>4.23</td>
<td>0.62</td>
</tr>
<tr>
<td>8</td>
<td>Supports my motivation in learning the language. (Personal)</td>
<td>4.36</td>
<td>0.66</td>
</tr>
<tr>
<td>9</td>
<td>Enables me to become more independent learner. (Personal)</td>
<td>4.40</td>
<td>0.63</td>
</tr>
<tr>
<td>10</td>
<td>Allows me to learn collaboratively. (Social)</td>
<td>4.22</td>
<td>0.72</td>
</tr>
<tr>
<td>11</td>
<td>Enables me to get more opportunities for personal feedback on my English. (Social)</td>
<td>4.04</td>
<td>0.70</td>
</tr>
<tr>
<td>12</td>
<td>Allows me to monitor my learning progress closely. (Personal)</td>
<td>3.90</td>
<td>0.71</td>
</tr>
<tr>
<td>13</td>
<td>Enables me to reflect on what it means to be a language learner. (Social)</td>
<td>3.97</td>
<td>0.68</td>
</tr>
<tr>
<td>14</td>
<td>Allows for communication online to increase learning potential. (Social)</td>
<td>4.30</td>
<td>0.66</td>
</tr>
<tr>
<td>15</td>
<td>Enables me to increase my time on learning. (Personal)</td>
<td>4.22</td>
<td>0.77</td>
</tr>
<tr>
<td>16</td>
<td>Allows for repeated practice and support of language skills. (Social)</td>
<td>4.28</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Table 5.1: The means and standard deviations for questionnaire no 8 item

Based on the original subscale used for each item, the figures can be interpreted as follows:

5= Strongly Agree, 4=Agree, 3=Not sure, 2=Disagree and 1=Strongly Disagree
Using this scale to interpret the mean scores of the participants for the perceived affordances of Web 2.0 for ESL learning outside classroom, it is apparent that there is a high mean value denoting a positive evaluation about Web 2.0 learning on all 16 items. As shown in Table 5.1, the two items that gained the highest average ratings (4.43) were 1 and 5. For item number 1, 370 students (92.6%) strongly agreed/agreed that Web 2.0 tools enable them to have more interesting ESL learning experiences than learning in the classroom. For item number 5, 373 students (93.3%) strongly agreed/agreed that Web 2.0 allows them to work at the location that suits them best, whereas 22 students (5.5%) rated as not sure. However, the item that gained the lowest average rating was 12. Of approximately 303 students, 75.8% strongly agreed/agreed that Web 2.0 allows them to monitor their learning progress closely. Overall, the students expressed overwhelmingly positive experiences and perceptions towards Web 2.0 tool affordances for their ESL learning outside the classroom. In reporting these results, the researcher does not claim that these constructs are stable or indicative of general predisposition of the participants, but that these results summarise participants’ reports of their experiences using Web 2.0 for their informal ESL learning.
Based on the above graph, the interpretation about the participants’ responses to 16 statements of predicting behavioural intention and perceiving affordances of Web 2.0 will be detailed. The first bar (statement 1) shows that 94% of participants strongly agreed/agreed that Web 2.0 enables them to have more interesting ESL learning experiences than learning in the classroom, 0.7% disagreed/strongly disagreed, and only 5.3% stated as not sure. Moreover, for the statement 2, Web 2.0 supports their knowledge of English grammar and vocabulary, a substantial number of participants (89.1%) agreed/strongly agreed, 9.1% declared as not sure and 1.8% disagreed/strongly disagreed. Furthermore, most (90.1%) agreed/strongly agreed, 7.3% claimed as not sure whilst the remainder 2.6% disagreed/strongly disagreed with statement 3, that Web 2.0
tools allow them to get a more direct experience of English culture and people. For the statement 4, “Web 2.0 allows me to work at the time that suits me best”, a majority of participants, 92.6%, agreed/strongly agreed. Only 0.3% of the learners disagreed/strongly disagreed with the statement, whilst the remainder, 7.1% reported as not sure.

On the fifth bar, 94.6% participants agreed/strongly agreed that Web 2.0 allows them to work at the location that suits them best and another 5.3% claimed not sure. Next, a considerable number of participants (92.7% agreed/strongly agreed) reported that Web 2.0 allows them to work at the pace that suits them best, while the remainder 7.1% stated as not sure and 0.2% disagreed/strongly disagreed toward the statement. Interestingly, again the majority of participants (90.6% agreed/strongly agreed) reported that the tools support their proficiency in ESL, another 8.4% stated as not sure whilst 1.1% disagreed/strongly disagreed. The eighth bar shows that most participants (92.1%) agreed/strongly agreed, 6.6% claimed as not sure while 1.3% disagreed/strongly disagreed that Web 2.0 supports motivation in learning the language. Support for this finding may be drawn from the literature in Chapter Two, which discussed motivation (Gardner, 2011; Mortimer, 2010; Muehleisen, 1997) as one of the key components affecting student performance and learning, particularly in online learning. Similar findings have been reported by other researchers (Al-Khatib, 2011; Ullrich et al., 2008) who have posited that Web tools function naturally, and as a learning tool characterized by collaborative learning, active reflection and motivate participation. The data indicate students’ overwhelmingly positive experiences and perceptions towards Web 2.0 tool affordances for their English informal learning motivation.
CHAPTER FIVE: QUANTITATIVE RESULTS

The next bar (ninth) records the responses for the participants who thought that Web 2.0 enables them to become a more independent learner, a statement with which 94.2% agreed/strongly agreed. In contrast, 0.8% of them reported disagreed/strongly disagreed, while the remainder, 5.0% claimed as not sure. In terms of Web 2.0 allowing them to learn collaboratively, 85.8% of participants agreed/strongly agreed, another 12.4% stated as not sure, whereas only 1.8% disagreed/strongly disagreed. Subsequently, a substantial number of participants (84.8%) agreed/strongly agreed, 12.2% were not sure while the minority of the participants, 3.0%, disagreed/strongly disagreed that they could get more opportunities for personal feedback on their English via Web 2.0. The twelfth bar records that many participants (76.2%) agreed/strongly agreed, 19.7% claimed as not sure, while 4.1% disagreed/strongly disagreed that Web 2.0 allows them to monitor their learning progress closely.

For the thirteenth statement, “Web 2.0 enables me to reflect on what it means to be a language learner”, most participants (79.9%) agreed/strongly agreed, 17.8% claimed as not sure, whilst the remainder 2.3% disagreed/strongly disagreed. Next, the fourteenth bar shows 92.4% agreed/strongly agreed (majority of participants), 6.6% claimed as not sure, whereas only 1.0% disagreed/strongly disagreed, in perceiving that they could communicate online to increase learning potential via Web 2.0. Moreover, 86.9% agreed/strongly agreed, 11.2% claimed as not sure while the minority of the participants of approximately 2.8% disagreed/strongly disagreed towards the statement “Web 2.0 enables me to increase my time on learning”. Finally, the last bar (sixteenth) shows 89.5% participants agreed/strongly agreed, 9.7% stated as not sure, whereas 0.8%
disagreed/strongly disagreed that Web 2.0 allows them constant practice and support of language skills.

From the results shown in Figure 5.5 above, it can be inferred that in terms of the agreement level with each of the following statements of the affordances of Web 2.0 for informal ESL learning, by average, 89% of the participants (356 learners) stated that they strongly agreed/agree that Web 2.0 facilitated them in learning ESL beyond classroom. Another 9.4% (38 learners) were noted as not sure towards the statements of Web 2.0 affordances for learning, while 1.6% of the participants (6 learners) pointed out as disagreed/strongly disagreed. These figures indicate that majority of participants perceived the positive affordances of Web 2.0 technology for their learning of ESL outside the classroom. The data also indicate that only a small number of participants did not have a strong opinion (not sure) and disagreed/strongly disagreed about the perceived affordances of the Web 2.0 tools in improving their ESL learning beyond classroom.

The final year Malaysian university students as part of an ESL learning community remain convinced that having access to a Web 2.0 tool beyond the classroom was important in terms of any relative advantage it might add to their daily learning. It is important to examine these Web 2.0 highly engaging affordances because they “will continue to shape the ways people learn, work, play, and consume” (Dietel-McLaughlin, 2010, p. 129) in future. The learners’ responses to the perceived level of social support and perceived personal usefulness aspects of Web 2.0 explicitly indicated a positive evaluation in terms of both attitudes towards Web 2.0 tools and actual Web
2.0 usage behaviour of the student users. These were strong indicators that the majority of the participants found a great deal of value or usefulness in the personal learning and collaborative learning process. This supports the idea expressed by Wenger (1998) that social engagement within informal learning practices “is not denying individuality, but viewing the very definition of individuality [is] something that is part of the practices of specific communities” (p. 147). The next section discusses the quantitative results and findings emerging from question 9 in relation to the students’ learning strategies for ESL learning outside of the classroom with the Web 2.0 tools.

### 5.5 The perceived learning strategies adopted by students for ESL learning beyond the classroom

As explained in the previous chapter, this section sought to investigate the strategies Malaysian university students employed in order to enhance their informal ESL learning mediated by Web 2.0 tools. For further analysis of question 9, Table 5.2 shows the means and standard deviations for the 24 online learning strategies which were perceived by the learners to be highly valuable for their informal ESL learning. The items for question 9 also contained five Likert scales, ranging from strongly disagree (1) to strongly agree (5), with the middle option (3) for a not sure position. For the data analysis, the mean and standard deviation was calculated for each item as demonstrated in Table 5.2 below. The value of the mean represents the degree of agreement ranging from 1 (strongly disagree) to 5 (strongly agree), the remainder 3, as not sure. An
average score above 3.00 shows the tendency towards positive perception and an average score below 3.00 demonstrates a negative tendency.

(Statement number =24)

<table>
<thead>
<tr>
<th>No.</th>
<th>Statements</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have a purpose in mind. (Personal)</td>
<td>4.39</td>
<td>0.67</td>
</tr>
<tr>
<td>2</td>
<td>I communicate in English with other learners. (Social)</td>
<td>4.12</td>
<td>0.84</td>
</tr>
<tr>
<td>3</td>
<td>I communicate in English with native speakers of English. (Social)</td>
<td>3.83</td>
<td>0.79</td>
</tr>
<tr>
<td>4</td>
<td>I take notes to increase my understanding. (Personal)</td>
<td>3.90</td>
<td>0.80</td>
</tr>
<tr>
<td>5</td>
<td>I think about whether the content of the on-line material fits my learning purpose. (Personal)</td>
<td>4.08</td>
<td>0.68</td>
</tr>
<tr>
<td>6</td>
<td>I try to get back on track when I lose concentration. (Personal)</td>
<td>4.00</td>
<td>0.66</td>
</tr>
<tr>
<td>7</td>
<td>I print out a hard copy of the on-line material then underline or circle information to help me remember it. (Personal)</td>
<td>3.75</td>
<td>0.87</td>
</tr>
<tr>
<td>8</td>
<td>I use reference materials (e.g. an on-line dictionary) to help me understand what I learnt on-line. (Social)</td>
<td>4.34</td>
<td>0.68</td>
</tr>
<tr>
<td>9</td>
<td>I use tables, figures, and pictures to increase my understanding. (Social)</td>
<td>4.05</td>
<td>0.70</td>
</tr>
<tr>
<td>10</td>
<td>I stop from time to time and think about what I am learning. (Personal)</td>
<td>3.91</td>
<td>0.69</td>
</tr>
<tr>
<td>11</td>
<td>I use context clues to help me better understand what I am learning. (Social)</td>
<td>4.20</td>
<td>0.56</td>
</tr>
<tr>
<td>12</td>
<td>I paraphrase (restate ideas in my own words) to better understand what I read. (Personal)</td>
<td>4.10</td>
<td>0.65</td>
</tr>
<tr>
<td>13</td>
<td>I go back and forth in the on-line material to find relationships among ideas in it. (Personal)</td>
<td>3.96</td>
<td>0.65</td>
</tr>
<tr>
<td>14</td>
<td>I check my understanding when I come across new information. (Personal)</td>
<td>4.19</td>
<td>0.56</td>
</tr>
<tr>
<td>15</td>
<td>When on-line text becomes difficult, I re-read it to increase my understanding. (Personal)</td>
<td>4.16</td>
<td>0.60</td>
</tr>
<tr>
<td>16</td>
<td>I guess the meaning of unknown words or phrases. (Personal)</td>
<td>4.20</td>
<td>0.69</td>
</tr>
<tr>
<td>17</td>
<td>I can distinguish between fact and opinion in on-line material. (Social)</td>
<td>4.12</td>
<td>0.80</td>
</tr>
<tr>
<td>18</td>
<td>I think about information in both English and my mother tongue. (Social)</td>
<td>4.05</td>
<td>0.81</td>
</tr>
<tr>
<td>19</td>
<td>I practice the sounds of English online. (Social)</td>
<td>3.84</td>
<td>0.91</td>
</tr>
<tr>
<td>20</td>
<td>I watch English language program /movies online. (Social)</td>
<td>4.18</td>
<td>0.79</td>
</tr>
<tr>
<td>21</td>
<td>I try to find as many ways as I can to use my English online. (Social)</td>
<td>4.35</td>
<td>0.70</td>
</tr>
<tr>
<td>22</td>
<td>I publish my ideas and responses online. (Social)</td>
<td>4.15</td>
<td>0.90</td>
</tr>
<tr>
<td>23</td>
<td>I voice my opinions in English online. (Social)</td>
<td>4.13</td>
<td>0.92</td>
</tr>
<tr>
<td>24</td>
<td>I get more ideas on how to learn well online than learning in the classroom. (Social)</td>
<td>4.23</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Table 5.2: The means and standard deviations for questionnaire no 9 items
As revealed in Table 5.2, overall, the learners again expressed significantly positive experiences and perceptions towards learning strategies with Web 2.0 tools for their ESL learning outside the classroom. The item that gained the average highest rating (4.39) was item 1. For this, 364 students (91%) agreed and strongly agreed that they have a purpose in mind when learning online. In contrast, only five students (1.3%) disagreed/strongly disagreed with the statement, while the remaining 26 students (6.5%) stated as not sure. The statement that gained the average lowest rating (3.75) was item 7, to which 286 students (71.6%) agreed and strongly agreed that they did print out a hard copy of the online material, then underlined or circled information to help them remember it. In contrast, 46 students (11.6%) decided to disagree/strongly disagree whereas only 63 (15.8%) of them rated the item as not sure.

From Table 5.2, patterns of behaviours drawn from the theoretical framework demonstrated a high level of agreement about taking up diverse language learning strategies beyond the classroom. The mean individual items (Table 5.2 above), were in general relatively high. The standard deviation was so minor around these patterns of perceived learning strategies that it did not have a significant impact on the result.
Bar charts in Figure 5.6 above demonstrate the 24 responses on ESL learning strategies preferred by the participants. For the first learning strategy “I have a purpose in mind”, 92.1% of participants agreed/strongly agreed. In contrast, 1.3% of them disagreed/strongly disagreed while the remainder 6.6% stated as not being sure. Chamot (2005) stated that “the learner’s goals, the context of the learning situation, and the cultural values of the learner’s society will also influence choice and acceptability of language learning strategies” (p. 124). The strategies are important because they enable learners to guide their learning in the right direction towards specific conscious goals. This is reflected in these figures regarding learning purpose.
The second bar shows that most of the participants, 80.8% agreed/strongly agreed, 13.8% stated as not sure while 5.4% disagreed/strongly disagreed that they could communicate in English with other learners via Web 2.0. Many participants 73.4% reported as agreed/strongly agreed, 19.3% stated as not sure whilst the remainder 7.3% disagreed/strongly disagreed with the third learning strategy, “I communicate in English with native speakers of English”. For the fourth bar, a substantial number of participants (81.5%) agreed/strongly agreed, 10.9% stated as not sure, and only 7.6% disagreed/strongly disagreed that they took notes to increase their understanding. Next, 86.1% agreed/strongly agreed, 11.9% stated as not sure while the remainder 2.0% disagreed/strongly disagreed with the fifth learning strategy, “I think about whether the content of the online material fits my learning purpose”.

The sixth bar shows 85% agreed/strongly agreed, 12% stated as not sure and the remainder 3% disagreed/strongly disagreed with the strategy, “I try to get back on track when I lose concentration”. A majority of participants (72%) agreed/strongly agreed, 15.3% stated as not sure, whilst the remainder 12.7% disagreed/strongly disagreed about printing out a hard copy of the online material to underline or circle information to help them remember it. For the eighth statement, 92.2% of participants reported as agreed/strongly agreed with using reference materials (for instance, an online dictionary) to help them understand what they had learnt online, while 2% of the students disagreed/strongly disagreed and the remainder (5.8%) stated as not sure. Furthermore, 85.1% agreed/strongly agreed, 11.1% stated as not sure while 3.8% reported as disagreed/strongly disagreed that they used tables, figures, and pictures to increase understanding. As shown by the tenth bar, a majority of participants (80.3%)
agreed/strongly agreed, 4.4% reported they disagreed/strongly disagreed and 15.3% stated as not sure regarding the strategy “stop from time to time and think about what I am learning”.

For the next bar, strategy 11, “I use context clues to help me better understand what I am learning”, 98.2% of students agreed/strongly agreed, 1.3% reported disagreed/strongly disagreed while the remainder 0.5% stated as not sure. A substantial number of participants (88.5%) agreed/strongly agreed, 9.7% stated as not sure while the remainder 0.8% disagreed/strongly disagreed that they paraphrase (restate ideas in my own words) to better understand what they read. The thirteenth bar shows 82.8% of participants agreed/strongly agreed, 13.9% stated as not sure whereas only 3.3% disagreed/strongly disagreed with the strategy “I go back and forth in the online material to find relationships among ideas in it”. For strategy 14, “I check my understanding when I come across new information”, most (94.9%) agreed/strongly agreed, 1.3% disagreed/strongly disagreed whereas the remainder of 3.8% stated as not sure. Bar 15 shows 93.1% of participants agree/strongly agree, conversely, 1.8% reported disagree/strongly disagreed while 5.1% of them stated as not sure that when online text becomes difficult, they re-read it to increase their understanding.

Bar 16 shows that 91.1% of students agreed/strongly agreed, 6.4% stated as not sure while only 2.5% disagreed/strongly disagreed toward the strategy “I guess the meaning of unknown words or phrases”. Bar 17 shows that 79.5% of participants agreed/strongly agreed, in contrast, 2.7% stated they disagreed/strongly disagreed while 17.8% stated as not sure they could distinguish between fact and opinion in online material. For strategy
18, “I think about information in both English and my mother tongue”, a majority of 83.2% agreed/strongly agreed, 11.2% stated as not sure and the remainder 5.6% disagreed/strongly disagreed. Many participants (73%) agreed/strongly agreed, 9.9% reported disagreed/strongly disagreed, and 17.1% stated as not sure that they practice the sounds of English online. Among the participants, 88.8% agreed/strongly agreed, 5.4% disagreed/strongly disagreed and 5.8% stated as not sure about watching English language programs/movies online.

From Figure 5.6, bar number 21 records the number of responses to the strategy “I try to find as many ways as I can to use my English online”. Approximately 89.3% of participants agreed/strongly agreed, 9.4% stated as not sure while the remainder 1.3% disagreed/strongly disagreed. A majority of 79.4% participants, agreed/strongly agreed, 14.5% stated as not sure and the remainder 6.1% disagreed/strongly disagreed about publishing ideas and responses online. For strategy 23, “I voice my opinions in English online”, 78.7% of participants agreed/strongly agreed, 14% stated as not sure whilst only 7.3% disagreed/strongly disagreed. Finally, bar 24 shows that 84.8% of participants agreed/strongly agreed, 11.4% stated as not sure while 3.8% disagreed/strongly disagreed that they got more ideas on how to learn well online than learning in the classroom.

Overall, in terms of the agreement level with the statements of the preferred learning strategies while using Web 2.0 for learning ESL beyond classroom, by average, 84.3% of the participants (337 learners) stated that they strongly agreed/agreed that Web 2.0 allows learning strategies of ESL beyond classroom. In contrast, 4.4% of the
participants (18 learners) disagreed/strongly disagreed while 11.3% (45 learners) reported as not sure towards the statements of learning strategies as stated.

The Web 2.0-based learning environment provides students with more opportunity and flexibility to work with peers and thus promotes students’ personal learning. These preliminary findings indicate that in particular, students can learn from an interactive environment with a range of learning scaffolds and supports; this concurs with relevant past literature (Franklin & Van Harmelen, 2007; Woo, et al., 2011). These quantitative data demonstrate that the shared experience among Malaysian university students who use Web 2.0 tools for their informal ESL learning indicates a preference for personal and social learning strategies (see Table 5.2). The learner-users’ “mutual engagement in problem solving, requests for information and assistance, and collaboration allowed [them] to foster relationships with fellow community members and reinforce their character’s identity” (Mills, 2011, p. 364) and benefit from role-mediated strategies. These strategies have the potential to improve retrieval of information when needed for use as a source for problem-solving (Carbo & Antoli, 2011). Furthermore, all appropriate language learning strategies were oriented toward the broad goal of communicative competence of ESL. Reciprocally, in the current study, the development of communicative competence of individuals via Web 2.0 technology as a cultural tool is perceived by the students as authentic interaction using contextualized language.
5.6 Summary

The reported level of participants’ engagement with the Web 2.0 was high overall, with the majority of participants accessing the Web 2.0 tools “several times a day” and agreeing that “Web 2.0 is useful for their informal daily English learning”. The learners also indicated that university was the most popular place to engage with Web 2.0 and claimed that Facebook/other social networking tool were the best and most useful for their daily ESL learning. The tools that are perceived to be of value and use will have a positive effect on personal learning engagement and will most likely be the tools of choice in future collaborative interactions. In this regard, Web 2.0 skills and cultural competencies give learner-users the capacity “to exploit new simulation tools, information appliances, and social networks … facilitate the exchange of information between diverse communities and the ability to move easily across different media platforms and social networks” (Jenkins et al., 2006, p. 55). This study has demonstrated the potential of Web 2.0 tools in ESL learning in various aspects, beyond the classroom, as summarized and depicted in Figure 5.7. This model brings together the perceived affordances of Web 2.0 explored in this phase under the relevant theoretical umbrella.
The study’s quantitative findings corroborate the sociocultural view of informal learning, as strong endorsements of perceived Web 2.0 affordances for social and personal learning. For example, Web 2.0 facilitates more interesting and efficient informal learning experiences, especially a more direct experience of English-speaking culture and people, and in providing personal feedback on learning. The tools also enable students to reflect on what it means to be a language learner, to interact and communicate online and to have constant practice of and support with their English language skills. This indicates that Malaysian university students as ESL learners perceived themselves to be confident in the informal learning collaboration process mediated by Web 2.0 tools. Moreover, as illustrated in Figure 5.7, Web 2.0 tools could
transform and extend social networking to personal learning networking. Web 2.0 supports proficiency in ESL, particularly in terms of grammar and vocabulary. The data revealed that learners perceived these tools as allowing them to work in their own time and location and at their own pace. The learners also indicated that Web 2.0 provides them, as ESL learners, motivation for learning because they allow for a closer monitoring of learning progress and increased learning time. As a result of such informal learning collaboration through Web 2.0 tools, these data indicate the ways in which learner-users become more independent learners.

The study on students’ preferred learning strategies has also shown the importance of social practices such as negotiating meanings and building up knowledge among learners. Learners demonstrated that they collaborated with other learners to achieve their learning objectives in managing their individual learning through Web 2.0 activities. This finding implies that learners benefit from assistance mediated by negotiation of meanings with a more capable person in order to improve their ESL competence. This also reflects and supports the sociocultural concept of learning, indicating that learning is not an individual process alone, but is a result of collaborative effort necessarily involving other individuals (Kaptejin & Nardi, 2006; Lantolf & Thorne, 2006; Vygotsky, 1978). As a consequence, Web 2.0 mechanisms support students to reflect on their personal learning tasks. In addition, these interactive learning tools create an environment in which learner-users can interact in real and deferred time and thereby accommodate positive effects on their learning behaviours. Such learning strategies among the learner-users are summarized in the following Table 5.3:
CHAPTER FIVE: QUANTITATIVE RESULTS

<table>
<thead>
<tr>
<th>Perceived Range of Learning Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social</strong></td>
</tr>
<tr>
<td>Communicate with: i) Other learners</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Use references.</td>
</tr>
<tr>
<td>Use tables, figures &amp; pictures.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Use context clues.</td>
</tr>
<tr>
<td>Use L2 &amp; L1.</td>
</tr>
<tr>
<td>Practice: i) Sounds</td>
</tr>
<tr>
<td>ii) Watching</td>
</tr>
<tr>
<td>iii) Use many ways</td>
</tr>
<tr>
<td>Publish ideas online.</td>
</tr>
<tr>
<td>Voice opinions.</td>
</tr>
<tr>
<td>Get more ideas about learning.</td>
</tr>
</tbody>
</table>

Table 5.3: *Representation of perceived learning strategies of student-participants*

Learners reported various ways in which they were involved in learning strategies for Web 2.0-based informal ESL learning. This chapter presented quantitative results concerning the students’ background information and several aspects of their perceived affordances of Web 2.0 and learning strategies for ESL learning outside the classroom. These key findings will be further analysed in synthesis with the qualitative findings. This researcher believed that the context of the proposed research would affect the
research process and different learners perceived meaning differently, thus recognizing this would facilitate more holistic and meaningful research. The following chapter, Chapter Six, aims to elucidate a more in-depth representation of these themes through the perceived ESL learning affordances and sociocultural engagement experiences of Web 2.0 learner-users.
CHAPTER SIX: QUALITATIVE RESULTS

6.0 Introduction

This chapter presents the learners’ responses from the qualitative in-depth case studies in order to investigate the perceived affordances of Web 2.0 tools and learning strategies for informal ESL learning among Malaysian university students. Through the qualitative analysis stages, the researcher analysed the extent to which particular Web 2.0 tools mediate and, at times, limit informal ESL learning opportunities for the participants and the degree to which participants are able to appropriate these tools to extend their ESL learning, learning strategies and interactions. In this chapter, the researcher reiterates the research questions, explains the qualitative data analysis phases and provides answers to the relevant research questions (Creswell & Plano Clark, 2011). Through the analysis stages relevant to this chapter, the interviews were transcribed, analysed and coded into identified major themes (Saldaña, 2009). While answering these questions, the researcher makes links to the relevant literature relating it to emerging findings to represent the results. The selected direct quotes, words and phrases from the focus group participants are used to represent their important perceptions and to characterize the majority of responses. The researcher helps protect participants’ identity and confidentiality by use of pseudonyms chosen to represent their university and real name throughout the study (for example, A1 and B2).
Twenty participants (final year student-teachers) from five universities undertaking a TESL course in Malaysia were selected to explore their experiences as competent TESL learners and ESL future teachers. Systematic approaches to coding the qualitative data were utilised by bringing together the various theoretical lenses of the study in order to provide key constructs for guiding the analysis. The researcher has chosen activity theory and situated learning theory as both theoretical lenses and analytical tools to frame the research. From activity theory and situated learning theory perspectives, a learner-user located within the Web 2.0-based informal ESL learning is a subject of a complex social activity system which is situated within everyday practice and which includes a number of interdependent system elements (see Figure 3.5). The activity is a contextually developed phenomenon, thus factors such as the learners’ previous experiences and knowledge are considered to have influenced the learners’ participations and views on their informal learning practices (see Chapter Three). Moreover, the affordance concept, in Gibson’s (1979) original description, has potential meaning for the experience choices, and links to a relational action possibility between the learners and the Web 2.0 tools. These integrated lenses offer for this study a framework for discussion to explore the issues driving the perceptions of affordances (see Section 6.1) and learning strategies (see Section 6.2), and to comment on their possible interpretations. This chapter is presented in an attempt to gain deeper insights into how and why these learners negotiate Web 2.0 technologies for their everyday learning beyond the walls of formal learning spaces. Consequently, the following section, Section 6.1, specifically addresses research question two:

2. What are the perceived affordances and limitations for learner-users in Web 2.0 based informal ESL learning?
CHAPTER SIX: QUALITATIVE RESULTS

6.1 Section One: Participants’ perceived Web 2.0 affordances for informal ESL learning

An interpretive analysis of interview transcripts highlighted both major and minor themes that contribute to this study; namely, the affordances and the limitations of Web 2.0 tools for ESL learning in unstructured and unguided environments. Two major themes of motivational affordances which describe how and why learners used these Web 2.0 technologies are personal learning and social transformation. Although the majority of participants claimed that they were appreciative of the opportunities enabled by Web 2.0-based informal learning for ESL enhancement, there were serious concerns regarding their limitations (minor themes); these will be reported later in Section 6.2. The participants mentioned in this chapter always refer to some or the total of the 20 TESL student-teacher participants, if not specifically defined. The researcher attempts to make links of the elements (these proposed major and minor themes and subthemes) into interconnected features of a single overall phenomenon. This is important to formulate the final explanation concerning the research questions. The two major themes and subthemes, as taken from the interview transcripts, are summarized in Table 6.1.
## Social transformation

| 1. Allows learning with others outside class. |
| 2. Enables global communication. |
| 3. Allows for community-building. |
| 5. Enables online identity formation. |

## Personal learning

| 1. Supports intrinsic motivation. |
| 2. Supports first-hand experience and twenty-first century skills. |
| 3. Enables accessibility and flexibility in learning. |
| 5. Enables independent and lifelong learning. |

### Table 6.1: Themes and subthemes of perceived affordances of Web 2.0 tools

### 6.1.1 Theme 1: “Social transformation”

Learners were more likely to be motivated to study as long as they were able to choose what and how to learn on their own and when encouraged to participate in collaborative learning (Dietel-McLaughlin, 2010; Gardner, 2011; Greenhow & Robelia, 2009). Learners thus develop confidence in their own ability to work with a group and to help their friends (Arbaugh & Benbunan-Fich, 2007). Such development, overall, helps encourage these Malaysian university learners to be more responsible and independent learners. Subthemes from this section of the research are summarized as follows.
6.1.1.1 Allows learning with others outside class

Participants perceived the value of using Web 2.0 technologies as a networking tool. Repeatedly, they described various methods of communicating with others. Participants reported that these “incredible” Web 2.0 tools contributed to their enhanced experience of communication outside of the classroom (Duke, 2010; Gee, 2010; Sefton-Green 2004) at any place, any time, at their own pace and with anybody. The following statement from A4 explained this view:

A4: I find it so easy to find a discussion group especially via Facebook because it comes in one page and all the contributors are there. At the same time, you can put the links straight away, videos, web pages and so on. Let’s say I need to do revision, I just need to check some messages, and everything is there. It helps my learning because there’s organization of thoughts and you can also check for questions and responses. All these are indirectly learning which not just language but I also learn how to discuss, to get or to give support and share ideas.

Data from this study suggest that learning mediated by Web 2.0 tools is a developmental process that is naturally social, involves internal contradiction and may imply rejection of previously traditional ways of learning. For example, most participants stated that “people change into a better” and “real person” when they are online, perhaps “the less formality of online discussion reduces their burden to be the perfect person as in classes”. Drawing from an activity theory, “learning can be seen as a resolution, often ephemeral, to the [negotiations] that produce changes in the conceptual, social and material conditions of one’s everyday life” (Lantolf & Thorne, 2006, p. 209). Moreover, some participants reported that they “always have someone to
listen to, communicate with and share [their] happiness or sadness”. For this reason, they “do not mind if someone condemns” them or “keeps re-correcting [their] grammar online” because they know that there is “no harm” in that. Through such interactions, they could “check how much [they] know about English”. E3 had experience of “correcting [her] English lecturer’s grammar on Facebook” and she thought that was a “cool” practice because the tools enable a “better relationship by connecting [her] to other people around the world”.

Web 2.0 activity is broad enough to include collective transformation; it does not focus on the single experience of an individual learner-user, but is expansive of all individual agents and artefacts in a Web 2.0-based informal learning system. This view is expressed by B2 as follows:

B: We can put ideas online and others can add some other ideas, then we can argue, discuss and conclude either we agree or disagree with the ideas. So the status part is the best features of Facebook that can teach us about English learning or not just English…other knowledge too. Maybe just by reading the others comments without contribute further, also can top up to your knowledge.

Collective transformation is especially useful for a Web 2.0 online informal learning situation in which sharing and learning is the key. For instance, B2 also said that they could “learn from each other” not only from their “own friends”, but also from “strangers online”. According to most participants, Web 2.0 tools were collective; in other respects it appropriated participants’ work behind additional navigational clicks. Learner-users could challenge the communal nature of the Web 2.0 tools by easily
utilizing their peers’ work. This subtheme indicates that, in practice, the communal online space afforded the ability to encounter differing perspectives and enable learning outside the classroom.

### 6.1.1.2 Enables global communication

The majority of participants describe their abilities to communicate with one another in order to provide members with information, contacts and supports. Interactive Web tools allowed them to be in touch (Duke, 2010; Greenhow & Robelia, 2009; Hernandez et al., 2011) by enabling them to post any questions in a longer text or “simple message” and support their knowledge sharing activities or when they were “stuck on stresses”. For instance, C2 described the networking tools in the following terms:

> C2: I can post any questions in a longer text or simple message via them. Besides, we can chat online for the quicker answer and it’s more fun. Facebook is also interesting in sharing thoughts, opinions and new idioms. Just post them on the wall, automatically we can share. Sometimes, my friends will add up more ideas, corrections, comments and share information.

As described in the above response, the interpretation can be made that most participants were positive about the presence of wide-ranging forms of social networking or “worldwide” communication made available to them using Web 2.0 technology tools. Such “interactive” and “communicative” tools provide sufficient opportunities “to express” themselves and “be confident” in life. The tools offer sufficient practice for learner-users to “interact one to one” or to “many users” “for a
more meaningful learning” and, in turn, invite participation. In this regard, Web 2.0 tools as global networks link learners with significant others, learners with information and information with other information. Consequently, some participants perceived Web 2.0 tools as helpful resources that offer them global communication, not only “among the learners” but also “English native speakers” and “other” diverse people. The following response from participant A2 summarizes this theme:

A2: Every time I am free, I visit their [native speakers’] blogs and follow their updates especially on their language updates. Sometimes, I also join in the discussion. By this, I can improve my writing styles and learn more on how the native speakers write in natural English.

As indicated in the previous excerpts, communication via Web 2.0 tools provides the participants with asynchronous (delayed) or synchronous (real time) interaction for effective informal ESL learning among Malaysian university learners. These options can accommodate situations where the participants are “not in the same” location or “time”. The asynchronous tool allows all participants to “read and respond” to messages whenever they are “available” online or at their “own schedule”. Mostly, they “read online news”, watched “movies”, surfed online, and chatted on Facebook. However, in synchronous interaction, participants “send and receive messages” with others at that moment and communicate via “Skype video conferencing”. These learners were aware that they could learn through interacting with those who have already been doing the same for them. For most participants, the key is “to talk to people, communicate with other learners, locally and internationally”. By “picking the brains” of these experienced
learners, they expressed a desire to gain insights into their learning practices and inform their own development as online learners.

6.1.1.3 Allows for community-building

Learning is a social process and can be influenced by the relationships that individuals engage in (Hernandez et al., 2011). As reported by most participants, such learner-users’ informal learning via Web 2.0 involves interaction between “people around the world”, including communication and social interaction. Additionally, many habits and experiences related by the majority of participants involved the enhancement of a virtual community through Web 2.0 tools. The following example from D2 is illustrative of the building of the learner to learner relationships:

D2: I have an international English exposure because I am an avid games player. I play games more than five hours per day in front of the computer without moving. Last month, I was in a tournament of online games, actually the international tournament that involves not only Malaysian, but also international, participants like from Thailand and Singapore. There was a leader, a native speaker to guide us, and in order to win the war we had to communicate in English.

In the previous passages, knowledge production puts much greater emphasis on the community of learner-users, such as the interaction “between learners” and more capable others, and how the nature of “information exchanges” between them can be transformed. Common features of learning communities are a shared purpose of learner-users and practice applicability beyond learning contexts mediated by Web 2.0.
tools. Further examples of the relationship-building between learners and lecturers were also stated by participant A4 as follows:

A4: ... *the most effective internet tool is website forum where lecturers suggest topics and ways to find the sources and the rest of it, up to the learners. Let the learners search information online and put their sense of thoughts into the forum. So, we can compare the ideas with the other learners. So, the interaction is not only between the learner-lecturer alone but also the learners and the learners.*

Even those participants who chose to study independently still recognized a need for “guidance from others”. For example, the online communication which focuses more on the ESL learning needs encourages the majority of participants towards “communicative language learning”. In this regard, they seek help from their peers and from “independent research”, using Web 2.0 tools to practice their ESL outside of the classroom in a more relaxed atmosphere. Nearly all participants spoke about their significant others also including their “assignment group members”, “classmates” and “ex-classmates” and other virtual friends. This affordance allows learners to interpret “textbook experience” into knowledge appropriate to the “real world”. Most participants agreed that Web 2.0 is suitable and useful for their ESL daily learning because it supports them with “new ideas” and “information” to be innovative and resourceful. For example, Web 2.0 tools enable the learners’ work to “appear online” and to be viewed by “peers” and the global audience in order to foster the learners’ “creativity” and “critical thinking skills” towards “independent learning”.

* * *
Participants believed that Web 2.0 discussion tools also enable secure environments for open discussion without risk of external criticism. In relation to this, some participants perceived that Web 2.0 allowed them to have more people to “help each other” towards their ESL learning improvement. They responded that “everyone needs other people to live and communicate with”, including “international users”, “TESL learners”, “international TESL teachers” and “English native speakers”. For example, B4 responded that sometimes, “lecturers keep correcting” their students’ “grammar” and “typos while chatting” online. But, “it’s not lost face at all because it’s online rather than face to face in class”. Whilst the relationships “between learners” and significant “others” may be unique, they retain a vital role in motivating learners to engage.

A key aspect of participants’ collective success is most of these “communities already exist; [so] they are already social-action genre systems ready to be adopted and adapted for use in educational settings” (Reinartz, 2009, p. 139). A few of the learners reported that they felt part of an online community because they “keep contacting each other and getting to know each other” and some thought that they “can influence other people to go online with English”. Another participant, B2, reported as follows:

B2: If your friend is sad, the status is sad, so we use Facebook to chat with them. So, we should use certain words...English affective words, to comfort him/her. So this is also an affective learning process of English. Indirectly, internet is not only to support for information, updated information but also relationship. When you know how to use Facebook, you’ll know how to use the specific words for specific moods...
In the above example, the participant (B2) demonstrates an understanding of the appropriateness of contribution, language and behavioural adaptations according to contexts and social rules. In this regard, Web 2.0-based informal learning provides learner-users with the social rules to regulate their behaviours (what is allowable) in the interaction among learners, peers and significant others. Social rules can be implicit, flexible and “unwritten codes of conduct” (Greenhow & Robelia, 2009, p. 135), such as cultural norms, expectations and social standards. These affordances guide the learners in how to use Web 2.0 tools, especially in being friendly and respectful to each other and what kinds of writing style should be used online such as to “avoid too many capitals” as it is considered “rude and improper”. As shown in the previous excerpts, Web 2.0 enables a space for the majority of the participants to enjoy and take ownership of tools available. Once they had been “motivated”, they were “willing to spend adequate time” learning ESL and take cautious risks to link with anybody via Web 2.0 tools, as long as the significant others were “willing to contribute” to their learning. Some learners found it was valuable mainly because they communicated with people whose English was fluent. It is worth emphasizing that most participants perceived that through Web 2.0 tools, and through the scaffolding in collaborations with peers and more capable people, learner-users’ sense of participation was validated and enhanced in various communities of practice. The following subsection describes the participants’ experiences and views about the collaborative learning via Web 2.0 tools.
6.1.1.4 Allows for collaborative learning

Web 2.0 tools allow all participants as ESL learners to engage in groups that are working on the same topic and preferences in order to support and collaborate with each other. A recurring subtheme in the case study was the connections between the Web 2.0 activity and the target practice of informal ESL learning. Through experiences in social networking mediated by Web 2.0 tools, the learner-users encountered authentic informal learning practices and engaged in meaningful, legitimate, peripheral participation (Lave & Wenger, 1991). Almost all participants consciously and rationally expressed clear “objectives” around the learning and believed that, through Web 2.0 activities, certain learning objectives would be achieved. These practices can be effectively understood when considered through sociocultural theories of learning. The peer “feedback” activity was a tool to “encourage them to write and reflect” upon their learning and to develop an awareness of learning in both “personal and academic” contexts. For example, D1 expressed that:

D1: With Facebook, if you chat to someone and there’s a grammatical error which is really annoying…uwwek! Annoying…You can be offline but for a TESL learner like me, of course I’ll put a comment there “You missed something”. No, it’s past tense, you should write like this…So, we learn something there. Yup! Learn from each other because everyone has their own weaknesses.

Most participants believed that they could act as a knowledge resource for each other via Web 2.0 tools. They conceptualized their activities in peers-only space where social interaction occurred amongst the learners and significant others and the voice of
lecturers were not dominant. In this activity, the role of the peers and significant others was to provide a sharp “assessment” by offering direct and detailed feedback on their work. Feedback mostly came from “peers” and significant “others”, “not the lecturer”. Subsequently, there was a lead in the excerpts below that through social interaction and the process of giving and receiving feedback online (Arbaugh & Benbunan-Fich, 2007), most participants presented their writing to each other. They also made comparisons between others’ work and their own, encountered a range of experiences around the text, became sensitized to characteristics of the text, and enhanced their “understanding” through critical evaluation.

Nearly all participants demonstrated a form of cooperative manners because they went through the motions of giving “feedback”. Ultimately, social interaction was meaningful to them as a means to “interact with others” to advance their own and others’ understandings of learning. Through the process of giving feedback, the learners would gain a greater awareness of their peers’ development and also “reflect” upon their own learning development within the group. For instance, D4 described these cooperative learning behaviours in the following terms:

*D4: To share, recently I found a blogs, a useful blogs written by our seniors. They actually provide us with specific guidelines in completing our assignment and final thesis. They’re really a good blogs especially for exam tips sharing. They also recommend the specific references to be used for our future works; the best websites and Facebook addresses to stay keep in touch with each other. The best part of the blogs is of course their comments on own learning experience.*
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This kind of informal learning mediated by the varieties of digital technological tools allows Malaysian university students to learn “indirectly” and adapt ESL learning “naturally” into their “daily routine”. This activity is motivated by an objective, the ESL proficiency, and is always connected to a goal, although the goal may not be consciously apparent to the learners. In addition, most participants as ESL learners were related to the learning objective or peer feedback task through a mix of varied motives and made sense of the learning object in differing ways. For example, E1 explained this view as follows:

E1: It helped me to have a clear idea about what I’m writing... helped me advance the organization of my ideas. Whether my friends’ writing is better or worse, there must be something to learn from.

As shown in the previous excerpts, internalization through social support involves introducing the Web 2.0 tools created by others into learners’ own practice. In this collaborative practice, “the playful dynamics within the community relations ranged from mixtures of expertise and helplessness, ease and struggle, resistance and compliance, trust and suspicion, and friendship and hatred” (Mills, 2011, p. 364). Most participants indicated that Web 2.0 involves some engagement with the learning community in order to develop ESL learning beyond the classroom. In moving beyond the private and individual space of the learner, they are likely to express their identities in Web 2.0 communities which meet their informal learning needs.
6.1.1.5 Enables Online Identity formation

Web 2.0 tools support a majority of participants in expressing their identities online. These tools allowed them to “express” their multiple identities and reinvent themselves as their perceptions of themselves changed over time. For example, this was achieved through the creation of their “profiles” (Bartlett-Bragg, 2006; Greenhow & Robelia, 2009) on Facebook or how they interacted with their peers through Web 2.0 using various “words”, “images”, and “videos”. In addition, how almost all participants decided to use these tools impacted on how they were perceived by their “friends”. The decision to comment or not to comment on their social networking walls or to “accept” or “reject” a comment such as a “blog post” or “photograph” influenced how they were perceived within their social network, all of which enabled them to manage their multiple identities online.

Most participants noted that they have at least a few family members in their online networks, usually parents. They express concern about giving parents such a window on their behaviours at university. In this concern, Web 2.0 tools enable the learner-users to be “selective” about what they want the other person “to know and not to know”. The affordance of evaluative and selective disclosure enables them to only provide a portion of their personal information or to omit details (Dillard, 2011) in order to present different identities in different contexts (Greenhow & Robelia, 2009). For example, A4 replied that:
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A4: Actually the first reason why I set up blog was for my family and friends to actually know how my life in university is. For example, if I go let’s say the recent one, mid-Autumn Festival, I will post my photos up with captions everything. So, my parent will know, “ooo … this is what she’s been doing in university”.

Most participants considered these presentations as typical of university students. They choose to highlight other areas of their life via Web 2.0 tools. These normally focus on “family”, “fun learning” and “social” life and were connected to “daily pictures”, publications and “humour”. Learners enjoyed different degrees of freedom to contribute their thoughts and self-publication via Web 2.0 tools. Discussing the effectiveness of the affordance, a number of participants said they saw how ideas were expressed. They learned “vocabulary”, “slang” and a different “writing formats”. Web 2.0 tools also allowed them to use various types of artefacts to communicate with various people about their “learning” and for their “assignments”. In this sense, most participants could have plenty of time to “search” and “select” the best materials and ideas and “think over” their posts, to compose “drafts”, to revise and “polish” them. They also expected to learn more effectively than they did in classes. E2 explained this idea as follows:

E2: This semester, we have to study ‘Teaching Literature in Secondary School’. So, we need to learn about the components of the short stories. Every time I had to do assignment, the first thing I did was search for references on specific databases especially EBSCOhost, ProQuest and Netlibrary. As a result, I found many specific references which are valuable for my understanding of the topic and writing of the assignment. It’s very interesting because I can know more about the entire components, the setting, the plot and the details better than my lecturer. That’s why I prefer internet rather than relying on my lecturer... I mean for the instant information, faster and details referencing and safer time.
As they participated in the informal learning activity mediated by Web 2.0 tools, the learner-users not only experienced changes in their ways of thinking and doing, but also changes in their sense of identity. The experience changed both how a participant (E2) expressed her identity online and how she was perceived online by her classmates and friends. A few participants did mention about being too “shy” as learners to debate an issue in class but were able to “express their opinions” through an “online forum” and “Facebook” discussion. The tools allowed them an opportunity to demonstrate critical literacy to others by writing and responding to their forum posts and gave them an academic “voice” that would have otherwise been silent. Web 2.0 tools are the tools that support them “to speak up”, “view opinions” and be “more organized” because they “have the guts to express” themselves online.

As perceived by the majority of participants, social images gain importance because of the increased concern for social appearance and peer approval that portray their life as university students. “University students” are preoccupied with social “images”, both their own images and of others. Although the majority did not use English as their first language, most participants chose to declare their identities as English language users online. They chose to engage in some Web 2.0 activities because they could “meet people” and use their English language for “real communicative” and “social” purposes like Facebooking, e-mailing and chatting online. This situation is explained by Wenger (1998) who in relation to participation and non-participation, argued:
We not only produce our identities through the practices we engage in, but we also define ourselves through the practices we do not engage in. Our identities are constituted not only by what we are but also by what we are not. To the extent that we can come in contact with other ways of being, what we are not can even become a large part of how we define ourselves. (Wenger, 1998, p. 164)

Similarly, almost all participants expressed the benefits of broadening online participation for identity transformation. They perceived having “enough” friends as an important factor regarding online status and, in order to develop friendships or potential friendships, claimed that they must accept every friendship request including those of “strangers”. These Web 2.0 affordances fulfil their needs such as to “meet” people and be social. For instance, E1 explained as follows:

E1: As final year students, we play a big role because when the juniors look at us, they expect us to be hundred per cent proficient English. … You have to prove that you are good especially to your lecturers, to show that you are independent and ready to be out there in the society as a teacher.

These findings present interconnections between identity and action, as suggested by Greenhow and Robelia (2009) in that Web 2.0 when “used outside of school allowed [learners] to formulate and explore various dimensions of their identity and demonstrate twenty-first century skills” (p. 119). In a collaborative Web 2.0 environment and Web 2.0-based informal ESL learning context, users tend to assume various roles. Parts of each user’s personal environments overlap, enabling shared practice and mediation through tools, roles and material resources. These environments are perceived and adjusted in a range of ways, offering identity screening possibilities such as non-
judgmental, trust or distrust according to a user’s needs, preferences and abilities. As such, Web 2.0-based informal learning communities involve relationships, identity building in relation to the community (Jokisalo & Riu, 2009) and the growth of particular efficient practices, particularly perceived affordances of learning ESL via Web 2.0 tools beyond the classroom. The participation is necessary if they are to move from “ordinary person” to “TESL teachers” or “lecturers in future” and “shy students” to “active learners”.

6.1.1.6 Summary

As is apparent in the earlier stages of the analysis, social interaction is meaningful as an authentic exchange of information to support informal learning. This form of collaboration reported is not possible without each affordance, and allows a very different form of informal learning activity than that allowed by each affordance separately. Thus, social interaction is used as a tool to support collaborative learning to expand “relationships with people in their local and extended networks” (Greenhow & Robelia, 2009, p. 129). However, as the second theme indicates, the participants also perceived that Web 2.0 tools’ affordances are meaningful for their personal learning.

6.1.2 Theme 2: “Personal learning”

Ebner et al. (2009) suggest that the researcher can track a learner-user’s development by examining the Web 2.0-mediated learning processes through which “self-directed learning, explorative or research-based learning offer particular potential for informal learning” (p. 93). This potential exists “because of the low influence of teachers and the
fact that learning is not primarily aligned to teaching” (p. 93). The process of self-directed learning, or in this analysis personal learning, will be fully explained in the following subsections.

6.1.2.1 Intrinsic motivation and fun learning

This finding concurs with previous studies (Cho et al., 2009; Gardner, 2011; Shihab, 2008) in that Web 2.0 technology tools offer a window to experience new ways of learning which are motivating and worth doing by learners for their own benefit. Learning ESL informally usually depends on this intrinsic motivation. Some participants love to “figure out anything by their own” effort and they “hate teachers to keep telling them to do this and that”. For instance, A2 responded as follows:

A2: One thing I want to add about online games, of course when you talk about English learning, it’s more effective through interactive games like vocabulary games which is very common and which I love to play most because it’s very challenging. Challenge for the learners to start learning is fun and motivating. At the same time we shouldn’t look down on simple games like ‘Farmville’ as mindless. In fact with them, you are not only learning the vocabulary but the contents specifically, like farmers use a sort of tool which is specific for their farm activities. So, you learn content specific tools rather than just a game which is specifically vocabulary.

In addition, nearly all participants perceived the affordance of Web 2.0 for inspiring future learning. In relation to this, they spoke about a few activities which are considered as “intrinsically motivating”, such as “vocabulary” and “grammar quizzes”,

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“crossword puzzles”, “movies” and “games”. For them, once they start using the Web 2.0 tools, they may be “addicted” to using these tools daily for their informal ESL learning enhancement because Web 2.0 tools are a means to learning motivation. Thus, the intrinsically motivating activities via Web 2.0 tools would be chosen by the learners according to their specific learning needs and preferences. For example, C3 responded that:

C3: Internet is the tool for the younger generation, I mean preferred by them. We can’t force them to learn. But internet is something that they want to use, their favourite tool which they wish to keep on with it. So, internet will be the best learning tool to actually get the learners to learn the language, the content and the cultural stuff…

For many participants, satisfaction was realised through using these tools. The appealing, fun, challenging, intrinsically-motivating tools and access to savings of “cost”, “time” and “effort”, therefore, would promote learners’ usage, which in turn increases ESL exposure. Considering that most participants are extremely motivated through these engaging ESL activities, their learning opportunities and understanding of their ESL learning are enhanced. They are likely to absorb the English information such as “sophisticated vocabulary” that is presented in lively, pleasant and attractive ways from entertaining artefacts of Web 2.0. For example, E1 reported this issue as follows:
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E1: By these, I can learn a lot from them as they are very active blogs users. They put all the details about their activities and events like a diary tool. Indirectly, they inspired me to write more and update my blogs as they keep suggesting some ideas for the improvement. For me blogs is for the people who wish to deepen their understanding of the language and its cultural aspects. I love to read blogs such as the Top 10 Language Learning Blogs 2010. These blogs really motivate us towards English learning and encourage us to stay connected locally and internationally to become a good TESL learner.

Many English artefacts and Web 2.0 activities that most participants included within their informal learning practice offered the affordance of affectivity. The learners believed that these aspects provided positive feelings: fun, enjoyment and a positive attitude toward ESL and toward themselves (Gardner, 2011). For instance, D4 emphasized that if the learners are “forced into something”, they are “not going to learn anything”, and D1 stressed that learners would not “apply anything” (under force) because “it just like delayed and tiresome”. D2 also thought that they may “hate their teachers” but they would never hate the Web 2.0 tool because “it’s exciting and a fun thing”. When learning is entertaining it is also motivating to learn. Of all ESL activities that most participants engaged in as part of their daily learning practice, the majority were non-academic, fun and entertaining activities, such as “watching movies”, “playing games”, “watching cartoons” and “browsing websites”. “Music”, “songs” and “media sites” were also highly motivating, “relaxing and stimulating” their interests towards ESL learning. Therefore, learning is “no longer boring” to them.
In this study, the use of affordance theory enables an understanding of how each individual learner via Web 2.0 tools utilizes the environment to reach their goals. A change in the form of the kind of informal learning activity is reflected by a change in the affordances perceived and utilized by learner-users. Thus, the form of informal ESL learning may be influenced if certain affordances of Web 2.0 tools are promoted. As shown by the previous excerpts, most participants perceived Web 2.0 tools as valuable for their informal learning because they are “motivating” and “always available” for them. They “do not have to consciously think about learning” because it is indirect, “fun” and “effortless”. They would “learn without anybody telling” them to do so. In this regard, among the most powerful and the available encouragement for informal and independent ESL learning situations was that which came from inside the learner.

6.1.2.2 First-hand experience and twenty-first century learning skills

Most participants noted that Web 2.0 tools provide them with precious first-hand experience and exposure to the content for their twenty-first century skills enhancement. This finding adds to the case for the educative value of Web 2.0 tools, thus confirming current literature (Armstrong & Franklin, 2008; Brown & Adler, 2008; Greenhow & Robelia, 2009). These skills are needed in order to be educated and prepared for a life and career in the information age, especially for coping with large amounts of “first-hand information” with speed and accuracy. A subtheme that occurred consistently throughout the participant interviews was that the best way to learn online is by simply “experiencing it” oneself or from personal experience. In this view, language and culture “come along in a package”, when a learner accesses the audio of a language and
views the “culture” at the same time. This exemplifies an engagement towards efficient ESL learning. Participant interview comments generally reflected the importance of “safe” practice for ESL learning and real-life technology skills rehearsal. For instance, these tools present less of a risk to their collaborative virtual learning, less chance in making “mistakes”, and more self-selected participation. For example, E1 responded that Web 2.0 tools allowed for “more effective” and creative language learning than “face to face” learning, and “sincere” interactive interaction without physical judgment. Learning only occurs if the users are “ready” and “free” to learn. Thus, they can control the interaction by choosing “to contribute or not to contribute” or even “not to be online at all” which reflects their self-directed informal learning engagement.

Most participants expressed that the language they learn outside the classroom via Web 2.0 and that which they learned from formal sources such as books in terms of language context. Informal ESL learning activities gives them “authentic language” which is another discourse for them to adapt and use appropriately depending on the person and situation compared to books which is “boring” and mostly “in black and white”. Because most of the out-of-class ESL artefacts have been used for a communicative purpose in the “real world” outside of the classroom, the participants present a variety of language genres which are important for their language learning. The Web 2.0 tools offer most participants more useful searching for “effective learning” and allow them to engage into real and meaningful conversations with the “real people”. Importantly, the learners indicated that the shift from teacher-centred to “learner-centred” learning has been made. For example, D2 explained as follows:
D2: I’m a sportsman and sometimes when I was coaching the new sportsmen, younger generation, I can refer to the internet as immediate access to richer source materials. Let’s say, I’m a runner, via YouTube, I can watch and learn the right way to run faster because I have YouTube videos. Many top international coaches did post their training session online and share their experience in coaching. So, I always review them and at the same time I learn English, spontaneously. Even though the real intention is to know how to run properly but at the same time I learn English unintentionally.

In relation to this, most participants thought that in their daily life they had experienced many types of language discourse besides academic English. The knowledge of different discourse registers gave them tools to comprehend the language correctly in specific contexts. This means the learner-user is focused on learning new skills, avoiding errors and understanding new knowledge in order “to get smarter” (Dweck, 2000, p.15) rather than expecting positive judgments about their competence (“to look smart”). In this sense, B1 stated that “awareness of sociolinguistic competence” helped her to be able to select the “appropriate language” for her daily conversation such as in using “certain expression” to express “feelings and emotions” in the right “intonation without making people annoyed”. The abundance of materials and texts that are available in English sometimes made them “conscious if the error is there”.

In this regard, the majority of participants as the “net generation” of ESL learners perceived Web 2.0 as a learning enabler regardless of their different learning styles, requirements, skills and capacity. These learner-users are motivated to perform an activity in order to improve their skills and knowledge (Csikszentmihalyi, 2002; Greenhow & Robelia, 2009). For instance, participants agreed that Web 2.0 tools enable
them to practice using interactive activities. This affordance allows for the repeated practice and frequent rehearsal necessary for them to strengthen their ESL skills. For example, most of the activities that involved “peers” and commenting with others provided the opportunity to “chat”, “discuss” and “interact” with other users. In addition, Web 2.0 activities allow all participants to check their “answers” and experience reading “the works of others”. Most of these activities cover the four major skills of “listening”, “speaking”, “reading” and “writing”, and value English as an “international language” in order to prepare learners for the future that they will encounter in the twenty-first century.

6.1.2.3 Enables accessibility and flexibility of learning

This subtheme emerged as the majority of participants described their experiences of the process of making successful connections with the ESL learning materials. Many participants described the richness of the Web 2.0 resources which were available “twenty-four hours a day” to them. For example, they have the opportunity to choose from a wide variety of learning materials ranging from samples of “dissertations”, “articles” and “research papers”. Some participants also perceived using the university “Wi-Fi access” to be a convenient option because they normally worked from their “hostel bed” or “while having meals”. Moreover, B2 explained that learners also can activate Web 2.0 tools through their “smart phones” like “Blackberry”, and that all they needed to do is log in their “ID no” and “password”. A1 reported more details as follows:
A1: I found that internet is very effective because you can actually access anytime anywhere as well as to access any other libraries ... So, the internet is the fastest, cheapest and the most effective tool to get information because if you want to physically go to all libraries and search for the refereed journals, it takes you forever. Seriously, not many of us know the research cataloguing in the library, not really familiar with the codes and stuffs.

Almost all participants found Web 2.0 technologies are flexible, “easy to use” and easy to access. These technologies were perceived as promoting optimum levels of openness, so learner-users have the freedom to choose to exploit the suitable artefact according to their “interest”, “skills” and “user friendly” qualities. For instance, they enable most participants to learn independently through “relaxed browsing”, “compiling works” via e-mail (such as G-mail and Hotmail) and “getting the latest songs” from YouTube. In addition, the same feature of the Web 2.0 tools may offer different affordances to different learners or to the same learners at different times. In this regard, affordances serve as data and perceptual cues to a specific learning analysis. Nearly all participants responded that they often find themselves involved in “multi-tasking” and “interactive” tasks via the tools of Web 2.0 outside class. Moreover, some participants mentioned that large numbers of texts from such different sources, which are accessible within the computer or hand phone screen just “a click away”. They also reported that multiple formats of texts and other features such as “sounds”, “videos”, and “pictures”, allow more opportunities for enhancing access to “up-to-date materials”. For example, A1 responded that:
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A1: … to keep update with the rest of the world, internet is the main tool in order to get in par with other people in world in terms of English learning. ...it’s easier, more pleasant to look because you can actually put aside the commercial parts, just read the important news and they are hyperlinked to the other news as well. So, you just need to click and click.

 Nearly all participants expressed the view that they could manage their money, time and efforts to have access to the Web 2.0 tools for efficient ESL learning. For example, A1 preferred “reading news online compared to the physical newspaper because it’s cheaper”. However, D3 loved to read news online in order “to read only what” he wants and skips advertisements for more effective reading. The majority of participants also perceived that Web 2.0 tools enable them to learn what works and to make “mistakes” at a minimal cost. For example, C1 reported this issue as follows:

C1: Yeah, I read ‘The Star’. We just go to the website, check out for current news and updates. As students, we prefer the cheaper way in updating news to save money; we just read news via internet. Besides we can read many types of newspaper and sometimes it comes with the videos. So, it’s more effective because it enables reading, watching and listening at the same time.

As described in these excerpts, an influential factor for most participants in choosing to participate in certain activities over others was the cost of the artefacts and how to get enough time, effort and moneys’ worth. Hence, informal learning that students identified is natural learning which happens at “anytime” and “anywhere” without specific places and times. All of the learners expressed the opinion that the most
inherent flexibility and undeniable convenience of online informal learning were a part of personal control especially in regards to both “where” and “when” the learners engage in their learning.

6.1.2.4 Self-paced and daily learning

With Web 2.0 tools, the control and management of learning rests primarily in the hands of the learner (Cho et al., 2009). For example, Web 2.0 is characterized by participants as a learning environment that bears significant potential and opportunities for engaging learners in “real learning”. This affordance enables intellectually productive and simulating debates on issues that constitute knowledge, skills and organization with “real world applications”. In terms of levels of engagement with online technologies in social and cultural lives, Malaysian university students as Web 2.0 users share many similarities with previous generational groupings such as the Net Generation or digital natives (Greenhow & Robelia, 2009; Oblinger & Oblinger, 2005). Web 2.0 is reported by the majority of participants as enabling them to have “freedom to choose” activities which ranged from easy, medium to difficult according to proficiency level and interest. They also articulated that, “different learners learn at different ways and different speed” and with Web 2.0 they “do not have to meet to have discussion because maybe [they were] at different places, with different problems”. For instance, in response to the question, B2 reported as follows:

B2: Nowadays we used to prepare our activity plan like a lesson plan manually but maybe in future, it’ll be different. Maybe the plan will be automatically posted to each learner online. Yes! Anything and now we just need to upload it and let say if we want to discuss about something but we don’t want to meet up so we just like...Yeah...Just
email it to you and you can reply it anytime...yeah, you can reply, just like that. We don’t have to meet to have discussion because maybe we are at different places, with different problems. Convenient!

This emerging learning practice via Web 2.0 allows self-paced rehearsing and practicing in flexible ways. For many participants, the tools which were available anytime at their own fingertips supported them in increasing understanding about the subject matter that they have learnt in class. Moreover, “the text-based learners” had varieties of choices of “extensive reading materials”, and for “visual-based” learners, Web 2.0 provided assistance to be better learners through the playing of the “latest video clips” and “audio-visuals”. According to them, Web 2.0 tools also provided for “research head start” and with “natural” and supportive problem-solving environments for ESL learning development at their own pace. C4 said that “whether like or not”, they would learn “at least a few vocabularies a day” because mainly, “language that appears on the screen is English”. Consequently, the learners were already familiar with Web 2.0 tools for ESL learning and informal learning occurs as a result of their daily habits and experiences.

6.1.2.5 Enables independent and lifelong learning

Having meaningfully engaged in an informal setting with Web 2.0 means learners are responsible for their own learning. The learners believed that they needed to be “self-regulated” and able to define their own learning goals and “evaluate” their own achievement (Chamot, 2005). In view of the fact that online tasks are authentic, challenging and multi-disciplinary, the learners have to become actively engaged
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towards the construction of their knowledge “independently” outside class. The availability of superior “learning models” via Web 2.0 tools was meant to increase independent learning skills among participants as ESL learners. In addition, they perceived Web 2.0 supports resources for their lifelong learning competence. They noted that it is “never been late” for them “to learn”, explore and “share everything” through the tools. This finding is supported by Geyer’s (2008) research, which suggests a Zone of Proximal Development (ZPD) was established through the social interaction among learners and web 2.0 tools that embedded in informal learning communities. In this study context, Web 2.0 tools allow learners “to do or to be anything as they wish” but, in order to get “positive outcomes” from it, they have to “use it wisely”. For instance C4 spoke about this issue as follows:

C4: Internet is the tool for the people who think that it’s too late for them to study for example me myself. For example to learn Adobe Photoshop it’s a bit late for me and I have no time to learn it formally. So what I did was I go to YouTube and type for videos on Adobe Photoshop tutorials. Just download all related video, view it and follow the instructions given and I’ve learn a lot of things includes the English language. Other than that, movies, if you watch movies via ‘Online Watch’ or YouTube, sometimes after half watching, it will pause, then you have to answer several questions, quizzes to keep on watching. By this way, we are going to learn a lot more helpful things for learning.

The information and skills gained from Web 2.0 activities provided the participants with ideas about being learners who are not only proficient in ESL but also “learners for life”. It is interesting that although some participants did not have the intention of learning or practicing English out-of-classroom when they participated online, they
were aware of possible affordances of ESL learning and practicing while participating in Web 2.0 activities. This is because all participants’ actions and operations have been shaped and determined by their individual differences, past experiences and the affordable conditions of the context. Thus, in the context of participants’ informal ESL learning, using the ESL and Web 2.0 tools can become automatic and no longer a goal-directed process. Nearly all participants mentioned the value of Web 2.0 tools for “indirect[ly] learning”, even “without a plan”, and an experience which they still considered “powerful learning”. For example, an advanced ESL learner may not pay attention to grammar while being engaged in Web 2.0 daily conversations. With Web 2.0 tools, they are actually learning English almost accidentally “every day” through their social networking such as by giving support and sharing ideas.

6.1.2.6 Summary

As shown through this qualitative data analysis, Web 2.0 tools were perceived as beneficial by almost all participants in order for them to become the experts in achieving social development and independence in ESL learning. Vygotsky (1978) believed that this process could be interpreted as self-regulation, indicating that novices could direct themselves to solve tasks strategically without being too dependent on others (Lave & Wenger, 1991; Starkey, 2010; Wenger, 1998). Moreover, a Zone of Proximal Development (ZPD) was formed not just inside an individual learner, but in the interaction between the learner, co-participants and available tools during involvement in a common activity. The development depends on the quality of the total interactive context of Web 2.0 informal learning as well as Web 2.0 learner-user
capabilities. A reciprocal association also exists between the learner-users and the learning objective; as the objective was changed, so too were the learner-users as they began to inhabit new ways of thinking and performing (Wenger, 1998). Consequently, the interaction helps to promote the learner-users’ fresh behaviours for meaning-making and reflection on new knowledge (Dale, 2010; Geyer, 2008). It shapes their personality development in terms of perception and awareness of valuable informal learning activities. Therefore, social interaction was meaningful as a way to enhance individual status, to develop individual understanding and to advance collective understanding. The next section presents the participants’ perceptions on the limitations of the Web 2.0 tools for learning.

6.2 The limitations of the Web 2.0 tools for learning

This minor theme, or negative case analysis, was used to reveal several of the negative cases which were in contrast to the themes already identified, namely the limitations and frustrations of the learners to access greater opportunities for informal ESL learning presented by the Web 2.0 tools. These cases were intentionally noted since they did not fit the previous themes. As suggested by Jenkins et al. (2006), these Web 2.0 technologies are important in understanding virtual collective experiences: “thus we must better understand the strengths and limitations of these new practices of knowledge production” (p. 43). This section provides a more complete picture of the data. This section is concerned with the aspects that might be perceived as a limit, barrier or visual anxiety, but which can offer complementary and equally necessary opportunities for enhancing the informal learning understanding of learners. The
appropriate subthemes for the limitations of Web 2.0 (minor theme), as taken from the interview transcripts, are summarized in the Table 6.2 as follows:

<table>
<thead>
<tr>
<th>Limitations of Web 2.0</th>
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</thead>
<tbody>
<tr>
<td>1. Technical limitations.</td>
</tr>
<tr>
<td>2. Cost constraints.</td>
</tr>
<tr>
<td>3. Motivational factors.</td>
</tr>
</tbody>
</table>

Table 6.2: Subthemes of perceived limitations of Web 2.0 tools

6.2.1 Technical limitations

Feedback from Malaysian university students as Web 2.0 users included a small number of comments related to Web 2.0 technical issues. One participant spoke about the incompatibility between different “multimedia formats” that delayed free exchange and collaboration, and discouraged users from participating (Boudreaux, 2010; Bartlett-Bragg, 2006; Gardner, 2011; Warschauer, 2007). Some of the emerging Web 2.0 tools “require users to have accounts” to be able to participate which create problems to the users and makes it difficult to invite the others to collaborate. C2 highlighted this issue as follows:

C2: Some learners may find it difficult to log on with passwords to all the different tools and to remember passwords. Sometimes, we end up with on-going spam about various products, unrecalled password and controversial views.
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When asked if there was anything else they disliked about working with technology, only two participants described their frustration when the “computers crashed”. As a result, their learning was “disappointed” when the Web 2.0 tools failed to work resulting in the loss of their works. A1 highlighted the result of the technology failure:

A1: Sometimes, while clicking, searching and waiting within a few hours, suddenly my computer restart and freeze up for no reason. It was just so frustrating dealing with a tool that didn't work for me when all I wanted was finishing my assignment projects. The worst was I lost my one whole day of work.

As shown in A1’s excerpt, his learning via Web 2.0 tools was negatively affected primarily due to issues regarding Internet connection and, in some cases, insufficient bandwidth. Four participants spoke about some users, especially novice users, who have a “phobia” of using “unproven” technologies, particularly both in implementation and in using approaches that have not been demonstrated to be effective for learning activities. As stated by these participants, Web 2.0 technologies “keep changing too fast” and the tools constantly “come and go”. Bartlett-Bragg’s (2006) research suggests that there is little evidence that web-based learning has resulted in significant change in learning processes; however, the findings in the current study would seem to contest this claim.

While generally eager and enthusiastic learner-users of Web 2.0 technologies, especially outside the classroom, some users are unwilling to adopt more innovative technologies and practices in their studies. Many researchers (Boudreaux, 2010; Jenkins et al., 2006; Warschauer, 2007) have noted learners demonstrate limited technical skills and
insufficient background knowledge to monitor and control their learning. This concern will be further explained in this study. During the interviews, only one participant indicated that some learners “preferred to be told what they had to know by others”, and did not perceive its learning value. Another participant also said that, “for some applications”, they are not yet sufficiently “user friendly”, and thus learners are not willing to use them for their informal ESL learning. Another four participants felt uncomfortable with the use of these technology tools. For instance B1 stated that:

B1: You are putting out details like your name, age, gender and many other types of information that you may not want to let strangers know. Most of us would say be careful, but no one can be certain about the security aspect. Currently, we always read about issues of online crimes, harassment and identity theft.

As shown, some participants referred to a “phobia” with using the Web 2.0 tools that have not been proven as effective technologies in terms of security and safety. Because these new tools allow personal information to be shared with a broad public, some learner-users drew attention to “privacy” issues, as identified by past research (Duke, 2010; Dietel-McLaughlin, 2010). Dillard (2011) has suggested there might be a problem around a lack of concern about the security of personal information among Web 2.0 users. This concern was not a common participant response of this study, but did provide a potential limitation aspect to the use of Web 2.0 technologies.
### 6.2.2 Cost constraints

Cost of computers and Internet access are frequently cited as obstacles to the use of Web 2.0 tools for learning. Researchers (Boudreaux, 2010; Franklin & Van Harmelen, 2007; Mortimer, 2010) have noted that the concerns with this process are insufficient resources, high costs of technology and inadequate access to the internet. However, in this study, participants rarely reported this concern as a potential problem for other learner-users. They recognised that online applications required standard fees and added potential cost in computer software or hardware. For example, the learner-users recognised that using the Skype application means the user must spend money to buy a webcam, or similar device that allows uploading a digital video of the speaker. To engage in informal learning via Web 2.0 tools, one must own a computer and have internet service, or have full and ready access to a computer with a reliable internet connection.

### 6.2.3 Motivational factors

Another problem raised in engaging in the out-of-class Web 2.0-based ESL activities is the problem of motivation (Tan, 2009). Again, this perception was not widespread among the participants in this study. A small number of the comments expressed during the focus groups in relation to motivational factors identified that there is an existing “lack of interest in technology” for some other users. These results highlight the fact that the learners’ abilities with Web 2.0 tools are “not all at the same level” and while some of the learners found using Web 2.0 “easy”, some thought it was quite time consuming and others had real difficulty. Learners are also de-motivated if their
“learning material is inappropriate and boring” especially for learners who lacked independent learning skills. These learners believed that “learning is often about receiving the knowledge from the lecturers” and engaged in “copy and paste” plagiarism. Although the tools have become popular because of their ease of use, it can still be “difficult to integrate different tools with each other” and learner-users must be motivated to learn. This view has been reported by D2 as follows:

D2: If this is not your kind of thing that it would just be a waste of time for you. The key to such learning is that it is supposed to be fun, whether you are doing it for learning or just clicking around for leisure purposes. That should be reasonable enough for anyone, but there are those people who don’t see the point. For them, it can be annoyance.

A further obstacle highlighted by only four participants was that the use of Web 2.0 tool-supported practices may be discouraging to an ESL learner. The participants spoke about the difficulties in finding appropriate information on the web because not all sources are reliable for ESL learning. Such an impractical environment could distract attention and disturb the learner-users from enhancing their ESL learning outside the classroom. For example, as explained by D4 in the following excerpt, the continual addition of new and massive materials has drawbacks and numbers of language inaccuracies such as informal ESL, “grammatical” and “spelling” mistakes make individual search results inconsistent and unstable. This can result in learner-users becoming overwhelmed by sloppy information and subsequently becoming demotivated. Moreover, if motivation is based superficially on novelty, its sustainability would be limited when the Web 2.0 tools are always available as tools for their daily
learning. For example, D4 and B3 reported on the informal learning de-motivation while using Web 2.0 tools:

D4: *Immediate feedback does not happen in the online learning environment. But learning online we have to wait for someone to respond or review work, sometimes taking more than a day... Sometimes the Internet doesn’t understand what you’re typing in and I hate when I have to click and read things a lot plus grammatical and spelling errors! What a boring life!*

B3: *It gives everyone the opportunity to complain, thus creating a community without rules. Some are really anti-social and not talented at socializing with others.*

Another drawback which is particularly concerning are “misconceptions” and “hurt feelings” that may occur (Schultz, 2011) when another user’s neutral comments are misinterpreted, in turn, becoming de-motivational for learner-users. Each individual user’s abilities play a role in influencing the extent of their own and their group’s learning. Some users who make more online postings are not necessarily contributing to the quality of ESL learning (for instance, as explained by D4 above). For this reason, some learners appeared to be reluctant to share knowledge and ideas with other co-learners through Web 2.0 tools.

Although learners listed these numerous issues as frustrations and negative aspects of using the Web 2.0 tools, many had clearly developed ways to deal with them. When the researcher asked participants if using the multiple tools was confusing, one of them responded that:
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B1: Well, not at all! I think the internet is the biggest advantage for learning. Just grab it and learn whatever you can from it, make use of any tools. Set your mind with English only, and then choose only relevant materials and content.

As shown in the above excerpts, participants perceived the affordances and greater strengths of Web 2.0 tools for informal ESL learning to far outweigh their limitations. It has been noted in Chapter Two that much web-based learning literature relates to the difficulties and constraints. However, the participants in this study were advanced student-teachers and ESL learners who had positive learning experiences, and therefore their perceptions would differ from those of younger peers, arguably influencing the more positive findings of this research.

Using broad integrated lenses for interpretation, this analysis has deliberately emphasised the activity itself and the interaction between the learner-users and the Web 2.0 tools; therefore, the learners’ perceptions are a credible resource to support the researcher’s investigation of informal ESL learning. One perceived affordance of Web 2.0 is it enables customization and adaptation that suit the learner-users’ behavioural intentions, needs and choices in ESL learning contexts. These affordances lead to both development of social interaction and personal informal ESL learning among Malaysian university students. As indicated in this study, Web 2.0 tools hold great potential for facilitating social responsibility, democratic participation and interactivity (Dietel-McLaughlin, 2010) among the learner-users within both technical and cultural dimensions. These tools are reported by the participants as inviting a different level of potential that enables control of exposure in ESL learning through safe and risk-free practice/rehearsal in tailoring their personal language acquisition and identity formation.
Learner-users, in their words, can be prudent and “selective” about what they want the other person “to know and not to know” by changing passwords and editing personal profile details. Thus, the sense of belonging to a community was reported as the most valuable attraction of Web 2.0. The focus of this study was broadened from the individuals’ perceptions of activities to their understanding of their reciprocal participation in collective activities (Lave & Wenger, 1991).

This section reported on the findings from the qualitative phase of the research into Malaysian university students’ perspectives, in order to answer the second research question. The next section attempts to provide answers to the third research question concerning the specific ESL learning strategies that Malaysian university students employed, interpreted from a sociocultural perspective.

6.3 Section Two: Participants’ perceived ESL learning strategies

This section aims to explore the common and shared learning strategies among Malaysian university students in using Web 2.0 technology. These students were engaged in ESL learning in unstructured environments, in which explicit educational guidance was unavailable. As most participants engaged in informal learning activities of ESL mediated by Web 2.0 tools, the data suggest that they perform toward the learning objective in differing ways. The learners brought their previous experiences and understandings into play and these learning histories influenced the manner in which they transformed the learning objective into an outcome, in this case, their learning strategies. The data analysis led the researcher to an understanding of the
specific language learning strategies that Malaysian university students employed as ESL learners, by recording their learning activities and situating them within the sociocultural theoretical framework.

6.3.1 Research Questions

As the purpose of this section of the study is to gain an understanding of the learning strategies adopted by the participants, to enhance their ESL learning via Web 2.0 tools, this part of the research addresses the third research question:

3. What are the perceived learning strategies used by these learner-users in the informal environment in research question 2?

This section employs the same analysis procedures as the previous, Section 6.1. The shared experiences among 20 participants from the five embedded sub-cases in this inquiry indicate a preference for the use of various learning strategies. When analysed, the data regarding participants’ experiences were grouped into three major themes of learning strategies, namely tool-mediated, community-mediated and role-mediated strategies. These and a series of subthemes are summarized in Figure 6.1 below and the sections that follow.
As outlined in Figure 6.1, the analysis reported in this section will consider three sections. These three sections reflect the relevant perspective of participants and will be discussed in turn; all will be oriented and explored in greater details towards how they connected. In the following subsection, the researcher will first describe the participants’ perceptions of learning strategies involve interacting with range of platforms.
6.3.2 Web 2.0 tool-mediated strategy use

Vygotsky (1978) emphasizes the role of tools (which can be physical, technical and psychological in nature) as social mediators of learning. In this regard, the relationship between the participant and the object is not direct but instead mediated through the use of tools. This strategy involves using tools to ascertain the meaning of what is found in the new language and to produce ideas in the new language. This strategy centres on using the language for actual communication and natural English practice (Chamot, 2005).

Vygotsky (1978), Duke (2010) and Kaptelinin and Nardi (2006) suggest that learners already have a previous experience of learning; thus, learners’ intellectual development is influenced by their previous experience and the use of tools and cognitive resources. In this study, tool-mediated learning strategies as referred to above approach a point where learners effectively access and utilize various Web 2.0 technologies for ESL, for reviewing audio-visual resources and exchanging messages repeatedly. Each Web 2.0 tool was shown to have one or more unique characteristics and was used based on learners’ preferences, levels of proficiency and their particular learning goals. Participants reported 10 types of tool-mediated strategies for their ESL learning: Facebook; online dictionary/translator; e-mail; games; YouTube; online news; Wiki; Skype; website; and blog. Participants perceived that interacting with these platforms enables personal practice of the recurrent informal ESL learning strategies.
6.3.2.1 Facebook-mediated

According to the interviews, the most popular, useful and frequently-used (daily) learning tool outside the class by the majority of participants was Facebook. The potentials of Facebook for collaborative online learning have long been recognised (Dillard, 2011; Eberhardt, 2007; Lenhart et al., 2010). Similarly in this study, D1 explained that, “for some people they cannot live one day without login” (Facebook). This suggests that most participants may find that they have been really “enculturated into it … and use it in particular ways. [Thus, Facebook] had become so normalized within popular culture that it was inevitable, spreading like a virus” (Freishtat, 2009, p. 224).

Several participants said that they would follow the general rules of English when writing on Facebook because it is a good practice of good language learner. For instance, A2 explained that from the point of learning English, “if using English on Facebook”, the users should “type in full and avoid using short forms” unless they are commonly used in writing. In contrast, in order to be “clear and simple”, a large number of participants reported using short-forms or incomplete sentences which were accepted as also appropriate in Facebook, in particular for the events which require instant response. This finding is supported by Antenos-Conforti’s (2009) research, which suggests the brevity, enables unique conditions for updating and informing within Web 2.0 collective interactions (p. 60). For instance, C2 highlighted this view as follows:
C2: Yeah! Even by using short forms like ‘btw’ for ‘between’, ‘fyi’ for ‘for your information’ or incomplete sentences in Facebook, I think it’s still acceptable because we require instant response most time ... try to be clear and simple. It is more interesting and sometimes I can get new words and slangs accidentally.

During the focus group interview, some participants also made reference to another Facebook learning strategy centred on social networking. Through this strategy, they were not only “discussing” or “sharing” information but also interacting and building up meaningful “relationships” globally. This is because they thought that by having more friends online, they could be “smarter” language learners as everyone was mutually supporting each other. This finding supports Selwyn’s (2007) work, which noted that learners habitually use Facebook as a place for social exploration and to develop social networks with their old and new peers at university. From this perspective, Facebook helped nearly all participants settle into university life, it kept them together as a community and aided effective communication (especially about social events) between them. Similarly, Dietel-McLaughlin (2010) notes that Web 2.0 tools allow for powerful self-expression through language (p. 38) among learners. Additional evidence of this idea was noted in the B1’s excerpt as follows:

B1: Yes! Sometimes, when in our own status, we can put ideas online and others can add some other ideas, then we can argue, discuss and conclude either we agree or disagree with the ideas. So the status part is one of the best features of Facebook that can teach us about English learning or not just English...other knowledge too. Maybe just by reading the others comments without contributing further, also can top up your knowledge.
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It was also not surprising that some participants, on the occasions when they publish on Facebook, they felt self-possessed and confident because each contribution was usually the result of careful thinking and internal rehearsal. In this way, they would avoid making mistakes and potentially embarrassing situations that could damage their public image. For instance, B3 highlighted this view as follows:

B3: *Most times in class we were not that confident to speak up, view opinions face to face but by virtually (via Facebook) no more problems. It’s about privacy! You have the guts to express yourself! Own ideas and thoughts, thinking first, properly before we post them online…it means more organized and can support with more online references.*

As noted in Chapter Two, research in this area has identified the advantages of peer-mediation for developing goals, checking understanding and evaluating outcomes together (Boruta et al., 2011; Lee et al., 2008). Consequently, learners often share their ideas with regard to these activities. For example, E2 described the peer-mediated strategy in the following terms:

E2: *I agreed with that. Internet is a helpful tool. My experience, by communicating through Facebook with my juniors, I always recommend something like learning materials, some particular websites for English. I should help others so that others will help me too. Actually, the sharing via Facebook has been continuously happened since my first year in university. We always share some website links or if any friends have any problems they just need to Facebook or YM each other. So through online discussion plus the interesting online English learning materials compared to the one that your lecturer gave, the sharing is useful. Some friends also post their previous*
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presentation to be a model to the juniors. So we did share, negotiate and help each other online.

The above responses highlight that, through the peer-mediated connections, interactions and communications in the Web 2.0 environment, ESL learners took advantage of a real-time, interactive tool to convey their thinking, negotiate the meaning of words and co-operate with each other to achieve their learning motives. As suggested by Mortimer (2010), these “critical literacy practices are dynamic and flexible” so the learner “acts as an active participant” (p. 15). Through the processes that participants identified as learning, the less proficient learners (juniors) obtain knowledge and experiences online, mediated by the more capable learners (seniors) globally. A number of participants also reported sharing techniques and skills about “examinations”, “past papers” and “learning tips”. The less proficient learners will continue this process until they no longer need help from high-skilled learners, to independently perform and solve problems. As such, Vygotsky’s and Lantolf and Thorne’s (2006) sociocultural theory and their notion of ZPD have powerful relevance for ESL learning contexts via Web 2.0 tools. In addition, the majority of participants reported using Facebook text messaging as a resource when their friends need help; for example, D3 elaborated on this aspect as follows:

D3: I have a friend, actually my Facebook friend. This friend back to Penang while I was here in Shah Alam, he was sent me a message and it was like ‘Hey Zack, how to differentiate the word of ‘got’ and ‘have’. I’m not so sure...’. Then, I replied him back with the answer.
As suggested by Mills (2011), Facebook supports the “joint enterprise”, “mutual engagement”, and “a shared repertoire”; for instance, the “collective storyline was enhanced as the students engaged in a meaningful online community that allowed them to organize, interpret, and give coherence to their experiences” (p. 363). As such, new generations of learners were much more familiar with the use of Web 2.0 tools, with texting and especially with Facebooking and, therefore, younger learners might show a tendency (motivation) to use these technologies, to mediate learning throughout life.

6.3.2.2 Online Dictionary/Translator-mediated

Another Web 2.0 resource preferred by most participants as a learning strategy is the use of the online dictionary and translator. They articulated that this tool is necessary not only as a reference resource to locate and learn “some new words”, but as an aid for accomplishing more complex tasks such as “writing an e-mail” or “reading online” for comprehension. Many participants reported the use of the online dictionary for the purposes of reference and ESL learning.

As an example of this, to facilitate understanding, some participants used an online dictionary to check words while others would “guess the meaning from the context” because it was inconvenient to open the dictionary to check meaning. For several participants, the online dictionary/translator was “free of charge” so it was very easy for them to just “copy and paste” the word in and get the “translation” instantly. This tool was more reliable when only one word was being translated, but can give “incorrect translations” if “a whole sentence” or a paragraph has been entered. As a result, learner-
users have to use their own translating skills to “reorganize” and “summarize ideas in their own words”. They would check for “IPA”, an “International Phonetics Alphabet”, of the useful vocabularies and learn correct spelling and pronunciation. For example, A1 highlighted this view as follows:

A1: Actually, if you read a journal in English and if your vocabulary is not at par with the particular journals, you can start by the hard word, just copy it, go online and then paste it onto the online dictionary. You also can check for ‘IPA’ an ‘International phonetics Alphabet’ at the same time.

Moreover, as reported by C3, when faced with difficulty and incomprehensibility problems, he tried to find a solution using English only. In contrast, another participant, C4 located the meaning of difficult words or tried to “translate” the part of the text unclear to him from English into Malay (mother tongue). In this case, the participant invented his new strategy of learning new knowledge through extensive reading in collaboration with searching for word definitions and English-Malay translations. The following response from C4 summarizes this subtheme:

C4: Sometimes, I do rely on my mother tongue because I think it’s a more convenient choice. Well, different people have different style of learning. Whatever it is, as long as it helps me to enhance my English, I’ll use it. As we know, every word has its own precise meaning. Even though it has synonym but it still has own specific meaning. So, by translating, I get the exact meaning and comprehend more of the word.
As shown by the above response, most participants agreed that the online dictionary/translator, in its varied formats of the online version, is one of the most commonly used tools for language learning. In order to understand English language texts online, a majority of participants confirmed that they needed to use “free” online “English” or “bilingual” dictionaries to check some “terms” that they did not know or that they were “not sure of [their] meaning”. The majority of participants found the online dictionary/translator was “convenient” thereby reducing frustration with self-learning because they could read the text of their choice while having both of these tools available and accessible any time.

6.3.2.3 E-mail-mediated

E-mail was an asynchronous communication tool that mediated learning (Anderson, 2007). Nearly all participants explicitly stated that e-mail exchange was not only a form of communication, but also a way of learning ESL. A number of participants said that they followed “rules” when they were writing e-mails. Among the rules that they adhered to were writing “in full sentence” and being “grammatically” correct. They also maintained the right “content”, “spelling” and good “style” of writing all the time. Moreover, an e-mail exchanging strategy was vital for their ESL learning because they could also learn a lot from others’ replies. Additional evidence of this idea was noted in the excerpt from E1 as follows:
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E1: Every day I read while checking my e-mail. It is a good reading practice and e-mail from friends will show what types of writers they are. Normally, I will check their writing in terms of content and organization in order to understand more. Then, I love to check their spelling and grammar because it’s about the writing style too. This practice is essential for me as a future ESL teacher so that I get used to varieties of writings and increase my knowledge effectively.

Most participants thought use of e-mail was an effective tool-mediated learning strategy that facilitated their ESL outside of classroom. As part of their ESL learning strategy, they would focus on both “form” and “content” when checking e-mails. Also, when writing e-mails, they would “spend some time thinking” and “proof-reading” before sending it. They would write carefully, monitoring their “grammar” and “spelling” in their writing. For instance, E2 demonstrated this strategy with e-mails when she said “I reread what I have written many times, and then I correct a mistake if there is one”. As shown by the excerpt, like other types of formal writing, the learners would consider the best content, spelling and style while writing or reading an e-mail. Overall, the majority of participants had experienced having an e-mail account and sending an e-mail to other people through e-mail systems, especially Hotmail or Gmail.

6.3.2.4 Games-mediated

Among the range of activities noted, a number of participants said they spent most of their time playing online games. They reported that playing games as an ESL tool-mediated strategy for learning was popular among Malaysian teenagers. They could position themselves according to the situations given and engage themselves in
conditions as presented with the use of gaming tools. It was easy to become “addicted” to it, though, since many played games “day and night” in order “to win their challenges”, in order to be higher thinkers and become more “creative”. Most participants had the freedom to explore tasks and specify their own strategies to carry out the tasks with self-engagement. This view has been stated by A2 as follows:

A2: ... it’s more effective through interactive games like vocabulary games which is very common and which I love to play most because it’s very challenging. Challenge for the students to start learning is fun and motivating. At the same time we shouldn’t look down on simple games like ‘Farmville’ as mindless. In fact with them, you are not only learning the vocabulary but the contents specifically like farmer use sort of tools which is specific for their farm activities. So, you learn content specific tools rather than just a game which is specifically vocabulary.

Though their primary aim in playing games was “to have fun”, a number of other participants also discovered other motivating strategies from playing, for instance “making friends” and “communicating” with them in English. This point supports the findings in the literature that learners engage in critical thinking and problem-solving across the technology affordances (Dunleavy et al., 2008; Lenhart & Madden, 2005; Mortimer, 2010; Woo et al., 2011). Indirectly, participants could also simultaneously and effectively develop their learning of “vocabulary”, idioms and “spelling”. This evidence also supports Muehleisen’s (1997) and Mortimer’s (2010) findings that the excitement of online curiosity could also maintain the intrinsic motivation for participants’ learning. For instance, E4 explained this learning strategy in the following terms:
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E4: Yeah! There are varieties of games available online, for instance, the game of Snakes and Ladders. It’s not just simply throwing the dice because nowadays it has been improved. Let’s say you want to proceed to the next stages, you have to answer some questions like spell out some words. Some Snakes and ladders are more fun and challenging. They inspire you to practice with the simple present tense and the structure of the sentence. Playing games with multimedia elements may become a fun and entertaining learning-process for the learners. By playing in groups there will be an interaction for the more fun and challenging game.

This strategy proved useful and it was no surprise to note that ESL learners enjoy learning through playing games because most considered that such productive skills as “pronunciation”, competition and “conversation” are important. They repeatedly mentioned “understanding the meaning”, “looking at the pictures for meaning”, and emphasizing words while playing. In relation to the new context of learning, these sociocultural adjustments might be improved by the active self-reflection and personal learning strategies (Jenkins et al., 2006) that were necessary when managing one’s path of study alone. Most participants as online ESL learners were thus developing identities that were different than those which they previously had when they were on-site learners. Further, a new relationship to ESL knowledge is being put into place through the dynamics of online learners’ interactions, such as the change in relationship to gaming has been recognized. For example, this is supported by D2:
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D2: In my experience, I have an international English exposure because I am an avid games player. I play games more than five hours per day in front of the computer without moving. Last month, I was in the tournament of online games, international tournament involves not only Malaysian, but also international participants like from Thailand and Singapore. There was a leader, a native speaker to guide us and in order to win the war; we have to give instructions in English. So, if our message is incomprehensive, nobody will understand us. It gives you lessons on how to spell new words and we were seriously using the English language, the most universal language in order to win.

Overall, games were a powerful resource to be used as a strategy for engaging with ESL learners worldwide. Online games were enjoyable and provided “interaction”, “interactivity”, “problem-solving”, considered involvement, “motivation” and “creativity”, in addition to the various other benefits of ESL learning noted by the Malaysian university students in this study.

6.3.2.5 YouTube-mediated

Most participants in the interviews revealed their perception that YouTube is an important informal learning resource. In relation to this, watching and listening via YouTube were considered normal activities that the majority of participants engaged in as strategies for their ESL daily practice. They could learn anything at anytime and anywhere by themselves in order to keep learning effectively. For instance C4 spoke about this issue as follows:
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C4: Internet is the tool for the people who think that it’s too late for them to study for example me myself. Let’s say to learn Adobe Photoshop it’s a bit late for me and I have no time to learn it formally. So what I did was I go to YouTube and type for videos on Adobe Photoshop tutorials. Just download all related video, view it and follow the instructions given and I’ve learn a lot of things includes the English language. Other than that, movies, if you watch movies via ‘Online Watch’ or YouTube, sometimes after half watching, it will pause, then you have to answer several questions, quizzes to keep on watching. By this way, we are going to learn a lot more helpful things for learning.

In addition, using YouTube as a learning strategy was considered more meaningful with input from “native speakers” (Dietel-McLaughlin, 2010; Selwyn, 2007, 2008). YouTube could provide participants with “good models” of speaking English in terms of native “accent, speed and intonation”. Though the characters especially English native speakers might talk “too fast”, the participants believed access to YouTube could support their “listening ability” and “expressive skills” if they listened to it regularly. For example, D4 pointed out this idea as follows:

D4: ...Actually, I like to read on review videos especially my favourite YouTube channel by William Johnson because he always reviews crazy stuff. So, that’s the role of internet. Even there are a lot of accents of the language used but we just need to focus on the way they use the language confidently, the communication and presentation skills etc. Yep, it’s a kind of up-to-date yourself with the latest information.

YouTube was also important for most participants in order to ensure that they have the necessary knowledge and therefore would be able to contribute in real activities such as “writing a thesis” and “presenting”. For instance, D1 expressed the view that sometimes
they have to do “presentation” in class and that via YouTube they can “get extra information quickly” and can “watch the sample of best presentation mostly by native speakers”. In reference to the effectiveness of this strategy, the majority of participants said it helped their listening and comprehension. It was evident that having a purpose for understanding a piece of information motivates these learners to “keep rehearsing” and “practicing”. A few participants preferred watching and listening to YouTube for there was at least “something to see” on YouTube because of their fear of being left behind by other learners. It was critical for ESL learners to have something to watch that was eye-catching and kept their attention as well as being relevant to the task. They also liked the diversity of dialogues spoken by native speakers in the movies and stated that effective listening takes place when they gain access to messages aurally, through contexts and visually, through pictures. As an example, A2 responded that “sometimes in order to get what the actors [are] trying to say, [they] learn from the visuals, contexts, intonation and facial expression”.

In order to polish their listening skills, most participants mentioned movie watching for entertainment as well as for learning, while some did it for leisure or as assignment activities through their most favourite tools like “YouTube”, “TPS”, “Torrent” and “Flixster”. Although most participants did not clearly explain what the activity was for, they had the learning of ESL in mind. As their listening strategy, a majority of participants tried a variety of ways to learn English by “watching thrillers”, “previews of upcoming movies” and video clips. A couple of them would “write down” and check words “after the movie” had ended. Some thought they should not depend too much on the subtitles because they would “guess” the meaning based on the visual clues and
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gestures first before referring to the subtitles. Some would pay a great deal of attention to the speaker and they would learn the “pronunciation” of words and practice the “expressions” in their own daily conversation. For example, A2 described this idea as follows:

A2: I used to watch English drama like ‘One Tree Hill’ that I love very much. Most times I just can’t wait to watch it on TV. So, What I did was I just start search on Google and watch ‘One Tree Hill’ online for free and there’s also some links like people use their blogs to upload this video after they download it. So I just need to check on their blogs and watch on the blogs itself. The interesting thing is that most English dramas are American, so again the pronunciation problem especially when there’s no subtitle. So, I really force myself to really listen carefully in able to catch the meaning. So, enhance your listening skills while listening to the native speakers.

The participant’s statement above adds support to the premise that, when the context is familiar, comprehension becomes easier. In addition, the most participants liked to learn from input on the Web 2.0 tools presented in a variety of modes such as “texts”, “pictures”, “animations” and “sounds”. Such rich input was powerful in enhancing the participants’ comprehension while listening, reading or watching YouTube. Furthermore, using music as a motivational learning strategy helped most of participants because English in songs tended to be “repetitive”, “fascinating” and “not stressful”. For instance E1 described that she listens to “English songs everyday” because it greatly improves her “listening and speaking skills”. Moreover, E2 highlighted this subtheme as follows:
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E2: It really catches my interest and for my everyday vocabulary, new sayings and idioms that you may not get in books or the classroom. Having the lyrics to read from can help much more. I think, for spoken vocabulary, I must hear a sophisticated vocabulary. By this way, I am more motivated to learn English and it takes away the stress and boredom from me.

The majority of participants frequently stated that in the Web 2.0 learning setting using music as a language learning motivation strategy was essential. They remembered certain English expressions, improved language skills including “pronunciation” and “new vocabulary”, and had enhanced “cultural awareness” by hearing the English songs. Moreover, some participants explained using another Web 2.0 resource in order to facilitate the development of their speaking skills. Most participants’ prior interest in the ESL seemed to relate to their interest in “gossips websites” and “English movies” due to their perception of English as having the power of conveying meanings. In this regard, their responses suggested that their interest in English was underscored by their curiosity to understand the nuanced meanings that English media and movies conveyed. This was especially so because formal learning might not capture these necessities in terms of new skills, creativity and varieties of opportunities to practice the new language. For example, D1 reported this issue as follows:

D1: Honestly speaking, ‘partialtear.com’ is my most favourite website. It’s all about gossips but I did learn about how they use their language in communicating with media and how they spread the news or gossips and how they turn it into sarcastic language, it’s really cool. It’s a fun and fascinating because I learn many things from that. Rather
than I use specific websites for learning, I can learn more about new skills and
creativity like the effective way to spread the information and all stuff interestingly.

This view implies that the most common language used for Web 2.0 is English, and that
as a result of learning how to use the tools and learning English become
complementary. It is unquestionable that the impact of Web 2.0 on learning is evident.
The participants reflected upon Web 2.0 as an ideal ESL learning tool because it offers
authentic learning resources available without having to travel worldwide (Feng, 2009).
By doing this, most participants were establishing a connection with what they were
learning in class. This included the actual use of the language in real life which they
then imitate when they speak. These were considered “real learning” and “creative” for
their English development. Indirectly, all the participants felt that their spoken English
was improving and were thus more confident about their language ability.

6.3.2.6 Online News-mediated

Reading interactive online news was one of the most frequently mentioned strategies
when the participants were asked freely what they did to build up their ESL. Most
participants mentioned reading online news, such as The Star, The Times, NST, BBC
and CNN to advance their English. Some explained that the tool was their English
resource for varieties of world news, entertainment and international stories. For
example, E1 spoke that that first thing she does every morning is read The Star online.
For her to skip it, she would “feel like missed something” in her day. Additional
evidence of this theme was noted in E4’s excerpt as follows:
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E4: Yeah! You can improve through the content to update yourself with the latest information and world events. For me, I like NSTP news because it’s updated twice a day. So, we can read and know the events that will appear tomorrow in other news.

In order to brush up English through reading, most participants said they chose resources or items which were “free of charge”, “convenient” and relevant. They considered reading online news as “interesting”, “easy”, and “effective” strategy, as they could use interactive “audio-visual” elements as a non-verbal sign-mediated strategy for more effective news comprehension while watching. Another participant, A1, who preferred reading news online, explained that the tool allows him to be “selective” in reading. He mentioned that he loved to read online news because by easy clicking he could move to another news website through the hyperlinks available for further reading.

A1: … it’s easier, more pleasant to look because you can actually put aside the commercial parts, just read the important news and they are hyperlinked to the other news as well. So, you just need to click and click. Just imagine, read a physical newspaper in the train full of people, really inconvenient. Actually you are also disturbing people next to you and some are interested to share the reading, too annoying. Compare to you reading news via smart phone, just need to scroll, scroll here and there, minding your own business and you read while listening to the music.

In contrast, E2 reported online news enabled interactive watching as a helpful English practice strategy. She identified that the animation, text and audio-visual aspects helped her “comprehend better” and she was able to “resize the screen for a clearer view”; sometimes she posted “interesting news to Facebook friends” to share by “posting them
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the links”. Furthermore, a number of participants reported they could improve their “communicative competence” by listening to the “reporters” who use “formal”, “authentic” and up-to-date English, as well as being fully aware of major “current issues”. C4 suggested that when he encountered new words while reading the online news, he would “copy and paste” the words into an “online dictionary” or “Wikis” to find the meaning immediately because for him “guessing the word meaning is boring”. Overall, most participants reported that they read online more in English than in their first language.

An interesting finding in this study is that most participants made the effort to learn vocabulary from reading. They used the dictionary to check words and some would guess the meaning and use the dictionary for confirmation. Generally, all participants considered reading, “listening” and “watching news online” as the main, effective, ESL learning strategy beyond the walls of formal learning spaces. With the strategy of using such resources of Web 2.0 for ESL learning activities, the participants gained freedom to choose how to learn and apply what they learned in an authentic language environment.

6.3.2.7 Wiki-mediated

Another subtheme that emerged was the importance of practicing through Wiki as a learning resource. In this study, most participants reported their strategy of editing closely, changing and promptly correcting errors when perceived. A similar finding has been noted by Boudreaux (2010) and Woo et al. (2011) who argue that Wiki is perceived as easy to navigate and gives language learners a sense of comfort that they
may not obtain in a formal class setting. This was particularly reported by participants especially in the case of completing academic projects without having to worry about the distraction of the technology itself. In relation to this, some participants explained that the best of part of Wiki is its “definition”, “biodata” and “hyperlinks” to the other web pages in order to get information easily. Another participant, A1, also reported in the following excerpts on using the resource for his learning especially as a “head start” for searching information.

A1: ... if you search on Helen Keller and you don’t know anything about her; Wikis will be the first place to go. You can read a brief data about her, what’s her contribution and only then you can Google more about her.

Another interesting finding of this study was related to several participants’ dependence on other learners’ participation before they themselves could take part in Wiki discussions. This strategy was employed by the participants who were “not sure” what to say at first and thus relied on other people’s opinions before they could form or present theirs. This strategy was also used to “avoid any repetitions” on opinions or to edit some ideas provided by other users. E1 reported more details as follows:

E1: I agreed with you. Too many advance internet tools available nowadays for our anytime learning outside the classes for example Wikis. Anyway, Wikis is a good learning tool because with it, we can think over and over and do some research on our own before posting our own opinion. We also can check for other people’s ideas for further supports. But you should consider and justify your decision because not all ideas are valuable. By this, I can motivate myself towards writing and develop ideas by
For the majority of the learners, the main reported motive was that they wanted to “check what” other learners “thought” or had to say. Within this general interest, a finer distinction could be made between those who were interested in others’ contributions primarily as a source of ideas for the “self-correction process” (Woo et al, 2011, p. 52) and those who needed to verify their own views (De Wever et al., 2011). The approach was represented by A2 as follows:

A2: The Wikis, it has a definition space and discussion tab. If you click on discussion tab, you can see the list of the contributors, who are they, what are the discussions, start from the first page till summary part of the discussion. So, we can have more information from the detailed comments and there are hyperlinks to share with the contributors, even by reading the argument, surely you can learn a lot like the process of thoughts, how it came to the front page.

The data within this subtheme suggest that through social activity mediated via Web 2.0 communities and Web 2.0 tools, a potentially new system of social action has been created that allows students to learn about new knowledge, cultures and activity with greater ease beyond the classroom.
6.3.2.8 Skype-mediated

Many participants agreed that it was important to speak English beyond the classroom online via Skype. The reasons given were the aim of learning a language (for global and faster communication) and the importance of practice and experience in speaking. Other motives mentioned by the participants were for “fluency” and “confidence” building including communicating with English native speakers and enhancing such “integrated skills” as pronunciation, speaking and listening. For instance, E3 and A1 highlighted this view as follows:

E3: Skype offers the opportunity to speak in English online and it is possible for you to set up English speaking groups via Skype. You just need to join in the group for free and also can find native-English speakers and practice better with them.

A1: ... she adds me to the Skype because she’s actually doing a comparative literature study as her major. So, we learn from each other. But because her accent is quite hard to understand, sometimes I ask her to pause, slowdown in order to catch her up and focus my concentration when she is speaking. For her, she found that my accent is funny because she never heard someone in UK speak like me, Malaysian English. Last semester, I took social linguistic class; she was somehow helping me out to learn the subject. For example, in a study I compared her British accent to mine, Malaysian English accent. Yeah ... I actually interviewed her via Skype and asked her to report on gossips via YouTube then I used them in my class.
In evaluating this particular strategy, nearly all participants claimed that advantages of talking with native speakers via Skype are obvious, because of their comparatively advanced “speaking skills” and “power of expression”. By examining the “speech” of the “native speakers”, they found that they have learnt some practices which were not taught in the class, but used by the native speakers in their interaction. They include “what words can be used when [they are] angry” and when they want to “praise someone”. As explained in the above statement by A1, some of the corrections by native speakers also helped the students’ learning of the spoken language.

6.3.2.9 Website-mediated

Use of websites is also preferred by most of participants as an ESL learning strategy. The hyper textual nature of a website helps develop learners’ reading skills, for example, to choose the online resources according to their own interest. In this regard, participants reported that they used “Google”, “keyword searches”, “bookmarks” and “websites to browse” in English language in order to locate more valuable reading materials. Some of them read online to find information for their “projects”, “research reports”, “assignments” and “to understand in-depth about the subject matter”. For example, A1 explained this issue as follows:

A1: I did a research on comparison of the Education Acts in Malaysia whether the policies are similar to the other Asian countries. ‘UKM Websites’ is very effective because you can actually access anytime anywhere as well as to access any other libraries which is subscribed by UKM for example the library of Oxford, Cambridge and Gajah Mada, Indonesian university. Only by this tool I can finish the comparative
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research on the education policy of Asian countries whether or not they are similar to
our education act... if you want to physically go to all libraries and search for the
refereed journals, it takes you for ages. Seriously, not many of us know the research
cataloguing in the library, not really familiar with the codes and stuffs... Why bother
yourself to physically go to research if we can do it conveniently online.

As participants were final year university students, they would consider a variety and
depth of contents on favourite websites. A number of them regularly engaged and
utilised a variety of materials, including “new” learning materials, “latest references”,
“music” and “sports”. A large number of participants mentioned “surfing” English
websites regularly to be more capable of learning from them. Accordingly, due to the
vast choices available and the inconvenience of reading text on display screens, most
participants would select resources on the Web 2.0 tools by “browsing” and
“skimming”. For example, E2 mentioned “intensive reading” that required her as a text-
based learner to browse and skim the extensive website reading materials in order to get
“the best part of information as required”.

Printing for additional reading was an issue raised by participants who used websites to
find information. The literature revealed that it is important to gather materials from
“online” sources and “in hard copy” sources in order to gain a better understanding of
the possible differences or similarities “between these two reading contexts” (Anderson,
2003, p. 22). According to Anderson (2003), this strategy is important because “we
cannot assume a simple transfer of L2 reading skills and strategies from the hardcopy
environment to the online environment” (p.5). As stated by most participants, they often
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printed important learning materials so the information was “readily accessible”, and then they made their own notes. Several other participants who considered themselves as “text-based learners” talked about the need to “copy and save” information into personal documents so that it is accessible for them to read and share with friends anytime. Accessible also meant information was “at fingertips” and available for their use at all times without going online to re-access it. Additional evidence of this strategy was noted in the responses from A2 as follows:

A2: Yeah! For me while preparing assignments, I will search for materials online and not just read them on screen because I need the materials physically so that I can make my own notes. So, I print my journals, highlight them and sometimes add my own notes, maybe on the words which I don’t understand. By this way, I can bring them anywhere. Yeah, that’s why I print out some important materials and read them while doing referencing online.

Another common strategy used while reading on websites was “guessing the meaning from the contexts”, “surfing” and “trial and error”. The participant responses indicated that all participants, TESL students with high proficiency in English, employed this strategy. For example, E4 described how she used this strategy in extensive reading. She stated that she did not have “the patience to look up every new word in a dictionary”. Instead, she tried to “figure out” for herself “what a word meant”. She referred to a dictionary only when she could not figure out the meaning of a key word in the reading. She described “guessing” as useful for improving her reading comprehension; therefore, she became inspired to learn ESL. She explained:
E4: As we know, online reading is useful for English practice for example guessing the meaning from the context. For me, I do not have the patience to look up every new word in a dictionary. So, normally I’ll try to guess the meaning first. Actually if the word is used in a sentence, I will look at the other words and see if they give me clues to the word's meaning. Normally I will guess so that I will think about the meaning, tense and the sentence pattern it is used in. I try to make connections with what’s around the word rather than look it up directly in a dictionary. Sometimes, we can check what the root word means or just guess it to understand better.

In addition, participants described the most effective way to reinforce their “memory” and to “avoid to forget” linguistic rules while using a website was through repetition and rehearsal. Practice provides an opportunity for most participants to confirm their correct understanding, enable self-correction and the repetition further increases the possibility of maintenance.

**6.3.2.10 Blog-mediated**

As described in the interviews, writing on blogs was found to be amongst the most frequent activity in which the majority of participants engaged. This activity was used to communicate in written form a variety of information to various readers. Participants commonly reported their writing practice online at “anytime”, “anywhere” and “with anybody”. For instance, A2 described this idea as follows:
A2: One thing about blogs, they also connected to the native speakers. I remember when I read blogs, application like blog spot and blog of note section. Actually every month, they will select one blog like ‘our blog of the month’ and they give you all the links there. Most of these bloggers that I found were all native speakers. I love to read their blogs and I make some of them my favourite writers. Every time I am free, I visit their blogs and follow their updates especially on their language updates such as the Top 10 Language Learning Blogs 2010. Sometimes, I also join in the discussion. By this I’m improving my writing styles and expressions and learning more on how the native speakers write in natural English.

The data illustrates how the use of blogs can enhance writing skills in everyday contexts. An important aspect was paying attention to the “writing practice” because the practice was a particular quality of ESL learning itself. As participants noted that repetition could be a “good memory” aid, practicing newly-learnt material allowed for better storage in memory and easier usage in the future. Thus, a good way to motivate ESL learning was to use learners’ interests, for instance writing on blogs.

6.3.2.1 Summary

The responses of the learner-users about interacting with these different platforms suggest a number of recurrent learning strategies, in terms of their personal perception. The growing awareness of effective and meaningful Web 2.0-based language learning has embedded the integration of interactions emerging between the personal use of Web 2.0 tools and the adoption of powerful informal learning strategies. For example, most participants reported using strategies of self-coaching, checking for confirmation, rule
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and role-practicing, rehearsing and redrafting through Web 2.0 tools support language clarity. Web 2.0 tools that students identified as helpful also offer a range of learning templates, meaningful interactive models and immediate feedback strategies. As reflected in the participants’ previous responses regarding informal learning, their repeated practices via Web 2.0 tools represented a set of broader social networks as virtual community systems of learning strategies. The following section describes the participants’ experiences with community-mediated strategies.

6.3.3 Community-mediated strategy

As outlined in Figure 6.1, when participants used community-mediated strategies, they reported thinking about interaction to aid their ESL learning and to work with other people to learn via Web 2.0 tools. As suggested by Lave and Wenger (1991), communities of practice have sociocultural histories, own identities and shared values among members. Further, Wenger (1998) proposed that these transformative communities are those that gather and socialize beyond the walls of formal learning spaces. In this study, D2 reported that significant others especially their social networkers (friends) contribute positively in their ESL learning as follows:

D2: Sure Facebook allows us to help others. Like my girlfriend’s case, she joined in a group in Facebook and always competes on games, nonstop like they are on drugs. Suddenly, there’s a guy posting a comment like “Why are you speechless?” Then my girlfriend replied something as she lost the game as “I walk the talk, ok!” Then, the guy put comments that it’s incorrect. So, some of her friends came helping by posting that ‘walk the talk’ is acceptable and meaningful.
During the focus group interview, the majority of participants suggested that in order to adopt an active task approach, their significant others especially “lecturers” and “parents”, should support their learning. This added in gaining additional exposure to the target language and creating practice opportunities, for instance through the use of interactive blogs for ESL learning. This reflects the view of Greenhow and Robelia (2009), Arbaugh and Benbunan-Fich (2007) and Hernandez et al. (2011), who posit that it is vital to source multiple supports and help online especially on academic-related issues or course work. Further, through the scaffolding and guidance of capable others, the participants could gain effective “feedback” because if they answered something incorrectly, they would be offered “answers and correction” immediately through the Web 2.0 resources.

6.3.3.1 Discussion and exchange of ideas

Participants said that they did discuss and exchange ideas beyond the classroom and these were influenced by others too, especially from their social activities with other Web 2.0 users online. According to the interview data, the majority of participants reported that they enhanced their “ideas”, “reasons” and “content” in writing by “reading from others’ posted writings” on the same writing topics and from comments and feedback on the Web 2.0 discussion forum. ESL learners had similar cultural experiences and could understand better their positions and meaning. C2 expressed this issue as follows:
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C2: Facebook is also interesting in sharing thoughts, opinions and new idioms. Just post them on the wall, automatically we can share. Sometimes, my friends will add up more ideas, corrections, comments and share information. It’s fun to share knowledge. To see all friends everyday face to face, it’s impossible but with internet you can stay keeps in touch 24-7.

Furthermore, the interviews revealed that a number of participants liked to post their ideas and opinions on the Web 2.0 tools and let others “share [their] life experiences”. These tools enhance the learning and the interactive environments for “shy” learners who are hesitant to speak in class but are “willing to chat” in real time with other learners around the world and communicate with their lecturers effectively. Most participants believed that they should only be online when they were “ready” to communicate. E1 assumed that “shy” learners like her, could “contribute more” via these tools because they were convinced that “communication is more sincere and effective when they just need to focus on the communication more than the physical appearance and without knowing each other before”. Furthermore, E4 highlighted this issue as follows:

E4: As you said, internet for daily communication and to be communicative online, we need time. As senior students, we are too busy and have no time to meet even for a group discussion. But via internet, virtually we can present and contribute anytime and anywhere when you are free. Frankly, I’m the type of shy person and only via Facebook, blogs and Wikis I can view my opinion freely. I can write any ideas or argue openly. For your info too, quite surprising, I can communicate with my lecturers better online rather than in class. Because there is no gap between us, these tools really help
As described in the above response, most participants had a positive reaction to integrating Web 2.0 technology into their daily learning practice. This is because they thought that the Web 2.0 discussion forum provided them with opportunities for negotiating and exchanging ideas about their own learning activities with more capable persons and peers.

### 6.3.3.2 Sharing

McLoughlin and Lee (2007, p. 671) write that “learning occurs as a sociocultural system, within which many learners interact to create a collective activity framed by cultural constraints and practices [and] … learners receive scaffolding through the help of others”. Thus, the activities within these systems are motivated through the repetitive practices of negotiating meaning, creating and sharing knowledge (Brown & Adler, 2008). As shown by these data, games, Facebook, blogs and the other Web 2.0 activities supported the participants’ ESL learning in developing their ability to co-operate with peers and more capable persons through sharing and exchanging their learning materials. E1 reported that, due to the fact that learners “cannot be creative all the times”, Web 2.0 media enable them to “exchange ideas with international TESL teachers” and “English native speakers” and make better choices of sources. Additional evidence related to this issue was noted in the responses from D4:
D4: To share, last year I found a blogs, a useful blogs written by our seniors. They actually provided us with specific guidelines in completing our assignments and final thesis. They were really good blogs especially for exam tips sharing. They also recommended the specific references to be used for our future works, the best websites and Facebook addresses in order to stay keep in touch with each other. The best part of the blogs was of course their comments on own learning experience.

This view suggests that learning is highly valued by the ESL learners. Such confirmation fits with Carbo and Antoli’s (2011) finding that “beyond the classroom, learners [were] involved in exchanges of information resources, academic and technological problem solving” (p. 2). Further, evidence was found for the strategy of co-operating with peers and becoming aware of other’s contributions. B2 expressed this idea as follows:

B2: In Facebook...after join in a group, you can discuss anything or view your opinion. Actually it’s about the group of learners gathered and, in my view if I learn alone, I just use one brain but with more online friends, more brains. But, if you can learn with all the brain of the world, you are smarter than Einstein.

Similarly, D3 explained that the social networking strategy is interesting because learner-users can have more friends which mean a better life as well as enhance learning. It was an especially helpful strategy for “those who wish to improve” their learning as “more people working on the same ideas are better than one” and they could have “more people for [keep] helping each other”. For that reason, he had more than 500 friends online.
6.3.3.3 Error correction strategies

From an activity theory perspective, the existence of two representations created internal negotiations in the learning objective. The evidence gathered from this study showed that there were shared artefacts that were collaboratively constructed by most of the participants as ESL learners informally through the use of Web 2.0 tools. Individually, therefore, the learners must resolve conflict, perhaps by modifying their cognitive structure. In contrast, if conflict occurred at the group level, the learners in the group might negotiate collaboratively to decide how both perspectives could be represented in the shared learning space. As a result, negotiation can generate “innovative attempts to change activities and be used as a catalyst for growth” (Engeström, 2001, p. 137).

Nearly all participants claimed that they should be “open minded” and “keep the spirit of learning” among each other. For example, E1 said that “there’s no harm to interrupt someone when they are busy making mistakes”, because they still could “learn from mistakes” and that learning is indeed enhanced through practice. Some perceived they could “check how much” they knew by learning online. Additional evidence of this theme was noted in the E3’s excerpt as follows:

E3: Most time, people change into a better person when they are online. Maybe the less formality of online discussion reduces their burden to be the perfect person as in class. In Facebook and blogs, they can be the real person and I love that. That’s why I don’t mind if someone condemns me or keeps re-correcting my grammar online because I know no harm in that. By this, I can check how much I know about English. In fact, I
have experience of correcting my English lecturer’s grammar on Facebook. That’s cool! So, internet helps you to build a better relationship by connecting you to other people around the world.

Additionally, a number of participants said that they never needed to be pushed by others as they themselves were independent and motivated with the use of Web 2.0 tools. In this sense, E3 explained that when users “argue about something”, they always “try to find the best reasons to support ideas”. Sometimes “reasons”, “deep thought” and “arguments” from others in the social network helped to build their “thinking skills” and bounce ideas around through interesting discussion. Occasionally, this strategy made them “tense and caused them to try to kill each other with words”, but they would know that they should “learn from each other”. Several participants said that their error correction strategy allowed them to identify strengths and weaknesses in their online friends’ writing and thus helped them avoid such problems in their own writing. As E1 said, her error correction strategy helped her “to have a clear idea about what she is writing” in terms of “the organization of ideas” and “whether [her] friends’ writing is better or worse; there must be something to learn from it”.

6.3.3.4 Summary

Overall, the community-mediated strategies, namely co-operating with peers and more capable users as well as error correction via Web 2.0 tools, support participants’ ESL learning through the friendly exchanging of information, expression of opinions and arguments and convincing peers. These findings confirmed Wenger’s (1998) notion of the characteristics of an active learning community that facilitate diverse interaction and
distributed expertise to develop collective and shared understandings. Through socialization, the majority of participants came into contact with the target culture and language (English), which enabled them to not only learn about it but also to acculturate them in the online society. Thus, social interaction within communities relating to meaningful roles and identities was also perceived as important by participants. The following section will focus on role-mediated strategies (see Figure 6.1), a theme represented through the data by the responses of a large number of participants.

### 6.3.4 Role-mediated strategies

In improving one’s ESL, Web 2.0 authentic learning model offers active learning around problem-solving in contexts that mirror those participants will most likely encounter throughout their lives. In this regard, a division of labor is referred to as those “roles” that describe the continuously-negotiated distribution of powers and responsibilities among the Web 2.0 participants. The emphasis centres on the ways in which learners regulate learning with their peers and with tools to both acquire and apply content knowledge (Reinartz, 2009). Particular key types of role-mediated strategies were discussed by most participants, namely, those of learning managers, ESL learners, final year university students, future TESL teachers.

#### 6.3.4.1 Learning manager

Learning by using Web 2.0 tools prompts most participants into active roles in learning. As a finding, this concurs with the work of others who promote developing online learning as a medium to shape and influence the multi-dimensional learning context to
engage learners in deeper and more meaningful learning processes (e.g. Anderson, 2003; Antenos-Conforti, 2009; Greenhow, 2009). It is more about the process than outcomes, as the process requires learners in the current study to be more actively involved as decision makers, knowledge builders and designers rather than receivers of information in order to experience higher level and meaningful learning. For instance, C3 highlighted this idea as follows:

C3: So when you post a link to a friend not only two of us to share but with the other people too. It’s going to be like multiple sharing. Like Facebook, you can read not only your friends’ updates but all of the other people updates who are actually linked to your virtual friends. Anybody who is attracted and curious, they’ll find out and probably learn.

As the managers and producers of their learning, nearly all participants took full charge of their learning and put much effort into the learning process. When managing and producing learning, they spent time collecting materials, brainstorming ideas and revising. For instance, this idea was stated by C1 as follows:

C1: BlogSpot, we have like a discussion feature and we always contribute opinions. Sometimes, our lecturers, they posted questions and quizzes on our blogs, we as a student, at free time, will response to them. Besides, I did suggest some other materials such as extra quizzes. Indirectly, we developed our writing, reading and gain a lot more ideas and some seniors also write up something in the blog. So, we can read up their point of views and learn from their learning experience. I think my BlogSpot is a way to
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develop my English learning outside class, yeah, especially in terms of sharing updates and discussion.

Additionally, by expecting the participants as author and editor to create their own learning and then critique the work of a peer, the informal learning activity raised their consciousness about the pertinent characteristics of the learning for both “content” and “structure”. As discussed above, the vast majority of participants struggled with the cognitive and affective demands of giving useful feedback to their peers. A number of peers enhanced the collective spirit of the learning activity by providing “multiple feedbacks” postings to the same learner. This led to some learners receiving many feedback comments as supports for their work. D1 elaborated on this aspect as follows:

D1: … with Facebook, if you chat to someone and there’s a grammatical error which is really annoying … uwwek! Annoying… You can be offline but for a TESL student like me, of course I’ll put a comment there “You missed something”. No, it’s past tense, you should write like this … So, we learn something there. Yup! Learn from each other because everyone got their own weaknesses.

Through engagement with Web 2.0 tools, most participants were encouraged to become independent thinkers, able to manage their learning and bring a critical perspective to their learning. Through the use of these tools, the learners “consumed identity and meaning, re-transmitting it through their performances. Their digital epistemologies remained dependent on sociocultural expectations. Self-authorship, … means that users author their own lives by producing meaning in addition to consuming and retransmitting meaning” (Freishtat, 2009, p. 228). As indicated in this study, as they
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negotiate culture and meaning, the ESL learners transformed the learning object into an outcome, and the data suggest that their sense of identity was transformed in the process.

6.3.4.2 Language learner and future TESL teacher

The English, as a language, was considered to be closely related to and important for participants’ present and future life. As ESL learners and future TESL teachers, final year university students (seniors) and lifelong learners, these participants believed they should always outperform those non-TESL majors and TESL junior students in the use of the ESL. This identity and the high demands it imposed on a large number of participants in terms of the ESL seemed also integrated into their personal development. Most participants clearly knew what this strategy indicated and this view has been portrayed by the statements from E1 as follows:

E1: As final year students, we play a big role because when the juniors look at us, they expect us to be hundred per cent proficient English. We have learnt almost for years in campus and that’s why we should have a good command of grammar and pronunciation, for example…It’s about daily practice of English, as a senior university student, you have to prove that you are good especially to your lecturers, to show that you are independent and ready to be out there into the society as a teacher. So, internet gives us courage and confidence by supporting specific abilities only at the tips of your fingers.
All participants believed that every piece of their English work represented their English proficiency, and that “poor writing” would spoil their “image”. Moreover, in their learning process via Web 2.0 tools, a majority of participants regarded themselves as ESL learners who were exploring the English language, the “culture” it represented and the society it served. ESL learning utilizing the tools already listed was particularly meaningful for their learning and for a better understanding of the beauty and essence of the English language and its society and culture. Such knowledge also helps the learner as a member of a particular culture to know what is culturally appropriate to say aloud or “not to share” online. For example, A1 highlighted this idea as follows:

A1: And you are actually learn about their culture and how their lifestyles through videos. I think learning English, it’s come along in a package. You learn the language and actually you also learn the culture. Let’s say how the British speakers detach from the American speakers. So, you are actually learning it through almost accidentally every day, indirectly.

A further important learning strategy used by most participants was developing self-discipline and self-awareness in ESL learning via Web 2.0 tools. In this regard, the users need to “know what to look for”. For instance, A4 described Wikis as “a good source to start” but claimed that its users “have to be selective” because in Wikis page alone, a reference “diverts them to the other blogs”, so they have to skip the unrelated blogs if they are not really the search focus. Seemingly, the users have to be selective about “where to search” and “what to search” online. Their learning process thus involved both the process of externalizing knowledge about the English language and internalizing more knowledge. This emergent subtheme is consistent with previous
CHAPTER SIX: QUALITATIVE RESULTS

studies, such as that undertaken by Schultz (2011) who suggested that “it is … important to learn appropriate communication strategies that users can adopt in these online realms, in order to ensure that they are engaging in effective communication” (p. 24) for learning. In this study, the affordance concept is valuable in explaining the complementarities and actionable properties between Web 2.0 tools and ESL learners that allows the learners to select actions and strategies for informal ESL learning.

6.3.4.3 Summary

In brief, the three sections of qualitative data analysis illustrate and explain the research findings, in turn facilitate an examination of the language learning strategies of Malaysian university students while informally using Web 2.0 tools. For the purpose of answering the fourth research question of this study, the record of interviews confirmed that three types of informal learning strategies were used by participants. The learning strategies were: tool-mediated; community-mediated; and role-mediated strategies. These learning strategies gave rise to a series of subthemes. In this regard, the activity goals of the majority of participants, although different for each individual, were mainly centred on acquiring knowledge and ensuring status in the academic community in order to do “better than anyone else”. The overwhelming majority of participants commented that they wanted to see what others were thinking about their “ideas” or “materials”, what their social networkers, “parents” and “juniors” were saying (feedback) and how they were progressing. In this context, both the sociocultural values, centred on activities in Web 2.0-based learning communities, and the learner-users’ intentions contribute to on-going and meaningful learning participation.
6.4 Summary

The key findings of the qualitative analysis of the study can be summarized as follows. Firstly, participants perceived that the affordances and strengths of Web 2.0 tools led to both development of social interaction and personal informal ESL learning. These findings include the subthemes of accessibility and flexibility, which relate to the random access design of the tools and cost decisions made by users. Web 2.0 tools also provide unique opportunities for “fun”, “authentic” and “effortless” learning, positive feedback and identity projection within their communities of practice.

Secondly, these Malaysian university students utilised particular learning strategies for their informal ESL learning via Web 2.0 tools. These strategies relate to the processes that students identified as “seeing”, “questioning”, rehearsing and “reflecting”, serving to aid in the evaluation of one’s own position within the Web 2.0 community, facilitate self-correction through “trial and error” for knowledge refinement, and complete the task. In this sense, language as a cultural tool (Vygotsky, 1978) and Web 2.0 in this study served as mediating tools for thought and inspiring opportunities that were internalized for mutual engagement of ESL learning mediation. Through the perceived affordances and learning strategies of construction, representation, exploration and negotiation, knowledge in the individuals’ minds and in the shared artefacts are developed together throughout the sociocultural collaborative learning process of participating in a virtual community. The integrated theories provided multiple lenses to better analyse and describe the complexity of learners in interaction with others and with Web 2.0 tools, to improve and continue their ESL learning beyond the classroom.
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These theoretical lenses provided a means to access and interpret the processes that were identified as contributing to learners’ independent, informal learning.

This analysis chapter has presented and discussed through a qualitative focus of the participants’ perceptions and experiences of their informal learning and strategies of ESL learning via Web 2.0 from a sociocultural perspective. The following chapter synthesizes and discusses the key findings that have emerged from both quantitative and qualitative phases, into a discussion of the merged results. Following that discussion, the final conclusions, reflections and perceived implications of the study are offered, to represent further development in understanding about the nature of Web 2.0-based ESL learning, in informal learning contexts and through an activity theory frame.
CHAPTER SEVEN:

CONCLUSIONS AND IMPLICATIONS

7.0 Introduction

This chapter presents key research findings and discusses the research’s contribution to the literature. It is organized in eight sections: Section 7.1 revisits the research aims and summarises key findings; Section 7.2 discusses the original research findings, in the Web 2.0-based informal learning and ESL study. Section 7.3 addresses the value of the theoretical approaches and Section 7.4 examines the analysis of the value of methodological approaches, while Section 7.5 reports on the limitations. Section 7.6 presents recommendations for action, and Section 7.7 offers recommendations for further research. Section 7.8 provides concluding remarks.

7.1 The research aims and the key findings summary

Over the last several years, Web 2.0 has been the subject of various studies but in different areas and with different cohorts. These studies only focussed on the affordances and drawbacks of Web 2.0-based teaching-learning contexts in formal education (Anderson, 2007; Dale, 2010; Jokisalo & Riu, 2009; Lee et al., 2008; Owen et al., 2006; Starkey, 2010; Tan, 2009) and on its uses in formal language acquisition (Boudreaux, 2010; Mills, 2011; Murray & Hourigan, 2010; Shihab, 2008; Ullrich et al.,
2008). However, there has not been an analysis of Malaysian university students’ perceptions of Web 2.0 for informal ESL learning, as undertaken in this study. Moreover, the literature on web-based learning, although recognising the need for online learning strategies of ESL (Anderson, 2003; Boruta et al., 2011; Branch, 2012), has yet to report on Web 2.0-based sociocultural learning strategies of informal ESL. This research study aimed to bridge this gap and add to the body of knowledge on the current perceptions among Malaysian university students about their informal learning and strategies of ESL learning via Web 2.0. Researchers have argued that investigations into Web 2.0-based education regarding the use of language are still rare (Armstrong & Franklin, 2008; Starkey, 2010). At the same time, there are clear limitations in terms of quantity and quality of the research conducted to date on educational uses of Web 2.0 applications; indeed, the available studies were conducted on the general use of such technologies (Sefton-Green, 2004; Selwyn, 2007). For that reason, it is clear that more research is required in the area of Web 2.0-based informal learning in general, and of ESL among higher education students in Malaysia in particular.

Unlike previous studies, this study examined the perceptions of Web 2.0 technologies among ESL learners at Malaysian universities. This study was particularly focused on the patterns of the learner-users’ engagement and perceived Web 2.0 affordances for informal ESL learning. These included the ways the interplay of intentions and perceived capacities of the technologies provide opportunities for and limitations on the engagement in out-of-class learning practices and on their learning strategies. To realise the objectives of this study, mixed method research questions, concurrent data collection and mixed analysis phases were utilised to allow the nature and meaning of
participation to be identified through the experiences of ESL learners. In addition, by highlighting mediated activity rather than individual actions or mental states, activity theory (Gaver, 1991; Engeström, 1987; Kaptelinin & Nardi, 2006) enabled an expanded conception of sociocultural participation that encompasses the mediating role of communal and cultural factors in multi-layered and complex contexts.

This research inquiry is broadly guided by the assumption that participants’ capacity to access socially-driven technology tools of Web 2.0 will enhance their learning behaviours and actions. This assumption and the data collected have assisted in contributing to knowledge and understanding through investigating four main research questions:

1. What are the trends and patterns of participants’ engagement with the Web 2.0 tools in terms of usage frequency, usefulness for their informal daily English learning, places of access, and perceived most used tool?

2. What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?

3. What are the perceived learning strategies used by these learner-users in the informal environment in question 2?

4. What are the implications of these findings for future use of Web 2.0 in the informal ESL learning or other related areas?
As shown earlier (see Figure 4.1), the first of the research questions is linked to the initial quantitative phase of the thesis. The second and third questions are linked to both quantitative and qualitative phases of the thesis. The fourth research question is addressed in the concluding re-descriptive/theorizing phase of the study. The combination of two methods in a mixed method studies generated new strengths and more evidence for this study. Through a mixed methods approach, this study aimed to understand the learners’ informal use of Web 2.0 tools and identify the impact of this use. The quantitative and qualitative strands were collected concurrently, with each receiving equal priority (see Figure 4.2). The quantitative data were collected from individual learner-users engaging in ESL out-of-class learning mediated by Web 2.0 tools. The vehicles for data collection were eight on-line surveys using Likert scales for the quantitative information. Qualitative data were gathered from responses to five focus group interviews. Considered together, the quantitative and qualitative phases provided complementary and in-depth understanding of learner-users’ unique social experiences and perceptions of their daily learning of ESL via Web 2.0 technologies. This case study analysis used descriptive statistical analysis on numeric questionnaire data to recognize and report usage patterns. These are supported by selected illustrative quotations and themes of focus groups interview data to tell the story of the perceptions of the individuals and groups involved. Findings for research questions 1, 2 and 3 are reported here, and the findings for research question 4 are presented in the recommendations.
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7.2 The research findings

This study builds on previous work in the field of social epistemologies in Web 2.0-based informal learning contexts. However, it makes its own contributions to the field of ESL by using multiple perspectives and finding new ways of interpreting practices. By using an integrated framework, the study makes several contributions to the literature on the affordances and obstacles of Web 2.0 technologies for Malaysian university students to engage in informal ESL learning and learning strategies they adopted. Students’ positive response rates were extremely high. Based on the results of analyses presented in Chapters Five and Six, this section discusses the integrated findings related to the first three research questions with reference to previous studies on web-based informal ESL learning.

7.2.1 RQ1: What are the trends and patterns of participants’ engagement with the Web 2.0 tools in terms of usage frequency, usefulness for their informal daily English learning, places of access, and perceived most used tool?

This study found that an almost equal percentage of male and female participants acknowledged learning possibilities and positive strategies in using these Web 2.0 tools for learning ESL beyond the classroom. The overall descriptive analysis of the numeric data indicated positive engagement and strong endorsement of the value of Web 2.0 for supporting their informal ESL learning. The majority of participants reported accessing the Web 2.0 tools several times a day and agreed that these tools are useful for their learning. It is assumed that these participants, as heavy users, had the best
understanding of informal learning and consciously perceived the connection between these types of activities and the new knowledge gained. These predominant views provided a prime example for the importance of establishing networks that allow learners to come together around common topics of interest. In light of the identifiable patterns of Malaysian university students’ engagement with Web 2.0, as a learning tool, the university was reported as the most popular place to engage in informal ESL learning. Many participants described the richness of Web 2.0 resources as important social tools available to them in all time zones to support their academic-oriented activities. The result also indicates that Facebook was rated not only as the most popular social tool but perceived as beneficial for Malaysian university students’ informal ESL learning.

7.2.2: RQ2: What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?

Overall, student-participants expressed positive experiences and perceptions towards Web 2.0 affordances for their motivation towards informal ESL learning. For example, the quantitative data indicated that nearly all learners strongly agreed that Web 2.0 tools enable them to have more interesting ESL learning experiences than learning in the classroom and allowed them to work at the location that suits them best. This study found that, specifically in relation to participants’ informal ESL learning, Web 2.0 tools operate as learning tools characterized by collaborative learning, active reflection and motivated participation. As such, motivation drives these learner-users’ engagement, and thus such engagement increases their ESL out-of-class learning.
This study has identified that the participants’ account of a rich range of perceived affordances can be categorised into three interlocking themes, as summarised in Figure 7.1. This analysis provided a richer understanding of participants’ reasoning as to why and how they use these Web 2.0 tools for their ESL learning in unstructured environments.

**Figure 7.1: Themes of motivational affordances**

**7.2.2.1 Theme 1: Social Transformation**

Figure 7.1 provides an initial response to research question 2. As illustrated in the figure above, Web 2.0 tools were perceived by student-participants as holding great potential for facilitating social transformation, and interactivity among learner-users within both technical and cultural dimensions. By this, they perceived the psychological attraction of Web 2.0 was the most valuable and appealing aspect because it enabled meaningful identity projection, social connection with one another and co-construction of knowledge across the Web 2.0 community. Most telling, the student-participants intended to adopt Web 2.0 technologies as social networking tools for active participation and mutual collaboration in their daily ESL learning. Similar to the typical
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assumption of the theorists of situated learning and activity, learners in this study believed that they gained awareness of learning objectives through conversations and social interactions and consequently improve their personality developments in terms of perceptions, reflections and valuable learning activities. From an activity theory view, data from this study suggest that sociocultural learning mediated by Web 2.0 tools is a naturally social developmental process that may essentially differ from traditional ways of learning. For example, participants intended and performed enhanced communicative experience outside the classroom through the use of various asynchronous and synchronous Web 2.0 tools.

As articulated and illustrated in Chapters Five and Six, this study has contributed to the current body of relevant literature through its exploration of an idea that communication in the target language (English) is important for ESL learners in order to provide them with updated information, contacts and supports. Mainly, the interactive Web 2.0 tools allowed a majority of participants to communicate and collaborate by enabling them to post questions in longer and simple messages that facilitate their effective knowledge-sharing activities. In this regard, Web 2.0 tools as global networks link participants with other learners, learners with information, and information with other information, and allow them to express themselves confidently in a global language. Moreover, the reported features of Web 2.0 informal learning communities are shared learning goals experienced by members of learner-users’ groups and their applicability to out-of-class learning contexts mediated by these tools, locally and globally. The evidence also shows that participants seek help from their peers and from independent research, adopting Web 2.0 tools to rehearse in order to enhance memory performance. The
evidence generated in this study demonstrates the merits of a sociocultural theoretical frame, through the presenting of an active virtual learning community that enables interaction among learner-users in developing the collective understandings of individuals’ creativity and critical thinking skills.

Another important finding of this study is that the users of Web 2.0 tools encountered authentic informal learning through engagement in meaningful legitimate peripheral participation. Influenced by the belief that, via these tools, participants could act as knowledge resources for each other, they understood peer feedback as critical to their purposes. As a peers-only space, social interaction mostly occurred amongst learners and significant others, established individual status, developed individual understanding and advanced group understanding. This study also found that these tools allowed learner-users to express multiple identities to their friends and parents and to reinvent themselves as their self-perceptions transformed over time, for example, through the creation of their profiles on Facebook. It is also worth noting that the decision to comment, to accept and to reject a comment reflects these learners’ selective behaviour in determining information for sharing and influencing how they were perceived within their social network. At times, participation became an expression of learners’ identity transformation as they progress from students to TESL teachers in the future and from passive to active learners. As reflected in the participants’ responses (in Chapter Six) to informal learning explored, the interaction enabled by interactive Web 2.0-based social learning was perceived to enhance their personal learning abilities. Virtual community scaffolding supported the learner-users’ new behaviours for meaning-making and reflection on new knowledge and formed their identity projection in ways of
understanding. This leads to the next theme that elaborates upon the participants’ experiences with Web 2.0 tools for their personal learning.

7.2.2.2 Theme 2: Personal Learning

In this study, the use of affordance theory provides a lens to interpret individual participants’ use of Web 2.0 tools to motivate and support learning goals. A change in the kind of informal learning activity is reflected by a change in the affordances perceived and utilized by personal learner-users. Thus, the form of informal ESL learning may be influenced if certain affordances of Web 2.0 tools are perceived. This is true for many participants because the principles of power and control via these tools support their own learning. For example, participants expressed the view that Web 2.0 tools demonstrate less risk to their learning, less chance of making mistakes, and more self-selected participation. Interviews with participants also reflect the importance of safe practice for learning some aspects of language that learners need a moderate amount of practice to acquire. For instance, by accessing the audio of a language and viewing the language and culture at the same time, participants reported efficient engagement with informal ESL learning.

Participants recognised that Web 2.0 technologies offer a window to experience new ways of learning which is intrinsically motivating and self-empowering. They believe that this learning is indirect, fun, effortless and helps them to satisfy their specific motivational needs. When these needs are satisfied they reported experiencing enjoyment and a desire to engage more in informal and independent ESL learning.
Participants’ statements confirmed that Web 2.0 tools provided them with useful first-hand experience with language learning and twenty-first century skills. They described how focusing on learning new skills, avoiding errors and understanding new knowledge led to positive judgments about their competence. This study also highlights another aspect of motivation for the participants in choosing to participate in certain activities over others. Cost of the computers and access time was a consideration. However, for some students, perceived affordances could also promote freedom to choose suitable platforms according to their interests and skills, because Web 2.0 tools are easy to use and easy to access. Another learning affordance explained by learner-users is the flexibility of multi-tasking resources from various sources and formats including multimedia features for updating learning.

This study found the participants perceived that Web 2.0 tools impacted strongly on their lives, providing a research head-start and a natural and supportive problem-solving backing for informal language learning development. Participants claimed that they were meaningfully engaged and able to self-evaluate their learning and reflect on their own achievement towards independent lifelong learning. In contrast with such positive reports, the next section explores the participants’ perceptions on the limitations of the Web 2.0 tools for learning.
7.2.2.3 The limitations of the Web 2.0 tools for learning

Although most of the participants were positive about Web 2.0 tools as providing opportunities to enhance their informal learning for ESL, there were concerns regarding their limitations attributed by the participants to some other learner-users.

As already noted in Chapter Six, one of the limitations that pertain to Web 2.0-based informal ESL learning was technical issues. For instance, participants articulated the incompatibility between different multimedia formats, the rapid changes of Web 2.0 technologies, and unreliable internet connections that delayed free exchange and collaboration. However, this concern was not noted by participants of this study because of their background as advanced student-teachers, adept Web 2.0 users, and motivated ESL learners. Participants also stated that novice users may have concerns using technologies whose learning value might be considered in educational research as somewhat unproven. There was concern about impacts on their privacy and safety. Cost of computers and Internet access are also expressed by participants as obstacles to the use of Web 2.0 tools.

In relation to motivational factors, most participants reported that less experienced learners may have a further problem with lack of interest in technology. Some participants believed that learners held differing levels of ability with Web 2.0 tools; while some learners found using Web 2.0 easy, some thought it was quite time-consuming and others had real difficulty. For example, the continual addition of new and unreliable materials such as informal language, and linguistic mistakes, makes individual search results ineffective leading to miscommunication. Learners are also de-
motivated if their learning material is inappropriate and boring. Some learner-users, as mentioned by participants, engaged in copy and paste plagiarizing habits. However, the participants in this study were advanced student-teachers and ESL learners who had positive learning experiences, and therefore their perceptions would differ from novices, arguably influencing the more positive findings of this research.

In summary, although learners listed some issues as frustrations and negative aspects of using the Web 2.0 tools, many had clearly developed ways to deal with them. Overall, the data analysis had confirmed the possibilities of these Web 2.0-based activities supporting the social construction of identities and personal informal ESL learning among Malaysian university students.

7.2.3 RQ3: What are the perceived learning strategies used by these learner-users in the informal environment in question 2?

Quantitative and qualitative data indicated that most Malaysian university students in the study expressed strong perceptions of learning strategies with Web 2.0 tools for their English informal learning, and these learning experiences were highly intentional and purposeful. A visual summary of participants’ perceptions of Web 2.0-based informal ESL learning strategies is represented in Figure 7.2.
As outlined in Figure 7.2 above, three interconnected themes represented participants’ perceived language learning strategies via Web 2.0 technologies. These included choice of Web 2.0 tool or tools as strategic, community-mediated and role-mediated strategies.

### 7.2.3.1 Web 2.0 tool-mediated strategy use

Learners perceived they had supportive choices in terms of various tool-mediated learning strategies that influenced their mindfulness of learning. In the current study, the relationship between the learner and the informal ESL learning is always mediated through the use of Web 2.0 tools and cognitive resources. It indicates that learner-users are consciously using these tools because they can recognize and articulate the value of the properties of different platforms in daily ESL learning. Constantly, this reflects the affordance theory relating to the participants’ perceived informal ESL learning strategies through interaction with these platforms.

This study found that nearly all participants claimed that Facebook, e-mails, blogs, wikis and games were meaningful platforms for their ESL learning strategies. They
reported practicing and rehearsing ESL writing in an authentic linguistic context and appropriate style. They would also spend some time thinking and proof-reading their messages before sending. In terms of communicative strategies, significant others support these individual learners to re-evaluate what they are doing and thinking, thus enhancing critical thinking and problem-solving across the technology affordances. The advantages of talking with native speakers via Skype were identified as crucial to enhance integrated skills like pronunciation, speaking and listening. These platforms guide these learners’ behaviour of being respectful in correcting someone’s mistakes. As indicated in this research, learner-users were also gradually collaborating and depending on other learners’ participation before they could take part in online collective discussions. Such a finding indicates that these tools enabled student-participants’ new online friendships, and supported relationship maintenance.

Learner-users also preferred watching movies and varieties of audio-visual resources via YouTube to have input from native speakers. Specifically, the findings of this thematic analysis suggest that YouTube provided learner-users with good models of spoken English in terms of native accent, new vocabulary, speed and intonation. This study provides evidence that these learners perceived online dictionary/translator as highly beneficial in facilitating language understanding, especially to check the meaning, translation, spelling and pronunciation of words. They also mentioned reading and watching online news such as *The Star, The Times, NST, BBC* and *CNN* to improve their English skills. These tools enabled the development of learners’ communicative competence and knowledge about current issues through listening to the reporters who use formal and authentic English. Most participants also intentionally selected resources
via Web 2.0 tools by browsing and skimming, using keyword searches and guessing the meaning from contexts. Student-participants’ comments indicated that they printed important learning materials so information was readily accessible, and that they could record their own notes.

7.2.3.2 Community-mediated strategies

Participants in this study noted that a sense of belonging to a community influenced their language learning. They reported discussing and exchanging ideas outside class, and as participants, were influenced by other Web 2.0 users online. Learner-users perceived and adapted their communicative behaviours for self and social representation online: they were more connected to their learning communities. Activity theory suggests social interaction within communities was meaningful for participants to extend their actual and virtual interactions.

7.2.3.3 Role-mediated strategies

This research found that learners were critically aware of how Web 2.0 resources enabled them to regulate projected roles. The data suggest that learners demonstrate individual differences in their aspects of their informal learning behaviours. As presented in Section 6.3.4, participants claimed they assumed such roles as learning managers, ESL learners, final year university students, and future TESL teachers in engaging with these tools. In examining Malaysian university students’ literacy practices and identities, data showed the platforms enabled productive role-playing that supported language learning. For instance, participants’ Facebook profiles exposed
confidential information through their efforts of self-directed learning and self-presentation. This practice is important because the role-play is normally dependent on whom they are communicating with. As shown by the data, much more informal interaction occurred when participants were communicating with peers, and in contrast, the conversation is more formal when communicating with higher status participants. This is consistent with the sociocultural theory model of this study, which when considered in this study suggests that productive participatory opportunities sustain and promote an open, shared practice towards ESL learning goals. In line with a sociocultural approach, this study found that in a virtual learning community, individual activity and collective knowledge mutually shape each other with a focus on achieving and furthering learning outcomes.

As reported in the following sections, the findings of this study emphasize the complex, interdependent and contextualized nature of learner-users’ sociocultural experiences. These findings, subsequently, are discussed in the light of their theoretical, methodological and educational implications.

7.3 Analysis of the value of theoretical approaches

The theoretical framework developed to explain the nature of the informal ESL learning experienced by the Malaysian university students based on the Web 2.0 technologies outside the classroom has provided fresh insights. This framework highlights important aspects of the dynamic and complex ways in which Web 2.0 functions to either enable authentic informal ESL learning or limit it, depending on the users’ past experiences, preferences and abilities. This application of sociocultural theory, building on the work
of Vygotsky (1978, 1986), Leontiev (1978) and Engeström (1987, 1999), demonstrates the links between learner motivation and virtual community-building in this context. The framework also draws on situated learning theory and affordance theory to guide research and to explore these links. In terms of the new contribution to knowledge, although others have proposed models for developing virtual learning from a sociocultural viewpoint, no one has considered the notion of participation that is framed and shaped by the use of authentic and relevant tasks of Web 2.0 tools to situate ESL out-of-class learning activity. From an activity theory and situated learning theory perspective, a learner-user, when engaged in Web 2.0-based informal ESL learning, is part of a complex activity system. The system is situated within everyday practice and includes a number of interdependent components, as presented in Chapter Six (Figure 6.1) and repeated as Figure 7.3 as follows:

**Figure 7.3: Triangle illustrating Web 2.0-based, informal ESL learning activity system**
As shown above, the integrated approach employed in this study provides a fresh understanding by allowing the connection of complementary and interactive elements to capture the complexity of the ESL learners’ activities and the learning contexts in which they are situated. When the individual learners participate in this virtual system, they choose mediating artefacts (cognitive resources and tools) from the range to suit their goals that are mediated through the use of various rules and roles, and also influenced by other members of virtual community. Such a conceptualisation of the Web 2.0 allows for a range of informal learning resources to be important inclusions for future studies, even if the tools and the objectives of the use are subject to change. Both theories of activity and situated learning represent conceptions of group behaviours and participation by going beyond individual actions and mental processes. The holistic unit of analysis includes groups of single learner-users and the learners’ larger practices in relation to sociocultural participation in virtual learning communities (social contexts). As indicated in this study, the learners as adept ESL learners assist the other novice users of Web 2.0 and their juniors to construct meaning through the dynamic and reciprocal relationship in the sustained virtual ESL learning community. The notion of collective motives and intentions to participate, as defined by the framework employed in this study, is critically important to explain the differences in the way learner-users engaged in Web 2.0 interactions. Powerful shared intentions and thoughts guide actions, shared practice and sociocultural mediation through tools and roles in this informal learning activity system.
The use of affordance theory provides a lens to understand how each individual learner via Web 2.0 tools utilizes the environment to mediate their goals. In this sense, as an activity system, perceived affordance emphasizes the mutual nature of actual interaction between an individual learner’s intention and perceived value of Web 2.0 properties. These Web 2.0 tools are perceived by learner-users as actionable properties of daily learning resources, with complex benefits and outcomes identified in this study. The same feature of the Web 2.0 tools may offer different possibilities to different learners or to the same learners at different times. This integrated framework both shows the robustness of an activity focus and confirms its value for interpreting an organized behaviour. The researcher believes this model has not previously been applied to informal learning or ESL learning. The researcher has attempted to demonstrate that a good fit exists for the development of new knowledge regarding the complexity of the system of learning, between the workability of behavioural intentions, and the perceived affordances of Web 2.0 resources that the learner-users access to become skilled in language use. When perceived, affordances of Web 2.0 allow learner-users to perform particular actions and to adapt to new sociocultural contexts that satisfy their informal ESL learning specific needs. Thus, this combination of theories can be a lens for understanding why learner-users preferred Web 2.0 tools and the way in which they make use of these tools to learn.

Building on these discussions, the study has illuminated how learners made sense of the learning objective in these Web 2.0-based informal learning settings by exploring the association of previous beliefs and understandings with emergent Web 2.0-based informal learning practice. Drawing upon both theory of activity and situated learning,
the learning goal has been conceptualised as a personal construct that is subjective, emergent, and shaped by numerous contextual factors and the motivation by other people (community). More specifically, the alternate ways learner-users relate to the learning goal support the development of shared goals and the ways in which participation expands identities. Thus, this multi-dimensional theoretical framework encapsulates those fine-grained and dynamic features of interaction and collaboration in an interactive Web 2.0-based informal ESL learning environment. Hence, this study into Web 2.0-based learning has demonstrated the suitability and value of the employed theoretical framework for future studies.

7.4 Analysis of the value of methodological approaches

This inquiry adds to the growing body of work which has used activity theory in educational research, particularly in relation to informal learning mediated by Web 2.0 technologies. This study has found the integrated theoretical framework to be a useful research tool which is well positioned to meet the need for more expansive conceptions of participation in Web 2.0-based informal ESL learning. The framework entails analyses of participation that help to elucidate differing perspectives and recognize the “mediated mental development” through culturally-mediated, experience-based, and practical activity (Lantolf & Thorne, 2006, p. 4) of informal learning. This integrated framework has proved valuable as a resource to make sense of multi-layered informal learning settings.
As already explained and illustrated, the researcher sought to integrate research techniques. The combined use of quantitative and qualitative research methods was utilised to gain a more holistic and comprehensive understanding of participants’ practices and beliefs around their informal ESL learning. The collection of numeric and textual data in multi-dimensional contexts also has the potential to reveal various patterns of engagement and participation in Web 2.0-based informal ESL learning encounters. This integration was enabled in this case by the complementary accounts of each method, and the researcher’s professional insights into leaner-users’ work.

### 7.5 Limitations of the research

The researcher acknowledges the challenges, potential risks and limitations associated with this study. First, as suggested by Selwyn (2008), studying informal learning can be a challenge, mainly because it is not easily identifiable (Armstrong & Franklin, 2008) and the data are primarily based on participants’ perceptions and beliefs. Aligned with this point, Web 2.0-based informal ESL learning is difficult to study because of the tacit nature of knowledge gained which is difficult to document or describe (Bartlett-Bragg, 2006; Greenhow & Robelia, 2009), particularly when learner-users are not consciously reflective when they are engaged in the process. This researcher acknowledges this challenge, and that the data draw on students’ subsequent reflections after participation in using Web 2.0 tools. Whilst insightful, most studies cited in this thesis relied upon small-scale case-study research designs and could be criticized as lacking broader scope. To address this concern, the questionnaire used in this study contained three different question structures for learner-users to quantify their Web 2.0 tools use for
informal learning. Moreover, this study employed multi-layered analyses dealing with data obtained from multiple sources and illustrated the advantage of this approach, particularly in relation to the advancement of understandings of Web 2.0-based informal ESL learning practices, which are characterized by voluntary and spontaneous participation. To facilitate a coherent analysis, the researcher marked the relations between the research questions and multiple data sources with identical codes and linked the relevant results obtained from multiple data analyses by using these codes (Saldaña, 2009). This aspect of the thesis advances knowledge of research methods appropriate to explore the processes and outcomes of virtual interactions and informal learning in web-based contexts.

The second point relates to the self-reported data adopted for this inquiry which has reliability and validity limits. For example, the researcher presented the data as learners’ perceptions. This is limited as the researcher cannot know precisely what the learners are thinking but merely reports how the learners have expressed their thoughts to the researcher. In other words, there is a possible difference between actual preference and articulated preference among participants. As a resolution, the risks of bias were addressed through particular procedures to reduce its influence, including a pilot study and multiple sources of data. These procedures also incorporated the data collection procedures, protecting the credibility of the data, and the procedures for data analysis. Although the conclusions in this study were based on an interpretation of the learner-users’ perspectives, the researcher believes that understanding their perspective is an important aspect in making progress in educational approaches. Specifically, the
researcher concluded that these student behaviours are plausible, given the researcher’s professional knowledge of these students and the range of data-collection methods.

Third, the participants were also self-selected and their perspectives may not be representative of typical learners in Web 2.0-based informal ESL learning. Moreover, the study used a convenience sample from eight Malaysian universities with 400 students to participate in the study. Compared to the large number of university students in Malaysia, the sample population is not considered large enough to generalize the results to the whole population in the country. Due to this limitation, it would be inappropriate to generalize beyond a comparable student sample. Despite precautions, results from self-reported on-line survey data must always be analysed with much care. However, it is important to remember that obtaining a representative sample was not a goal of this study. The goal has been to gain an in-depth description and analysis of the sociocultural phenomenon and allow the reader to decide if the findings are applicable to other contexts. The online questionnaire of the Web 2.0-based informal ESL learning was adopted and modified by the researcher. In light of the consideration that it had not been previously used with other populations, any researcher intending to use it is therefore encouraged to conduct a pilot study.

Further complications may occur due to the rapid evolution of Web 2.0 process itself. While the study was being carried out, older forms of Web 2.0 tools were becoming less popular, new methods of Web 2.0 were being introduced, and trends in Web 2.0 technologies use were changing. The danger of research into a field that changes so rapidly is that the research may soon become dated and irrelevant. Nevertheless, this is
not necessarily a weakness in this study, in that the research in this area still can be interpreted within the proposed theoretical perspectives.

7.6 Recommendations

This section, based on the findings of this study, details the recommendations. The following recommendations are presented for the purpose of enhancing this research topic in order to provide additional valuable data for technology-based learning support.

Recommendations for educational policy-makers

In line with the Malaysian Government’s Vision 2020 for education transformation, skills in technology using English have been foregrounded across Malaysian education institutions (Tham, 2010). Particularly with the availability and range of Web 2.0 resources, and the dominance of English as global language, Malaysia aspires to meet international demands in order to be at the forefront of globalisation. Therefore, it is vital for universities and schools to be coordinated for updated curricula and policy changes in the realm of Web 2.0 education that requires digital proficiency. Policy-makers need to immediately examine how technology-based language learning is theorized in local educational contexts, and shift to the development of appropriate educational infrastructures. Those entrusted with educating students will demand professional support to develop explicit instruction for the future. Allowing for professional development, providing supplemental funding and supporting curriculum coordinators to work alongside practitioners to develop new pedagogical designs will additionally support the educational outcomes. The results of this study into the
affordances of Web 2.0-based informal ESL learning and online language learning strategies need to be disseminated broadly.

Furthermore, in teacher preparation programs, introducing Web 2.0 applications to the student-teachers is recommended, as Web 2.0 applications are useful resources for teaching. One possible area of future research is to incorporate the Web 2.0 into ESL curricula and evaluate its efficacy. Based on the potential of Web 2.0 tools in assisting language learning identified in this study, relevant findings from this research on how Web 2.0 tools can be employed for ESL learning may contribute to the literature. One challenge of incorporating the Web 2.0 resources into ESL learning is to provide a balance between personal and functional purposes (Feng, 2009), as suggested by participants in this study. In this sense, an important area of future research is to examine ways to ensure that Web 2.0 technologies for these aims are balanced and compatible with curriculum objectives.

Recommendations for educators

All educators with an interest in e-learning technologies must do whatever they can to remain informed, both with regard to the trends on the Web 2.0 technologies and to the body of research that is being developed around Web 2.0. This will give lecturers and teachers the necessary experience for more sophisticated usage of these technologies towards professional development. The Web 2.0 model in this study would provide pedagogical groundwork upon which to build effective content-based ESL instruction. Through teacher-student dialogue students can be given autonomy and responsibility to
engage them in a competitive knowledge-based society and provide practical assessment. Moreover, educators can support each other and learn from exploring more ways of implementing Web 2.0 in order to establish their best teaching practices, by drawing on relevant recent research of the kind undertaken in this study.

Recommendations for parents and students

The ultimate stakeholders within the educational system are the parents and students. They should be aware of the potential of Web 2.0 tools such as Facebook and YouTube as part of educational offerings and opportunities. As noted by many researchers (Greenhow & Robelia, 2009; Tapscott, 2009; Warshauer, 2007), the reality is that formal curricula will not be completely adequate to include all aspects of twenty-first century education. In view of that, considerable time and planning should be devoted to identifying activities that engage students in developing lifelong learning and career skills, as well as information and technology skills.

7.7 Recommendations for future research

More research is needed in many areas investigated by this study, and areas which develop from the experiences of digital natives or the net generation (Prensky 2001; Oblinger 2004). The following recommendations are presented for the purpose of enhancing this research topic in order to provide additional valuable and credible data for future investigations.
Recommendation One. One possible direction for future research is to replicate the study with a larger sample size in order to generalize findings to a larger population. The current study could be replicated with new students in the same cohort, thus increasing the sample size. This would allow for more in-depth statistical calculations, which could bring more statistically rich conclusions. A larger sample size may indeed identify differences in the ways Malaysian university students perceive Web 2.0 worlds. The researcher suggests caution when generalizing findings from ESL students to non-ESL students’ learning practices.

This study could also be replicated to include a larger population, perhaps encompassing other universities in Malaysia or other Asian countries. It would be interesting to compare the experiences among students from different regions or countries. In fact, Web 2.0 resources, such as those explored in this study, are useful not only for Malaysian university students studying ESL outside of the classroom but also for students in countries where English is the native language such as Australia or in countries where English is a Foreign Language such as China. In addition, future research may consider appropriating the Web 2.0 resources in different ways, for example, by building a learning community around them. In this sense, the role that community and collaborative learning play is worth examining as the focus of such a study.
Recommendation Two. This study has raised and discussed many opinions about the perceived affordances of Web 2.0 by its learner-users. However, the study’s findings refer to a particular set of ESL learners’ practices. As Web 2.0 use is constantly evolving, new trends must be studied as they develop in order to be understood (Armstrong & Franklin, 2008, Gardner, 2011). Of particular interest is the nature of Web 2.0 use among other learner-user groups in Malaysia, because it is quite possible that the experience between one group and another would be quite different. For example, it is prudent to take into account learners’ age and previous experience with Web 2.0 tools when choosing a tool as a learning resource for them. Therefore, this study could be repeated to explore possible differences between younger learners such as school students or older graduate students as they use Web 2.0 technologies to improve their ESL learning in various settings. As well as incorporating opinions and insights from different groups, a future study could include the impact of technology-based learning applications at home and in the classroom.

It is also important to compare Web 2.0 resources as self-study tools with other self-study tools for ESL learning, such as current language learning resources (books, CD-ROMs and audiotapes). This study demonstrates that learning with Web 2.0 resources as self-study tools can be helpful for university ESL learners; however, the effectiveness of this learning method as compared to other self-study tools merits exploration. Future research should consider tools that appear more interesting and popular than others. Moreover, the fact that Web 3.0 technologies could be used to enhance the learning skills of students is a growing area that should be examined. It is important to remark that the study revealed the students’ high level of satisfaction with the online learning
community and that because of this further study should address attitudes toward the
use of other technologies for the same purpose. It may be beneficial to widen the scope
of the study. As noted earlier, widening the scope of the study and increasing the sample
population will increase generalizability of the results.

*Recommendation Three.* From a theoretical standpoint, further refinement of ESL
learning research with the possible development of more items and value factors on the
survey specifically geared towards informal e-learning is desirable. Further studies
focusing on populations that are more difficult to access (also including non-users)
would aid scholars’ ability to understand the long-term implications of the concept of
informal ESL learning in Web 2.0-based informal learning settings. In addition,
research should gain a better understanding of how Web 2.0 users manage these various
social networks that they maintain in parallel and simultaneously online, and what
implications this may have for future relationship development and communicative
interaction in society.

Taken together, this study suggests informal learning should be studied in more breadth
and depth in a variety of settings to allow for a greater understanding of the
phenomenon. Therefore it is recommended that future studies be conducted to develop
measurement tools that provide comprehensible paths for studying informal learning.
The development of these tools will extend the body of knowledge beyond what is
learned in the formal learning process to include how people learn informally, and how
that learning contributes to ESL proficiency goals. In extending this notion, it is
recommended that future research designs provide for a deeper qualitative component
that includes observation and more in-depth interviews. Along with increasingly complex statistical analyses in future studies, the theories of affordances, activity and situated learning then should offer increased illumination regarding the relationship between informal ESL learning and Malaysian university students’ out-of-class learning practices.

7.8 Concluding remarks

With this study, the researcher has identified a series of important areas of contribution by filling a knowledge gap. The employed research framework provides fresh insights to current understandings at the core of the matter. These insights illuminate the potential of Web 2.0 tools for informal learning and the value in pursuing this medium for ESL learning beyond the classroom using a model for future studies refined in the current study. First, the study makes the case for Web 2.0 tools as familiar generative and expressive resources for informal learning processes by interpreting the patterns of voluntary and spontaneous engagement such as the types and frequency of Web 2.0 tools used. Second, the study develops an understanding of the learners’ perceptions of the motivation affordances and limitations of Web 2.0 tools for daily learning of ESL. Third, this study has strengthened the case for the importance of out-of-class ESL activities in terms of particular conscious learning strategies. The research clearly identified that the learners predominantly have highly deliberate and articulated intentions or, at the very least, deliberate justifications around practicing at being good learners and fine-tuning their multiple roles and identities. They mutually negotiated and expressed themselves through repeated rehearsal, trial and error of informal
learning affordances, in relation to the development of both social and personal learning of ESL. Thus, for most of the ESL learners who participated in this study, the benefits were important and far outweighed any obstacles experienced. These experiences involved authentic tasks and positive phenomena, and, as technology develops further, novelty will continue to drive motivation and a process of continuing learning participation for many learners.

It is hoped that this research regarding Web 2.0 opens up a new trajectory, stimulating new research in this area through which policymakers and practitioners in general can recognize additional directions for education and investigation. By implication, the researcher believes that building on these findings can create new ways for future language education.
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APPENDICES

APPENDIX A: Research ethics approval

25 August 2010

Che Wan Ida Rahimah Che Wan Ibrahim
121A Nish Street
Flora Hill 3550

Dear Ida

RE: YOUR APPLICATION FOR ETHICS APPROVAL.
FH EC No: R044/10
Supervisor’s: Prof V. Prain
Project/Activity Title: Perceived affordances in using Web 2.0-based English for informal learning of second language - A case study of Malaysian university students

Thank you for submitting your project for consideration by the Education Faculty Human Ethics Committee. The proposal has now been considered by the Committee and has been assessed as complying with the National Statement on Ethical Conduct in Human Research. Your project has now been granted ethics approval and you may now commence the study.

The project has been granted approval till 20/01/2012.

The following standard conditions apply to your project:

- Complaints - If any complaints are received or ethical issues arise during the course of the project, researchers should advise the Secretary of the Education FHEC.

- Limit of Approval - Approval is limited strictly to the research proposal as submitted in your application while taking into account the conditions and approval dates advised by the FHEC.

- Variation to Approval - As a consequence of the previous conditions, any subsequent variations or modifications you wish to make to your project must be notified formally to the FHEC. This can be done using the ‘Application for Approval of Modification to Research project’ which is available at the following website:

- Progress Report - A condition of approval is that you submit a Progress Report to the Committee annually throughout the approval period, to cover activities of the previous calendar year and is due on 12 February. Failure to submit a progress report may result in the withdrawal of Human Ethics approval. A Final Report will be due within 6 months of the expiry date of the approval period. The Report Form is available from http://www.latrobe.edu.au/research-services/ethics/human.htm. Please note that your application has been reviewed by a sub-committee of the FHEC in the interest of facilitating a decision before the next committee meeting. The decision will require ratification by the full Human Ethics Committee and, as a consequence, approval may be withdrawn or conditions of the approval altered. However, you may commence your project prior to ratification of the approval decision and you will be notified if the approval status is altered.

If you wish to discuss any aspect of your project, please contact your supervisor (if you are a student) in the first instance, the Secretary Ms Joan Freeman, (j.freeman@latrobe.edu.au) or the Chairperson Dr Ramon Lewis (r.lewis@latrobe.edu.au).

On behalf of the Committee, best wishes with the success of your project.

Yours sincerely,

[Signature]

Josh Freeman
Executive Secretary, Education Faculty Human Ethics Committee.

cc: Chair: Supervisor(s) Prof V. Prain
APPENDIX B: Participant information sheet

Participant Information Sheet

Title of the Project: PERCEIVED AFFORDANCES IN USING WEB 2.0-BASED ENGLISH FOR INFORMAL LEARNING OF SECOND LANGUAGE – A CASE STUDY OF MALAYSIAN UNIVERSITY STUDENTS.

Supervisor: PROFESSOR VAUGHAN PRAIN
DEPUTY DEAN AND RESEARCH DIRECTOR
SCHOOL OF EDUCATION
LA TROBE UNIVERSITY
Phone: +61 0 5444 7314
E-mail: v.prain@latrobe.edu.au

Researcher: CHE WAN IDA RAHIMAH BT. CHE WAN IBRAHIM
PHD STUDENT
SCHOOL OF EDUCATION
LA TROBE UNIVERSITY
Phone: 0430197753
Email: cwhewanibrahim@students.latrobe.edu.au

Aim of the Project
This research aims to understand the role of Web 2.0 tools in Malaysian university students’ informal ESL learning, specifically: (i) students’ learning usages behaviours in terms of their frequency and volume of use, (ii) students’ evaluation of the Web 2.0 in terms of its potential advantages and usefulness for their informal ESL learning and (iii) students’ on-line learning strategy.

Invitation to Participate
It is desirable that the research has participants from different universities across Malaysia for its findings to be as useful as intended in its aim. However, for many good reasons, the research cannot invite all universities to participate in it. For on-line survey, only a purposively selected sample of approximately 400 students from 5 public universities in Kuala Lumpur and 3 public universities in Terengganu are invited to participate in the research. In addition, 20 respondents (final year student teachers) from four universities presenting a TESL course in Wilayah Persekutuan Kuala Lumpur are invited to participate in the project interviews.

As a student participant, you are one of the 400 students invited to participate in the research and/ one of the 20 students invited to join in interview sessions. Your participation in this research is important because your perceptions, knowledge and first-hand experiences of an internet-based English informal learning subject are important parts of your English daily learning and motivations.
APPENDICES

Roles of the Participants

<table>
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<tr>
<th>To On-line Survey Participants</th>
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To Interview Participants

As a TESL student teacher participant, you will be involved in focus group discussions. Your group discussions will be focused on the following topics:

- your learning usages behaviors in terms of the frequency and volume of use,
- your evaluation of the Web 2.0 in terms of its potential advantages and usefulness for your informal ESL learning and
- your on-line learning strategy.

Possible Risks to the Participants

This research is on-line based, and it does not involve any physical observation or experiment. Therefore, it is assumed that the participants will not be exposed to any harmful objects or chemicals which may have adverse effects. Also, the research instruments are innocuously designed to avoid any emotional disturbances to the participants, either during or after their engagements with the instruments.

Benefits to the Participants

Although there may not be direct or immediate benefits to the participants, there are certainly several indirect benefits. Student-participants will gain an understanding of their knowledge with a list of the best practices of Web 2.0 applications for their English as a second language informal learning purposes as they respond to the research questions. In other words, this study does enable the participants to extend reflection and the effectiveness of their learning strategies. In addition, the participants will have the benefit of having the opportunity to contribute to educational knowledge base for use by people across the world.

Confidentiality and Use of the Data

Your responses to the questionnaire and/ interview will be computed and stored electronically on a safe computer at La Trobe University in Australia. Although the researcher will know who you are during this research, your name will not be used on any documentation relating to the results of the research. Any descriptive information which could be used to identify you will be changed to protect your identity. Therefore, you will remain unknown to everyone other than the researcher.

The results of this research may be published in a thesis, presented at conferences, and published in journals, but you will not be identified in any of these reports. Also, the data used in this research will be made available to other researchers who may be interested in using the data for their research, but the data will be changed so that they are not able to identify you. In other words, the data used in this research will be de-identified appropriately before making them available to other researchers to ensure that your identity is always protected.

Rights of the Participants

While your sincere participation is highly appreciated, you should also be aware of the fact that your participation is fully voluntary. In other words, you have participated in this research because you are interested in contributing to the process of making our education system better by providing true information as required of you by the research. The results from the study will be available to on your request. Additionally, you have the right to withdraw from participation in the research at any time. No question on your decision to withdraw will be asked. Also, please note that you have the right to demand that data arising from your participation are not used in the research provided that this right is exercised within four weeks of the completion of your participation in the research. You are asked to complete the
APPENDICES

“Withdrawal of Consent Form” or notify the investigator by e-mail or telephone that you wish to withdraw your consent for your data to be used in this research project.

Questions from the Participants

Any questions regarding this research project may be directed to the following Investigators:
1. Professor Vaughan Prain, School of Education at La Trobe University on tel…or via e-mail…
2. Che Wan Ida Rahimah, School of Education at La Trobe University on tel… or via e-mail…

Complaints and further Questions from the Participants

If you have any complaints or queries that the investigator has not been able to answer to your satisfaction, you may contact the Secretary, Human Ethics Committee, research and Graduate Studies Office, La Trobe University, Victoria, 3086, ph: 03 9479 1443, e-mail: humanethics@latrobe.edu.au
Title of the Project: PERCEIVED AFFORDANCES IN USING WEB 2.0-BASED ENGLISH FOR INFORMAL LEARNING OF SECOND LANGUAGE – A CASE STUDY OF MALAYSIAN UNIVERSITY STUDENTS.

To participate in this research project, please read the paragraph below and write your name with signature in the space provided.

I (participant) have read (or, where appropriate, have had read to me) and understood the participant information sheet and consent form, and any questions I have asked have been answered to my satisfaction. I agree to participate in the project, realising that I may withdraw at any time. I agree that research data provided by me or with my permission during the project may be included in a thesis, presented at conferences and published in journals on the condition that neither my name nor any other identifying information is used.

Participant’s name: ______________________  Researcher’s name: Che Wan Ida
Signed: __________________  Signed: __________________
Date: (   /   /   )  Date: (   /   /   )
APPENDICES

APPENDIX C: Online survey guide and consent form for participants

Participant Information Sheet (Survey Participant)

‘Perceived Affordances in Using Web 2-Based English for Informal Learning of Second Language – A Case Study Of Malaysian University Students’.

Dear student,

My name is Che Wan Ida Rahimah Che Wan Ibrahim and I am a doctoral candidate at Education Faculty, La Trobe University in Bendigo, Australia. The research title for my Doctoral thesis is on the ‘Perceived Affordances in Using Web 2.0-Based English for Informal Learning of Second Language – A Case Study of Malaysian University Students’. Approval to undertake this research has been obtained from Malaysian government. This research aims to understand the role of current internet tools in Malaysian university students’ informal ESL learning, specifically: (i) students’ learning usages behaviours in terms of their frequency and volume of use, (ii) students’ evaluation of the internet in terms of its potential advantages and usefulness for their informal ESL learning and (iii) students’ on-line learning strategy.

It is desirable that the research has participants from different universities across Malaysia for its findings to be as useful as intended in its aim. However, for many good reasons, for on-line survey, only a purposively selected sample of approximately 400 students from 5 public universities in Kuala Lumpur and 3 public universities in Terengganu are invited to participate in the research.

I would like to invite you to participate in this study. If you are willing to participate, as a student participant, you are one of the 400 students invited to participate in the research. Your participation in this research is important because your perceptions, knowledge and first-hand experiences of an internet-based English informal learning subject are important parts of your English daily learning and motivations. You will be provided with an on-line survey questionnaire. The questionnaire will take 10 minutes to complete. Your role as a student participant in this research is to complete the questionnaire as honest as you can. You will be asked specifically on:

- demographic factors such as sex, attended course and university,
- your learning usages behaviours in terms of the frequency and volume of use,
- your evaluation of the current internet tools in terms of its potential advantages and usefulness for your informal ESL learning and
- your on-line learning strategy.

Possible Risks to the Participants
This research is on-line based, and it does not involve any physical observation or experiment. Therefore, it is assumed that the participants will not be exposed to any harmful objects or chemicals which may have adverse effects. Also, the research instruments are designed to avoid distress to the participants, either during or after their engagements with the instruments.

Benefits to the Participants
There are a number of benefits to the participants. Student-participants will gain an understanding of their knowledge with a list of the best practices of current internet applications for their English as a second language informal learning purposes as they respond to the research questions. In other words, this study
does enable the participants to extend reflection and the effectiveness of their learning strategies. In addition, the participants will have the benefit of having the experience to contribute to educational knowledge base for use by people across the world.

Confidentiality and Use of the Data
Your responses to the questionnaire will be anonymous and will be computed and stored electronically on a secure computer at La Trobe University in Australia. You will remain unknown to everyone because of the anonymity of your data. The results of this research may be published in a thesis, presented at conferences, and published in journals, but you will not be identified in any of these reports.

Rights of the Participants
While your sincere participation is highly appreciated, you should also be aware of the fact that your participation is fully voluntary. In other words, you have participated in this research because you are interested in contributing to the process of making our education system better by providing true information as required of you by the research. The results from the study will be available to on your request. Additionally, you have the right to withdraw from participation in the research at any time. You are asked to complete the “Withdrawal of Consent Form” or notify the investigator by e-mail or telephone that you wish to withdraw your consent. However your data cannot be destroyed because your response is anonymous. Also, for the same reason I cannot provide you with your personal data.

I look forward to working with you and thank you for your attention.

My contact details in Australia: Che Wan Ida Rahimah Che Wan Ibrahim
Phone: 0430197753
Email: cwchewanibrahim@students.latrobe.edu.au

My university in Australia: Faculty of Education
La Trobe University,
Bendigo VIC 3552
Australia.

Supervisor contact: Professor Vaughan Prain
Phone: +61 0 5444 7314
E-mail: v.prain@latrobe.edu.au

Complaints and further Questions from the Participants
If you have any complaints or queries that the investigator has not been able to answer to your satisfaction, you may contact The Secretary, Education Faculty Human Ethics Committee, La Trobe University, PO Box 199, Bendigo 3552 or Email: educationethics@latrobe.edu.au
The Consent Form

Title of the Project: ‘Perceived Affordances In Using Web 2-Based English For Informal Learning Of Second Language – A Case Study Of Malaysian University Students’.

To participate in this research project, please read the paragraph below and write your name with signature in the space provided.

I (participant) ____________________________ have read (or, where appropriate, have had read to me) and understood the participant information sheet and consent form, and any questions I have asked have been answered to my satisfaction. I agree to participate in the project, realising that I may withdraw at any time. I agree that research data provided by me or with my permission during the project may be included in a thesis, presented at conferences and published in journals on the condition that neither my name nor any other identifying information is used.

Participant’s name: _____________________ Researcher’s name: Che Wan Ida

Signed: ___________________ Signed: ___________________

Date: (     /       /      ) Date: (      /      /      )
APPENDIX D: Focus group interview guide and consent form for participants

Participant Information Sheet (Focus Group Participant)

‘Perceived Affordances In Using Web 2-Based English For Informal Learning Of Second Language – A Case Study Of Malaysian University Students’.

Dear student,

My name is Che Wan Ida Rahimah Che Wan Ibrahim and I am a doctoral candidate at Education Faculty, La Trobe University in Bendigo, Australia. The research title for my Doctoral thesis is on the ‘Perceived Affordances in Using Web 2.0-Based English for Informal Learning of Second Language – A Case Study of Malaysian University Students’. Approval to undertake this research has been obtained from Malaysian government, the study is being carried out by me alone and the information obtained will form the basis for my Doctoral thesis to be submitted at La Trobe University, Australia. This research aims to understand the role of current internet tools in Malaysian university students’ informal ESL learning, specifically: (i) students’ learning usages behaviours in terms of their frequency and volume of use, (ii) students’ evaluation of the internet in terms of its potential advantages and usefulness for their informal ESL learning and (iii) students’ on-line learning strategy.

It is desirable that the research has participants from different universities across Malaysia for its findings to be as useful as intended in its aim. However, for many good reasons, only 20 respondents (final year student teachers) from four universities presenting a TESL course in Wilayah Persekutuan Kuala Lumpur are selected in the project interviews.

I would like to invite you to participate in this study. If you are willing to participate, as a TESL student teacher participant, you are one of the 20 students invited to participate in the research. Your participation in this research is important because your perceptions, knowledge and first-hand experiences of an internet-based English informal learning subject are important parts of your English daily learning and motivations. The focus group discussion will take for about 45 minutes to complete. This discussion will be audio and videotaped to ensure accuracy of transcription. Your group discussions will be focussed on the following topics:

- your learning usages behaviours in terms of the frequency and volume of use,
- your evaluation of the internet in terms of its potential advantages and usefulness for your informal ESL learning and
- your on-line learning strategy.

Possible Risks to the Participants

This research does not involve any physical observation or experiment. Therefore, it is assumed that the participants will not be exposed to any harmful objects or chemicals which may have adverse effects. Also, the research instruments are designed to avoid distress to the participants, either during or after their engagements with the instruments.
Benefits to the Participants
There are a number of benefits to the participants. Student-participants will gain an understanding of their knowledge with a list of the best practices of current internet applications for their English as a second language informal learning purposes as they respond to the research questions. In other words, this study does enable the participants to extend reflection and the effectiveness of their learning strategies. In addition, the participants will have the benefit of having the experience to contribute to educational knowledge base for use by people across the world.

Confidentiality and Use of the Data
Your responses to the interview will be computed and stored electronically on a secure computer at La Trobe University in Australia. Although the researcher will know who you are during this research, your name will not be used on any documentation relating to the results of the research. Any descriptive information which could be used to identify you will be changed to protect your identity. Therefore, you will remain unknown to everyone other than the researcher.

The results of this research may be published in a thesis, presented at conferences, and published in journals, but you will not be identified in any of these reports. In other words, the data used in this research will be de-identified appropriately before publication to ensure that your identity is always protected.

Rights of the Participants
While your sincere participation is highly appreciated, you should also be aware of the fact that your participation is fully voluntary. In other words, you will participate in this research because you are interested in contributing to the process of making our education system better by providing true information as required of you by the research. The results from the study will be available to on your request. Additionally, you have the right to withdraw from participation in the research at any time. No question on your decision to withdraw will be asked. Also, please note that you have the right to demand that data arising from your participation are not used in the research provided that this right is exercised within four weeks of the completion of your participation in the research. You are asked to complete the “Withdrawal of Consent Form” or notify the investigator by e-mail or telephone that you wish to withdraw your consent for your data to be used in this research project.

I look forward to working with you and thank you for your attention.

My contact details in Australia:
Che Wan Ida Rahimah Che Wan Ibrahim
Phone: 0430197753
Email: cwchewanibrahim@students.latrobe.edu.au

My university in Australia:
Faculty of Education
La Trobe University,
Bendigo VIC 3552
Australia.

Supervisor contact:
Professor Vaughan Prain
Phone: +61 0 5444 7314
E-mail: v.prain@latrobe.edu.au

Complaints and further Questions from the Participants
If you have any complaints or queries that the investigator has not been able to answer to your satisfaction, you may The Secretary, Education Faculty Human Ethics Committee, La Trobe University, PO Box 199, Bendigo 3552 or Email: educationethics@latrobe.edu.au
The Consent Form

Title of the Project: ‘Perceived Affordances In Using Web 2-Based English For Informal Learning Of Second Language – A Case Study Of Malaysian University Students’.

To participate in this research project, please read the paragraph below and write your name with signature in the space provided.

I (participant) __________________________ have read (or, where appropriate, have had read to me) and understood the participant information sheet and consent form, and any questions I have asked have been answered to my satisfaction. I agree to participate in the project which will be audio and videotaped, realizing that I may withdraw at any time with four weeks of my participation. I agree that research data provided by me or with my permission during the project may be included in a thesis, presented at conferences and published in journals on the condition that neither my name nor any other identifying information is used.

Participant’s name: ______________________  Researcher’s name: Che Wan Ida
Signed: __________________  Signed:____________
Date: (     /   /   )  Date: (     /   /   )
APPENDIX E: Participant self-report questionnaire

**** USER SELF REPORT QUESTIONNAIRE ****

Thank you for agreeing to fill in this questionnaire- there are only 2 pages and it takes about 10 minutes to complete.

The questionnaire covers:


Your accurate and honest opinions are highly valued and deeply appreciated. Please answer all the questions. There is no right or wrong answer. The information in this questionnaire is confidential. Only summarized data will be reported. If you wish, a brief personal report of your results (compared to average responses) can be e-mailed to you when analysis is completed.

*1. Sex:

☐ Male
☐ Female

*2. Course

*3. University

*4. How frequently do you use the Internet? (Check one.)

☐ Once a day
☐ Several times a day
☐ Once a week
☐ Several times a week
☐ Once or twice a month
*5. In your opinion, do you think that Internet is useful for your informal English learning?

- Strongly agree
- Agree
- Not sure
- Disagree
- Strongly disagree

*6. In which of the following places do you use internet for English informal learning.

(Circle all that apply).

- At residence
- public library
- Hostel
- Cybercafe
- university

Other (please specify)

*7. What is the tool on the internet do you use most for your English informal learning.

(Check one).

- Blogs
- Wikis
- Facebook or other social networking tools
- Delicious or other tagging tools

Other (please specify)
8. This question is about what you think you can do with internet. Indicate your level of agreement with each of the following statements.

**Internet:**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>enables me to have a more interesting English learning experiences than learning in the classroom.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>supports my knowledge of English grammar and vocabulary.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>allows me to get a more direct experience of English culture and people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>allows me to work at the time that suits me best.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>allows me to work at the location that suits me best.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>allows me to work at the pace that suits me best.</td>
<td></td>
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</tr>
<tr>
<td>supports proficiency in English.</td>
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<tr>
<td>supports my motivation in learning the language.</td>
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</tr>
<tr>
<td>enables me to become more independent learner.</td>
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<tr>
<td>allows me to learn collaboratively.</td>
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</tr>
<tr>
<td>enables me to get more opportunities for personal feedback on my English.</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>allows me to monitor my learning progress closely.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
9. ABOUT YOUR LEARNING

This question is about your on-line language learning strategies. Indicate your level of agreement with each of the following statements.

When I learn on-line:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a purpose in mind.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I communicate in English with other learners.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I communicate in English with native speakers of English.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I take notes to increase my understanding.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think about whether the content of the on-line material fits my learning purpose.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I try to get back on track when I lose concentration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I print out a hard copy of the on-line material then underline or circle information to help me remember it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use reference materials (e.g. an on-line dictionary) to help me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand what learnt on-line.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>---------------------------------</td>
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</tr>
<tr>
<td>I use tables, figures, and pictures to increase my understanding.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I stop from time to time and think about what I am learning.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I use context clues to help me better understand what I am learning.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I paraphrase (restate ideas in my own words) to better understand what I read.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I go back and forth in the on-line material to find relationships among ideas in it.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I check my understanding when I come across new information.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>When on-line text becomes difficult, I re-read it to increase my understanding.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I guess the meaning of unknown words or phrases.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I can distinguish between fact and opinion in on-line material.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I think about information in both English and my mother tongue.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I practice the sounds of English online.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I watch English language program/movies online.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I try to find as many ways as I can to use my English online.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I publish my ideas and responses online.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>I voice my opinions in English online.</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
<td></td>
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</tr>
</tbody>
</table>

I get more ideas on how to learn well online than learning in the classroom.

**** THANK YOU AGAIN FOR TAKING TIME TO COMPLETE THIS SURVEY
******

********** YOUR EFFORT IS VERY MUCH APPRECIATED **********
APPENDIX F: Approval from the Malaysian Ministry of Higher Education

Puan Che Wan Ida Rahimah bt. Che Wan Ibrahim
No. K/P: 770121-11-6738
82, Jalan Merpati
Padang Jambu
Dungun
23000 TERENGGANU
E-mail: idaray@umt.edu.my

Puan,

PERMOHONAN MENJALANKAN PENYELIDIKAN DI UNIVERSITI MALAYSIA


2. Sukacita dimaklumkan bahawa Jabatan ini tiada halangan dengan permohonan puan untuk menjalankan penyelidikan di Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), Universiti Islam Antarabangsa Malaysia (UIAM), Universiti Teknologi MARA (UiTM), Universiti Sultan Zainal Abidin (UnisZA) dan Universiti Malaysia Terengganu (UMT) bagi tujuan projek penyelidikan bertajuk “Perceived affordances and learning strategy of Malaysian University Students in Web 2.0-based English as a second language informal learning: A mixed method study”. Walau bagaimanapun, kelulusan yang diberikan ini adalah tertakluk kepada persetujuan universiti tersebut.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menurut perintah,

(DATO' IR. DR. RADIN UMAR BIN RADIN SOHADI)
Ketua Pengarah
Jabatan Pengajian Tinggi
Kementerian Pengajian Tinggi
APPENDICES

APPENDIX G: Approval from the Malaysian Economic Planning Unit

UNIT PERANCANG EKONOMI
Economic Planning Unit
JABATAN PERDANA MENTERI
Prime Minister’s Department
BLOK B5 & B6
PUSAT PENTADIRIAN KERAJAAN PERSEKUTUAN
62502 PUTRAJAYA
MALAYSIA

UNIT PERANCANG EKONOMI
Economic Planning Unit
JABATAN PERDANA MENTERI
Prime Minister’s Department
BLOK B5 & B6
PUSAT PENTADIRIAN KERAJAAN PERSEKUTUAN
62502 PUTRAJAYA
MALAYSIA

Ray. Tzm:
Your Ref:

Ray. Kmr:
Our Ref:

Tarikh:
Date:

21 Jun 2010

Email: hwww.fundl.edu.my

APPLICATION TO CONDUCT RESEARCH IN MALAYSIA

With reference to your application, I am pleased to inform you that your application to conduct research in Malaysia has been approved by the Research Promotion and Co-Ordination Committee, Economic Planning Unit, Prime Minister’s Department. The details of the approval are as follows:

Researcher’s name: CHE WAN IDA RAHIMAH BT. CHE WAN IBRAHIM

Passport No. / I. C No: 770121-11-5738

Nationality: MALAYSIAN

Title of Research: “Perceived affordances and learning strategy of Malaysian University Students in Web 2.0-based English as a second language Informal learning: A mixed method study.”

Period of Research Approved: 4 MONTH

1. Please collect your Research Pass in person from the Economic Planning Unit, Prime Minister’s Department, Parcel B, Level 4 Block B5, Federal Government Administrative Centre, 62502 Putrajaya and bring along two (2) passport size photographs. You are also required to comply with the rules and regulations stipulated from time to time by the agencies with which you have dealings in the conduct of your research.
Appendix H: Approvals from the participating universities

OFFICE OF THE DEPUTY RECTOR (ACADEMIC AND PLANNING)

IIUM/I03/4/1
16 August 2010 / 6 Ramadhan 1431

St. Che Wan Ida Rahimah bt. Che Wan Ibrahim
Faculty of Education, La Trobe University
Bendigo VIC. 3552
Australia
E-mail: echeewanibrahim@students.latrobe.edu.au

Dear Sir,

appliqué pour votre bien-être.

APPLICATION TO CONDUCT RESEARCH AT THE INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM)

Thank you for your e-mail of 12 August 2010 regarding the above. We have no objection for you to carry out the proposed study and to conduct interviews on a number of final year students of the TESL course at IIUM. For further arrangement, you are advised to contact the Head of English Department as follows:

Name: Dr. Zahariah Pilus
Contacts: Zahariahp@iiu.edu.my or zahaplus@yahoo.com
603 6196 6020/6021 (T) - 603 6196 3148 (F)

You ought to collect Visitor Temporary Pass from the Security Office at the IIUM Main Entrance to ease your movement while on this campus. You are also required to comply with all rules and regulations of the university during this period.

All the best to you!

Thank you.

Sincerely

PROF. DATO’ DR. MD TAHIR MD AZHAR
Deputy Rector (Academic and Planning)

Cc: Hon. Dato’ Sri Rektor, IIUM
Chief Librarian, IIUM
Dean, Kulliyyah of IRKHS, IIUM
Head, Dept. of English Language and Literature, Kulliyyah of IRKHS, IIUM
Security Manager, Security Management, IIUM

Garden of Knowledge and Virtue
Office Address: Office of the Deputy Rector (Academic and Planning), Level 4, Registry Building, International Islamic University Malaysia, Kuala Lumpur, 50600 Serdang.
Tel: 603 6196 4818 / 603 6196 4815 Fax: 603 6196 4867 Email: rkm@iiu.edu.my Website: www.ium.edu.my
APPENDICES

Surat Kami
Tarikh

600-HEA (5/2)
20 Ogos 2010

Puan Che Wan Ida Rahimah bt Ché Wan Ibrahim
82, Jalan Merpati
Padang Jambu
Dungun
23000 Terengganu

Puan

KEBENARAN MENJALANKAN KAJIAN PENYELIDIKAN DI UNIVERSITI TEKNOLOGI MARA, SHAH ALAM

Dengan segala hormatnya surat puan bertarikh 21 Julai 2010 adalah dirujuk.


3. Oleh yang demikian diharap pihak puan dapat memaklumkan terlebih dahulu kehadiran puan ke Fakulti yang berkenaan bagi mengelakkan sebarang kesulitan.

Sekian terima kasih.

Yang benar

PROF. DR. AZNI ZAIN AHMED
Tibaalan Naib Canselor (Akademik & Antarabangsa)

sk
(i) Y Bhg Dato' Prof Ir Dr Sahol Hamid Abu Bakar FASc
Naib Canselor

(ii) Prof Madya Dr Normah Abdullah
Dekan
Fakulti Pendidikan
Puan Che Wan Ida Rahimah bt Che Wan Ibrahim
Education Faculty
La Trobe University
Bendigo 3550 Vic
AUSTRALIA

Saudari,

MENJALANKAN PENYELIDIKAN DI UKM

Dengan segala hortatnya saya ingin merujuk kepada emel puan bertarikh 19 Ogos 2010 mengenai perkara di atas.

Saya tiada halangan dan bersetuju meluluskan permohonan puan untuk menjalankan penyelidikan bertajuk 'Perceived Affordances in Using Web 2.0 Based English for Informal Learning of Second Language A Case Study of Malaysian University Students’ di Fakulti Pendidikan UKM tertakluk kepada syarat-syarat yang boleh dikenakan oleh UKM dan Fakulti Pendidikan.

Sekian, terima kasih.

Yang benar,

PROF. DATO’ IR. DR. HASSAN BASRI

s.k.: Dekan, Fakulti Pendidikan
30 Ogos 2010

Puan Che Wan Ida Rahimah bt. Che Wan Ibrahim
62, Jalan Merpati
Padang Jambu
23000 Dungun
Terengganu Darul Iman

Puan,

PERMOHONAN MENJALANKAN PENYELIDIKAN DI UNIVERSITI MALAYA

Dengan hormatnya saya merujuk kepada email puan bertarikh 26 Ogos 2010 berkaitan berkaitan perkara di atas.

Saya mengambil malam puan sedang mengikuti pengajian PhD di La Trobe University, Australia dan kini dalam proses menyediakan tesis yang bertajuk 'Perceived Affordances in Using Web 2.0-Based English for Informal Learning of Second Language – A Case Study of Malaysian University Students'.

Bagi memenuhi keperluan tesis tersebut, sukacita dimaklumkan Universiti Malaya tiada halangan membenarkan puan menjalankan penyelidikan di Fakulti Pendidikan sesuai dengan bidang dan tajuk tesis puan tersebut.

Sehubungan itu, sila berhubungan dengan Dekan, Fakulti Pendidikan di talian 03-79675000 bagi tujuan tersebut.

Sekian, terima kasih.

Yang benar,

PROFESOR DR. HAMZAH ABDUL RAHMAN
Timbalan Naib Canselor (Akademik & Antarabangsa)

s.k. Dekan ) Sukacita dapat pihak Fakulti memberi
Fakulti Pendidikan ) bantuan kepada pelajar dimana perlu.
Universiti Malaya )

Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)
Akaun 2, Bangunan Canselor, Universiti Malaya
50603 Kuala Lumpur, MALAYSIA

Office of the Deputy Vice-Chancellor (Academic & International)
Level 3, Chancellor Building, University of Malaya
50603 Kuala Lumpur, MALAYSIA
Tel: (603) 7967 3203 / 7967 3256 • Faks: (603) 7967 2214 • E-mail: tvc_dca@um.edu.my
REQUEST FOR PERMISSION TO CARRY OUT RESEARCH IN UNIVERSITY

Dengan hormatnya saya merujuk surat puan melalui e-mel bertarikh 26 Ogos 2010, mengenai perkara di atas.

2. Sukacita dimaklumkan bahawa saya tiada halangan bagi puan untuk menjalankan penyelidikan tersebut di Universiti Putra Malaysia (UPM), dengan syarat satu salinan laporan hasil penyelidikan yang akan puan jalan kekal dihantar ke Pejabat Timbalan Naib Canselor (Akademik dan Antarabangsa), UPM.

Sekian, terima kasih.

"BERILMU BERBAKTI"

Yang benar,

PROF. DATIN PADUKA DR. AINI IDERIS
Timbalan Naib Canselor (Akademik dan Antarabangsa)

E-mel: tnca@putra.upm.edu.my
Our Reference : UMT/TNC(A&A)/2-2
Date : 23rd September 2010

Madam Che Wan Ida Rahimah Che Wan Ibrahim
Faculty of Education
La Trobe University
Bendigo VIC 3552
Australia.

Dear Madam Che Wan Ida Rahimah,

REQUEST FOR PERMISSION TO CARRY OUT RESEARCH IN UNIVERSITY

With regards to your request to undertake a survey of UMT students use of the web for learning English, I welcome you to carry out such research at Universiti Malaysia Terengganu. Please inform me of your planned dates for the study and preparations on our part to support your study.

Thank you. Best regards.

Yours sincerely,

(PROF. DR. NOOR AZHAR MOHAMED SHAZILI)
Deputy Vice-Chancellor (Academic and International)
Universiti Malaysia Terengganu

c.c. - Vice Chancellor, UMT
- File
APPENDICES

Che Wan Ida Rahimah bt. Che Wan Ibrahim
82, Jalan Merpati
PadangJambu
23000 Dungun
Terengganu.
(I/C No: 770121-11-5738)

APPLICATION TO CONDUCT RESEARCH IN UNIVERSITI SULTAN ZAINAL ABIDIN (UniSZA)

With reference to your e.mail dated 21 September 2010, I am pleased to inform you that the university have no objection to your application for conduct of the stated research below.

Title of Research : “Perceived affordances and learning strategy of Malaysian Students in Web 2.0-based English as a second language informal learning: A mixed method study.”

Period of Research Approved: 4 MONTHS

Please contact our Head of Corporate and Communications Unit - Madam Rosliza Abdul Razak (e.mail: rosliza@udm.edu.my) for further assistance. We would be grateful if you could also submit to us, a summary of your findings.

Thank you.

Yours sincerely,

[ Prof. Dr. Mohd Afandi bin Muhamad ]
Deputy Vice Chancellor Academic and International Affairs

c.c. - Dean of Student Affairs and Alumni
- Dean of the Faculty of Languages and Communication
- Head of Corporate and Communications Unit

UNIVERSITI SULTAN ZAINAL ABIDIN

MBA UNIT, KADAM HUM

Pekan Timbalan Naib Canselor (Akademik dan Antarabangsa)
Deputy Vice Chancellor’s Office (Academic and International Affairs)

Our Ref : UniSZA/C/1/TNC(A&A)/628 (12)
Date : 23 September 2010

Canseleri - Chancellory

unisza.edu.my