

## Perceived Learning Strategies of Malaysian University Students in Web 2.0-based English as a Second Language Informal Learning

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### ABSTRACT

Web 2.0 popular platforms such as Facebook, YouTube and Wikis offer an emerging social networking practice, collective intelligence and a natural context to promote learner independence in informal ESL acquisition. This paper presents a review of recent research that investigates “the perceived learning strategies of Malaysian university students in Web 2.0-based informal learning of ESL”. The main research question considers how ESL learners account for the strategies of Web 2.0-based ESL learning when they engage with these tools in informal, learning settings. Questionnaires were used to generate quantitative data from the university student population (N=400) through an on-line self-reported survey. Results suggest that the majority of the Malaysian university students (ESL learners) surveyed use learning strategies with Web 2.0 tools for their English informal learning that are intentional and purposeful, and provide valuable lifelong learning experiences too. Powerful shared intentions and thoughts guide actions, shared practice and sociocultural mediation through Web 2.0 tools and roles in this informal learning activity system, locally and globally. These learners also seek help from their peers and their own independent research, using web 2.0 tools to practice in communicative language learning environments outside of the classroom in more relaxed atmosphere. This media has enabled students to adopt new learning behaviours, cooperative practice, mutual engagement and responsibilities consistent with the realities of a rapidly changing virtual community. The participants also expressed strong positive experiences and perceptions towards learning strategies with Web 2.0 tools towards their meaningful English informal learning.

**Keywords:** English as a Second Language (ESL); Web 2.0 tools; informal learning; language learning strategies; social networking

### INTRODUCTION

This section draws on current literature to provide a theoretical direction for understanding and interpreting Web 2.0-based informal ESL learning strategies for Malaysian university students. 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 set 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 one's [second language] 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)

What strategies and methods are appropriate to language learners and measured are still being debated (Chamot, 2005; Macaro, 2001; Zimmerman, 2000). 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 use would be a potential help to all language learners to become more dynamic (Chamot, 2005; Macaro, 2001; Zimmerman, 2000). Language learners who discover various learning strategies are able to decide the best strategies for their own practice (Chamot, 2005; Macaro, 2001; Zimmerman, 2000).

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).

Many web-based learning experiences rely on feedback from others (Duke, 2010). 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). 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 (Nor Fariza, Hazita & Afendi, 2012). 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). 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. 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). As such, online learning is perceived to be an interactive, exciting and a better learning experience compared to face-to-face learning because it helps students share thoughts and ideas and engage in more collaborative activities (Kung, 2005; Nor Fariza, Hazita & Afendi, 2012; Pang, Wah, Keong & Mohamed, 2005).

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 global language and collaboration, 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 (Shihab, 2008; Boruta, Chang, Gutl, & Edwards, 2011; Branch, 2012). 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 and sharing 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 integrating and remixing are also useful in writing strategies, especially for source synthesis (Boruta et al., 2011; Kung, 2005).

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 (Duke, 2010; Nor Fariza, Hazita & Afendi, 2012; Starkey, 2010; Ullrich et al., 2008). Typically this involved learners trying out something and, if not successful, looking for online help or asking 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 (Branch, 2012; Nor Fariza, Hazita & Afendi, 2012; 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) and Woo et al. (2011) 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.

Researchers found some important learning strategies for searching and selecting information on the web as demonstrated by young learners in their study (Kung, 2005; Mortimer, 2010). For example, Mortimer (2010) 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) and Woo et al. (2011) claim 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 (Woo et al., 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). These authors propose web-based language learning is important for

worldwide social interaction and for 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.

As suggested by the literature, web tools offer potential ground for supporting individual personal learning (Nor Fariza, Hazita & Afendi, 2012; Woo et al., 2011). This in turn, empowers their perception and valuable activity exploration (Boruta et al., 2011; Mortimer, 2010; Shihab, 2008). Consequently, individual learning is seen to be influenced by the environment and context. 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 (Dale, 2010; Mills, 2011), 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.

Further, the researcher has not so far located any credible research studies which examine the current perceptions among Malaysian university students about their informal learning strategies of English as Second Language (ESL) learning via Web 2.0. Thus, the key research question of this study is: “What are the perceived learning strategies used by Malaysian university students in web 2.0-based ESL learning beyond the formal spaces, from a user perspective”.

## **THEORETICAL FRAMEWORK**

This study uses the multiple lenses of sociocultural 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. Activity theory (Vygotsky, 1978; Engeström, 2001; Lantolf & Thorne, 2006) and situated learning theory (Wenger, 1998) are viewed to highlight communal practices. According to activity theory, all human activity is considered to be object-oriented (Engeström, 2001) and subjects' actions towards objects in an activity system are mediated by four inter-related mediators namely mediating artefacts, rules, community and division of labor. Mediating artefacts include technical artefacts (tools) and psychological artefacts (cognitive resources). In informal learning activities of ESL, technical artefacts can be computers, Web 2.0 tools such as Facebook and YouTube while psychological artefacts include language and multimedia materials. Engeström (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, 2001).

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, 2001). 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, 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, 2001). 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.

Under situated learning conceptualization, individual actions are now embedded within and obtain meaning from a community of people (CoP) 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. Therefore, parts of each user’s personal environment overlap allowing for shared practice and mediation by tools, roles and material resources. This integrated framework (activity theory and situated learning theory) allows for capturing the complexities of perceived learning strategies to be conceptualized as learning histories which are imported into the informal ESL learning activity. It also has 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 strategies for informal ESL learning are performed.

## METHODOLOGY

A quantitative method design was used to collect data using online surveys. The distribution and collection of these surveys took place at the end of the second term of 2010/2011 academic year. Approximately 400 students were selected as participants 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. Therefore, this research focused on one group of respondents who were final year students and their selection was done based on a convenient sampling. These populations are also conveniently accessible to the researcher. Approvals from universities were obtained prior to any data collection. 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 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-MSA area (Terengganu) as follows:

TABLE 1. University based on location and course

<b>University Based on Location and Course</b>	
<b><i>MSC area (Kuala Lumpur)</i></b>	<b><i>Non MSC area (Terengganu)</i></b>
University of Malaya (UM) TESL (50 participants)	University Malaysia Terengganu (UMT) Other courses (50)
University Putra Malaysia (UPM) TESL (50)	University Darul Iman (UDM) Other courses (50)
University Kebangsaan Malaysia (UKM) TESL (50)	University Technology Malaysia (UITM-Dungun) – Other courses (50)
University technology Malaysia (UITM) TESL (50)	
International Islamic University Malaysia (IIUM) TESL (50)	

The survey instrument was administered during class time and required approximately 15 minutes to complete. This survey 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 were informed 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. The questionnaire contained statements that used a 5-point Likert scale. 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.

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. Online survey data were analysed

through statistical methods including descriptive analysis using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics was used to organize, summarize and describe the responses of the participants. More importantly, the processes of organizing numerical data allowed the researcher to draw conclusions and make informed decisions about the validity of study. 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. The analysis of participants' online learning strategies used 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 language learning strategies for investigation. This further divided into a number of sub-themes according to the constructs of perceived language learning strategies, provided by Anderson (2003). This quantitative data collection instrument was modified for use in this study by the researcher (see Table 2 below).

## RESULTS

This section sought to analyze the strategies Malaysian university students employed in order to enhance their informal ESL learning mediated by Web 2.0 tools. For further analysis, Table 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 mean and standard deviation was calculated for each item as demonstrated in Table 2 below.

TABLE 2. The means and standard deviations for questionnaire no 9 items

No.	Statements	Mean	SD
1	I have a purpose in mind. (Personal)	4.39	0.67
2	I communicate in English with other learners. (Social)	4.12	0.84
3	I communicate in English with native speakers of English. (Social)	3.83	0.79
4	I take notes to increase my understanding. (Personal)	3.90	0.80
5	I think about whether the content of the on-line material fits my learning purpose. (Personal)	4.08	0.68
6	I try to get back on track when I lose concentration. (Personal)	4.00	0.66
7	I print out a hard copy of the on-line material then underline or circle information to help me remember it. (Personal)	3.75	0.87
8	I use reference materials (e.g. an on-line dictionary) to help me understand what learnt on-line. (Social)	4.34	0.68
9	I use tables, figures, and pictures to increase my understanding. (Social)	4.05	0.70
10	I stop from time to time and think about what I am learning. (Personal)	3.91	0.69
11	I use context clues to help me better understand what I am learning. (Social)	4.20	2.58
12	I paraphrase (restate ideas in my own words) to better understand what I read. (Personal)	4.10	0.65
13	I go back and forth in the on-line material to find relationships among ideas in it. (Personal)	3.96	0.65
14	I check my understanding when I come across new information. (Personal)	4.19	0.56
15	When on-line text becomes difficult, I re-read it to increase my understanding.	4.16	0.60



	(Personal)		
16	I guess the meaning of unknown words or phrases. (Personal)	4.20	0.69
17	I can distinguish between fact and opinion in on-line material. (Social)	4.12	0.80
18	I think about information in both English and my mother tongue. (Social)	4.05	0.81
19	I practice the sounds of English online. (Social)	3.84	0.91
20	I watch English language program /movies online. (Social)	4.18	0.79
21	I try to find as many ways as I can to use my English online. (Social)	4.35	0.70
22	I publish my ideas and responses online. (Social)	4.15	0.90
23	I voice my opinions in English online. (Social)	4.13	0.92
24	I get more ideas on how to learn well online than learning in the classroom. (Social)	4.23	0.81

(N=24)

As revealed in Table 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%) strongly agreed that they have a purpose in mind when learning online. In contrast, only five students (1.3%) 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%) 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 whereas only 63 (15.8%) of them rated the item as not sure.

From Table 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 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.

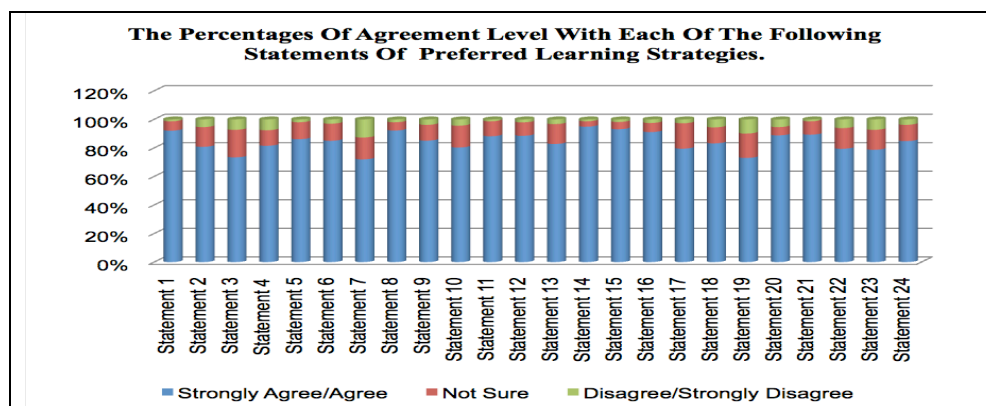


FIGURE 1. Students' agreement level with the online learning strategies

Bar charts in Figure 1 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 strongly agreed. 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% strongly agreed that they could communicate in English with other learners via Web 2.0. Many participants 73.4% reported as agreed with the third learning strategy, "I communicate in English with native

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speakers of English”. For the fourth bar, a substantial number of participants (81.5%) agreed that they took notes to increase their understanding. Next, 86.1% strongly agreed, with the fifth learning strategy, “I think about whether the content of the online material fits my learning purpose”. The sixth bar shows 85% strongly agreed, with the strategy, “I try to get back on track when I lose concentration”. A majority of participants (72%) strongly agreed 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 strongly agreed with using reference materials (for instance, an online dictionary) to help them understand what they had learnt online. Furthermore, 85.1% strongly agreed, 11.1% stated as not sure that they used tables, figures, and pictures to increase understanding. As shown by the tenth bar, a majority of participants (80.3%) strongly agreed, 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” 88.2% of students agreed. A substantial number of participants (88.5%) agreed/strongly agreed, that they paraphrase (restate ideas in my own words) to better understand what they read. The thirteenth bar shows 82.8% of participants strongly agreed, 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. Bar 15 shows 93.1% of participants agree, conversely that when online text becomes difficult, they re-read it to increase their understanding.

Bar 16 shows that 91.1% of students strongly agreed toward the strategy “I guess the meaning of unknown words or phrases”. Bar 17 shows that 79.5% of participants agreed that 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% strongly agreed. Many participants (73%) agreed that they practice the sounds of English online and 88.8% agreed about watching English language programs/movies online. From Figure 1, 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. A majority of 79.4% participants, agreed about publishing ideas and responses online. For strategy 23, “I voice my opinions in English online”, 78.7% of participants agreed. Finally, bar 24 shows that 84.8% of participants agreed that they got more ideas on how to learn well online than learning in the classroom.

## DISCUSSION

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 that Web 2.0 allows learning strategies of ESL beyond classroom. In contrast, 4.4% of the participants (18 learners) 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 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; Nor Fariza, Hazita & Afendi, 2012; 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 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 (Boudreaux, 2010). 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.

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 (Vygotsky, 1978; Lantolf & Thorne, 2006; Cho et al., 2009; Nor Fariza, Hazita & Afendi, 2012). 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 3.

TABLE 3. Representation of perceived learning strategies of student-participants

<b>Perceived Range of Learning Strategies</b>	
<b>Social</b>	<b>Personal</b>
Communicate with:	
i) Other learners	Set purpose in mind.
ii) Native speakers	
Use references.	Take notes.
Use tables, figures & pictures.	Think about content, rethink & check understanding.
	Print out & underline.
Use context clues.	Paraphrase.
Use L2 & L1.	Relate ideas.
Practice: i) Sounds	
ii) Watching	
iii) Use many ways	
Publish ideas online.	Re-read.
Voice opinions.	Guess meaning.
Get more ideas about learning.	Distinguish facts and opinions.

Learners reported various ways in which they were involved in learning strategies for Web 2.0-based informal ESL learning. This study presented quantitative results concerning the students’ learning strategies for ESL learning outside the classroom.

## CONCLUSION

The significance of this study is that the researcher brings fresh insights to current understandings at the core of the matter. That is, they illuminate the potential of Web 2.0 tools for informal learning strategies in pursuing this medium for ESL learning beyond the classroom. This study has strengthened the case for the significance of out-of-class ESL activities in terms of students’ perceived individual and social learning strategies. The research clearly identified that participants were purposefully adept at being good learners,

especially through the multiple identities they adopted (Wenger 1998; Mills, 2011) and their own trial and error (Ullrich et al., 2008; Duke, 2010; Starkey, 2010). They mutually negotiated and expressed themselves through repeated practice and rehearsal (Shihab, 2008; Boruta et al., 2011; Branch, 2012) of informal learning, to aid in the development of both social and personal learning of ESL.

These experiences involved authentic tasks and positive sociocultural interactions, and, as technology develops further, novelty will continue to drive motivation and continuing learning participation for many learners. For instance, via web 2.0 tools, participants could act as knowledge resources for each other, they conceptualized the peer feedback and sharp assessment activities as a peers-only space where social interaction occurred amongst the learners and significant others. In other words, social interaction was meaningful as a way to enhance individual status, to develop individual understanding and to advance group understanding. The participants communicated with one another in order to provide members with information, contacts and supports. The interactive web 2.0 tools allowed them to be in touch by enabling them to post any questions in a longer text or simple message and support their knowledge sharing activities and when they were stuck on stresses. Such interactive and communicative tools allow them to express themselves and be confident in international language skills. In this regard, web 2.0 tools as global networks link people with people, people with information and information with other information. These options can accommodate situations where the participants are not in the same location and where they may or may not be online at the same time through asynchronous tools and synchronous interaction in English language.

Thus, it is hoped that this knowledge will encourage education practitioners and policy makers to consider integrating these factors into their formal activities, their instruction and curriculum planning, to promote students' learning performance. The findings of the study can also be of value to curriculum designers and educational technology systems developers, especially in offering approaches for the design of web-based learning systems that most suitable for 21<sup>st</sup> century language learners. Taken together, 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. Extending this notion, it is recommended that future research designs provide for a deep qualitative component that includes observation and 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 learning of ESL and Malaysian university students' out-of-class learning practices, for example, on Web 2.0-based informal learning rules and learning strategies.

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### **REFERENCES**

Anderson, N.J. (2003). Scrolling, clicking, and reading English: Online reading strategies in a second/foreign language. *The Reading Matrix*. 3(3), 1-33.

- Boruta, S., Chang, V., Gutl, C., & Edwards, A. (2011). Foreign language learning environment built on Web 2.0 Technologies. International Conference on Interactive Computer-Aided Learning, ICL2011. Retrieved from <http://0ieeexplore.ieee.org.alpha2.latrobe.edu.au/stamp/stamp.jsp?tp=&arnumber=6059551>
- Boudreaux, M. (2010). *Collaboration via Wikis: Social aspects and adapting teacher feedback in an online environment*. Unpublished MA thesis, University of Louisiana. Retrieved from <http://etd.lsu.edu/docs/available/etd11182010131545/unrestricted/BoudreauxThesis.pdf>
- Branch, R. (2012). *The effects of web based instruction on foreign language learning*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3489467)
- Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. *Annual Review of Applied Linguistics*. 25, 112-130.
- Cho, Vincent., Cheng, Edwin & Lai, Jennifer. (2009). The role of perceived user-interface design in continued usage intention of self-paced e-learning tools. *Computers and Education*. 53(2), 216-227.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.
- Dale, C. (2010). *Engaging the networked learner: Theoretical and practical issues*. University of Wolverhampton (United Kingdom). Retrieved from <http://wlv.openrepository.com/wlv/bitstream/2436/106818/1/Crispin%20Dale%20PhD%20.pdf>
- Denzin, N. K., & Lincoln, Y. S. (2005). *The SAGE handbook of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage.
- Duke, R. A. (2010). *Students' learning experiences with the Web 2.0 Tool My Portfolio: A case study of one high school classroom*. Unpublished MA thesis, Victoria University of Wellington, New Zealand). Retrieved from <http://researcharchive.vuw.ac.nz/handle/10063/1302>
- Engeström, Y. (2001). Expansive Learning at Work: Toward an activity theoretical reconceptualization. *Journal of Education and Work*. 14(1), 133-156.
- Franklin, T., & Van Harmelen, M. (2007). Web 2.0 for content for Learning and Teaching in Higher Education. Bristol: JISC. Retrieved November 9, 2007 from [http://www.jisc.ac.uk/media/documents/programmes/digital\\_repositories/web2-content-learning-and-teaching.pdf/](http://www.jisc.ac.uk/media/documents/programmes/digital_repositories/web2-content-learning-and-teaching.pdf/)
- Kung, Shiao-Chuan. (2005). Guiding EFL Learners in the Use of Web Resources. *GEMA Online<sup>®</sup> Journal of Language Studies*. 5(2), 50-62.
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford, New York: Oxford University Press.
- Lave J. & Wenger E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press.
- Macaro, E. (2001). *Learning strategies in foreign and second language classroom*. London, New York: Continuum.
- Mills, N. (2011). Situated learning through social networking enterprise, mutual engagement, and a shared repertoire. *CALICO Journal*. 28(2), 345-368.
- Mortimer, N. R. (2010). *Investigating How Young Students Search for, Select, and Interrogate Information on the Internet*. Ph.D, Claremont Graduate University and San Diego State University. Retrieved from <http://search.proquest.com/docview/912381142?accountid=12001>

- Nor Fariza Mohd Nor, Hazita Azman & Afendi Hamat. (2012). Investigating students' use of online annotation tool in an online reading environment. *3L: Language Linguistics Literature®*, *Southeast Asian Journal of English Language Studies*. 19(3), 87-101.
- Salomon, G., & Perkins, D. N. (1996). Learning in wonderland: What do computers really offer education? In S. Kerr (Eds.). *Technology and the future of schooling. Ninety-fifth yearbook of the national society for the study of education*. Chicago: University of Chicago Press.
- Shihab, M. M. (2008). *Web 2.0 tools improve teaching and collaboration in high school English language classes*. (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3344829)
- Starkey, L. (2010). *Digital Saviours: Digitally able secondary school teachers in their first year of teaching*. (Doctoral dissertation, Victoria University of Wellington). Retrieved from <http://researcharchive.vuw.ac.nz/bitstream/handle/10063/1176/thesis.pdf?sequence=1>
- Ullrich, C., Borau, K., Luo, Heng, Tan, Xiaohong, Shen, Liping, & Shen, Riumin. (2008). *Why Web 2.0 is good for learning and for research: Principles and prototypes*. Paper presented at the Proceedings of the 17th International World Wide Web, New York. Retrieved from <http://halshs.archives-ouvertes.fr/docs/00/58/87/57/PDF/ULLRICH-CARSTEN-2008.pdf>
- Vincent Pang, Lee Kean Wah, Tan Choon Keong, Shukery Mohamed (2005). E-Learning initiatives in e-educating student teachers. *GEMA Online® Journal of Language Studies*. 5(2), 15-27.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge, U.K: Cambridge University Press.
- Woo, Matsuka, Chu, Samuel Kai-Wah., Ho, Andrew, & Li, Xuan. (2011). Using a Wiki to Scaffold Primary-School Students' Collaborative Writing. *Educational technology & society*. 14(1), 43-54.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social-cognitive perspective. In M. Boekaerts, P. Pintrich & M. Seidner (Eds.). *Self-regulation: Theory, research, and applications* (pp. 13-39). Orlando, FL: Academic Press.

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