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

CHE WAN IDA RAHIMAH BT. CHE WAN IBRAHIM
DOCTOR PHILOSOPHY

SCHOOL OF EDUCATION
FACULTY OF EDUCATION
LA TROBE UNIVERSITY
BENDIGO, VICTORIA 3552
AUSTRALIA

2013

LB 1044.87 .C4 2013



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 / Che Wai Ida Rahimah Che Wan Ibrahim.



#### PUSAT PEMBELAJARAN DIGITAL SULTANAH NUR ZAHIRAH UNIVERSITI MALAYSIA TERENGGANU (UMT) 21030 KUALA TERENGGANU

21030 KUALA		
110	0090469	
	-	
		,

Lihat Sebelah

HAK MILIK

PUSAT PEMBELAJARAN DIGITAL SULTAMAN NUR ZAHIRAN

# 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

## Submitted by Che Wan Ida Rahimah Bt. Che Wan Ibrahim

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 Faculty of Education

La Trobe University Bendigo, Victoria 3552 Australia

January 2013

## TABLE OF CONTENTS

TICT	OF EL	CLIDEC	**
		GURES	v
		ABLES	vii
		CRONYMS	ix
		NS OF TERMS	X
ABST	RACT		xii
STAT	EMEN	T OF AUTHORSHIP	xiii
DEDI	CATIO	ON	xiv
ACKN	OWL	EDGEMENTS	xv
CHAP	TER (	ONE: INTRODUCTION	1
1.0	Introd	luction	1
1.1	Resea	rch questions:	3
1.2		ground of the research	4
1.3	Theor	retical framework	7
1.4		tial significance of the study	8
1.5		ture of the dissertation	10
	Summ		12
CHAP	TER	TWO: LITERATURE REVIEW	13
2.0	Introd		13
2.1	An ov	erview of educational theories	14
	2.1.1	Behaviourism	15
	2.1.2	Constructivism	17
	2.1.3	Social constructivism	18
	2.1.4	Technology and learning: the influence of the sociocultural Approach	21
2.2	Web 2	2.0: The millennial learners	25
	2.2.1	Web 2.0: What to learn?	28
	2.2.2	Web 2.0: How to learn?	31
2.3	The no	otion of affordances	33
	2.3.1	Web technologies and learning affordances	36
	2.3.2	Web technologies and learning limitations	55
2.4	Learn	ing strategies	61
	2.4.1	Web-based language learning strategies	64
	2.4.2	Web tools as learning strategies practice platforms	69

2.5	Sumn	nary	83
CHAP	TER T	THREE: THEORETICAL FRAMEWORK	85
3.0	Intro	duction	85
100		skian sociocultural theory	87
	3.1.1	Mediation in sociocultural theory	88
			93
3.2	Activi	ty theory: Leontiev and Engeström	
	3.2.1	Leontiev's activity theory: motive, goal and conditions	93
	3.2.2	Engeström's activity theory: mediating resources	97
	3.2.3	Re-conceptualizing the activity of perceiving ESL learning affordances and strategy research from a sociocultural perspective	100
3.3	Situa	ted learning and communities of practice (CoP) theory	105
3.4	Web	2.0 activities considered from the ecological perspective	107
3.5	Conc	lusion	112
CHAPT	TER F	OUR: METHODOLOGY	115
4.0	Intro	duction	115
4.1	Purp	ose of the study	116
4.2	Resea	arch questions and instrumentation	117
4.3	Resea	arch methods	119
	4.3.1	Definition of mixed methods research	120
	4.3.2	Advantages and justification for mixed methods	121
4.4	Desig	n of the study	123
	4.4.1	Mixed method research design	123
	4.4.2	Case study design	127
	4.4.3	Research phases, tasks and outcomes	129
4.5	Data	collection procedures	132
	4.5.1	Quantitative phase: online survey	133
	4.5.2	Qualitative phase: focus group interviews	143
4.6	Pilot s	study	148
	4.6.1	Pilot study of questionnaire	148
	4.6.2	Pilot study of interview guide	148
4.7	Valid	ity and reliability of the study	149
4.8	Meth	ods of analysis	151
	4.8.1	Quantitative data analysis	152
	4.8.2	Qualitative data analysis	154
4.9	Resea	arch ethics	158
4.10	Sumi	mary	159

CHAPT	TER FIVE: QUANTITATIVE RESULTS	161
5.0	Introduction	161
5.1	Testing Reliability	163
5.2	Demographic information	164
5.3	Students' engagement with and evaluation of the Web 2.0 for their informal ESL learning	165
	5.3.1 Patterns of Web 2.0 engagement	165
	5.3.2 Places	167
	5.3.3 Tools	168
5.4	Students' evaluation and perceived affordances of Web 2.0 tools for informal ESL learning	170
5.5	The perceived learning strategies adopted by students for ESL learning beyond the classroom	177
5.6	Summary	185
CHAPT	ER SIX: QUALITATIVE RESULTS	189
6.0	Introduction	189
6.1	Section One: Participants' perceived Web 2.0 affordances for informal ESL learning	192
	6.1.1 Theme 1: "Social Transformation"	193
	6.1.2 Theme 2: "Personal learning"	209
6.2	The limitations of the Web 2.0 tools for learning	223
	6.2.1 Technical limitations	224
	6.2.2 Cost constraints	227
	6.2.3 Motivational factors	227
6.3	Section Two: Participants' perceived ESL learning strategies	231
	6.3.1 Research Questions	232
	6.3.2 Web 2.0 tool-mediated strategy use	234
	6.3.3 Community-mediated strategy	261
	6.3.4 Role-mediated strategies	268
6.4	Summary	274
CHAPT	TER SEVEN: CONCLUSIONS AND IMPLICATIONS	276
7.0	Introduction	276
7.1	The research aims and the key findings summary	276
7.2	The research findings	280
	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?	280
	7.2.2: <b>RQ2:</b> What are the perceived affordances and limitations for learner-users in Web 2.0-based informal ESL learning?	281
	7.2.3 <b>RQ3:</b> What are the perceived learning strategies used by these learner-users in the informal environment in question 2?	288

7.3 Analysis of the value of theoretical approaches	292
7.4 Analysis of the value of methodological approaches	296
7.5 Limitations of the research	297
7.6 Recommendations	300
7.7 Recommendations for future research	302
7.8 Concluding remarks	306
REFERENCES	308
APPENDICES	325
APPENDIX A: Research ethics approval	325
APPENDIX B: Participant information sheet	326
APPENDIX C: Online survey guide and consent form for participants	330
APPENDIX D: Focus group interview guide and consent form for participants	333
APPENDIX E: Participant self-report questionnaire	336
APPENDIX F: Approval from the Malaysian Ministry of Higher Education	342
APPENDIX G: Approval from the Malaysian Economic Planning Unit	343
APPENDIX H: Approvals from the participating universities	344

## LIST OF TABLES

Table 2.1	The functional and non-functional requirements of Web 2.0 tools for language learning (Boruta et al., 2011, p. 83)	41
Table 2.2	The importance of motivational game-play elements and their language learning applications (Hoy, 2011, pp. 105-106)	81
Table 4.3	Concurrent mixed methods design with merged results	132
Table 4.4	University based on location and course	135
Table 4.5	Five point likert scale of the study	136
Table 4.6	Constructs and measurement scales for participants' demographic information (Section 1-Part A)	137
Table 4.7	Constructs and measurement scales for participants' patterns of Web 2.0-based learning outside class (Section 1-Part B)	138
Table 4.8	Constructs and measurement scales for participants' perceived affordances of Web 2.0 for informal ESL learning	139
Table 4.9	Constructs and measurement scales for participants' learning strategies for Web 2.0-based informal ESL learning	142
<b>Table 4.10</b>	Focus group topic guide	146
Table 4.11	Significant codes for focus group interviews (Theme 1)	155
Table 4.12	Significant codes for focus group interviews (Theme 2)	156
Table 5.1	The means and standard deviations for questionnaire no 8 item (Statement number =16)	171
Table 5.2	The means and standard deviations for questionnaire no 9 items	178

Table 5.3	Representation of perceived learning strategies of student-participants	188
Table 6.1	Themes and subthemes of perceived affordances of Web 2.0 tools	193
Table 6.2	Subthemes of perceived limitations of Web 2.0 tools	224

## LIST OF FIGURES

Figure 1.1	Conceptual and research framework of the study	10
Figure 2.1	The four literature elements of informal ESL learning in Web 2.0-based language learning for higher education, namely: 1-History of educational technologies, 2- the millennial learners, 3- Web 2.0 affordances & limitations and 4- online learning strategies	14
Figure 3.1	Theoretical framework of the current study	86
Figure 3.2	Graphic representation of Vygotsky's concept of mediation adapted from Engeström, 1987)	91
Figure 3.3	The hierarchical structure of Leontiev's activity theory (Leontiev, 1978, p. 62)	94
Figure 3.4	Activity system (based on Engeström, 1987, 1999)	97
Figure 3.5	Triangle illustrating Web 2.0-based, informal ESL learning activity system	101
Figure 4.1	Research questions and phases	119
Figure 4.2	Concurrent mixed methods research design with merged results	125
Figure 5.1	Participants' usage levels of the Web 2.0 tools	165
Figure 5.2	Students' interest level in Web 2.0 tools for their informal daily English learning	167
Figure 5.3	Places for ESL learning beyond classroom via Web 2.0 tools	168
Figure 5.4	The main Web 2.0 tools that Malaysian university students used most for their informal ESL learning.	169

Figure 5.5	Students' agreement level with the Web 2.0 affordances for informal ESL learning	173
Figure 5.6	Students' agreement level with the online learning strategies	180
Figure 5.7	The summary of Web 2.0 affordances for informal ESL learning	186
Figure 6.1	Themes and subthemes of perceived language learning strategies of participants	233
Figure 7.1	Themes of motivational affordances	282
Figure 7.2	Themes of language learning strategies	289
Figure 7.3	Triangle illustrating Web 2.0-based, informal ESL learning activity system	293

#### LIST OF ACRONYMS

**COP** Communities of Practice

L2 Second language

Edu Educational

ESL English as a Second Language

NCREL North Central Regional Educational Laboratory

EFL English as a Foreign Language

FL Foreign Language

O/L Online

Qual Qualitative

Quan Quantitative

RQ Research Question

RSS Really Simple Syndication

SMS Short Message Service

SPSS Statistical Package for the Social Sciences

Wi-Fi Wireless Fidelity

ZPD Zone of Proximal Development

#### **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