



การประชุมวิชาการและนำเสนอผลงานวิจัยระดับชาติและนานาชาติ ครั้งที่ 10
"Global Goals, Local Actions: Looking Back and Moving Forward"

Effects of Mobile Assisted Language Learning on Learners' Willingness to Communicate in English

ผลของการเรียนรู้ภาษาผ่านโปรแกรมการเรียนภาษาเคลื่อนที่ที่มีต่อความเต็มใจในการสื่อสาร
ภาษาอังกฤษ ของผู้เรียน

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ABSTRACT

Based on cognitive constructivism, this research examines the effects of Mobile assisted language learning (MALL) on learners' willingness to communicate (WTC) in English at a Thai university. The study adopted a purposive sampling technique with 20 participants in a control group without any special treatment and 20 in an experimental group with the requirement to use a mobile application. The researcher used WTC survey questionnaires and student log to collect the data. Mean, Standard Deviation, Independent- and Pair-Samples t-test are used in data analysis. From 130 respondents, learners' WTC was reported at neutral level. After 8 weeks, the results collected from pre- and post-survey questionnaires showed that each group of participants improved their WTC significantly ($p < 0.05$) whilst there is no significant difference between the improvements of the two groups. Thus, this result needs a further triangulation from a more exploratory design such as observation to see more concrete evidences for such difference.

KEYWORDS: Willingness to Communicate (WTC), Mobile Assisted Language Learning (MALL), Cognitive Constructivism

บทคัดย่อ

งานวิจัยนี้ยึดหลักการทฤษฎีการเรียนรู้แบบสร้างสรรค์ด้วยปัญญา โดยมีจุดมุ่งหมายเพื่อ ศึกษาผลของการใช้ โปรแกรมการเรียนภาษาเคลื่อนที่ที่มีต่อความเต็มใจในการสื่อสารภาษาอังกฤษของรของผู้เรียนในมหาวิทยาลัยแห่งหนึ่งในประเทศไทย กลุ่มตัวอย่างที่ใช้ในการศึกษาวิจัยได้มาจากการสุ่มแบบเจาะจง แบ่งออกเป็นกลุ่มควบคุม จำนวน 20 คน และกลุ่มทดลอง จำนวน 20 คน โดยผู้เรียนที่อยู่ในกลุ่มทดลอง เรียนภาษาอังกฤษผ่านโปรแกรมการเรียนภาษาเคลื่อนที่ เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถามความเต็มใจ



ในการสื่อสารภาษาอังกฤษ และแบบบันทึกการเรียนรู้ การวิเคราะห์ข้อมูลทางสถิติ โดยหาค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน การทดสอบแบบ Independent- และ Pair-Samples t-test ผลจากการตอบแบบสอบถามความเต็มใจในการสื่อสารภาษาอังกฤษ จากผู้เรียนจำนวน 130 คน พบว่า ความเต็มใจในการสื่อสารภาษาอังกฤษของผู้เรียน อยู่ในระดับปานกลาง ผลจากการวิเคราะห์ข้อมูลในกลุ่มควบคุมที่เรียนภาษาอังกฤษโดยวิธีปกติและกลุ่มทดลอง ที่เรียนภาษาอังกฤษผ่านโปรแกรมการเรียนภาษาเคลื่อนที่ เป็นเวลา 8 สัปดาห์ โดยเปรียบเทียบคะแนนจากแบบสอบถามความเต็มใจในการสื่อสารก่อนและหลังเรียน พบว่า ทั้งสองกลุ่มมีระดับความเต็มใจในการสื่อสารภาษาอังกฤษเพิ่มขึ้น ($p < 0.05$) อย่างไรก็ตามไม่พบว่าทั้งสองกลุ่มมีระดับคะแนนที่เพิ่มขึ้นแตกต่างกันอย่างมีนัยสำคัญทางสถิติ ดังนั้นจึงควรเพิ่มการสังเกตพฤติกรรมของผู้เรียนร่วมด้วย เพื่อศึกษาข้อมูลเชิงลึกเพิ่มมากขึ้น

คำสำคัญ ความเต็มใจในการสื่อสาร, การเรียนภาษาผ่านโปรแกรมการเรียนภาษาเคลื่อนที่, ทฤษฎีการเรียนรู้แบบสร้างสรรค์ด้วยปัญญา

Introduction

Communicative language teaching (CLT) in English has been widely adopted in Thailand (Methitham, 2009). Despite the wide application, CLT practice is not proved so successful since learners' proficiency is still rather unsatisfactorily low (Sermsongswad & Tantipongsanuruk, 2013). As cited in Reinders and Wattana (2014), L2 use can be found more in higher WTC learners than in the lower ones (Kang, 2005) and the earlier group of learner also get more benefits from CLT than the later ones (Ellis, 2004). Thus, it can be assumed that in order to adopt CLT effectively, learners' WTC should also be enhanced which would possibly optimize more opportunities in practice and authentic language use (Wattana, 2013). Nevertheless, with the great effort putting into English education in Thailand, many Thai EFL learners are found lack of confidence in their speaking skills (Grubbs, Chaengploy, & Worawong, 2009) and feel unwilling to communicate in English (Kamprasertwong, 2010; Pattapong, 2013; Wattana, 2013).

A number of studies related to WTC have been conducted in Thailand (eg. Chotipaktanasook, 2014 & 2016; Reinders & Wattana, 2014 & 2015; Dawood, 2014), and among these studies, most researchers used technological tools in experiment to improve learners' willingness to communicate. From these studies, researchers seem to focus on measuring learners' WTC and intend to improve their WTC under classroom-based condition. In addition, although social media - instagram, and digital game seemed to promote WTC as they provided learners the chance to practice language they learned, those applications do not possess functions that could help learners learn more new language and with the language which is matched to their proficiency level, which would ultimately result in



boredom and withdrawal from game or activities. Although L2 proficiency is regarded as an indirect predictor of L2 willingness to communicate in McIntyre et al.'s (1998) heuristic model of variables influencing WTC, L2 achievement is found by Gardner, Tremblay, and Masgoret (1997) to be an influential predictor of communication confidence which is one of the direct variables of WTC (cited in Khajavy, Ghonosooly, Fatemi & Choi, 2016).

Self-confidence, the seventh variable in the WTC model of MacIntyre and his colleagues (1998) refers to "the overall belief in being able to communicate in the L2 in an adaptive and efficient manner" (p. 551). Its components are divided into two: cognitive and affective components. The cognitive component of self-confidence corresponds to a judgment decided by the speakers regarding their level of mastery accomplished in the L2 while the later corresponds to language anxiety (e.g. discomfort experiences accumulated from using the L2. Many studies have found that self-confidence is one of the most significant predictor of L2 WTC (Cetinkaya, 2005; Ghonsooly, Khajavy & Asadpour, 2012; Kim, 2004; Peng & Woodrow, 2010; Yashima, 2002; Yashima, Zenuk-Nishide, & Shimizu, 2004). Similarly, Ghanbarpour's (2016) quantitative study asserted that L2 self-confidence made a statistically significant contribution to prediction of WTC by explaining 11 percent of variance in its total level. Self-confidence has been found to be related to several factors such as aspects of intergroup contact (Clément & Kruidenier, 1985), actual competences in the L2 (Clément, 1986), and intercultural adaptation (Noels, Pon, & Clément, 1996). Instead of directly measuring self-confidence, the researcher intends to measure one of the variables influencing self-confidence known as communicative competence. In this sense, it can be summarized that to enhance learners' WTC, self-confidence should be improved through communicative language competence.

Constructivism is a learning theory which believes that new knowledge would be acquired in relation to the existing knowledge ones possess by constructing a broader view of what is already acquired. It is one of current trend in research including the context of Thailand as one can find in those studies of constructivism in connection with instruction and democracy (Haruthaithanasan, 2010), key competencies (Soparat, Arnold & Klaysom, 2015) and English vocabulary improvement (Wang, 2015; Wang & Suwanthep, 2017); however, the study of constructivism in relation to more collective (rather than isolated) aspects of communicative language competence is hardly found.

With the mobile technology advancement and its advantages such as flexibility, cost saving, small size and convenience, MALL has become one of the trends in current language research society (Huang, Huang, Huang & Lin, 2012) as language learning materials can be effectively distributed to students through mobile devices (Thornton and House, 2005).



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Winters (2007) proposes that MALL is a sort of learning taking place with the assistance of mobile devices enabling learners to acquire knowledge and skills anywhere and anytime. In addition, it also helps improve language learning attitude and motivation of learners (Huang et al., 2012). In many cases, the contents are readily available. Mobile technologies are normally less expensive than some standard equipment, such as PCs. They can be easily utilized either inside or outside classroom and learners can study or practice suitable pieces of information in any place at their own times (Wang, 2015). Viberg and Grönlund (2012) synthesized from their literature review that mobile technologies can enhance learners' second and foreign language acquisition.

Hence, this study required learners with both lower and higher WTC to use a mobile application called Hello English for 8 weeks to learn and practice English individually by completing student logs every week. After using the application, the participants were expected to improve their communicative language competence and WTC.

Purpose/Objective

1. To investigate learners' willingness to communicate in English before and after applying MALL.
2. To investigate learners' communicative language competence before and after applying MALL.

Research Scope

The study was conducted with non-English major undergraduates taking English 1 course at a university in Thailand in the first semester of academic year 2018. The participants were required to use Hello-English application as frequently as they preferred (at least twice in a week) outside class as self-learning and practice with student logs to be filled as control on their participation. The study lasted for 8 weeks. The whole study intends to examine changes both in WTC and communicative language competence; however, only the results of WTC are presented in this paper.

Literature Review

Willingness to Communicate (WTC)

WTC is originated from early studies, i.e. work of Burgoon (1976) about unwillingness to communicate, Clément (1986) about self-confidence, and MacIntyre and Charos (1996) about WTC, perceived competence and anxieties. McCroskey and Baer (1985) brought willingness to communicate into the communication literature in accordance with native



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language communication and previous work of Burgoon (1976) and others. A theoretical L2 WTC model was conceptualized by in MacIntyre, Clément, Dörnyei, and Noels (1998) based on L1 WTC model of McCroskey and Baer (1985). The model describes and explains the mental process contributing to initiating L2 communication with a pyramid. This model, in connection with the definition of WTC of MacIntyre et al. (1998), stresses that if learners are willing to communicate, they will endlessly find the opportunity to engage in L2 conversation.

Mobile Assisted Language Learning

Mobile language learning “offers opportunity for ubiquitous connections with language learning materials and applications” (Hubbard, 2009). Mobile language learning or mobile assisted language learning (MALL) includes learning with tools such as television, radio, the PC, cellphones, personal digital assistants (PDAs), iPods, and several more. A quasi-experimental study by Wang and Suwanthep (2017) was conducted to improve EFL vocabulary learning with constructivism-based mobile application on 90 second-year university students attending English for Academic Reading course during the time of the study. The findings agreed with previous study making MALL a convenient, accessible and effective way that can be utilized to help EFL learners with their vocabulary learning.

Hello English

Hello English (HE) is found useful for learners of English as a second/foreign language in general due to several main characteristics. HE provides 4 phases of English lessons with total number of 100 hundred lessons. Each lesson provides practices in forms of game and/or conversation. In addition to the series of lessons, HE provides other learning and practicing features such as homework, extra practices (e.g. a list of 40 conversation topics, a range of reading articles, games, videos, audio stories with and without subtitle and books), an English-Thai dictionary. Moreover, most of these features are available offline. Participants of this study could learn or use the application with Thai instruction. Such support would be beneficial and helpful for learners whose language was limited. In addition, the application provides a number of lessons and practices in forms of games and conversations. Those lessons cover language 4 aspects of language acquisition: reading, writing, listening, and speaking (Vesselinov & Grego, 2017). Learners could also gain linguistic knowledge such as grammar, vocabulary, pronunciation, etc., from those lessons. Lastly, the HE offers interactive practices with advanced voice recognition which the participants can interact with



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application by listening to the app and produce their statement or questions by following the ready-made phrases or sentences provided by the application.

Cognitive Constructivism

Cognitive and social constructivism are the two most current schools of theory based on constructivism (Swan, 2005). The common characteristic of these two areas is the actual process of learning with meaning and learners constructing concepts to create knowledge (Powell & Kalina, 2009). Marlowe and Page (2005, p. 6) assume the fundamental characteristics of a constructivist approach as: “about constructing knowledge not receiving it, about thinking and analyzing not accumulating and memorizing, about understanding and applying not repeating back and being active not passive” (as cited in Prefume, 2007).

Piaget’s (1972) learning theory embraced the cognitive orientations including active learning, schema, assimilation and accommodation, where Vygotsky (1978) embraced social constructivism concerned about interaction (Aljohani, 2017). Cognitive constructivism is believed to stem largely from Piaget’s work (1972). It is also called psychological constructivism which mainly focuses on the internal development of mental structures and cognitive psychology indicates that learning occurs through the cognitive processing of environmental interactions and the corresponding construction of schema to make sense of them (Wiske, 1998). This approach is meant to help students in assimilating new information to prior knowledge, and leads them to make the suitable modifications to their existing intellectual framework to accommodate that information. The intellectual framework is also called schema.

Methodology

This research is a quasi-experimental study. This study was divided into 2 phases. The first was done to select the participants and the second one was conducted to give experiment on selected participants. As it is believed that learners with lower communicative language competence are likely to have lower self-confidence and willingness to communicate in English, the researcher designed the second phase in order to determine learners’ competence and to let learners use mobile application to learn and improve English individually based on their current English ability. By learning English independently through the application, the participants were expected to improve their language competence, self-confidence and WTC.

Firstly, in phase I the researcher gave a brief instruction about pre-survey questionnaires, which were used to determine participants’ level of WTC and select



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participants for further study, to students in the four selected classes with total of 130 participants and were delivered to participants on a hard copy. The pre-survey questionnaires consists of two sections: (1) background information and exposure to English use and (2) willingness to communicate.

Then, in phase II there were 3 stages. In the primary stage, the researcher conducted a pre-test on speaking on the selected participants in the first week of the experiment to determine their communicative language competence of several selected basic routine topics such as description, narration, and comparison. The test was done under one-on-one interview form where the researcher acted as interlocutor (interviewer) and participants would join as interviewees. Based on result from pre-test, the researcher recommended language points where participants should improve to reach a more effective communication with particular series of lessons and practices in Hello English application that the participants could get access and improve themselves individually. The experimental groups were offered a small workshop on how to use the application, student log and more detailed information about the research. Then, the participants used the application to improve their language competence in stage two. At the end of the study, stage three, those students were requested to take a post-test on speaking and to respond to post-survey questionnaire of willingness to communicate section. The study (phase II) was conducted outside classroom and was separated from their current English course syllabus.

Sample subjects

Participants were drawn from students who enrolled in English 1 course, a required course for non-English major students and English is their foreign language. The course was designed to develop learners' four skills for communicative purposes essential for daily life and familiar topics. The research employed a purposive sampling technique to select the participants whose WTC was low (average WTC score of 3 or less) to participate in further treatment. The researcher chose four classes whose number of students in each class was approximately 32 making 130 students in total. As a result, 37 participants were found having lower WTC while 93 had higher WTC. Only 26 lower-WTC participants agreed to proceed to next stage of the study including 6 students who withdrew before receiving the treatment due to their personal reasons. Hence, only 20 remained from lower WTC group which then were divided into two groups: 10 in experimental group to receive treatment by using Hello English application and filling student logs, and 10 in control group to receive no treatment. As it was also important to see the effectiveness of the application on general students' WTC, another 20 students from higher WTC group were selected and equally



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separated into experimental group and control group. Thus, 20 students were in experimental group and another 20 students were in control group. The participants in both groups received the same instruction and tasks in class based on English I course syllabus provided by the university; however, the experimental group received additional treatment outside class.

Research instrument: Questionnaires

Each pre-survey questionnaire, which were delivered at the beginning of the study, consists of two parts which are background information adapted and modified from Wattana (2013), and WTC in English adapted and modified from Pattapong (2013). However, 16 items (items number 6 - 21) from the original questionnaire were removed and replaced by new items (items numbers 6 -24) created by the researcher of current research to make it appropriate to Thai context and participants' context where their university use English as a medium of instruction. In total, there were 37 items while section 1 was about demographic background consisting of 13 items and section 2 about WTC in English inside classrooms consisting of 24 items which were divided into 4 parts: (1) Short expressions (6 items), (2) Narration (4 times), (3) Description (6 items), (4) Comparison (8 items). In addition, this WTC questionnaire used 5 Likert scale following Wattana's (2013) study. Range of mean scores interpretation was described as: 4.50 to 5.00 (Very willing), 3.50 to 4.49 (Somewhat willing), 2.50 to 3.49 (Neutral), 1.50 to 2.49 (Somewhat unwilling) and 1.00 to 1.49 (Very unwilling).

Post-survey questionnaires consisted of two sections. Section 2 about WTC remained the same as that from pre-survey questionnaire while section 1 contains only one item which was about student ID number and the rest of the background information were omitted since only information about WTC was needed to be measured before and after treatment.

Validity of questionnaire

To ensure content validity, Index of Item-Objective Congruence (IOC) was used and three experts were requested to evaluate the items of the questionnaire. Any items whose mean on the IOC was at least 0.5 were remained. 8 items were modified to be more precise to ease participants' understanding and to avoid confusion.



Results

Findings from WTC questionnaires

Table 1 Average WTC scores of the sample populations from Pre-survey questionnaire

	n	Mean	SD
Population	130	3.42	.7008

Table 1 indicates a mean score ($\bar{X} = 3.42$, $SD = 0.7008$) of WTC reported by 130 respondents.

Table 2 Comparison of Pre-Test of WTC between Control and Experimental Group

Group	n	Mean	SD	df	t	Sig.
Control Group	20	3.17	.823			
Experimental Group	20	3.23	1.04	38	-.214	.086

Table 2 showed pre-test mean score comparison between the two groups before intervention. Pre-test mean scores were compared by using an independent sample t-test. The results showed that there was no significant difference between the pre-test mean scores $\{t(38) = -.214, p > 0.05\}$ of the control group ($\bar{X} = 3.17$, $SD = 0.823$) and the pre-test mean scores of the experimental group ($\bar{X} = 3.23$, $SD = 1.04$).

Table 3 Comparison of Pre-test and Post-test of WTC of the Control group

Group	n	Mean	SD	df	t	Sig.
Control Group Pre-test	20	3.17	.823			
Post-test	20	3.40	.857	19	-3.668	.000*

Table 3 indicated a comparison of the control group's pre and post-tests. The researcher used a paired sample t-test to measure the control group's change in willingness to communicate. After 8 weeks, the control group reported a significantly higher willingness to communicate, $\{t(20) = -3.668, p < 0.05\}$, post-test, ($\bar{X} = 3.40$ and $SD = 0.823$) whilst pre-test, ($\bar{X} = 3.17$, $SD = 0.857$).



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Table 4 Comparison of Pre-Test and Post-Test of the Experimental Group

Group		n	Mean	SD	df	t	Sig.
Experimental Group	Pre-test	20	3.23	1.040			
	Post-test	20	3.52	.859	19	-3.626	.000*

Table 4 displayed a comparison of the experimental group's pre and post-tests. The result from a paired sample t-test showed a significantly higher willingness to communicate of the experimental group, $\{t(20) = -3.626, p < 0.05\}$, post-test, ($\bar{X} = 3.52$ and $SD = 0.859$) whilst pre-test, ($\bar{X} = 3.23, SD = 1.040$).

Table 5 Comparison of Post-Test between the Two Groups

Group		n	Mean	SD	df	t	Sig.
Control group		20	3.40	.857			
Experimental group		20	3.52	.860	38	-.446	.817

Table 5 shows that there was no significant difference $\{t(38) = -0.446, p > 0.05\}$ between post-test mean scores of the control group ($\bar{X} = 3.40, SD = 0.857$) and the experimental group ($\bar{X} = 3.52, SD = 0.860$).



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Findings from student log

Table 6 Numbers of time accessing the suggested lessons

Suggested Lessons	Frequency (Percentage)		
	1 time	2 times	3 times
9	15 (75%)	4 (20%)	1 (5%)
10	15 (75%)	4 (20%)	1 (5%)
11	15 (75%)	4 (20%)	1 (5%)
22	9 (45%)	10 (50%)	1 (5%)
23	12 (60%)	7 (35%)	1 (5%)
37	13 (65%)	6 (30%)	1 (5%)
39	13 (65%)	7 (35%)	0 (0%)
40	14 (70%)	5 (25%)	1 (5%)
70	15 (75%)	4 (20%)	1 (5%)
71	15 (75%)	3 (15%)	2 (10%)
72	16 (80%)	2 (10%)	2 (10%)
73	16 (80%)	4 (20%)	0 (0%)
74	17 (85%)	3 (15%)	0 (0%)
84	14 (70%)	5 (25%)	1 (5%)
85	10 (50%)	9 (45%)	1 (5%)
n	20	20	20

n = 20

Data from the student log indicated that all participants (n =20) from experimental group accessed to all the suggested lessons at least one time whilst some lessons were accessed twice by 10% - 50% of the participants and thrice by at most 10% of them.

Discussion and conclusion part

The 130 respondents reported an average WTC mean score in a Neutral level. Thus, it cannot be concluded that they were willing or unwilling to communicate in English. This result is not consistent with the results from studies by Kamprasertwon (2010), Pattapong (2013) and Wattana (2013) reporting that Thai learners were likely unwilling to communicate in English.

The results from the survey questionnaires of WTC showed that after 8 weeks, both control and experimental groups significantly improved their willingness to communicate in



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the given conditions. The experimental group's WTC mean score from pre-survey questionnaire was 0.05 higher than that of control group while experimental group's mean score from post-survey questionnaire was 0.12 higher than that of control. These mean scores indicates that experimental group made more improvement in WTC than the counterpart did. From this result, it can be assumed that the experimental group's WTC were possibly enhanced by the use of mobile application. However, the improvements between the two groups were not different significantly. Thus, this result needs a further triangulation from a more exploratory design such as observation to see more concrete evidences for such slight difference.

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