Utilizing WhatsApp Messenger to Enhance Listening Skills of Civil Engineering Degree Students in Mandarin Courses at UiTM Penang Branch

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Abstract

Listening skills are important skills that need to be mastered by foreign language learners. Listening skills have, however, often been neglected in the teaching and learning process. This study aims to investigate the effectiveness of using WhatsApp messenger as an instructional tool in enhancing listening skills. This experimental research employs the two-group pre-test post-test design. Two groups of 30 students who enrolled in the Introductory Mandarin course in one of the public universities in Malaysia took part in the study. During the study, the experimental group of 30 students underwent listening drills and exercises using WhatsApp messenger as the treatment, while another 30 students in the control group were taught by another lecturer using the conventional method of teaching listening skills. Listening test scores of before and after the treatment were compared and analyzed using Independent Samples t-Test to identify the significant level of the difference between the scores of these two groups. The findings show no significant difference in the listening pre-test scores between both control and experimental groups. However, after the treatment, the listening scores of the experimental group students are significantly better than that of the control group students. These results indicate that WhatsApp messenger is a useful instructional tool to teach listening skills in foreign language. The findings of this study could be used as a reference for further development of WhatsApp messenger as an instructional tool to enhance listening skills, overcome the constraints on teaching time, and improve the pedagogy as well as the instructions of foreign language learning.

Keywords: *Listening skills; Mandarin; Foreign language; Second language; WhatsApp messenger*

Introduction

Helping students to gain better language acquisition and performance has always been the primary concern of language instructors and educators. They will try different methods or ways and utilize various supplemental tools to attain the purpose. Thus, various educational approaches, strategies, as well as teaching and learning tools, are being developed from time to time. For instance, the traditional teacher-centered teaching has been replaced by learner-centered learning. In recent years, with the rapid development of the internet as well as wireless technology, educators are beginning to substitute the old chalk and talk teaching style with various IT-related teaching aids/methods. Teaching is no longer limited to the traditional face-to-face teaching but is slowly moving towards blended teaching and mobile learning.

One of the mobile learning strategies that is gaining popularity is the use of social media applications such as WeChat, Line, and WhatsApp messenger as a tool for promoting practical communicative skills. A quick Internet search revealed numerous articles that are related to the use of WhatsApp messenger in lan-

guage learning especially in enhancing English performance (Ta'amneh, 2017), oral skills (Andújar-vaca et al., 2017), writing performance (Andújar, 2016), and the learning of Chinese characters (Chu, & Toh, 2015). As in traditional teaching, whereby listening skills are often neglected (Ismail & Aziz, 2020), there is still a lack of attempt to explore the usage of social media applications such as WhatsApp messenger to improve listening skills. Thus, in this study, an attempt to utilize the WhatsApp messenger application as a listening tool to promote listening skills among students is made.

Literature Review

Listening skills are essential for successful language learning and acquisition. Generally, among the four essential skills of language, the receptive skill of listening is the skill that is most needed in our daily communication. It is a crucial skill that foreign language learners need to master because "people can expect to listen twice as much as they speak, four times more than they read, and five times more than they write" (Morley, 1991). Furthermore, people spend 40-50 percent of their daily communication time listening (Latifi et al., 2013). Despite its importance and significance, many language instructors have not given due emphasis on improving learners' listening skills in the teaching and learning of a second and foreign language.

Listening, often thought of as the first language skill that every child acquires, is a vital component for effective communication, and it has been established that children learn their mother tongue first by listening and then attaching meanings to what they heard (Levine & Munsch, 2010). This receptive skill seems to come naturally to children and require no specific effort. However, as children grow into their teenage or adult life, the natural acquisition of a second or foreign language does not happen anymore. They soon discover that much conscious effort is needed to understand what is heard. At this stage of learning, the learners need to "develop the necessary learner knowledge and control of internal cognitive and affective processes, as well as the external social demands that influence comprehension success" (Vandergrift & Goh, 2012). Therefore, it is of utmost importance that second or foreign language instructors place equal emphasis on listening and teach listening skills in the second or foreign language classroom.

As a fundamental language skill, listening has, for a long time, been regarded as a passive activity. This view, however, is slowly changing to one that regards listening as a sophisticated and active activity (Palacios, 2015). Generally, listening involves three distinct phases (Bellota, 2012). Firstly, the listener will hear the spoken words. Next, the listener needs to understand the meaning of the words heard in relation to the context. Finally, the listener has to provide the appropriate responses to the speaker to indicate that the message has been understood. Considering these three stages, one could say that listening is a rather complicated process that involves many cognitive and motor processes (Palacios, 2015). Listening, therefore, could be postulated as an active and complex activity whereby to understand the message and respond according-

ly, the listener must attend to the spoken words actively and then activate the appropriate schemata. Recently, many researchers (Bellota, 2012) believe that to command excellent communication skills, one must have good listening skills, and as such, listening should be given due attention in a language classroom.

With the advancement in mobile technologies, mobile learning or m-learning is becoming more popular. M-learning makes it possible for one to learn anytime and anywhere via the use of multimedia (which includes texts, voices, images, or videos) and also communication (which can be in the form of phone calls, voice/text messaging, emails, and web access). Apart from that, m-learning also allows "real-time online interaction in a series of short-burst learning activities" (Annan et al., 2012). Learners can study whenever and wherever they want within a short period, such as while waiting for a bus. Moreover, when they are puzzled by what they are learning, they could post their questions on the spot and get their queries answered in real-time by other members including the instructor of the same learning group.

Although m-learning was initially limited to laptops, with the widespread use and popularity of smartphones and tablet PCs, m-learning is becoming increasingly ubiquitous. One of its strengths is that m-learning is not dependent on time, place, and learning resources. It can be used at any time and place if there is internet access. Even if internet access is unavailable, learning can still take place if the learning materials have been downloaded onto the device. In terms of learning materials, learners are not limited to only the materials given by the instructors. They could have access to a vast pool of almost infinite resources. With the increasing number of learning applications made available on the internet and also online apps stores, language instructors can now easily customize and prepare their teaching and learning materials. Moreover, they can choose to use whichever apps that they think may facilitate students' learning besides making their teaching more accessible and more effective.

Language instructors can also utilize various social media applications that might be effective in assisting them in their teaching. This is possible due to advances in wireless technologies. WhatsApp messenger, which is currently being experimented by many as a supplementary learning tool in teaching and learning of second/foreign language, is a case in point. Some recent studies (Andújar, 2016) have focused on the possibilities of using mobile device applications especially WhatsApp messenger as a means to improve learners' vocabulary and writing skills. However, investigations into other aspects of language learning such as oral interaction (Kukulska-Hulme & Shield, 2008) and listening, which in many cases are problematic areas for learners, are somewhat limited.

Some studies in the teaching and learning of second/foreign language that utilized WhatsApp messenger to improve oral skills (Andújar-vaca et al., 2017; Nanan, 2017), reading (Plana et al., 2016), and writing (Salem, 2013) have been conducted. These studies have found significant improvement in students' achievement except for Salem's study, which indicate a contradictory result. These studies have revealed that WhatsApp messenger could also be a suitable learning tool on the teaching and learning platform.

In Malaysia, the utilization of social media applications for educational purposes has also gained the attention of some educators. Chu and Toh (2015) used WhatsApp messenger to teach students the writing of Chinese characters and sentences. However, the effects of social media applications on other aspects of language teaching and learning have not been extensively explored and reported by local educators. Based on a survey conducted among 149 diploma and degree students from one of the universities in Malaysia in March 2020, WhatsApp was found as the most preferred platform for online learning (Mah, 2020). As such, this study was conducted to provide some insights into the effects of using WhatsApp messenger, a popular and widely used social media application in Malaysia (Bernama, 2017), in promoting the listening skills of learners.

WhatsApp messenger – a cross-platform, end-to-end encrypted instant messaging client used mainly on smartphones, and which can also be used to make free international calls – has been widely used by teachers and students alike during the current Covid-19 pandemic (Mah, 2020). WhatsApp messenger utilizes the internet to send text messages, documents, images, video, user location, and audio messages to other users via standard cellular mobile numbers (Nanan, 2017). It can encourage learners to learn by anticipating needs, making collaborative learning efficient and effective, and also building a relationship that stimulates learner-to-learner interaction for consistent and progressive learning.

WhatsApp messenger can also be a suitable tool to assist second/foreign language learners to enhance their listening skills. Students can listen to the recorded listening drills and exercises at any time and any place. Listening to the audio can be done outside the classroom, and hence it does not consume the limited face-to-face classroom time. It not only promotes mobile learning, but at the same time also promotes blended learning as well. Conventionally, listening skills were taught in a language lesson using supplemental audio-lingua resources such as radio, cassette, and CDs. These resources are rather obsolete and are unable to capture the interest of the present generations who are IT savvy. With the advancement of technology, mobile devices and a variety of mobile applications that are more contemporary should be utilized in language lessons to encourage better listening skills.

Teachers should endeavor to innovate and experiment with online tools, which may eventually be a part of continuing online pedagogies in the future. Since the WhatsApp messenger application is a widely used application among Malaysians, including students, the researchers of this study felt that it could be a useful tool to attract students' attention and thus could promote listening skills among students. Through conducting listening drills and exercises via WhatsApp messenger, the samples could be exposed to a variety of accents of the language. This means that the samples will have an opportunity to listen to samples of real-life communication and thus prepare them for the real world.

Problem Statement

As in traditional teaching, there is still a lack of attempt to explore the usage of social media applications such as WhatsApp messenger to improve listening skills. Thus, in this study, an attempt to utilize the WhatsApp messenger application as a listening tool to promote listening skills among students is made.

Another reason for using WhatsApp messenger application in this study is the application allows the samples to utilize both bottom-up and top-down processing approaches. In the 1970s, the teaching of listening focused on three main aspects namely individual sounds, sound combinations, and word identification (Hinkel, 2006). The proponents and practitioners of this approach, which is known as bottom-up processing, thought that listeners would make use of their linguistic knowledge to process the utterances heard. They believed that listeners would first break down the sound stream into meaningful units. They will then construct meaning from the smallest to the biggest unit – from sounds to words, clauses, and finally sentences (Richards, 2008; Vandergrift & Goh, 2012).

In the following decade, the focus of the teaching of listening shifted to one that emphasized the importance of knowledge-based schemata. In this new approach, also known as top-down processing, it is believed that in order to infer and make meaning of what is heard, listeners need to activate their background knowledge (Richards, 2008). Examples of the background knowledge that listeners need to activate include world knowledge, pragmatic knowledge, and situational knowledge (Richards, 2008; Vandergrift & Goh, 2012). The message heard will be understood if it matches the background knowledge of the listeners, or else confusion and incomprehension may occur.

As the debate on which approach – bottom-up or top-down processing – is more important rages on, a third opinion emerged (Hinkel, 2006; Vandergrift & Goh, 2012). This third group opined that none of the approaches have managed to produce impressive results. Language instructors need to strike a balance between both approaches and should use either of the approaches when needed.

As an attempt to incorporate both approaches, the researchers in this study decided to expose the samples to listening drills and exercises via WhatsApp messenger to improve their listening skills in learning Mandarin as a foreign language. The use of listening drills and exercises via WhatsApp messenger will allow the samples to utilize both approaches in their learning. As they focus their attention on the drills and exercises, not only are they engaged in active listening and repetitions, as well as constructing meanings and messages from what is heard, but they also need to activate their background knowledge to make sense of what they are listening to.

In this paper, we attempt to obtain the answer to the question: Is WhatsApp messenger an effective tool for developing listening proficiency in learners of Mandarin as a foreign language?" Descriptive hypotheses were drawn for this purpose:

H_0: There is no significant difference in means between students' scores before and after the use of WhatsApp messenger to promote listening skills.

H_1: There is a significant difference in means between students' scores before and after the use of WhatsApp messenger to promote listening skills.

Methodology

Study Design

This study employs a pre-test post-test experimental design. In this design, two groups of students were given the similar pre-test and post-test before and after the treatment. The test instruments used in the data collection of this study were two listening tests which were administered as part of their Mandarin course assessments. The first listening test, used as the pre-test, measured the students' listening skills before the treatment while the second one, served as the post-test, measured the students' listening skills after the treatment.

Instruments and Research Procedure

Before undergoing the treatment, both control and experimental groups were not given any aids for doing their listening practices. They learned their lessons by using the prescribed course book under the guidance of their instructors and received the same instructions for carrying out the listening test. The topics learned before receiving the treatment were greetings, asking and giving names, family, as well as asking and telling the date and time. After learning all the prescribed topics, the first listening test was conducted, and marks were recorded as the pre-test scores.

Subsequently, both groups continued their lessons to learn other more difficult topics. The topics included appreciation and making an apology, festivals, shopping, and in the restaurant. At this stage, the experimental group students were given a different treatment. Listening drills and exercises were sent to the students' WhatsApp group. Even though the learning contents were similar to those given to the control group, the students in the experimental group were given the freedom to determine how often and how frequent they want to utilize the learning contents. The control group students, meanwhile, continued to learn in the conventional way. After students had learned all the topics, the second listening test was conducted, and the marks were used as the post-test scores.

Participants

This experimental research involved 60 undergraduate students from the Faculty of Civil Engineering at Universiti Teknologi MARA (UiTM) Cawangan Pulau Pinang who studied Introductory Mandarin as

their elective foreign language course. All of them were 22 years old. 20 or 33.3% of them were male while 40 or 66.6% were female. For the experimental group, 14 or 46.7% of them were male and 16 or 53.3% were female. For the control group, 6 or 20.0% of them were male and 24 or 80.0% were female.

Data Analysis

The collected data were analyzed statistically by employing SPSS version 26. Levene's Test and Independent Samples t-Test were administered to identify whether there was a significant difference in both control and experimental groups before as well as after the treatment. The results from both Levene's test and Independent Samples t-Test showed no significant differences between both groups in the pre-test. After the treatment, an Independent Samples t-Test was conducted again on the post-test scores.

Findings

Basic Assumption Test

Table 1. Test for Equality of Variances

	Levene's Test	
	F	Sig.
Pre-test	.001	.979

Table 1 shows the result of the Levene's Test on the pre-test scores. The significant value obtained is 0.979 (>0.05) and this means that equality is assumed (Coakes, 2012); and therefore, it could be concluded that the data of this study were equally distributed, and the Independent Samples t-Test can be conducted for further data analysis.

The Independent Samples t-Test's result

Table 2. Independent Sample t-Test

Group		N	M	MD	t	df	Sig. (2 tailed)
Control	Pre-test	30	14.47	.067	.110	58	.913
Experimental		30	14.40	.067	.110	57.992	.913
Control	Post-test	30	13.83	-1.933	-2.141	58	.037
Experimental		30	15.77	-1.933	-2.141	56.418	.037

As shown in Table 2, the average means of the pre-test scores from the experimental group is 14.40 while for the post-test scores, it is 15.77. On the other hand, the average means of the pre-test scores obtained from the control group is 14.47 and 13.83 for the post-test scores. In the post-test, control group t (58) = -2.141, experimental group t (56.418) = -2.141, MD = -1.933, and p = 0.037. The mean difference (MD) and t-value of the Independent Samples t-Test show the probability level (p) as 0.037 (0.037 < 0.05). Based on the criterion of the test, if sig. < 0.05, H_0 is denied while H_1 is accepted. This means that there is a significant difference in students' listening tests scores between the experimental group and the control group before and after using WhatsApp messenger as a learning platform for listening skills.

Discussions

This study attempts to compare the achievements in listening tests before and after the use of WhatsApp messenger as the instructional tool. The results show that after using the WhatsApp messenger, the students performed significantly better in the listening test as compared to the regular instructional practices. After undergoing listening drills and exercises made available via WhatsApp messenger, they could perform better though the topics covered during the treatment were generally more complicated than those before the treatment. Although the focus in this study differs from the other studies, the findings seem to concur with those in the earlier studies such as those by Andújar-vaca et al. (2017), Nanan (2017) and Plana et al. (2016). Hence, WhatsApp messenger can be used as a useful instructional tool in the teaching and learning of foreign languages.

Conclusion

Although the findings of this study concur with many other studies, further investigations need to be carried out to ensure the effectiveness of using WhatsApp messenger as an instructional tool. Students might do significantly better in the post-test than the pre-test due to other factors such as motivation and attitude change, which were not considered in the study. Apart from that, as the listening tests were set in multiple-choice format, improvement in the test scores might simply be due to guessing, which could produce a better score than expected. As such, further study should be carried out with more participants and better control over the extraneous variables to overcome the limitations, which may threaten the validity of the results.

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