

Explore the potential use of English Instant Messages

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Paper type: Research article

Journal ISSN: 2692-2800

Abstract

Owing to its easy access and user-friendly interfaces, the worldwide popularity of Instant Messaging (IM) has grown significantly in recent years. This study proposed that IM can be used as a modern learning tool for enhancing English communication. The current study investigated university students' perceptions of the use of instant messaging (IM) in their English learning. The study also discussed the potential usability and efficiency of the proposed application. A survey instrument was developed to achieve the described objective. One hundred and eighty-two Taiwanese university students completed the survey. Five statistical analysis methods including descriptive statistics, factor analysis, T-test, analysis of variance (ANOVA), and path analysis were performed to test the hypotheses of the study. This study concluded that the implementation of IM in English learning is feasible due to students' interest in English learning and their familiarity with IM. The implementation of IM in English learning may be valuable to non-English speaking countries. Future studies should employ an experimental design to investigate whether implementing IM would enhance students' English fluency.

Keywords: Instructional technology; Educational technology; Distance learning; Synchronous learning; Computer assisted language learning (CALL); Online learning; Computer-mediated communication; Networked learning; Cooperative/collaborative learning; Interactive learning environments; Higher education; English as a foreign language (EFL)

Introduction

As a global language in the interconnected world, English has a critical role in international communication. With its immensely widespread adoption as the language of choice, English is used for a greater variety of purposes than ever before. A dominant language in Internet communication, English now rules both business and cyberspace (Singh, Pandian, & Kell, 2002). In virtually all parts of the world, it is used extensively for business management, technology development, scientific advancement, and academic improvement. The increased use of English is especially significant among Taiwanese university students. In an effort to enhance Taiwanese university students' competitiveness in the global market, it is essential to raise their English communication ability by the most effective means.

Taiwanese university students typically feel nervous when communicating with foreigners in English. The main reason is that the students feel a lack of confidence in their English communication ability. Huang and van Naerssen (1987) reported that Taiwanese university students' memorization strategies were clearly influenced by traditional Chinese reverence for knowledge and wisdom, as reflected in books and the practice of memorizing this wisdom as a way to gain language proficiency. This is also a major reason that Chinese students tend to lose the

habit of learning English through communication. Moreover, most universities in Taiwan offer virtually no English courses beyond the freshman year. Although it may be possible to provide an additional number of language courses, there is a lack of qualified instructors for these courses.

Tori-Williams (2004) pointed out that most foreign language education has focused on the acquisition of grammar and vocabulary until recent times, even though communication has been indicated as one of the five goals identified in today's foreign language classroom. The present study made the assumption that communication is an important component of English learning. It was assumed that students' English ability could be enhanced through regular communication. This study considered that if Taiwanese university students can frequently communicate with other English speakers anytime and anywhere, they would realize significant enhancements in their English communication ability.

An advantageous approach to realize the abovementioned idea is through the use of advanced online communication. Online communication can be considered valuable for practicing English communication due to the easy access and the user-friendly interface of the latest instant messaging programs. Moreover, online learning technology has the benefit of reducing anxiety of language learners by providing them an autonomous learning environment. Online learning may also improve language learners' attitudes toward the language (Kongrith, 2005). At any rate, computer-mediated communication holds great promise for the learning and synchronized practice of English (Warschauer, Turbee, & Roberts, 1996; Warschauer, 2001). Chen (2005) advocated that introduction of computer-mediated communication into EFL learning can provide learners more authentic input and more opportunities to participate in the target sociocultural contexts. This context may well promote linguistic and also pragmatic knowledge. Motivation, learner autonomy, social equality, and identity can also be encouraged through the use of computer-mediated communication inside and outside of the classroom. According to the survey conducted by the Taiwan Network Information Center, TWNIC (2005), the percentage of the Taiwanese population that are Internet users was 60.25% (13.8 million) at the end of December 2004, while about 53.78% (10.31 million) of residents in Taiwan aged 12 and above had experience in using broadband. As broadband Internet connections become more prevalent in Taiwan, the use of Instant Messenger (IM) becomes increasingly popular at the same time. IM software such as AOL Instant Messenger (AIM), ICQ, MSN Messenger, and Yahoo! Messenger have attracted millions of daily users in recent years (Chatterjee, Abhichandani, Haiqing, TuLu, & Jongbok, 2005). The International Data Corporation indicated that IM users would exceed 300 million users in 2005 (Mingail, 2001).

Instant Messaging (IM) is intended to be synchronous written communication that is different from Email. IM traces its roots to single-line, person-to-person communications facilities built into mainframe computer operating systems (Cunningham, 2003). IM users can select other users to list in their buddy list. When users log onto IM, they can glance around to see if any of their contacts are logged onto the network. Then, users can decide if they would engage in a chat with their contacts. IM provides the ability to not only exchange text messages but also to transfer electronic files and pictures (Cunningham, 2003; Chatterjee, Abhichandani, Haiqing, TuLu, & Jongbok, 2005). IM users often multi-task or use IM with other media; that is to say, they use multiple media at the same time (Cameron & Webster, 2005).

IM has extended the functionality by adding some flavor to the conversations with emoticons. Additionally, real-time voice conversation and videoconferencing are now widely available through the use of IM. IM is vastly popular among university students because IM is an easy way for them to keep in touch with friends. In a very recent study, Sung, Yang, Cheng, and Yang (2006) found IM to be a popular and common interpersonal communication tool among Taiwanese university students. Also, IM is much cheaper than the use of telephones in Taiwan. Students can stay online to chat and not worry about the cost. Increasingly more IM functions are being extended and renewed as the technology develops.

Pauleen and Yoong (2001) used grounded action research consisting of seven members in a virtual team training program. The study found that IM was usually used to support informal conversation in virtual teams. Hard and Ljungstrand (2002) recorded and analyzed IM logs of university students for over 16

months. The results indicated that Webwho (a university system as well as ICQ) was mainly used for supporting collaborative work and for coordinating social activities.

Nicholson (2002) considered IM services useful in providing a tool for social communication in an asynchronous Web-based classroom. Students who took part in the study and used the IM software found it easier to discuss class material. They also found it easier to communicate in a social manner with other students. Furthermore, the students felt that IM services could help with group assignments. Weller, Pegler, and Mason (2005) proposed four major techniques to be used in e-learning courses, including: blogging, audio conferencing, instant messaging, and Harvard's Rotisserie system. They view dialogue in the learning environment as multi-channeled, with particular tools providing usability for specific forms of communication, which are matched to the learning outcomes of any activity or course. In the study, IM proved to be the most popular technique. In general, IM is used for informal discussion, often of a social nature. Nicholson (2002) also found that IM could be implemented in educational environments. Students can make use of PDAs and mobile phones for IM utilization in their higher education experience. Although IM is considered primarily a communication tool, it could also be utilized as a learning style or an augmenting phase in a learning cycle.

It is well established that technology can be successfully integrated to promote better teaching and more learning in the higher education sector (Bates & Poole, 2003). In the context of foreign language classrooms, the use of information technology is proven to be an important aspect for academic language learning (Cummins, 2000). The application of computer-assisted language learning can also help students improve both the quality and quantity of language learned (Tsou, Wang, & Li, 2002). However, there is a scarcity of research specifically regarding foreign language learning based on the use of advanced Internet techniques such as instant messaging.

Following the above-described notions, this study proposed that IM can be used as a modern learning tool for enhancing English communication. The current study investigated university students' perceptions of the use of instant messaging (IM) in their English learning. Results of the study can provide significant insights into the potential use of one of the most widely adopted global communication tools in English learning. The researchers in this study developed a survey questionnaire to achieve the described objectives. The purpose of this study was to explore the potential use of IM on English learning for Taiwanese university students. Through the analytical results, this study may reveal the feasibility of using IM in learning English. Results derived from the study can also indicate the usefulness of IM in enhancing English communication ability.

2. Methodology

With the aim of accomplishing the aforementioned purpose, the following research questions were developed to guide the study:

1. What user habits do Taiwanese university students have when using instant messaging software?
2. To what extent do Taiwanese university students consider it is feasible to incorporate instant messaging software into English learning?
3. What are Taiwanese university students' perceptions of instant messaging as a beneficial tool for English learning?

In the following sections, this study will describe the data collection and analysis procedures, report the findings, and discuss the potential implications of the findings for future research.

2.1 Participants

Participants in the study consisted of 182 students from a selected university. All participating students had completed at least seven years of English classes from high school and university. There were 125 male (68.7%) and 57 female (31.3%) students in the sample.

2.2 Hypotheses

Men and women typically use language differently (Harmer, 2001). Language use and interaction style were found to be gender-related in a study that involved university students in educational online discussion groups (Guiller & Durndell, 2006). In the language learning context, gender has been

frequently associated with different strategy use (Oxford, 2001). Significant differences have also been reported to exist in the use of specific language learning strategies between university students of different genders (Green & Oxford, 1995). Therefore, the relationship between gender and perceptions of English learning were tested via the following hypotheses:

H1a: Gender influences the interests of English learning.

H1b: Gender influences the feeling of the necessity of English learning.

H1c: Gender influences the feeling of the usability of applying IM to English learning.

Kubey et al. (2001) found that IM was the most frequently mentioned type of synchronous online communication by focus group participants. Jeong (2002) found that students appreciated not having to wait for answers to questions and appreciated the more informal context of IM communication. The relationships between IM communication and English ability enhancement were thus tested based on the following hypotheses:

H2a: Students consider IM as a practical for the enhancement of English communication ability.

H2b: Students perceive that the incorporation of IM has a positive impact on English communication ability.

2.3 Data collection and analyses

A survey questionnaire was used to evaluate the effects of IM on enhancing English communication ability. Data collection was conducted over a two-week period between May 1st and May 15th, 2006. The students who participated in the survey were informed that the questionnaire was not a test, and that their responses would be used for research purposes only. The instruction part of the survey indicated that participation in the study was strictly on a voluntary basis and students might withdraw at anytime during the process. The students were assured that their confidentiality would be adequately protected. The questionnaire used a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Students were asked to rate their agreement with each questionnaire item. The survey also included a background section that asked students to provide information about their demographic characteristics, including gender, class level, average computer use per day, frequency of Internet use, and frequency of IM use.

The data analysis process included four steps. First, this study used descriptive statistics, including frequencies, percentages, means, and standard deviation, to obtain demographic information from the background questionnaire. Second, factors analysis was used to uncover relationships among the variables. This allows numerous inter-correlated variables to be condensed into fewer dimensions, called factors. In the context of this research, numerous questionnaire items were condensed into fewer factors. The following analyses are related to the results of factors analysis. Third, T-test and analysis of variance (ANOVA) was performed to examine the differences in the overall mean. Based on the p-value test (α is equal to 0.05), we can test if the hypotheses in section 2.2 will be significantly rejected or not. Finally, multiple comparisons were used to determine if significant differences exist between demographic characteristics and the survey results. These analysis processes were employed to investigate Taiwanese university students' feeling about using IM to improve English communication ability.

3. Results

3.1 Background analysis of subjects

This study is based on a survey taken by 182 undergraduate students at a selected university in Taiwan. Table 1 summarizes the background of subjects, including gender, class level, average computer use per day, frequency of Internet use, and frequency of IM use. The vast majority of students (97.8%) spent more than one hour on the computer every day. Additionally, 78.1% of students get on the Internet upon turning on the computer. Results of the survey also revealed that 72.5% of students used IM on a daily basis. The described results clearly indicate that most students are familiar with both the Internet and IM. Therefore, to implement IM in teaching and learning activities can be considered valuable.

Table 1

Subjects' Demographic Characteristics

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		Class				Total	(%)
		Sophomore	Junior	Senior			
Gender	Male	25	89	11	125	68.7	
	Female	10	46	1	57	31.3	
Average computer use per day	Time<1 hr	0	4	0	4	2.2	
	1<Time≤4 hrs	15	40	6	61	33.5	
	4<Time≤8 hrs	14	56	3	73	40.1	
	8<Time hrs	6	35	3	44	24.2	
Frequency on Internet use	On the Internet upon turning on the computer	29	104	9	142	78.0	
	When necessary	1	14	2	17	9.3	
	At specific Arial	5	16	1	22	12.1	
	Others	0	1	0	1	0.5	
Frequency of IM use	On IM upon being online	26	78	7	111	61.0	
	When necessary	7	37	4	48	26.4	
	At specific Arial	2	18	1	21	11.5	
	Others	0	2	0	2	1.1	

3.2 Factors analysis of questionnaire items

The main applications of factor analytic techniques are: (1) to reduce the number of variables and (2) to detect structure in the relationships between variables, that is to classify variables. Therefore, factor analysis is applied as a data reduction or structure detection method. To draw out clear elements from the many questions, this survey employed factor analysis before further investigation. Because there are five parts in the questionnaire ,factors analyses were demonstrated , five Arial in this section (Table 2). Principal component factor analysis was run to determine the potential groupings of these questionnaire items of “interests of learning English”, “the necessity of English learning”, “English communication ability”, “experience in IM use”, and “students’ viewpoints of applying IM on English learning”. Varimax rotation was used to better account for expected correlations among potential factors. One factor emerged with eigenvalues greater than 1.0. From Cronbach’s alpha value, we can find that the reliability of the questionnaire is very high. And based on the analyses of the total variances, we can also conclude that the validity of the questionnaire is sufficiently high.

Table 2

Results of Factors Analysis

Group	Category	Factors	Cronbach’s alpha	Total Variances
1	Interests of learning English	1. Interests of learning English	0.92	59.56%
2	Necessity of English learning	1. The necessity of English learning 2. The importance of English ability 3. The advantages of owning excellent English ability	0.82 0.78 0.81	68.42%

3	English communication ability	1. Interactive ability of English communication 2. Translation ability	0.87 0.86	68.40%
4	Experience in IM use	1. Using experiences in IM functions 2. Social experiences 3. Learning experiences	0.88 0.81 0.69	68.21%
5	Applying IM to English learning	1. Usability of applying IM to English learning 2. Efficiency of applying IM to English learning	0.95 0.91	76.20%

3.3 T-test and analysis of variance for principle factors based on subjects' background

This section will describe whether the background variables significantly influence the principle factors or not. There are 11 principle factors in the questionnaire based on results of a factor analysis. From the results shown in Table 3, this study yielded the following results from the T-test and analysis of variance (ANOVA).

Gender significantly influences the interests in learning English. The independent T test was carried out to compare the difference between male and female. Results indicated that females were more interested in learning English than males (T-value = -3.556, significance = 0.000). Gender also significantly influences the feeling of the necessity of English learning. The independent T test was carried out to compare the differences between male and female. Results indicated that females feel that it is more necessary to learn English than males (T-value = -3.101, significance = 0.002). Additionally, the difference in educational backgrounds significantly influences the feeling of the necessity to learn English. The multiple comparisons of Scheffe method was used to compare the difference between different education backgrounds. Results indicated that sophomore students feel more necessity to learn English than junior students (Significance = 0.007). The different frequencies of using instant messaging significantly influence the experiences of using IM functions. The multiple comparisons of Scheffe method were used to compare the different frequencies of IM use. Results indicated that higher frequency users feel more competent than lower frequency users (Significance < 0.01). Gender significantly influences the feeling of the usability of applying IM to English learning. The independent T test was carried out to compare the difference between male and female students. Results indicated that more females than males agreed that the use of IM in English learning is usable (T-value = -3.701, significance = 0.000). Finally, the difference in time spent on using the Internet significantly influences the feeling towards the efficiency of applying IM on English learning. The multiple comparisons of Scheffe method was used to compare the different frequencies of IM use. Results indicated that the users who spent more than 4 hours and less than 8 hours mostly feel that it is efficient to use IM on English learning (Significance < 0.01).

3.4 Path analysis of applying IM on English learning

The initial model of applying IM to English learning was developed to define the major factors and paths that influence the research concepts. There are five major paths that can be clearly defined to verify the model, including (1) from 'Interests of learning English' to 'Viewpoints of applying IM on English learning'; (2) from 'Interests of learning English' through 'Ability of English communication' to 'Viewpoints of applying IM in English learning'; (3) from 'Importance of learning English' to 'Viewpoints of applying IM in English learning'; (4) from 'Importance of learning English' through 'Ability of English communication' to 'Viewpoints of applying IM in English learning'; (5) from 'Experience of IM use' to 'Viewpoints of applying IM in English learning'.

In order to verify and validate the initial model, path analysis was conducted. There are two regression models established using the path analysis. First, it was necessary to define the dependent variables and

the independent variables. The dependent variable in the first model is ‘Ability in English communication’. And the independent variables included ‘Interests in learning English’ and ‘Importance of learning English’. The dependent variable in the second model is ‘Viewpoints of applying IM to English learning’. And the independent variables included ‘Interests in learning English’, ‘Ability in English communication’, ‘Importance of learning English’, and ‘Experience in IM use. Second, the regression analyses are shown to verify and validate the initial model. In the first regression model, it was found that ‘Interests in learning English’ positively and significantly influence ‘Ability in English communication’. And in the second regression model, ‘Interests of learning English’, and ‘Experience of IM use’ are positively and significantly influence ‘Ability of English communication’ as illustrated in Figure 1. Figure 1 shows that if students were interested in learning English, they would agree to apply IM in English learning. If they were familiar with using IM, they would also agree to the usability and efficiency of applying IM on English learning. Lastly, if the students were interested in English learning, their English ability would be better than students who were not interested. For the most part, regardless of the students’ feeling towards the importance of learning English, they all agreed with the notion that it is usable and efficient to apply IM to English learning.

Table 3
Analysis of Variance for Principle Factors

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	A1	B1	B2	B3	C1	C2	D1	D2	D3	E1	E2
Gender	12.59**	9.97**	4.38*							16.88**	
Education		6.38**									3.20*
Time spent on a computer per day											4.13**
Frequency of using instant messaging		3.304*					13.86**		5.35**		

A1: Interest in learning English; B1: The necessity of English learning; B2: The importance of English fluency;

B3: The advantages of possessing excellent English fluency; C1: Interactive ability in English communication;

C2: Translation ability; D1: Experiences of using IM functions; D2: Social experiences; D3: Learning experiences;

E1: Usability of applying IM in English learning; E2: Efficiency of applying IM in English learning

*: p-value<0.05;

** : p-value<0.01

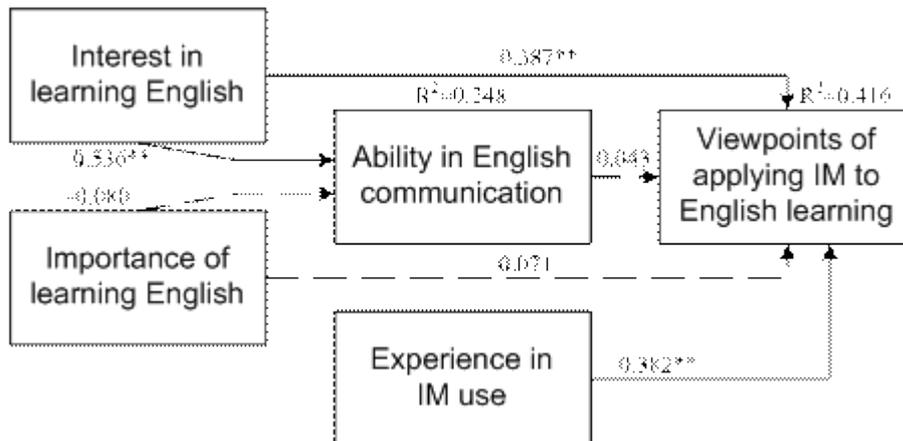


Figure 1. The Model of Applying IM in English Learning
 (*: p-value<0.05; **: p-value<0.01)

4. Discussion and Conclusions

The present study examined the implementation of using instant messaging in English learning for Taiwanese university students. Results derived from the survey indicated that most students perceived the potential use of IM on English learning as an intriguing concept. It was also revealed that the students felt it would be usable and efficient to utilize IM in English learning. Findings of this study brought to light that IM can be integrated into innovative instructional design.

Based on the analytic results of the survey, we found that gender, education, time spent on a computer per day, and frequency of using instant messaging were significant variables to the factors which influenced students' viewpoints of applying IM in English learning. From the perspective of gender, this study found that: (1) females were more interested in learning English than males; (2) females feel it is more necessary to learn English than males; (3) females agreed more than males with the notion that the use of IM in English learning is usable.

Survey results also indicated that sophomore students feel that it is more necessary to learn English than junior students. As previously stated, the majority of Taiwanese universities offer virtually no English courses beyond the freshman year. The unfortunate effect of this lack of language courses is that students tend to lose their interest in English learning over time. When considering this negative consequence in conjunction with the assumption that regular communication is crucial in the enhancement of students' English ability, the benefits and sheer convenience of the use of IM in English learning becomes apparent. In addition, not only can the convenient use of IM make up for the lack of English courses offered to the students, it can also provide easy access to English communication practice.

We found that the difference in time spent in using IM significantly influences the feeling towards the efficiency of applying IM on English learning. Results indicated that users who spent more than four hours and less than eight hours on using IM generally feel that it is efficient to use IM in English learning. Sixty-four point three percent (64.3%) of students spent more than four hours on a computer. Thus, we conclude that the majority of students consider applying IM in English learning as an efficient method.

The following results were obtained from the path analysis performed. (1) Students who are interested in learning English would agree with the notion of applying IM on English learning. (2) Students who are familiar with the use of IM would agree to the usability and efficiency of applying IM on English learning. (3) Student with a greater interest in English learning would possess better English ability than their peers. (4) Regardless of the students' feeling toward the importance of learning English, they would agree with the notion that it is usable and efficient to apply IM in English learning.

As a modern communication tool in the global information society, IM can be very helpful and practical for users from all walks of life. For students, it provides them with the valuable opportunity to practice their English with other English speakers instantaneously. It is established that if students can practice their English communication frequently, their English ability will be enhanced. IM technology can even provide multi-channel communication for students to practice English. In general, Taiwanese university students feel a lack of confidence in their English communication, especially speaking ability. IM conversation sessions, like other online communication learning tools, can be conducted in a learner-friendly environment without the pressure of face-to-face communication (Warschauer, 1996a). Besides, there is a significant rise in the use of IM in the corporate setting (Cameron & Webster, 2005). Such a strategic practice may be beneficial for Taiwanese university students to gain the necessary communication skills to face the global market. Students can also acquire technical skills via online communication practice that will be useful in the future.

Limitations of the study need to be considered when interpreting the findings of the present study. First, this study was conducted at one selected university only. Although the results are shown to have high validity and reliability, the results of the study would be more representative if the subjects were sampled from more universities. Second, the concept of utilizing IM on English learning proposed in this study has not been put into practice. Although it is proven usable and efficient as indicated by the findings, it would be worthwhile to put this concept into practice.

Findings in the study led to the conclusion that students who are interested in learning English are more likely to enhance their English communication significantly. We conclude that applying IM in English learning is not only an interesting concept, but also a usable and efficient English learning method. This supports the notion that the use of computer-mediated communication tools certainly can benefit learning and develop learners' communicative competence to a certain extent (Chen, 2005). In future studies, we can employ an experimental design to investigate whether or not students' English communication can be enhanced by utilizing IM. Furthermore, we can tackle the research from a different perspective by designing another survey questionnaire to elicit the opinions of English instructors. Comments from English instructors can be of high value to the actual implementation of IM on English learning. Instructors' feedbacks can be used to form the strategy to initiate the implementation. Finally, this study concluded that the utilization of IM on English learning is highly feasible for Taiwanese University students. This concept is a constructive value to be initiated at universities in Taiwan. Subsequent investigations will reveal the extent to which IM enhances Taiwanese university students' English communication. This concept holds promise for educational administrators and English instructors in non-English speaking countries.

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