

**The Effectiveness of Internet-based Multimedia Assisted
Language Learning (IB-MALL) in Improving Students'
English Proficiency under Sino-foreigner Cooperative
Education Context From Students' Perspectives**

Qirui Liu

Master's Thesis in Education
Autumn Term 2019
Faculty of Education and Psychology

ABSTRACT

Qirui, Liu. 2019. Master's Thesis in Education. University of Jyväskylä. Faculty of Education and Psychology.

This empirical study is intended to explore the effectiveness of Internet-based Multimedia Assisted Language Learning (IB-MALL) under the Sino-foreign cooperative education context from students' perspectives in China.

With the expansion of the globalization and development of technology, there are more and more pedagogical experiments of applying the internet and multimedia being carried out in the education field. However, in China, there are limited foci on the unique context of Sino-foreign cooperative education, in which non-English major students are facing challenges of their unqualified English proficiency. Therefore, it is well worth exploring the effectiveness of IB-MALL on those groups of students.

This study adopted both qualitative and quantitative approaches. Two questionnaires including both multiple choices and open-ended questions were designed and given to the students to collect their self-evaluation of learning outcomes and attitudes toward IB-MALL.

Based on the findings, most of the students suggested that their overall English proficiency has been improved, as well as other skills. In terms of attitudes, almost all the students showed a positive acceptance and preference for the IB-MALL. Meanwhile, students also made suggestions for the future application of IB-MALL.

Keywords:

Internet-based Multimedia Assisted Language Learning; Learning and Teaching English as a Foreign Language; Sino-foreign cooperative education program;

CONTENTS

TABLE OF CONTENT	6
1. INTRODUCTION	7
1.1 Background.....	7
1.2 The Rationale of the Study	8
1.3 Objectives of the study and research questions	9
1.4 Layout of the study.....	9
2. LITERATURE REVIEW	10
2.1 Internet-based multimedia assisted language learning (IB-MALL) .	10
2.1.1 Definition and development	10
2.1.2 Effect of CALL and Internet-based multimedia assisted language learning (IB-MALL)	13
2.1.2 Multimedia and Multiliteracy	15
2.2 Sino-foreign cooperative education program	16
2.2.1 Low English proficiency of students under Sino-foreign cooperative education program	16
2.2.2 Ineffective English training before studying abroad	17
2.3 Learner-centered pedagogy	18
2.3.1 What means learner-centered pedagogy?.....	18
2.3.2 IB-MALL enables learner-centered pedagogy	19
3. IMPLEMENTATION OF THE STUDY	21
3.1 Research background	21
3.2 Research design	22
3.3 Participants.....	23
3.4 Instruments.....	23
3.4.1 Questionnaire survey	24
3.4.2 Direct Observation.....	25
3.5 Data collection	26
3.6 Data analysis.....	26
3.7 Ethical solutions.....	26
4 RESULTS	28
4.1 Results of the multiple choice questions from the questionnaire survey	28

4.1.1	An overview of the numeric results	28
4.1.2	Analysis of students' self-evaluation	29
4.1.3	Analysis of students' attitudes toward IB-MALL	38
4.2	Results of the open-ended questions from the questionnaire survey	44
4.2.1	Analysis of students' self-evaluation	45
4.2.2	Attitude toward IB-MALL	49
4.3	Results of in-class observation	56
4.3.1	Basic information of the training	57
4.3.2	Teaching and learning tools	57
4.3.3	Students' positive engagements and cooperation	65
5	DISCUSSION	70
5.1	Does IB-MALL improve students' English proficiency?	70
5.2	What do students think of IB-MALL?	72
5.3	Advantages of IB-MALL	73
5.4	Limitations of IB-MALL	74
5.5	Implications	75
5.5.1	Provide sufficient ICT training	75
5.5.2	Apply Internet based Multimedia assisted learning (IB-MAL) to other subject studies	76
5.5.3	Combine IB-MALL with contact teaching	76
5.6	Reliability and validity of the study	76
5.7	Suggestions for future studies	77
6	REFERENCES	78
7	APPENDIX	84
8	ACKNOWLEDGEMENT	88

FIGURE OF CONTENT

Figure 1 Answer Distribution of Q1 (N=23)	29
Figure 2 Answer Distribution of Q2 (N=23)	30
Figure 3 Answer Distribution of Q12 (N=23)	30
Figure 4 Answer Distribution of Q3 (N=23)	31
Figure 5 Answer Distribution of Q4 (N=23)	32
Figure 6 Answer Distribution of Q5 (N=23)	33
Figure 7 Answer Distribution of Q6 (N=23)	33
Figure 8 Answer Distribution of Q7 (N=23)	34
Figure 9 Answer Distribution of Q8 (N=23)	35
Figure 10 Answer Distribution of Q9 (N=23)	36
Figure 11 Answer Distribution of Q10 (N=23)	36
Figure 12 Answer Distribution of Q11 (N=23)	37
Figure 13 Answer Distribution of Q1 (N=23)	38
Figure 14 Answer Distribution of Q2 (N=23)	39
Figure 15 Answer Distribution of Q5 (N=23)	40
Figure 16 Answer Distribution of Q7 (N=23)	40
Figure 17 Answer Distribution of Q3 (N=23)	41
Figure 18 Answer Distribution of Q6 (N=23)	42
Figure 19 Answer Distribution of Q4 (N=23)	43
Figure 20 Answer Distribution of Q8 (N=23)	43

TABLE OF CONTENT

Table 1 Basic information of the experimental group.....	23
Table 2 The purposes of questions in the questionnaire 1 (Self-Evaluation of the Summer intensive English training).....	24
Table 3 The purposes of questions in the questionnaire 2 (Students' attitudes toward IB-MALL)	24
Table 4 Frequency and distribution of the first survey (N=23)	28
Table 5 Frequency and distribution of the second survey (N=23)	29

Picture of Content

Picture 1 Outlook of WeChat.	57
Picture 2 Outlook of Moodle on iPad.	58
Picture 3 Outlook of Answer Garden.	58
Picture 4 Outlook of Dubbing Fun	59
Picture 5 Icons of Pages, Numbers, and Keynote.	59
Picture 6 Printed outlook of individualized book	60
Picture 7 Outlook of Kahoot	60
Picture 8 Outlook of X-Mind	61
Picture 9 Outlook of Yingyu Liulishuo	61
Picture 10 Outlook of Baicizhan	62
Picture 11 Outlook of Seed.	62
Picture 12 Outlook of TED.	63
Picture 13 Outlook of BBC News	63
Picture 14 Outlook of Grammarly	64
Picture 15 Outlook of Quara	64
Picture 16 Outlook of Canvas	65

1. INTRODUCTION

This chapter starts from the background of Sino-foreign cooperative education, followed by the rationale of this study, research questions, and layout of the study.

1.1 Background

With the development of globalization, there is more international cooperation in different fields around the world. In the Chinese educational field, Sino-foreign cooperative or joint education is a popular trend. Sino-foreign cooperative education refers to an innovative way of cultivating international future elites by combining as much educational resources from all over the world as possible (Lin, Wang & Zhang, 2018). For instance, summer school, exchange programs, and double two-year programs, bachelor-master joint programs are the specific forms of Sino-foreign cooperative education. Students who enrolled in those programs will be able to receive education not only in China but in other countries.

As a new trend, this phenomenon has promoted extensive research globally as well. Among different research in this area, the instructional language learning and teaching is one of the most well worth exploring area of studies. In a Sino-foreign cooperative education setting, students need to be equipped with good instructional language proficiency to study in targeted countries. In most of the cases, English is the most common instructional language. Despite that more and more educational institutions like universities have designed related training for the students, most of them find it difficult to reach the necessary level of language proficiency. Therefore, developing an effective way of improving students' English proficiency is an urgent issue. This study is designed to explore the effectiveness of an internet-based multimedia assisted language learning (IB-MALL) method in improving students' English proficiency from students' perspectives under the Sino-foreign cooperative education context.

1.2 The Rationale of the Study

First of all, according to previous studies many students who participated in the double-two-year programs had encountered learning difficulties due to unqualified English proficiency. (Qiu & Yu, 2009; Geng & Lin, 2013; Sun & Han & Li, 2014) Unfortunately, there is limited number of empirical studies about how to solve this problem. Thus, finding solutions to eliminating the language barrier for students who study abroad is meaningful.

Besides, learning and teaching English with the assistance of computer (computer-assisted language learning; CALL) and other digital devices have been shown by a great number of studies to be effective in improving students' different English abilities. (Ali, 2013; Wang & Pei, 2011; Pirasteh, 2014) However, almost all the studies were targeting English major university students, especially in mainland China. Much less is known about non-English major students' learning situation in the double-two year program. Nowadays, being equipped with good English proficiency is not only the requirement for English major students but all other major students as well. Therefore, it is necessary to establish and innovate an efficient form of English teaching and learning for non-English major students, especially under the unique Sino-foreign cooperative education context.

Last but not least, traditional computer-assisted language learning (CALL) is moving toward internet-enhanced and student-centered form (Lisa Winstead, 2016). That is to say that studies related to CALL need to be updated. Still, there is a very limited studies in mainland China. Besides, a huge part of the previous researches compared the pre and post-test scores and used the scores as the only proof to show the effectiveness of CALL. Those studies ignored the learning and teaching experience of two main subjects: students and teachers. The assessment and evaluation of the improvement and effectiveness should be conducted by them. Hence, this study will focus on one of the roles -- students' attitudes and opinions.

1.3 Objectives of the study and research questions

This research is designed to investigate the effectiveness of Internet-based Multimedia assisted Language Learning in improving first-year students' English proficiency from a learner's perspective. The research questions are as follows:

1. Does Internet-based Multimedia assisted Language Learning (IB- MALL) improve students' English proficiency;
2. What do students think of Internet-based Multimedia assisted Language Learning (IB-MALL);
3. What are the advantages and disadvantages of IB-MALL?

The results of this research will have potentially wide-reaching implications for the further implementation of Internet-based Multimedia assisted Language Learning (IB- MALL) in the English training for students enrolling in the Sino-foreign cooperative education program.

1.4 Layout of the study

This thesis consists of five chapters. Chapter 1 is the introduction of the study, which briefly introduces the background and research gap of this research. Chapter 2 contains previous researches about issues related to the Sino-foreign cooperative education program and internet-based multimedia assisted language learning. Chapter 3 demonstrates the implementation of the study, which describes research background, research design, participants, instruments, data collection, data analysis, and ethical solution. Chapter 4 reports the data and results from the study and analysis. Chapter 5 concludes the research by summarizing the findings and pointing out the limitations of current researches and suggestions for further study.

2. LITERATURE REVIEW

This chapter will review previous studies that related to Sino-foreign cooperative education program and internet-based multimedia assisted language learning (IB-MALL).

2.1 Internet-based multimedia assisted language learning (IB-MALL)

In this part, previous studies relating to computer-assisted language learning (CALL) and internet-based multimedia assisted language learning will be summarized and discussed. It includes the development process of CALL and its effect on improving learners' language proficiency.

2.1.1 Definition and development

Since the late 20 century, there have been studies about computer-assisted language learning (CALL) and this was the beginning stage of learning and teaching in the digital environment. The origin of CALL can be even traced back to an attempt by behaviorist psychologist B.F. Skinner called Programmed Instruction (PI) in 1960s. Then between the 1960s to 1990s, researches about CALL were classified as Tutorial CALL which referred to the interaction between language learners and computers rather than computer-mediated communication. In Tutorial CALL, the specific form was sentence-based multiple-choice, blank-filling, matching practice, etc. Later, a change in focus occurred as CALL as a field of study starting to focus on the individualization of the learning experience. This change was supported by the development of technology, more specifically, Artificial Intelligence (AI). This development enabled the computer to become smarter rather than testing right and wrong answers according to rigid algorithms (Heift, T., & Schulze, M., 2015).

In 1997, Levy defined CALL as "the search for and study of the allocation of the computer in language learning and teaching" or "any kind of language learning activity that makes use of computers" (p. 1).

Nowadays, after decades' development, CALL has become the most common and widely used term referring to the form of learning language through the mediation of the computer. With the rapid innovation in technology, not very long after, the emerging and rapid development of the internet represented the coming of E-Learning. Moving to the 21st century, the development of mobile devices like mobile phones, MP3, MP4, etc. promoted the trend of moving from E-learning to M (mobile)- learning. Recently, smart digital devices based on wireless internet, AI, VR, and other advanced technologies are conducting a revolution which enables the (language) teaching and learning can be done in an Internet-based multimedia form. This innovative form of learning and teaching pushing a change in trend from M-learning to U-learning (customized individual learning form) (Dyson, Litchfield, Lawrence, Raban, & Leijdekkers, 2009). According to Hwang, Tsai, Yang, U-learning provides the right content for the right learners, at the right time, in the right place and in the right context (2008). In U-learning, learners will not break off their learning, as they can access to their learning materials from anywhere at any time immediately. Besides, learners can interact with peers, instructors, experts and learn in a real, authentic situation (Ogata & Yano, 2004).

Due to this short but fast development process, there are diverse of other terms based on CALL being utilized in different contexts. For instance, technology-assisted language learning (TALL), computer-aided instruction (CAI), Internet-enhanced language learning (IELL), web-based language learning (WBLL), etc. Those terms are designed to accurately describe different language learning contexts in the digital age. As Winstead and Wang (2016) point out, the traditional term CALL cannot provide an overarching frame for understanding innovative and more nuanced language learning contexts.

As one of the extended terms, multimedia assisted language learning (MALL) according to Mayer (2002) refers to the presentation of material using at least two of the elements of sound (audio), text, still and motion graphics (visual). It is a combination of various types of information and resources into a public and common platform that can facilitate language learning and teaching. Traditionally, according to Chan (2011), media was defined as a channel or system of communication, information or entertainment. Later this definition has been divided into more specific terms. Ohm (2010, cited in Chan, 2011) defined three types of media: auditive media (e.g. music and radio); visual media (e.g. pictures and books); audiovisual media (e.g. television programs and sound films). Based on that, the term of multimedia can be understood as the combination of traditional media forms. Besides, the occurrence of social media is one of the most crucial milestones that represented the turning point from traditional media to modern multimedia. Social media has been taking the main role of current multimedia since the internet has been started to be utilized by the individual.

Obar and Wildman (2015, p.745-750) pointed out three features of social media:

- a. Social media services support the growth of social networks by connecting with other individuals and groups
- b. Individuals and groups create characterized profiles for sites and applications that designed and managed for social media services
- c. User-generated content is the core formula that consist of social media

In the modern language education field, Multimedia assisted language learning (MALL) is applied through different kinds of applications and software that can be used on diverse electronic devices. Based on individualized needs, those applications and software are being designed and upgraded with incredible speed and there is research that has unveiled the growing diversity and

complexity of the multimedia content (Rasiwasia, Costa Pereira, Coviello, Doyle, Lanckriet, Levy, & Vasconcelos, 2010)

2.1.2 Effect of CALL and Internet-based multimedia assisted language learning (IB-MALL)

During the past several decades, many empirical studies had proven the effectiveness of CALL and other similar forms of learning and teaching language (English). Jagust T., Boticki I., and So H.J. (2018) indicated that the utilization of technology has a positive influence on students' academic performance and enhance learners' motivation, interest, and engagement during the study proves. There are also studies showed the effectiveness of CALL in other aspects of language learning. For instance, the study conducted by Pardo-Ballester (2012) showed that students' listening and speaking skills have significantly improved after receiving an internet-based multimedia language training program; Another study that was conducted by Zaini and Mazdayasna (2015) indicated that the students who were exposed to computer-based instruction outperformed their counterparts in terms of using appropriate articles, tense, plural forms and spelling; In 2015, a study about LAN-based computer-aided English teaching platform was carried out revealing that this way of learning and teaching can meet the requirements of English teaching in most colleges and it has excellent effects (Yuan Ruijiao, 2015).

Apart from the improvement in learning outcome, there are studies showing that learners have a positive attitude toward using the internet and electronic devices to learn the language. Pedagogically, it is a reflection of a student-centered pedagogical trend which is replacing traditional teaching-centered way. This is reflecting a tendency of emphasizing learners' experience rather than solely focusing on the learning outcome. Learner as one of the most important learning participants should have their voices be heard. Therefore, more studies moved from investigating the objective and numeric learning outcome to exploring the learners' attitudes and experience. For example, the studies by Churchill (2008), Federico (2000), Liaw (2002), Tsai and Tsai (2003)

and Peng, Tsai, and Wu (2006) explored learner characteristics such as perceptions, attitudes, and self-efficacy toward information technology in language learning and teaching. According to Talebinezhad M.R. and Abarghoui M.A. (2016), the application of internet and multiple choices of electronic devices enhanced learners' confidence as they believe that internet and electronic devices have developed their way of thinking which result in better learning outcome. Takeshi Ishihara and Joowan Ham conducted an empirical study in 2012 that proved that students tend to study longer and more frequently by using ICTs than when they did not these technologies. Another study showed that most students agreed that their motivation for English learning was enhanced and most of them had positive attitudes toward m-learning (mobile learning) (Yang Shih-hsien, 2012). Similar results also occurred in Mahmoudi and Razak's study which investigate students' attitude and performance in learning vocabulary via CALL that participants possessed positive attitudes toward Computer Assisted English Language Learning (CAELL) (2012). Students' positive attitude is also reflected as an interest in English learning. A study by Milutinović, Labus, Stojiljković, Bogdanović and Despotović-Zrakić (2013) also indicated that mobile applications have a positive effect on the students' interest in English subject matter.

Such studies not only revealed the learners' positive attitude and better learning experience but manifests that Internet-based language learning facilitates learner-centered learning and teaching. As Mohannad and Masoud (2013), mentioned, electronic devices and the internet offer a stress-free and relaxed atmosphere, and learners are more self-motivated which leads to more frequent interaction apt between learners It means the usage of electronic devices and the internet create more chances for learners to design and carry out a diverse way of either working together or alone without the limitation of place and time.

2.1.2 Multimedia and Multiliteracy

With the development of technology and the popularization of the internet, the notion of multiliteracy have been put forward and discussed more frequently. One of the first definitions of multiliteracy was described by New London Group (1996, as cited by Leino 2014) that information is presented in multiple communication channels, both printed and electronic. In Finland, multiliteracy has been emphasized as a key competence and has been indicated in the national core curriculum during the basic education stage. This multiliteracy competence refers to the skill to interpret, produce and make a value judgment across a variety of different texts (National Core Curriculum, 2016). According to this definition, “text” can be understood to refer to all different types of communication including verbal, visual, audial, etc. In modern society, this competence is of vital importance as it influences individuals to understand and perceive the diverse world (Halinen, Harmanen & Mattila, 2015). For instance, there are many texts, videos, pictures and other information on the internet. Individuals need to have multiliteracy competency to form a holistic comprehension of the information (Leino, 2014).

When it comes to multiliteracy competence, and how to enhance this competence, we need to discuss multimedia first. As Halinen et al. (2015) pointed out, media literacy can be developed by working with media. From this perspective, it can be inferred that to improve the learners’ multiliteracy competence, learners should have access to multimedia resources during the study. But one thing needs to be clarified that the content and materials come from multimedia should be carefully chosen. Additionally, it is also crucial to guide learners to use multimedia effectively and critically. That is to say that learners should know how to distinguish the information that they need from that irrelevant information.

In conclusion, learners should be equipped with multiliteracy competence to facilitate their learning through Multimedia assisted learning. At the same time, learning with multimedia can support learners’ multiliteracy competence.

2.2 Sino-foreign cooperative education program

After many years' development, Sino-foreign cooperative education nowadays has become a common educational form in China. Aside from the fruitful achievements for benefiting students and promoting cross-culture communication, there are also a number of problems waiting to be solved.

2.2.1 Low English proficiency of students under Sino-foreign cooperative education program

The most basic requirement which is also the biggest challenge for students who will study abroad is to have a good command of English proficiency. When study abroad, both studying and living require students to use English. However, in China, even English major students are not been equipped with satisfying overall English skills, let alone non-English major students who come from the vocational school. According to Yan (2012), there is a great number of students under the Sino- foreign cooperative education program whose average English score in the college entrance examination is 47.22 (the full mark is 150). Take an example of He Nan province, among 704 students within different Sino-foreign cooperative programs, there were only 12 students reach above 90 scores in college entrance examination with a passing rate of 1.7%.

As Gu summarized in 2012, students have difficulties in listening and speaking skills, in particular. Traditional English teaching in China does not emphasize the importance of listening and speaking. Students spent most of the time learning grammas. Therefore, students did not realize the importance of listening and speaking, neither do the students can speak and understand correctly. Besides, for academic writing skills, it is also a big learning difficulty for Chinese students. For Chinese students, writing is always the biggest problem of their English learning. The main reason is that they do not have sufficient and related training. Initially, Chinese students do not own stable lexical base. They are not capable of expressing their ideas in correct English. For the freshmen, they find that finishing one essay is already a challenge, leaving alone generating a formal and correct academic paper. However, for

university students, lacking such training will harm their study and working performance (Yu, Xu, & Bai, 2011).

Due to the poor English foundation of the students, they usually have limited interests and motivation in learning English. The reason is that with such limited proficiency, English learning and training is demanding for them as the quickest way is to remember and recite. Such methods can cause big pressure on those students easily. Besides, some of the students even worked very hard, but without an effective method, very few of them can make a significant improvement. (Zhang & Luo, 2013).

2.2.2 Ineffective English training before studying abroad

One of the biggest problems as mentioned above is the students' language skills are not sufficient for studying and living in other countries. The reason for this problem radically is that the teaching and training mode is enabled to meet the international standards, especially in higher vocational colleges context. At present, a large part of the Sino-foreign cooperative education project still utilizing traditional Chinese teaching mode throughout the teaching and training process. The content and methods of language teaching and assessment do not follow the teaching practice of Chinese-foreign cooperation. Besides, there is not much effective construction of internationalized teacher teams that are qualified to train students. According to the "Questionnaire Survey Report on Internationalization of Education in Higher Vocational Colleges in Jiangsu Province", there are 48 colleges that indicate they have recruited foreigners to participate in teaching. The average number of foreigners engaged in teaching in higher vocational colleges in Jiangsu Province is only 4.81. According to the statistics, 90.7% of colleges have never sent the domestic teachers and administrative personnel to learn and exchange with their foreign partners. 64.8% of colleges have never sent their teachers to participate in foreign language training and 85.2% of colleges have never sent their teachers to participate in foreign professional training. The same results also occurred in other provinces like He Nan that there is insufficient foreign human teaching

resources, and domestic human teaching resources with overseas learning experience (Zhang Ge, 2019). Such insufficient and not qualified teaching teams do not support the proper communication between Chinese teachers and foreign teachers, which will further influence the English training quality for the students.

Wu Yanling (2015) pointed out that there is an unavoidable difference between Chinese teachers and foreign teachers in pedagogy and course design. Therefore it is necessary to keep effective and regular communication to ensure the quality of the English training. Research has shown the positive results of the co-teaching of the Chinese teacher and foreign teacher in English training (Zhang & Liu, 2012).

Facing those challenges, studies are being conducted to explore the solutions. One such solution may be the use of ICT tools. For example, there is a study by Su (2011) indicated that it is necessary to make good use of ICT tools and multiple media forms to facilitate the English study. This study is intended to explore the effectiveness of utilizing Internet-based Multimedia to assist the English study of students' under the Sino-foreign cooperative education program in the higher vocational college context.

2.3 Learner-centered pedagogy

Learner-centered learning and teaching have been replacing traditional teacher-centered classes. This trend reflects the respect of learners' leading role in learning.

2.3.1 What means learner-centered pedagogy?

According to Yamada (2009), learning consciousness and motivation are two features of learner centered pedagogy. Students should have clear learning consciousness and strong motivation during the study that can lead them to have a better learning outcome. Learning consciousness refers to the importance of the study. Students with learning consciousness usually have stronger learning

motivation in the study. Furthermore, students would know what they want to learn and how they want to learn. Motivation is another central issue for learning (e.g., Bersin, 2014; Schunk & Zimmerman, 2007; van Lier, 1996). Learners with higher motivation can be higher academic performers, as they know why they learn.

When carrying out learner-centered pedagogy in second language acquisition (SLA) pedagogical design, there is one example that reflect learner-centered value called interactive learning. When applying IB-MALL or other similar ways on the English L2 class, it creates chance and space for the learners to communicate and negotiate. It can be viewed as language in-input and out-put. Such in-input and out-put seem to play an important role in language learning (Yamada, 2009). IB-MALL in this process enables the learners to in-input and out-put positively rather than passively forced by instructors. This pedagogical design typically showed a good example of how to respect learners' leading roles in the English L2 class.

2.3.2 IB-MALL enables learner-centered pedagogy

In Yamada's research, he indicated that there are two types of CALL: synchronous and asynchronous.

Hiltz and Goldman (2005) discussed both the advantages and disadvantages of asynchronous. Asynchronous means learners can learn at any time and at any place via the internet and certain electronic devices. It allows learners to learn freely according to their own pace and form. However, Weller and Mason (2000) thought learners might delay the study and give priority to other things as there are no specific time and space restrictions. In addition, Levy and Stockwell (2006) pointed out that it decreased communicative language learning as there is no contact interactions required.

Different from asynchronous mode, the synchronous mode has been proved to be effective in learning communication skills because instant interactions facilitate practical communicative skills (Blake, 2000). Synchronous mode

nowadays is based on instant response systems like online chatting platforms and APPs. In the classroom setting, synchronous form enhanced task-based communication such as discussions and feedbacks (Morris, 2005). But in this mode, high-proficiency learners utter more than low-proficiency learners, and learners tend to utter short expressions, which lead to inadequate language acquisition (Lamy & Hampel, 2007).

In order to avoid those disadvantages of both asynchronous mode and synchronous mode, Yamada suggested the better way is to combine both modes. Therefore, in IB-MALL context, especially this study settings, it was a contact-teaching based mode with applying IB-MALL. Learners could engage in the class with the help of an online instant response system during the learning with the instructors. Such learning experience not only could ensure the language learning but strengthened learners' learning consciousness. On the other hand, during the private time, students could study at any time and at anyplace as they preferred through electronic devices. This function could promote learners' motivation.

3. IMPLEMENTATION OF THE STUDY

This chapter introduces the methodology adopted in this study. It will describe the research background, research design, participants, instruments, procedures in data collection and analysis.

3.1 Research background

This study was carried out in the international department of the Wuhan Institute of Polytechnic. The international department of this college dispatches several students every year to study abroad via the different cooperative education program. This study focuses on the students under the joint degree program who have been students in the Wuhan Institute of Polytechnic for one year and will go on to study in Australia in 2020. Students will spend two years both in China and Australia and after finishing the required credits they will be granted the joint bachelor degrees from both colleges.

Before being admitted by the foreign university, students need to pass the IELTS exam with the requirement of the overall band above 5.5 and the lowest part should not below 5.0. To prepare for the IELTS exam, the international department will arrange summer intensive courses and apply internet-based multimedia to support the training. All the students enrolled in the summer training had already attended IELTS once and their scores did not reach the requirement. They will attend the second IELTS exam after the summer training.

The instructor of the course was an English teacher from Australia and me as the teaching assistant and research observer. The instructional language was bilingual.

3.2 Research design

This study was intended to explore the effectiveness of internet-based multimedia assisted language learning from the students' perspective. As mentioned in the introduction part, the research questions are:

1. Does Internet-based Multimedia Language Learning (IB-MALL) improve students' English proficiency;
2. What do students think of Internet-based Multimedia Language Learning (IB- MALL);
3. What are the advantages and disadvantages of IB-MALL?

To explore those questions, it was planned to adopt a mixed approach. Creswell defined the mix approach as integrating both qualitative and quantitative data in one study to obtain a more accurate and robust analyzed results (Ivankova, N. V., Creswell, J. W., & Stick, S. L., 2006).

Specifically, this study adopt the mixed-method sequential explanatory. It consisted two phases: firstly quantitative and then followed by qualitative. The qualitative data were collected and analyzed second in the sequence and help explain, or further elaborate on the quantitative results. The qualitative phase was based on the first quantitative phase, and two phases were connected in the intermediate stage in the study(Creswell, 2003).

The quantitative approach can generate reliable and replicable results in a short time and it can be tightly controlled. (Dörnyei, 2007). Unlike the quantitative approach, the qualitative approach is more useful in revealing the reasons and complex situations, a phenomenon better in detail behind the results (Dörnyei, 2007). Therefore, a mixed approach can make good use of the advantages of both qualitative and quantitative approaches.

In this study, it included both questionnaire and class observation to collect data. In the questionnaire, there were two types of questions: multiple choices and

open-ended questions. The multiple choices data would be analyzed quantitatively and the open-ended questions as well as the direct observation would be analyzed qualitatively.

Questionnaires were used to collect general information from the participants about their self-evaluations of their learning outcomes and their attitude toward IB-MALL. It has advantages like cost-efficiency and versatility (Dörnyei & Tagutchi, 2010). In order to acquire detailed data, there were open-ended questions for the participants to explain their answers specifically in the questionnaire.

Class observation was a direct way to record the actual in-class situation, including the teaching style, students' performance, in-class activities, the role of teacher, students, etc.

3.3 Participants

The participants of the study were students in Wuhan Institute of Polytechnic (see Table 1). There are the basic information about the participants.

Table 1 Basic information of the experimental group

Category	Description
Grade	Freshmen
Major	Mechanical Engineering
Gender	Female students: 39.13% (N=9) Male students: 60.87% (N=14)
Age	18 years old on average (ranging from 17-19)
Number	23

3.4 Instruments

Questionnaires were applied to collect students' self-evaluation of their learning outcome and attitudes toward Internet-based multimedia assisted language

learning. In terms of specific and detail answers, open-ended questions were designed for the participants to illustrate. In order to obtain clear and specific of the IB-MALL intervention during the training, this study also carried out direct observation.

3.4.1 Questionnaire survey

Questionnaires are one of the most efficient ways to acquire sufficient data in a short time. In this study, the questionnaire was adopted to collect self-evaluation of students' learning outcomes and attitudes toward the way of the training which was the Internet-based multimedia assisted language learning mode.

The following is the category of questionnaire's purpose. Completed questionnaires are provided in appendix 1

Table 2 The purposes of questions in the questionnaire 1 (Self-Evaluation of the Summer intensive English training)

Criteria for CALL task appropriateness/Purpose of questions	Question number
Language learning potential: Overall self-evaluation of learning experience	Q1; Q2; Q12; Q13; Q14
Language learning potential: Self-evaluation of improvement in reading	Q3; Q4
Language learning potential: Self-evaluation of improvement in listening	Q5; Q6
Language learning potential: Self-evaluation of improvement in speaking	Q7; Q8
Language learning potential: Self-evaluation of improvement in academic writing	Q9; Q10
Language learning potential: Self-evaluation of improvement in ICT skills	Q11

Table 3 The purposes of questions in the questionnaire 2 (Students' attitudes toward IB-MALL)

Purpose of questions	Question number
Learner fit: Overall attitude toward this course and pedagogy	Q1; Q2; Q9
Practicality : Preference and favorability of the learning and teaching method	Q5; Q7; Q10
Positive Impact: Interest	Q3; Q6
Meaning focus: Motivation	Q4; Q8
Practicality: Suggestions	Q11

At the end of the summer course, each student was required to answer two surveys. The survey was adapted from Tsai, Tsai, & Hwang's (2010) PDA attitude scale and guided by Chapelle's framework for CALL evaluation (Jamieson J., Chapelle C. & Preiss P., 2001), with some additional modifications being implemented by me. The first survey requested students to evaluate their study outcomes on 1-5 scales and two open-ended questions. The second survey was about their detailed and overall personal feelings toward the training and IB-MALL which consisted of multiple choices and open-ended questions as well. Considering the students' language level, the questionnaire was designed in Chinese so that students could answer the questions in Chinese.

3.4.2 Direct Observation

Direct observation means observing and recording the class and participants without disturbing the participants. This thesis used direct observation to record the real in-class condition. In this study, I was the teaching assistant as well as the observer. I would pay attention to how does the teacher organizes the whole class; how do students' response to the teachers and knowledge, how do the activities be conducted etc. All the details can be displayed clearly. In addition, voice recording and videotaping were also implemented to recording the class. Under internet-based multimedia assisted language learning, the

usage of website and software are of paramount importance. Thus, the record of the class contains the screenshots and notes.

3.5 Data collection

The questionnaire was administered with the help of software. All the data from the questionnaire were collected by a software called WenJuanXing. This kind of online questionnaire was sent as a link. Students received the link through an online group discussing room. After clicking the link, the questionnaire was presented and students finished the questionnaire independently.

3.6 Data analysis

The first type of the questionnaire was multiple choice and would be analyzed through WenJuanxing. It is a software that supports answer collection and descriptive analysis through the internet. The second type was open-ended questions about students' overall feelings and their point of views about the learning and performance, which would be analyzed through content analysis, as well as the in-class observation. As Cohen, Manion, and Keith (2007) point out, content analysis follows the steps including gathering the text, defining the units of analysis and categories, coding the text by modifying and fitting the content into different categories. To ensure the accuracy of the analysis, all the analyses will be carried out in Chinese and translated into English.

3.7 Ethical solutions

As this intensive summer English training was the first time that adopting internet-based multimedia assisted language learning (IB-MALL) mode, students who enrolled in this training meant that they agreed to participate in the effectiveness experiment held by Wuhan Institute of Polytechnic. This agreement had been acknowledged by the students before the starting of the training.

In this study, concerning to students' rights, before giving the questionnaire to the students, the consent forms that asked for students' permission of participating in this study were given to the students. In order to guarantee participants' privacy, the data were anonymized and there were no personal questions such as names, ages, etc. in the questionnaire. All the data were only stored in the author's private computer and would be kept until the end of 2019.

4 RESULTS

In this part, the results of the questionnaires and findings of the class observation are demonstrated and analyzed.

4.1 Results of the multiple choice questions from the questionnaire survey

The results of multiple choice questions would be presented according to order and logic of the purposes of the questions. For the students' self-evaluation questionnaires, the analysis were carried out by following the order of overall improvements, improvements in listening, speaking, writing, reading and other aspects. For the students' attitudes toward IB-MALL questionnaire, the analysis were carried out by following the order of general attitudes, preference and favorability, interest, and motivation.

4.1.1 An overview of the numeric results

The following two tables demonstrate students' answers to each question in the survey. The holistic frequency and distribution of the answers have been calculated and presented.

Table 4 Frequency and distribution of the first survey (N=23)

Self-Evaluation Of The Summer Intensive Training										
	1		2		3		4		5	
	N	%	N	%	N	%	N	%	N	%
Q1	0	0%	0	0%	6	26.09%	11	47.83%	6	26.09%
Q2	0	0%	0	0%	5	21.74%	6	26.09%	12	52.17%
Q3	0	0%	1	4.35%	2	8.7%	12	52.17%	8	34.78%
Q4	1	4.35%	1	4.35%	1	4.35%	10	43.48%	10	43.48%
Q5	0	0%	2	8.7%	1	4.35%	12	52.17%	8	34.78%
Q6	0	0%	0	0%	3	13.04%	10	43.48%	10	43.48%

Q7	0	0%	2	8.7%	10	43.48%	7	30.43%	4	17.39%
Q8	0	0%	1	4.35%	8	34.78%	7	30.43%	7	30.43%
Q9	0	0%	1	4.35%	2	8.7%	15	65.22%	5	21.74%
Q10	1	4.35%	0	0%	7	30.43%	8	34.78%	7	30.43%
Q11	0	0%	1	4.35%	5	21.74%	11	47.83%	6	26.09%
Q12	0	0%	0	0%	4	17.39%	9	39.13%	10	43.48%

Table 5 Frequency and distribution of the second survey (N=23)

Questionnaire Of Students' Attitudes Toward IB-MALL										
	1		2		3		4		5	
	N	%	N	%	N	%	N	%	N	%
Q1	0	0%	3	13.04%	7	30.43%	9	39.13%	4	17.39%
Q2	0	0%	2	8.7%	7	30.43%	7	30.43%	7	30.43%
Q3	0	0%	1	4.35%	7	30.43%	8	34.78%	7	30.43%
Q4	0	0%	3	13.04%	8	34.78%	7	43.48%	5	21.74%
Q5	2	8.7%	4	17.39%	4	17.39%	9	39.13%	4	17.39%
Q6	0	0%	1	4.35%	6	26.09%	6	26.09%	10	43.48%
Q7	0	0%	4	17.39%	7	30.43%	10	30.43%	2	8.7%
Q8	0	0%	3	13.04%	7	30.43%	7	30.43%	6	26.09%

Note: Q=question; N=number; %=percentage

Students made their answers on the scale of 1-5. 1 means strongly disagree; 2 means disagree; 3 means agree somewhat; 4 means agree; 5 means strongly agree.

4.1.2 Analysis of students' self-evaluation

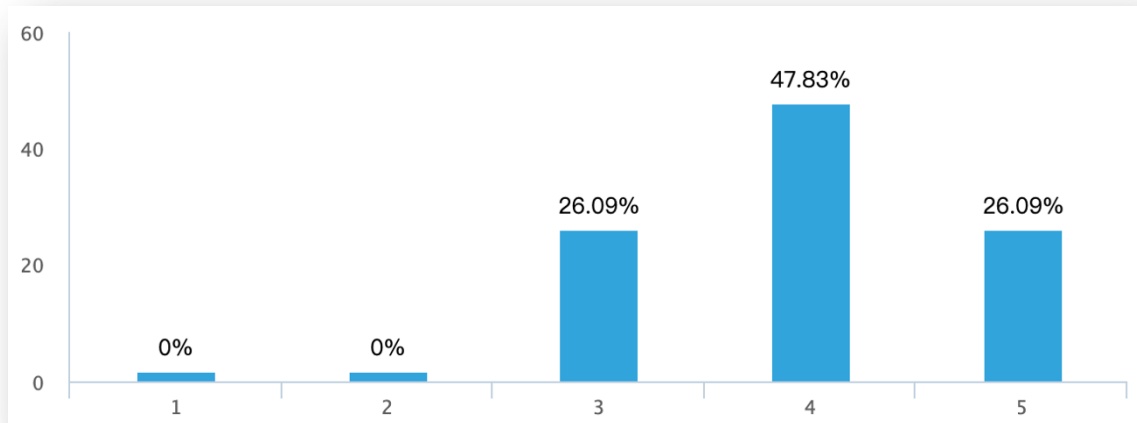
This part showed the numeric results and analysis of students' self-evaluation.

4.1.2.1 Overall performance

Q1, Q2 and Q12 were designed to collect students' self-evaluation of their overall performance.

Figure 1 Answer Distribution of Q1 (N=23)

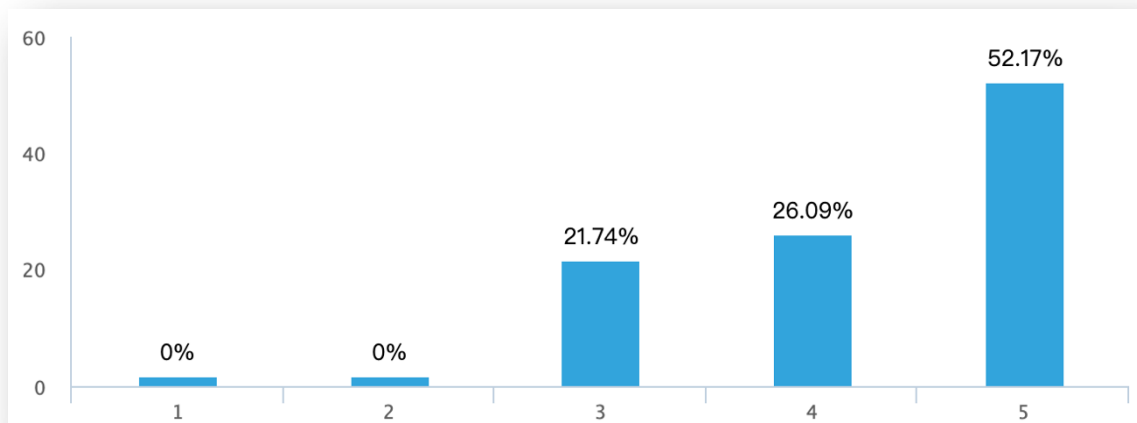
Q1: I think I have made significant improvement.



From Figure 1, it was apparently showed that there was 47.83% and 26.09% of the students agreed and strongly agreed that they had made significant improvements through the training. No one thought they did not make any improvement.

Figure 2 Answer Distribution of Q2 (N=23)

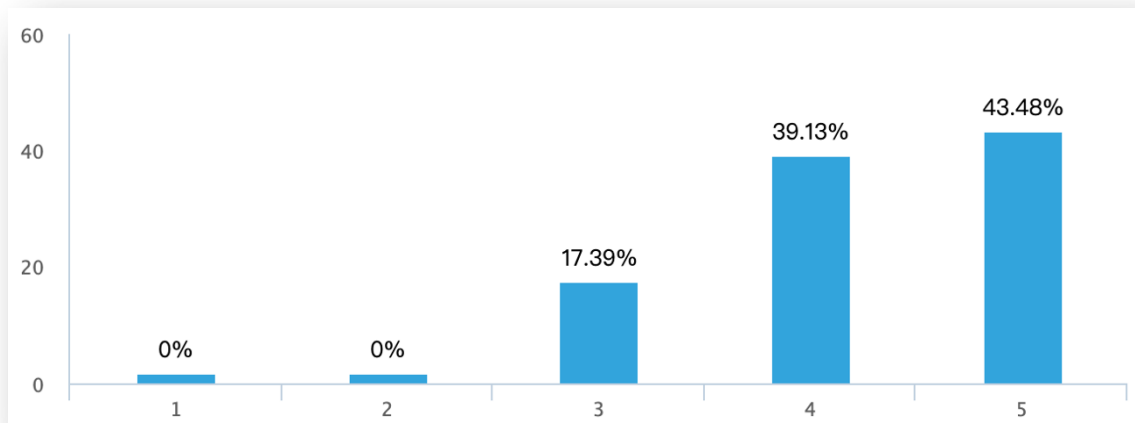
Q2: I think my overall English proficiency has been enhanced.



The same result occurred in question 2. The proportion of students who agreed and strongly agreed that their overall English proficiency had been enhanced was 26.09% and 52.17% respectively. No one thought their overall English skills were not improved.

Figure 3 Answer Distribution of Q12 (N=23)

Q12: I'm capable of finishing the tasks and assignments.



In Figure 3, it obviously presented that all the students thought they were capable of finishing the tasks and assignments during the training. There was no one thought they could not complete the tasks and assignments during the training. According to that, it was unquestionably to summarize that students did not have difficulties in adapting to and keeping up with the training.

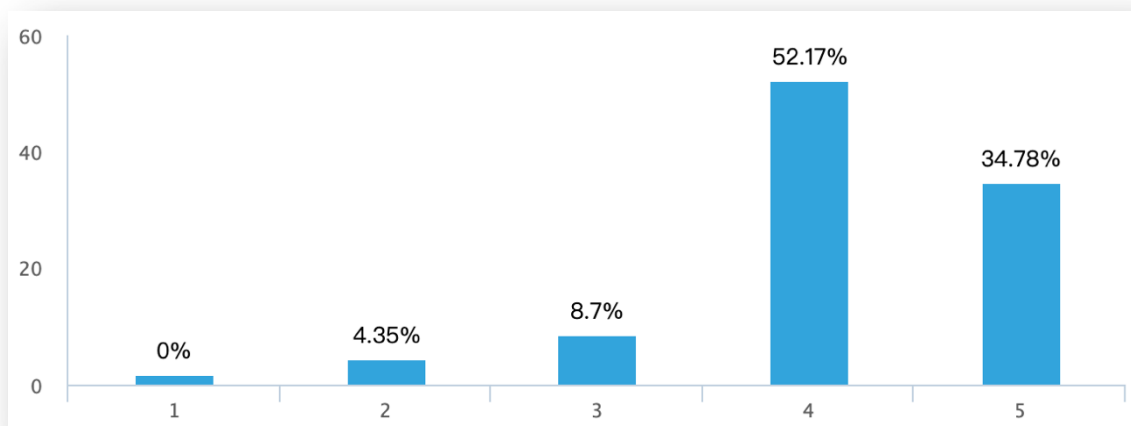
Three figures showed clearly that all the students were satisfied with their learning performance and outcome, and there was no significant learning barriers and difficulties in their studies.

4.1.2.2 Listening aspect

Q3 and Q4 were designed to collect students' self-evaluation of their performance in listening proficiency.

Figure 4 Answer Distribution of Q3 (N=23)

Q3: My listening skills have been improved.



In the figure 4, it showed the proportion of students' self-evaluations of their listening performance. Most of the students thought they had made improvements in listening part. But there was one student (counting for 4.35%) thought he or she did not make improvements.

Figure 5 Answer Distribution of Q4 (N=23)

Q4: I can understand different types of English audio materials more accurately.

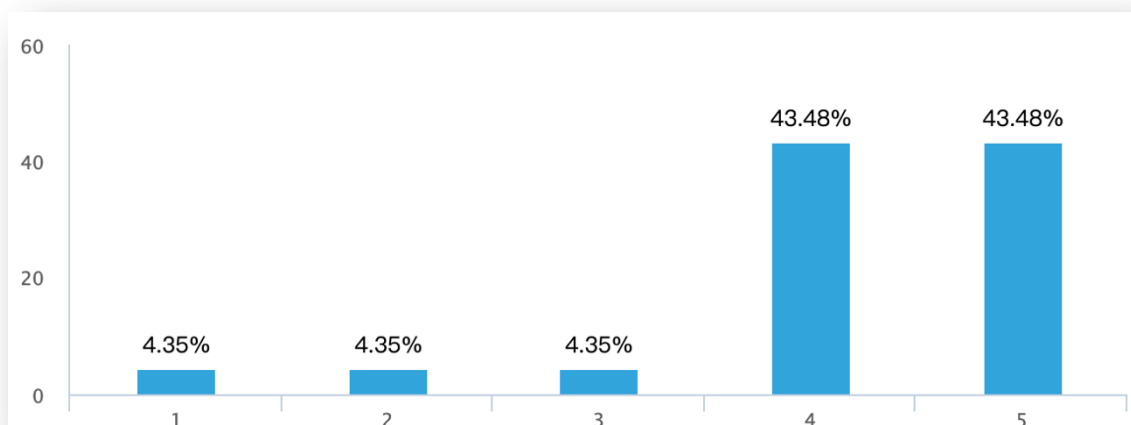


Figure 5 presented students' opinions of their listening comprehension skills. There were two students (counting for 8.7%) thought they could not understand different types of English audio materials more accurately. But the rest of the students thought that they could understand different types of English audio

materials more accurately. That was to say that most of the students' listening abilities had been improved.

According to the two figures above, it could be concluded that almost all the students had better listening comprehension after receiving the summer intensive training.

4.1.2.3 Speaking aspect

Q5 and Q6 were designed to collect students' self-evaluation of their performance in speaking proficiency.

Figure 6 Answer Distribution of Q5 (N=23)

Q5: My speaking skills have been improved.

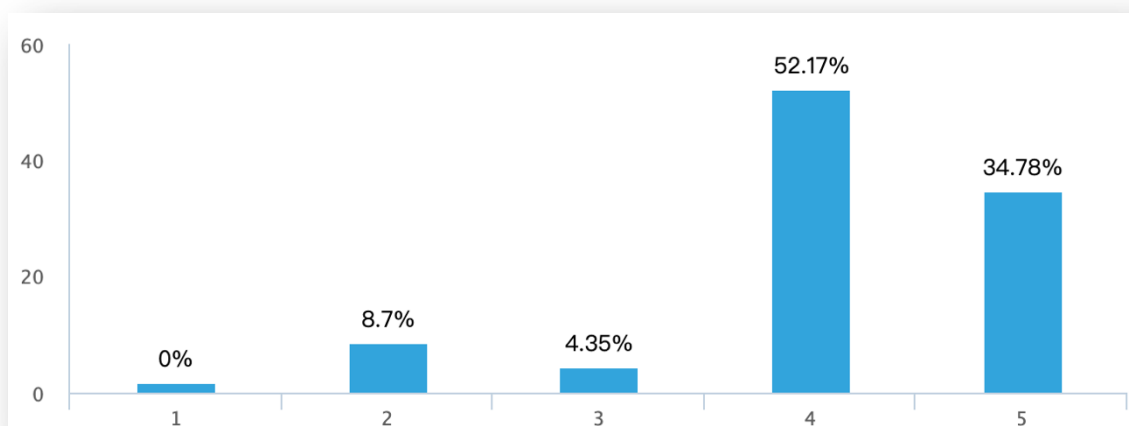
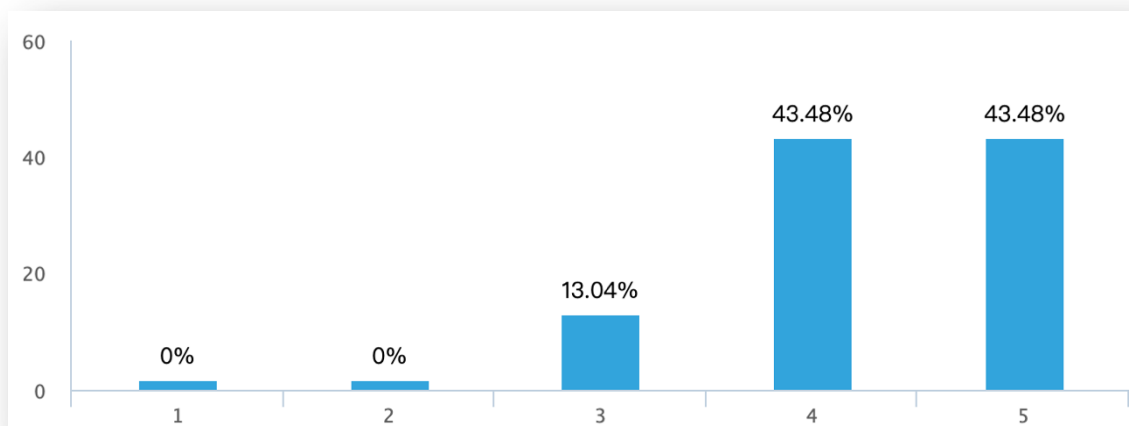


Figure 6 demonstrated the students' responses of their self-evaluations of the speaking skills. The percentage of students who thought their speaking skills had enhanced accounting for 86,95%. Although there were two students (8.7%) did not think their speaking skills had been enhanced, most of the students thought they had made progress in speaking aspect.

Figure 7 Answer Distribution of Q6 (N=23)

Q6: I become more confident in using verbal English to communicate.



In the figure 7, it was glad to see that all the students thought they had become more confident in using verbal English to communicate. Especially, the proportion of students who agreed and strongly agreed that they had become more confident in using verbal English to communicate reached up to 86.96%.

Taking the results from figure 6 and 7 together into consideration, we could draw the conclusion that the speaking skills of most of the students had been enhanced and students had become less reluctant to speak and talk in English. Even for those two students who thought they did not improve in speaking aspect, they still became more confident in speaking and talking in English.

4.1.2.4 Writing aspect

Q7 and Q8 were designed to collect students' self-evaluation of their performance in writing skills.

Figure 8 Answer Distribution of Q7 (N=23)

Q7: My writing skills have been improved.

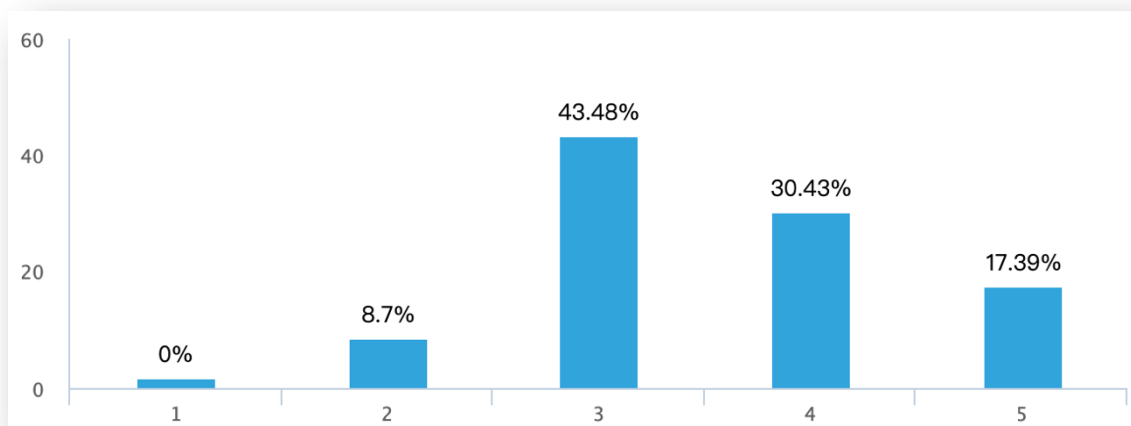


Figure 8 showed the results of students' self-evaluations of their writing skills. It showed similar results as the speaking aspect that two students thought they did not improve in writing skills. The percentage of students who thought their writing skills had improved reached up to 91.3%. Among this proportion, most students chose "agree somewhat" which mean the improvements were not very significant or obvious.

Figure 9 Answer Distribution of Q8 (N=23)

Q9: I can write longer with less mistakes.

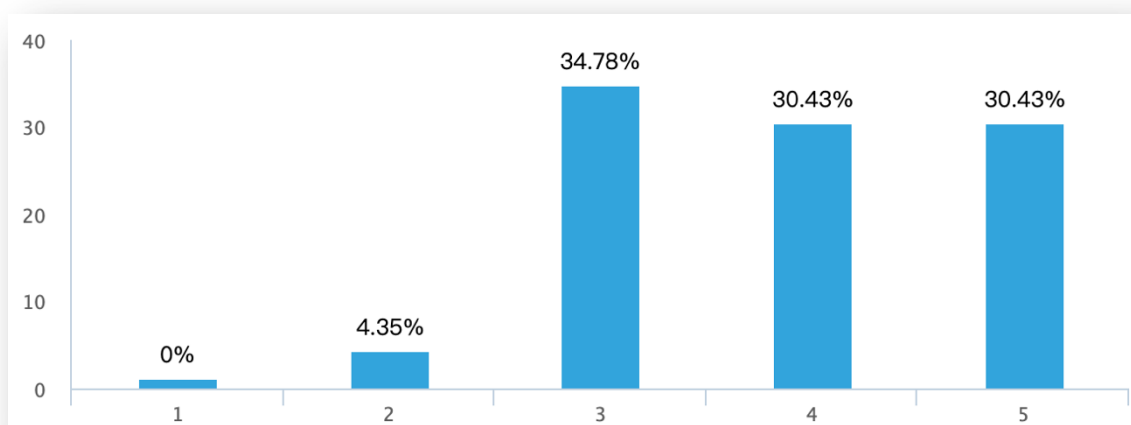


Figure 9 presented the students' responses of the question 9. Apparently, almost of the students (95.65%) thought they could write longer with less mistakes except one students (4.35%). The percentage of students who thought they could

write longer with less mistakes taking part of 34.78% (agree somewhat), 30.43% (agree), and 30.43 (strongly agree). Writing longer and less mistake is the basic requirement and the first step of writing skills. For the students in this study who barely had tried to write in English before, it was a surprisingly satisfied results that most of them could start to write and write even longer with less mistakes.

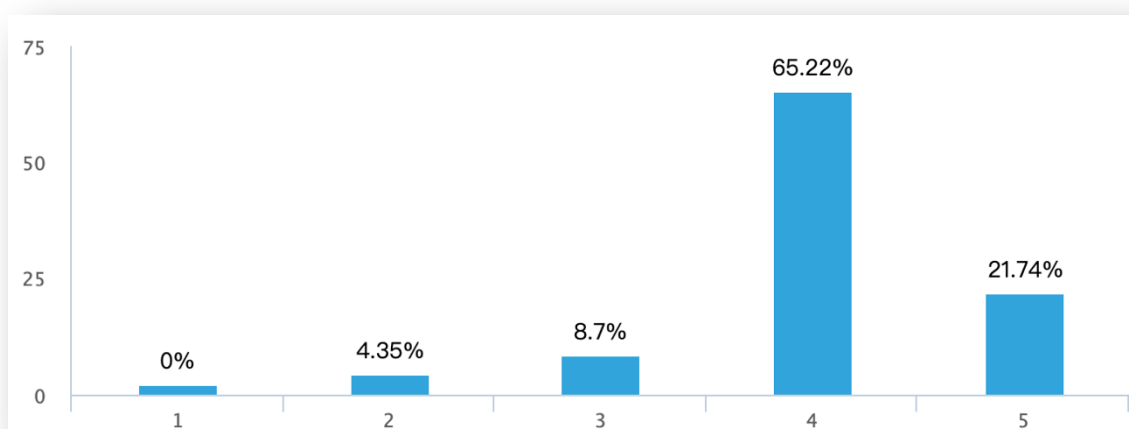
To sum up both figure 8 and 9, it could be concluded that students had made significant progress in English writing skills.

4.1.2.5 Reading aspect

Q9 and Q10 were designed to collect students' self-evaluation of their performance in reading skills.

Figure 10 Answer Distribution of Q9 (N=23)

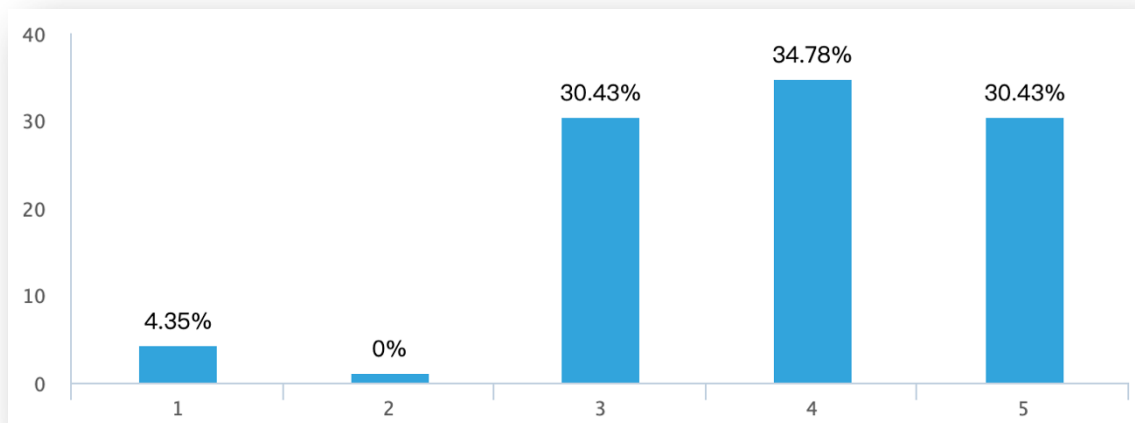
Q9: My reading skills have been improved.



According to Figure 10 which showed the results of students' self-evaluations of their reading skills, most of the students (95.65%) thought their reading skills had been improved except one student (4.35%). There were 65.33% of the students agreed that their reading skills had been improved. In addition, 21.74% of students strongly agreed that their reading abilities had been enhanced.

Figure 11 Answer Distribution of Q10 (N=23)

Q10. I can read faster and understand the text better.



Corresponding to Figure 10, figure 11 showed similar results as the figure 10. There was only one student expressed that he or she could read faster or understand the text better. The rest of the students (95.65%) all suggested that they could read faster and understand the text better. Among these students, there were 30.43% agreed somewhat, 34.78% agreed, and 30.43% strongly agreed that they could read faster and understand better.

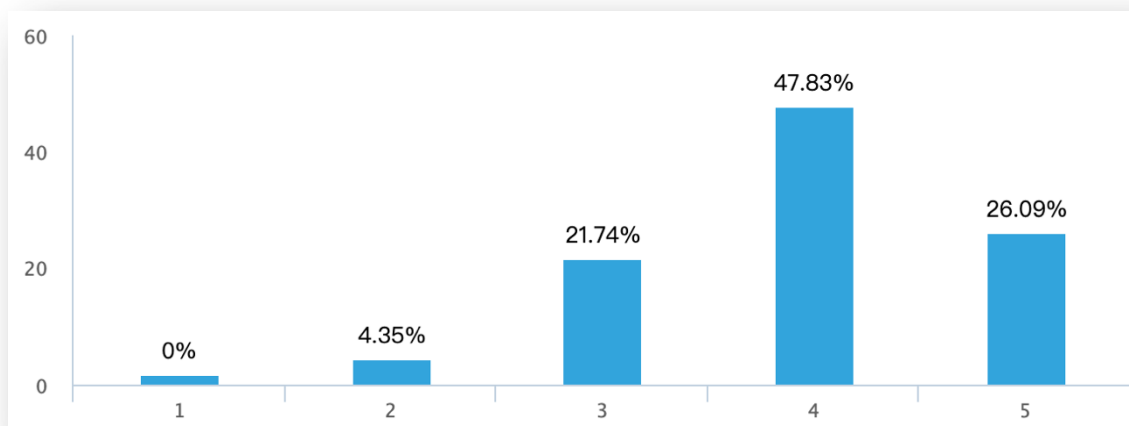
Based on two figures above, we could draw the conclusion that students' English reading comprehension skills had been enhanced and strengthened. Especially in the aspects of the reading speed and comprehension accuracy.

4.1.2.6 Other aspect - ICT skills

Q11 was designed to collect students' self-evaluation of their performance in ICT skills.

Figure 12 Answer Distribution of Q11 (N=23)

Q11: My ICT skills have been improved.



As the context of this study is internet-based multimedia assisted language learning (IB-MALL), therefore this training depends, requires and practices students' ICT skills unquestionably. According to the figure 12 which showed the students' self-evaluation results of their ICT skills, it obviously could be seen that most of the students (95.65%) thought their ICT skills had been improved except one students. That was to say that this way of learning (IB-MALL) had positive effect in improving students' ICT skills.

In conclusion, most of the students have improved in English listening, speaking, writing, reading, and ICT skills.

4.1.3 Analysis of students' attitudes toward IB-MALL

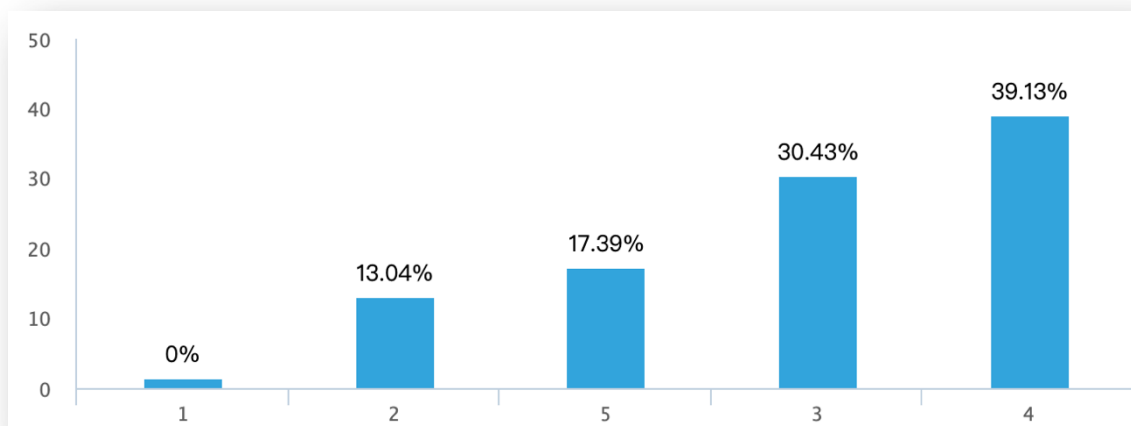
This part showed the numeric results and analysis of students' attitudes toward IB-MALL.

4.1.3.1 General attitudes toward IB-MALL

Q1 and Q2 were designed to collect students' general attitudes toward IB-MALL

Figure 13 Answer Distribution of Q1 (N=23)

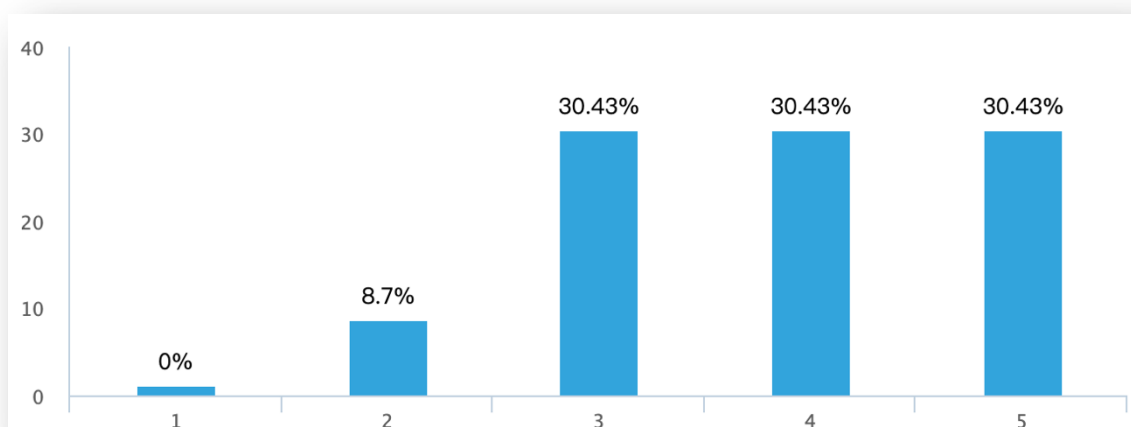
Q1: I like to be taught by multimedia and internet to learn English.



From Figure 13 which showed the results of students' overall attitudes toward IB-MALL we could see that, most of the students (86.96%) expressed that they liked to be taught and learn through this way (internet and multimedia). However, there was 13.04% percent of the students showed opposite attitudes. The proportion of students who agreed that they like this way somewhat counting for 17.39%, who agreed counting for 30.43%, and those strongly agreed counting for 39.13%.

Figure 14 Answer Distribution of Q2 (N=23)

Q2: I think it is fun to learn English through the support of the internet-based electronic devices.



According figure 14, it could be apparently seen that there was only a small portion of the students that did not think learning English through the support

of the internet-based electronic devices was fun, counting for 8.7 percent. The rest of the students thought it was fun to learn English through this way. That was to say, most of the students liked to learn English through IB-MALL.

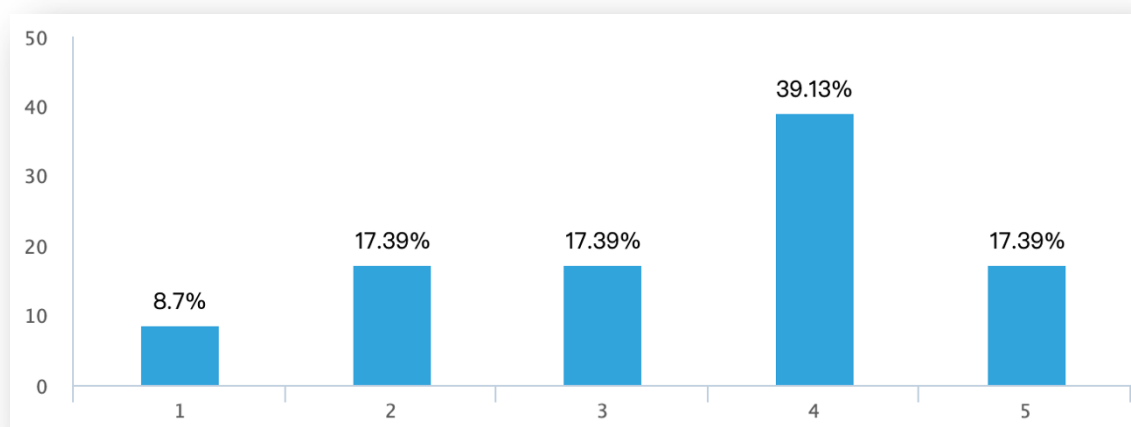
Figure 13 and 14 had shown the similar results. To conclude, students liked to learn and be taught English with the assistance of internet, multimedia, and electronic devices. Students' general feelings toward IB-MALL were positive.

4.1.3.2 Preference and favorability

Q5 and Q7 were designed to collect students' preference and favorability toward IB-MALL.

Figure 15 Answer Distribution of Q5 (N=23)

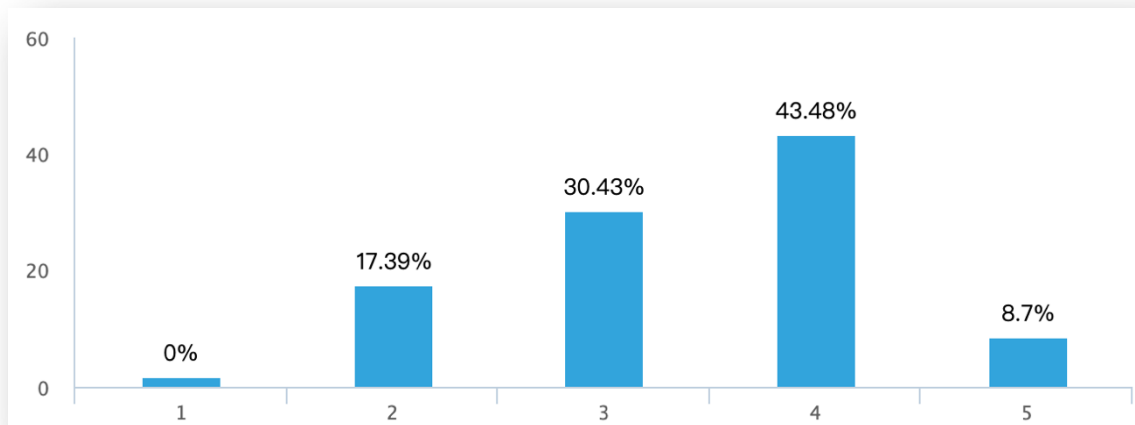
Q5: I prefer learning English via different APPs, software, online platforms etc.



In the figure 15, if calculate the proportion of students who prefer and did not prefer learning English via, different APPs, software, online platforms etc. we could yield the results were 73.91% and 26.09%. Despite of the small part of the students who did not prefer, there was still more students who were fond of learning English through various APPs, software, online platforms etc.

Figure 16 Answer Distribution of Q7 (N=23)

Q7: I feel this way of learning English by using internet and multimedia is better than traditional English teaching and learning method.



From figure 16, we could clearly see that except 17.39% of the students did not think IB-MALL was better than traditional English teaching and learning method, more students (82.61%) thought IB-MALL was better when comparing to traditional English teaching and learning. This results also underlined that students preferred IB-MALL than traditional way.

Based on two figures above, it could be concluded that most of the students would like to choose IB-MALL as the method to learn English especially compare to traditional ways.

4.1.3.3 Interest

Q3 and Q6 were designed to collect students' interests in learning English with IB-MALL.

Figure 17 Answer Distribution of Q3 (N=23)

Q3: I think this way of using internet and multimedia have promoted my interests in learning English.

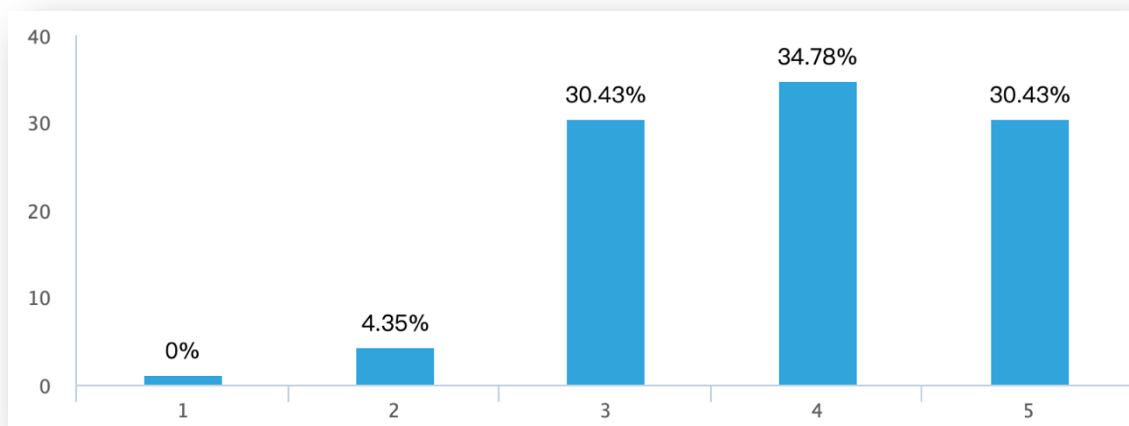


Figure 17 presented the results of students' opinion of IB-MALL in promoting students' English learning interests. Almost all the students (95.65%) thought IB-MALL had promoted their interests in learning English. However, there was one student who thought his or her interest did not be promoted by IB-MALL.

Figure 18 Answer Distribution of Q6 (N=23)

Q6: I enjoy learning English through internet and electronic devices.

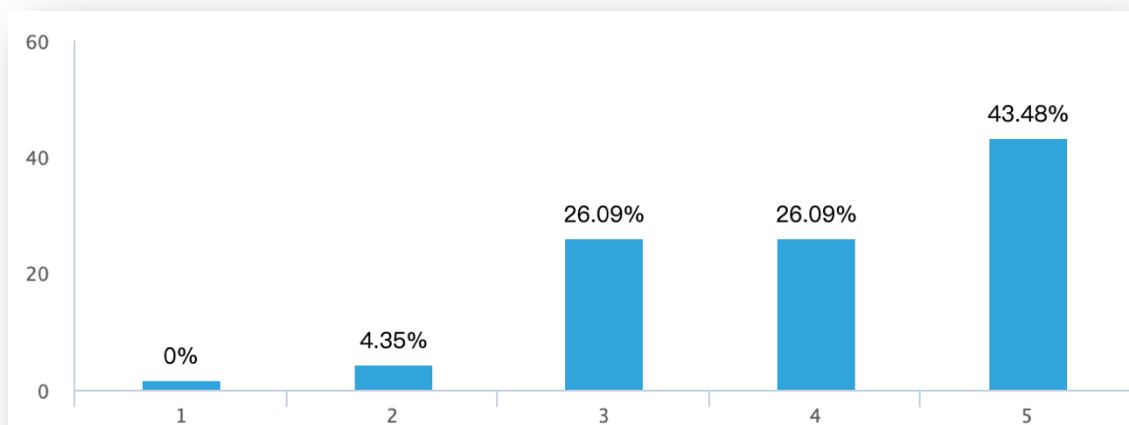


Figure 18 illustrated students' answers to how did they enjoy learning English through internet and electronic devices. The students' answers to question 6 showed a similar tendency as their answers to question 3. There was only one student who expressed that he or she did not enjoy learning English through internet and electronic devices. The rest of the students (95.65%) all thought they enjoyed learning English via internet and electronic devices to different extent.

Both two figures reflected that IB-MALL could raise most of the students' interests in learning English as they enjoyed and liked this way of learning.

4.1.3.4 Motivation

Q4 and Q8 were designed to collect students' motivation in using IB-MALL.

Figure 19 Answer Distribution of Q4 (N=23)

Q4: I'm confident when using internet and multimedia to learn English.

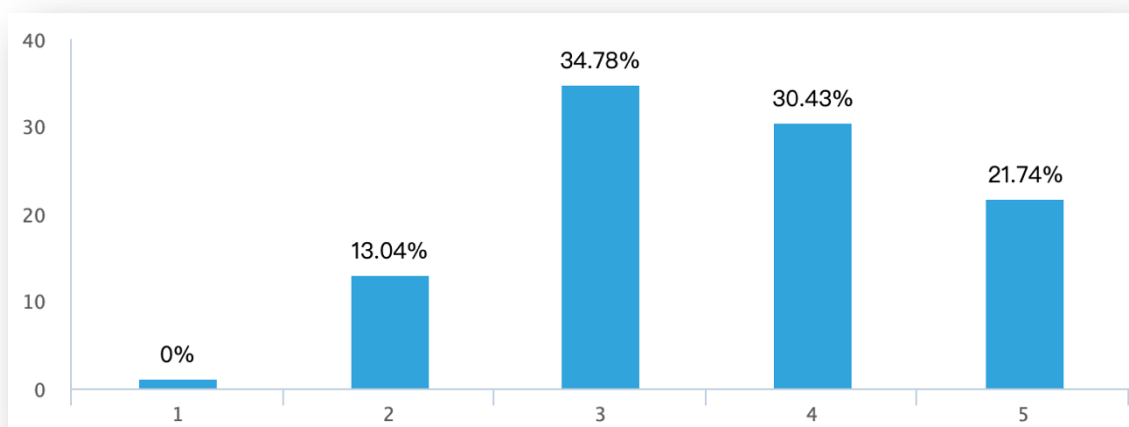
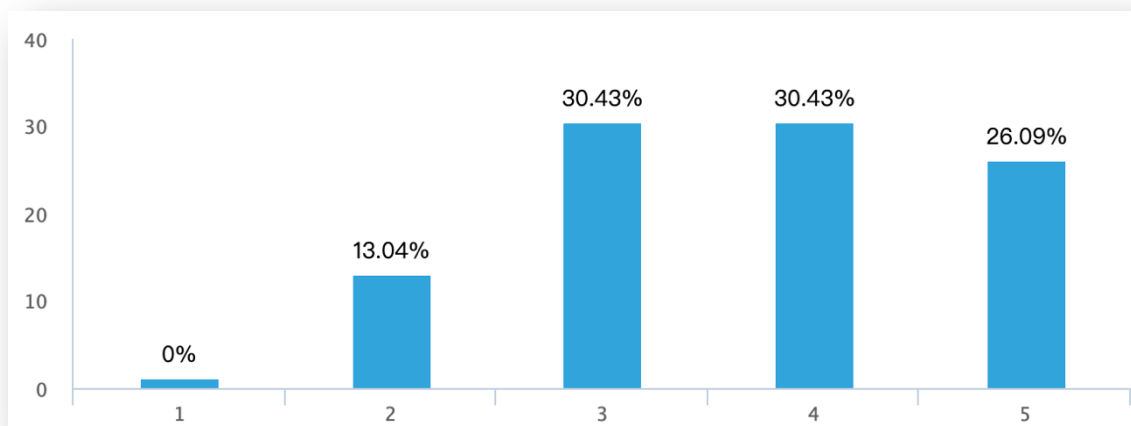


Figure 19 demonstrated students' opinions toward their confidence in using internet and multimedia to learn English. There was 13.04% of the students thought they did not feel confident when using internet and multimedia to learn English. But most of the students (86.96%) held the opposite opinions that they thought that they felt confident when using internet and multimedia to learn English. From these results, it could be summarized that most of the students felt less nervous or inferior when learning English thorough IB-MALL. They had more positive attitudes and moods when using IB-MALL to learn English.

Figure 20 Answer Distribution of Q8 (N=23)

Q8: This internet-based multimedia assisted English learning method can raise my learning autonomy.



Almost the same results occurred in figure 20 as occurred in figure 19 which showed the students' responses of how do they think IB-MALL raised their learning autonomy. There were obvious more students thought IB-MALL triggered their learning autonomy than those who did not think so, counting 13.04% and 86.96% respectively. Learning autonomy is one of the most important reflections of learning motivation. Students became more initiative in learning English means they became more motivated through this way of learning (IB-MALL).

From those two figures above, we could draw the conclusion that students had relatively positive attitudes and moods when using IB-MALL to learn English, and this way of learning triggered their learning motivation, which further led to students' learning autonomy.

4.2 Results of the open-ended questions from the questionnaire survey

In the surveys, there were open-ended questions used to collect students' detailed and specific answers to their learning performance and attitude toward IB-MALL. In the following part, part of students' answers and the analysis of students' responses are illustrated.

4.2.1 Analysis of students' self-evaluation

In the questionnaire 1, there are two open ended questions asking about students' self-evaluation of their improvements. The analysis of their answers are presented as below.

4.2.1.1 Overall improvement

All the students suggested that they had made more or less improvement in overall English ability through this intensive training which applying IB-MALL as the main teaching method. There were some students mentioned such improvements were reflected as holistic language proficiency. Although the training was about listening, speaking, writing, and listening, students also thought they had made progress in memorizing more vocabulary, correct grammar rules, literature, western culture, and other knowledge that did not relate to English proficiency.

" During the listening section and reading section, I also learned a lot through the reading and listening materials about western culture"

---No.4 Participant

" With the convenient internet, I could search for related information or anything I wanted to know immediately without leaving the questions asides which I would not search later. So I also learned other knowledge some of them have nothing related to English via the internet and through the learning material"

---No.13 Participant

4.2.1.2 Improvement in listening

There were 16 students that pointed out they had improved in English listening ability. Especially they had mentioned more standard accent, more accurate listening comprehension, and strengthened language sense.

Traditional Chinese English teachers do not speak with standard English accents, either American accent or British accent, and most of the time they use paper version textbooks. During the class, students do not have the chance to

listen to the standard English and seldomly listen to the audio materials. Therefore, students' listening will be influenced which further disturbs their judgments when hearing the standard pronunciation. But in this study, students had foreign teachers whose mother tongue was standard Australian English. More importantly, students had access to the internet, on which they could find videos and audios of the standard English accent. Compare to the rigid textbook that could not speak or talk, videos and audios provided students' with standard teaching resources. Learning in this authentic English environment, with more English students heard and spoke, unquestionably students' listening skills had improved.

"I could find typical British accent videos, movies, music online. After 10 years, I finally figured out the correct pronunciation of 'London'"

---No.2 Participant

"We had own earphones and computers so we did not have to wait for the teachers and listen with others together. I had a good listening foundation, so sometimes I wanted to learn more. The more I listened, the better the skills I had. In the before it was impossible, but now we had more chance to practice"

---No.5 Participant

4.2.1.3 Improvements in speaking

Almost all the students expressed that they had made progress in speaking. First of all, listening and speaking are connected. As mentioned above, students had made improvement in listening which at the same time supported their speaking at the same time.

Specifically, students suggested that they had more chances to practice speaking skills though online platforms or instant communication software even when they were alone in their own rooms. Except that, a dubbing application which was used during the training allowed them to practice with fun and it was a practice that they could do by themselves. Internet and media devices created space and chances for them to open their mouths and practice.

"I liked the APP called dubbing fun, and I almost practiced on it every day before sleeping. I could imitate the original sound, practice, edit and finally make my own work"

---No. 9 Participant

"I thought it was really an funny way to make face-time with the patterner even that guy was just sitting in front of you and you can start chatting with him in English"

---No.3 Participant

"It was my first time to finish an assignment that was a self-recorded audio in English and send to the Moodle"

---No. 17 Participant

4.2.1.4 Improvements in reading

There were 20 students that clearly pointed out that they had made progress in reading. Reading was another aspect that had been mentioned most by the students of their improvements. Reading requires speed and comprehension. Many students indicated that internet and mobile devises provided them with unlimited reading materials and allowed them to read at any time and at any place. This way of teaching and learning created more opportunities for the students to practice reading skills. The more they read, the better reading skills they had.

" When reading the English text, I hated unknown word that disturbing my reading. But my phone and iPad had the function called Dictionary that could show the meaning immediatly. My reading became more fluid, and I started to love reading"

--- No. 19 Participant

"Every time I read through phone or computer, I could use functions to add some ideas aside and a timer which helped me to capture the meanings and enhance my reading speed"

--- No. 12 Participant

4.2.1.5 Improvement in writing

Writing might be one of the most difficult parts for Chinese students. Lacking proper training, they could not write, or could not write in correct way in terms of reference and citation. Broken sentences, misspelling words, and unqualified format are the typical problems.

There were 11 students expressed that they had improved in writing. To be more specifically, they had mentioned that they could write longer with less broken sentences; they had figured out the correct format of academic paper; they started to have the consciousness of adding references and citations when referring others' ideas etc.

"If I write on the paper, I would check after I finished the whole work but most of the time I could not find mistake. But the software called Grammarly could correct my spelling and basic grammar mistakes instantly, also the correcting process was very easy"

---No.1 participant

" Now I knew the basic requirement of academic paper and I knew how to use tools to write references and citations"

--- No. 18 Participant

4.2.1.6 Improvements in ICT skills

As mentioned above in the overall improvement, students thought not only had their English skills improved, but other knowledges had been grasped as well. There was one skills that have been pointed out by most of the students -- ICT skills. With diverse software, applications, online platforms, electronic devices had been introduced, students had mastered more skills in operating those devices and multimedia.

" I started to know more useful applications and online platforms that could be utilized in learning English and other subject studies"

--- No. 12 Participant

" I only knew basic operations on the computer and phone before. But now I had mastered a little bit more knowledge to use those technologies. Even some applications I had used before, and now I had figured out more functions that I did not know before"

--- No.7 Participant

4.2.2 Attitude toward IB-MALL

In the questionnaire 2, there are three open-ended questions asking about students' attitudes toward IB-MALL. The analysis of the students' answers are presented as below.

4.2.2.1 Interests and preference

As this training took students at the center position, therefore, students' feelings, experiences, and opinions of the way of learning and teaching were essential. According to the answers from the open-ended questions, all the students showed high acceptance and positive attitude toward IB-MALL. There were 21 students thought that this way of learning and teaching was interesting and attractive. Among those 21 students, 8 students expressed that their interests in learning English have been raised through this way. Almost all the students have clearly mentioned that they really enjoyed using IB-MALL to learn English.

"I really enjoyed learning English, or even other subjects and knowledge through this way"

---No.2,4,8,9,14,23 participants

"This way of learning and teaching made me feel that learning English was not as frustrated and boring as I used to feel"

---No.6,15 Participants

"Compare to the traditional way of teaching and learning English, I definitely preferred this way as it could help me to be more concentrated during the class and more autonomous to continue studying during spare time"

---No. 3,21 Participants

However, those two students who thought they did not feel that IB-MALL was interesting and attractive did not give their detailed reasons and explanations directly. They only mentioned they were not adapted to this new way. According to their answers, it can be concluded that although most of the

students showed positive attitudes toward IB-MALL, there were still a small part of the students were not used to the change in the teaching and learning method.

4.2.2.2 Motivation and confidence

Interest is the best teacher, and interest can trigger motivation. As mentioned above that students showed high interests and preference in IB-MALL. The interests and preference further promoted students' learning motivation. Students became self-driven in learning English. Most of the students shared their views that this way of learning had promoted their motivations and confidence in learning English. Some students attributed the reasons to the convenience of the internet and mobile-devices especially during their private time. Internet and mobile-electronic devices allowed them to check and jump-in the learning at any time and any places. This "fragmentization" of the study maximized students' learning time without creating extra learning pressures.

"I could check and kept-up the study even when I was on the metro or waiting for the bus. Sometimes I didn't even feel that I was studying, but I actually was studying"

---No. 18,22 Participants

"It was very convenient to open an APP and log-in software on a phone or iPad. So I checked very frequently, and I liked to do so"

---No. 6,10,12 Participants

"There was no pressure or difficulties to learn through this way and I felt more motivated and confident to learn, rather than a passive feeling to be forced to finish a task"

---No.9, 11 Participants

" It made the process of learning English not like learning English. It had become one of my normal habits to learn. Even without a teacher or anyone else' inspection, I still would like to open it and start to learn"

---No. 14 Participant

From the students' answers it could be found that students started to learn English naturally and felt more relaxed to learn. This was because they became more confident in English and learning English. Nowadays students are

confident in using those internet, phones, iPads, etc. Hence, using those devices to learn English is as easily as checking messages. Although they might not be confident in “learning English”, with the assistance of internet and multimedia devices, they could transfer the “in-confidence” in learning English into “confidence”. It could also be explained that with stronger motivation occurred which turned out to be more effort being made into learning English, students learned more and became more confident in learning English.

4.2.2.3 Advantages of IB-MALL

The advantages of IB-MALL as previous researches shown had been discussed quite much. In this studies, the advantages of IB-MALL also had been indicated clearly according to students’ response.

a. IB-MALL was efficient

First of all, various type of internet-based medias and devices offered students unlimited learning resources. That was to say that students were exposed to more materials at the same long period compared to traditional paper version textbook. In addition, when there was question, it was faster to search on the internet without waiting for the teachers to help. One example, there was a function on an APP that could be used for evaluation of the pop-quiz and assignments. Students could get instant results and the teacher did not have to check the answers one by one. By this way, the teachers’ workload had been released as well.

Secondly, students could start learning at any time, at any place. Even for a short period, students could jump-into the study mode right away. It proved that fragment time could be utilized to maximize the learning period. For instance, students could check the information given by the instructors and then replay the listening materials several times if after the class they still needed extra time to practice when they were waiting for a bus with the phones and earphones.

b. IB-MALL promoted engagement and interaction

During the class, students needed to participate all the procedures set by the teachers on the platform. All the response would be recorded which would be used for evaluation of their in-class performance. In the traditional class, teacher cannot ensure all the students' engagement manually, but this time, technology could help.

In additionally, all the interaction between students and teachers and among students could be done online instantly. Sharing became easily and quickly. With the internet, teamwork became more convenient. Students did not have to have face-to-face team meeting. All the communications could be done online. Students became more positive in finishing and managing group tasks. Those functions worked together guaranteed students' engagement and interaction. The more they participated, the more they benefited. The more they benefited, the more they improved.

"I needed to be very concentrated during the class as I could not miss any tiny tasks, otherwise it would influence my participation"

---No.7, 19 Participants

"I could reach for the teachers and patterners immediately. I used to hate teamwork as I did not want to spare too much time on meeting, but now we could finish group task online which was very easily and conveniently"

---No.8, 14 Participants

c. IB-MALL supported creativity

There were certain amount of students marked that when they were using different APPs and software, they would generate more ideas and better outcomes. They also shared the reasons that APPs and software enabled them to create more forms and present more content. Paper work could only be presented in text and simple shapes. But through APPs and software, they could present pictures, PowerPoints, videos, audios etc. They enjoyed to explore the functions of different APPs and software. In addition, teamwork also helped to generate more ideas.

"It was a brand new experience to finish a task to make a video and send to the teacher. I really liked this kind of assignment"

---No.5,8,17 Participants

“Every time I tried to make a PPT or a video, I could come up with more ideas. There were so many functions of different APPs and I wanted to make it as better as I can. Except that, usually we cooperated online with other group members, brainstorming was also very good way to generate more ideas”

---No.16, 20 Participants

d. IB-MALL released learning pressure

There were students expressed that they felt natural and less stressed when using this way of learning as this way made learning not like learning. Traditional “learning” usually links to a situation that learners should sit at one place and keep learning for a long period or sitting quietly, listening the lectures. For Chinese students when it came to study, they started to be tired of that situation which made them frustrated to learn. But IB-MALL broke their stereotypes of “learning”. Learning could happen at any time, at any place, can be short, can be natural. Learning English via IB-MALL was as naturally and easily as they put out their phones and check their Facebook and Instagram. Emotionally, students’ begin to be positive toward “learning English”.

When “learning” was not as stressed as students had thought, they would be more likely to learn and practice. During the class they did not think the class was too long or too boring which made them feel like sleeping. On the contrary, they started to immerse themselves into the class and learned with joy. After the class, there was no rigid written assignment or exercises. They felt less stressed in individual learning and reviewing. They learned more. The more they learned, the better they became and the more confident they became as well. Confidence means learners have the motivation to learn and the belief to learn well. It works as a positive element in mediating the learning process.

“I really liked finishing new type homework, rather than merely completing written quiz. We could cooperate and present our outcome in different ways”

---No.8 Participant

“Sometimes I did not really feel that I was studying, as using phone and iPad made me feel natural and relaxed. But actually I was studying with less pressure”

---No.10, 17 Participants

“I used to sleep at English class, but now I found it was interesting to learn through different online platform and software which were much more attractive to me”

---No. 23 Participant

In conclusion, the advantages of IB-MALL mentioned by the students could be viewed as the reasons of their preference of IB-MALL and their improvements in English proficiency. This way of learning and teaching had attracted students’ learning interests and helped students to make progress holistically.

4.2.2.4 Disadvantages of IB-MALL

Just like one coin has two sides. There were also disadvantages of the IB-MALL. According to students’ responses, there were two aspects of IB-MALL that they thought did not support their studies.

The first aspect was that IB-MALL decreased face-to-face interactions, especially emotional in-class interaction between the teacher and students. As we had electronic devices and internet work as the main bridge to communicate, there was almost none in-person in-class activities being included in the design. All the interactions and activities were completed online. There were only information and response exchanging, but less emotional communication between the students and teachers. This emotion include students’ moods, spiritual situation etc.

“There were only screens in front of me. It was difficult even to have eye contact with the teachers”

---No.16 Participant

The second aspect is that IB-MALL might ignored students whose reflections and ICT skills were not as quickly or good as the average. IB-MALL in fact was a machine-based way. Machine is not like human, and it just operate the programs they people have set already. For example, within certain time, students need to type some text. If there is one student he did not think of an

answers or he was slow in operating functions, he might be delayed. His nerve and anxiety influence his learning. However, in IB-MALL context, teachers usually check the class situation through response given by the machines and internet rather than students themselves. Therefore some “slow” learners will possibly be neglected.

“I was not really a “technical” person before the training or even after the training. So at first I found it was hard to keep up with the others. So I became very nervous and anxious during the class, and such emotions seriously disturb my study. I started to focus on the operations rather than learning”

---No.7 Participant

This answers from No.7 Participant had corresponded to the results in the numeric questionnaire relating to ICT skills. Although this way of learning had successfully improved most of the students’ ICT skills, there was still student who did not think he or she could manage successfully in this aspect. Their “slowly” in technical management even influenced their in-class learning.

In fact, from those two aspects students had pointed out, it could be obviously seen that despite internet and electronic devices could be a good assistance in learning and teaching English, it would never replace the role of the teacher, and this way of learning had different effect for different ICT levels students. During the class, the students’ different situations and needs could only be found and cared by the teachers, and this ability might never be fully mastered by the machine at least in the next few years.

4.2.2.5 Students’ suggestions in developing this training

Based on those two disadvantages that had been mentioned by the students, they also shared their opinions in how to develop this training better.

The first suggestion was that IB-MALL should work as a tool rather than taking the role of the teachers. In this summer intensive training, although we included teacher, teaching assistant, and IB-MALL as the tool, we probably allocated too great a proportion to using IB-MALL. This resulted in insufficient in-person interaction between the teachers and the students especially during

the class. The responses given by the machine and internet solely could not become the only type of evidences representing the students' learning situation. Students still needed the in-person and emotional interactions with the teachers. The judgements of the students' learning situation also needed the inspections made by the teacher manually.

"It would be better to have certain amount of time to have direct communication and interaction with the teachers rather than deliver the message through the screen. Maybe I had some individual situations and I wanted to inform the teachers. But the setting of certain APPs and software did not allow me to break the whole operating process"

---No.16 Participant

The second point was that students' ICT skills should be cultivated before the training. The reason for that was this way of learning required students' ICT skills and experience. However, this way of learning had not been applied widely. Therefore, students had varied ICT skills at the beginning of the training. This might lead to the polarization of the students at the very beginning. Students with poor foundation would have a difficult time in adapting and keeping up with the others. That was to say that cultivating students' ICT skills was essential. With certain foundation, it would be simple to make progress.

"I had a very hard time at beginning as I was so slow in managing technics. Although after several days I could keep up with the others, the learning experience at first was not good. If before the training I could learn more ICT skills it would be less difficult"

---No.7 Participant

4.3 Results of in-class observation

As the teaching assistant, I had the chance to participate in the training completely. During the class, I also worked as the observer of the study. In this part, I will analyze the observation results according to the records kept by myself. The record included textual note, screen shot of multimedia, and video clips.

4.3.1 Basic information of the training

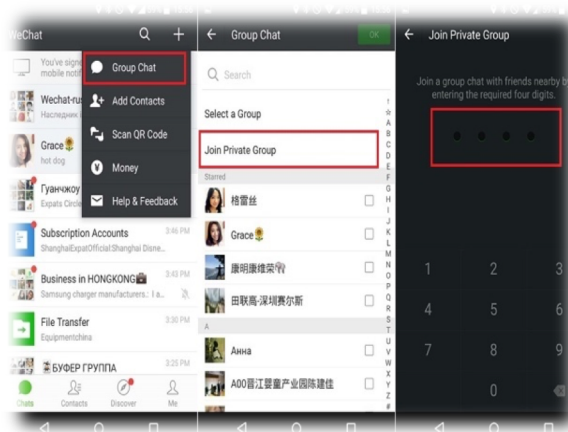
According to the syllabus of the summer English training course, students received four sessions of contact training including reading, listening, speaking, and writing each day. During both in-class training and free study time (individual private learning), students and teachers used mobile phones, iPads, and computers with multiple applications and software to carry out teaching, learning activities, assignments and communications.

4.3.2 Teaching and learning tools

Below are the applications and software that had been adopted through the training.

➤ WeChat

An instant message application that supports both individual talks and group talks, as well as sharing different kinds of information (pictures, audios, short videos, links, etc.). As teachers we have created a group chatting room with all the students to inform some information and instant communications.

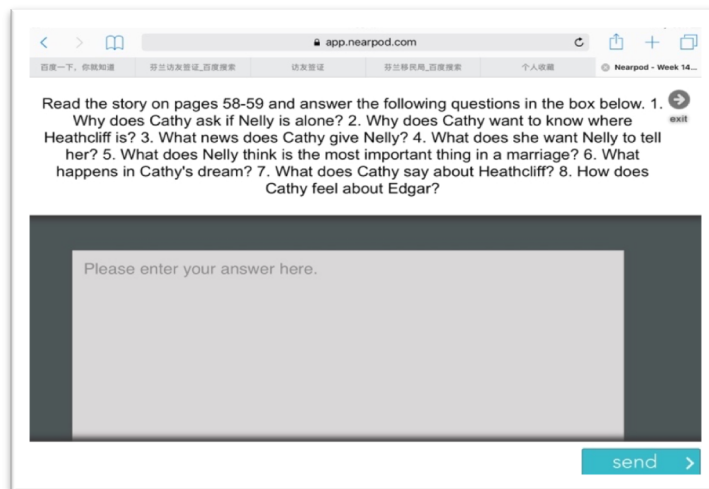


Picture 1 Outlook of WeChat

➤ Moodle

An online platform that supports instant common information interaction, online teaching activates, feedback collection, etc. The instructor can post

main content on this platform and students can also give feedback, leave messages through this platform.



Picture 2 Outlook of Moodle on iPad

➤ Answer Garden

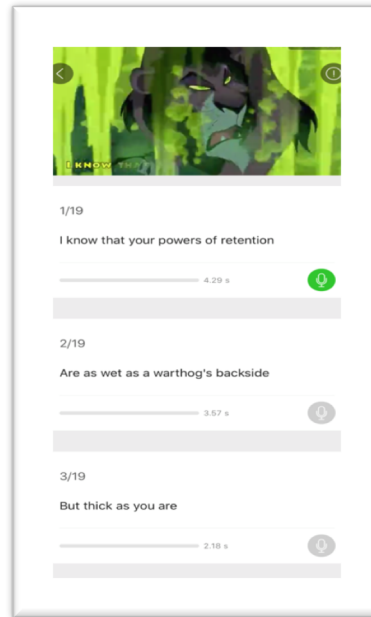
Instant opinion collector that can be used during the class. This online platform was used during the training mostly for collecting students' opinions, views, and responses.



Picture 3 Outlook of Answer Garden

➤ Dubbing Fun

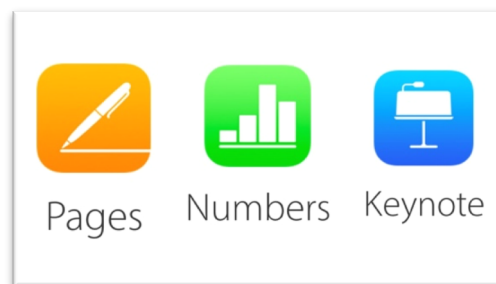
A dubbing application with abundant English video resources that allow users to dub with own voice and editing more effects. In this training, students can use this APP to practice English oral skills with fun.



Picture 4 Outlook of Dubbing Fun

➤ Pages, Keynote, Numbers

These three software are set of APPLE cooperation system which are valid on iPhone, iPad, and MacBook computers. The functions of those software are similar to Microsoft Office set targeting text editing, PowerPoint presenting, and data processing. In the training we allowed students to present their learning outcome in multiple forms. Therefore, students chose different software to finish different tasks according to their needs.

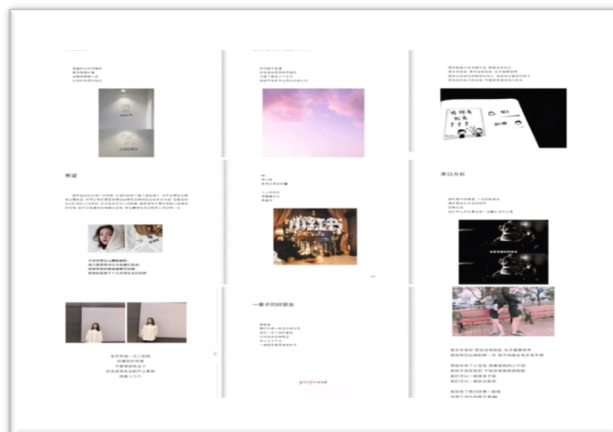


Picture 5 Icons of Pages, Numbers, and Keynote

➤ Shi Qi

Shi Qi is an online mobile APP that provides functions like multi-platform and multimedia recording, one-click editing, typesetting, and printing for users. The users can record at any time, or invite multiple people to cooperate together. After inputting the content, users can use intelligent typesetting

functions to create an e-book. In this training, students used this APP to record their learning diaries and form their own portfolios.



Picture 6 Printed outlook of individualized book

➤ Kahoot

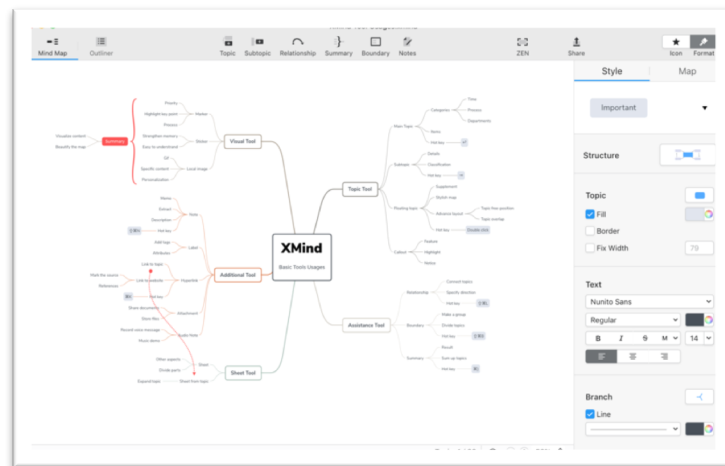
Kahoot is an easy-operative APP that allows the instructors to create pop-quiz and conducting simple answer collection. The instructors can form the quizzes and share the PIN with the students to join in. Students will only see the questions and answer options, and they need to answer the questions in a limited time. After each question, there will be results been presented instantly. Bonus and points will be calculated as well depending on the speed of the response and the rate of the correctness. It is very useful for the vocabulary check.



Picture 7 Outlook of Kahoot

➤ X-Mind

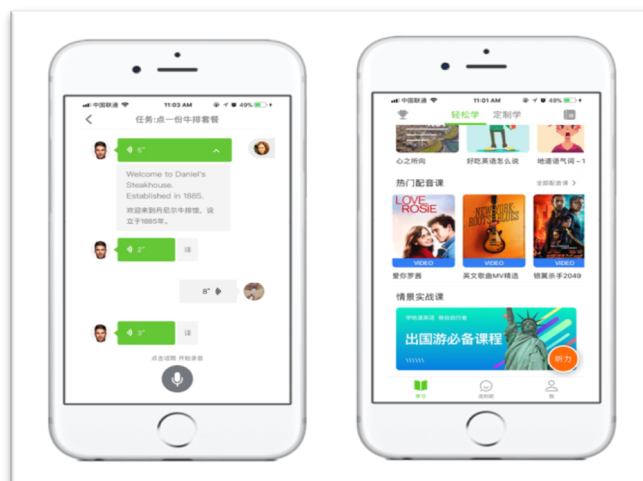
This software can be used both on computers and phones for the students to make mind-map with multiple shapes and templets.



Picture 8 Outlook of X-Mind

➤ Yingyu Liulishuo

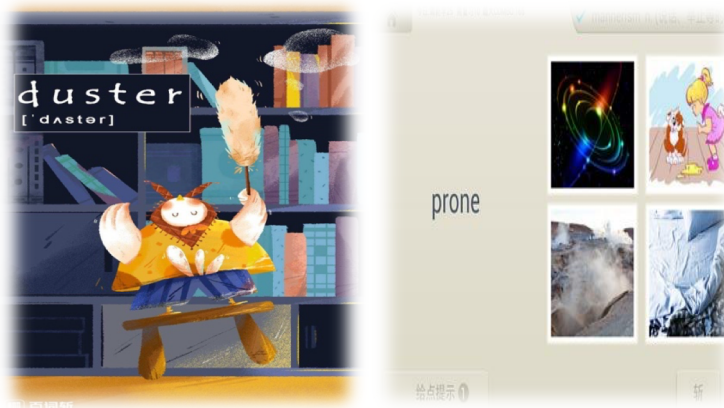
It is an artificial intelligence-based APP offering diverse English learning contents, multiple English practice functions, innovated learning methods, and interactive learner communities. Students can practice English listening, reading, writing, and especially speaking with extra bonus and points accumulation. Huge learner communities create a friendly-competition atmosphere that motivates students' learning autonomy.



Picture 9 Outlook of Yingyu Liulishuo

➤ Baicizhan

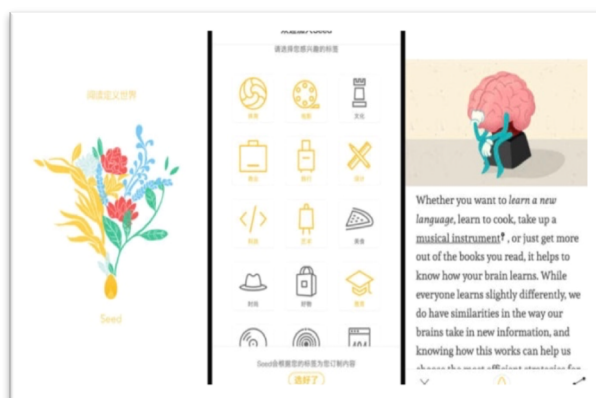
An innovated vocabulary-memorizing APPs helping students to enlarge their vocabulary corpus with fun. It provides authentic and professional explanations and examples of the words, as well as the vivid and multi-feeling sources for memorizing. The learning record can be shared to social media platforms which motivates the students' to keep practicing every day.



Picture 10 Outlook of Baicizhan

➤ Seed

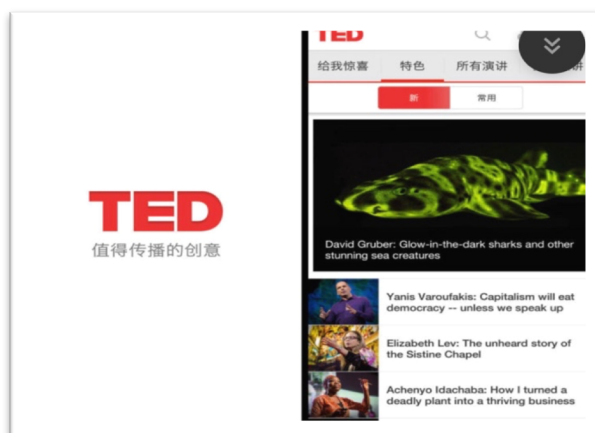
Seed is a social-based English reading APP. Users can form their own reading preferences according to their interests. The reading materials are authentic and original English articles. It also has an instant translation function which is convenient for the English users to keep fluid reading experience without unknown vocabulary blocks.



Picture 11 Outlook of Seed

➤ Ted

TED has resourceful speeches that can be used for practicing English for English learners. All the scripts can be found as well as the support when practicing listening.



Picture 12 Outlook of TED

➤ BBC news

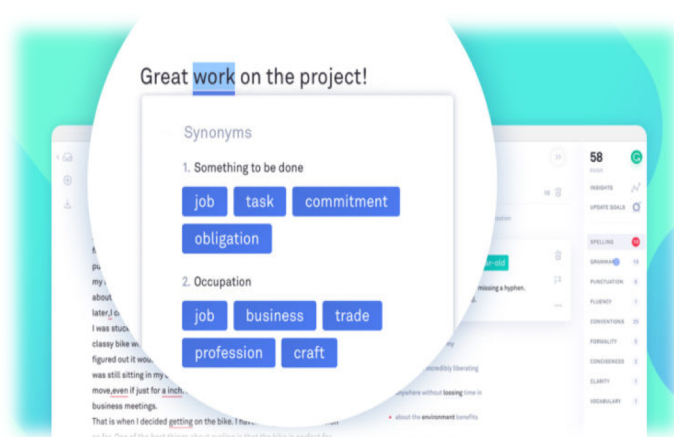
Another listening resource with the most updated news. The content is diverse which can meet the students' need for the IELTS exam as the accent is British accent, and broaden students' knowledge horizon.



Picture 13 Outlook of BBC News

➤ Grammarly

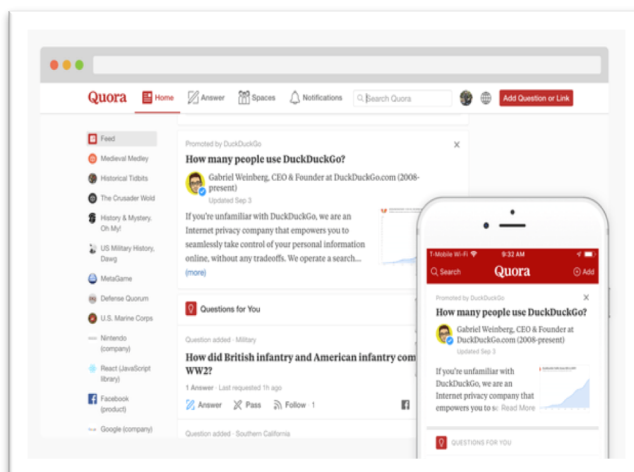
It is a grammar correcting software. It can correct students' basic grammar mistakes instantly and help the students' to finish the writing tasks more conveniently and improve their writing skills at the same time.



Picture 14 Outlook of Grammarly

➤ Quora

Online Q&A platform which can practice students' writing skills. Different types and aspects of questions can strengthen both the reading and writing skills of English learners with fun.



Picture 15 Outlook of Quara

➤ Canva

A useful platform with abundant templates for the users to design by themselves or by the team. It can present vivid and color content which can be used by the students to create their own learning outcomes.



Picture 16 Outlook of Canvas

4.3.3 Students' positive engagements and cooperation

Students showed positive engagement and a high cooperation degree since the first session of the training. In this part, I will demonstrate the analyzed in-class records under different subtitles.

4.3.3.1 Fluid in-class training

Due to this training conducted a brand new form (IB-MALL) it was one of the most huge challenges for the students to adapt to a new learning environment which was totally different from traditional English class. In addition, the main instructor was a foreign teacher using English as the main instructional language. Although one of my responsibilities was translating when there were language barriers, translation only occurred when necessary rather than sentence by sentence. Therefore, it was another challenge for the students as they need to try to use English to learn English.

In order to ensure the training can be pushed forward smoothly, we prepared bilingual materials in different forms as much as we can. Moreover, we decided that the proportion of the translation part shall be taking 30%-40% during the instructions. Surprisingly, students did not show obvious comprehension difficulties even at the very beginning of the training. In reality, I, as the translator only translated

at some point when there was some abnormal vocabulary or expressions. Students could understand most of the instructions and they followed the instructions to finish certain operations, giving instant responses. Based on this situation, as instructors, we decreased the proportion of the bilingual materials gradually. On the third week, we stopped providing bilingual materials and only oral translation in-class from time to time.

Another element which would influence the fluidity of the class except the language barrier was the ICT operation skills. In the beginning, since we introduced many APPs, online platforms, and software, some of which were new to the students, it took some time for the students to master the functions and operations. In fact, most of the students could adapt to the new context soon, and they did not have apparent problems in operating the internet and those tools. There were only one or two students who showed significant difficulties in ICT operations at the very beginning. But they could still catch up with the rest with some help. Basically, after 3 to 4 days, the technical problems had been eliminated. Students had no difficulties in understanding the instructions and ICT operations.

4.3.3.2 Forming learner-centered classroom

Learner-centered classroom requires learners' high participations and engagements. Learners are willing to participate in the class only when they can understand and follow the class. That is to say that a fluid class is a condition. In this study context, as mentioned above, it only took very short time for the students to adapt to the new learning environment and realize fluid training. Such situation laid a solid foundation for the forming of the learner-centered classroom.

Under IB-MALL context, we included more and more APPs, software, online platforms, and different mobile devices with the training being pushed along the way. At first, it usually started with the instructors'

introduction of certain APPs, software, and online platforms. But it was a time-wasting process for the digital aged generation. Gradually, students argued that they did not need our demonstrations or detailed orientations as they could figure out how to do it. Therefore, we changed the presenter role from the instructor to the students. On the fourth day of the training, there were some students even proposed to use other APPs that did not include in our plan. With approval, students became more confident and positive in finishing the tasks, sharing useful tools, and leading the class to some extent.

Students began to initiate learning and teaching activities with the facilitation of the IB-MALL, and they started to be willing to share their opinions and needs. It was an essential sign of learner-centered classrooms, as students were leading the training according to their needs. At the same time, as instructors, our plans and designs could be more suitable to meet the students' learning needs.

4.3.3.3 English proficiency and overall skills

As this study's main duty was to explore the effectiveness of IB-MALL in improving students' English proficiency, it was crucial to pay extra attention to the key point "effectiveness". In other words, how did the students improve throughout the training should be observed. As the instructor as well as the observer, one thing that could be ensured was that students' English proficiency had been improved along the way.

In the listening part, except that students could understand in-class instructions in English, which was one evidence of their improvements, students could understand more types of English. News, dialogues, movies, even different dialects and accent, etc. During the training, we tried to include as more as different types of materials as possible. And it turned out that students could grasp the main meaning more accurately.

In the speaking part, students changed from not willing to speak to more willing to express themselves in class. Speaking skills requires good listening skills, as speakers should response after understanding the other speakers. That is to say, students need to know what they should react to and how to express out properly. Despite most of the students' speaking skills only reached a basic level, they appeared to have more courage to express themselves. Comparing to traditional English class, with the assistance of IB-MALL, students could have more chances to practice and conduct verbal interactions with the others.

In the writing part, which was the most difficult part for Chinese learners, students made significant progress. Some of the students even had never written in English before. But now, almost all the students started to write although they could just write simply, they could write a little bit longer with less broken sentences. In addition, they established the awareness of reference and citation and most of them had mastered how to insert references and citations when doing digital writing.

In the reading part, there were two pieces of evidences that showed students' improvements: faster reading speed and more information capturing. English reading depends largely on the vocabulary of the readers. The improvements of the students also reflected larger students' vocabulary corpus. With the technology assistance (instant translation function) the "unknown words" barrier had been eliminated. Students appeared to read faster and understand the text better. For example, the students did not need bilingual text materials to the some extent, and they could understand the text messages from the foreign instructors after even one-week training.

4.3.3.4 Other aspects

In terms of the acceptance and preference of IB-MALL, attendance record could be the evidence of students' positive attitudes. Except for sick leaves of two students, there was no one absent from the training throughout the whole training. Besides, during the class, students appeared to be highly engaged with the tasks and other learning materials.

Students shared their feedback online either privately or publicly every day based on their learning situation. It was also well worth noticing that students were becoming more confident and motivated. It certainly seemed to me that the more they learned and improved, the more confidence, motivation, and interest in the study they developed.

5 DISCUSSION

In this part, the summary of findings will be discussed according to the research questions. The research questions as mentioned in the first chapter are: a. Does IB-MALL improve students' English proficiency? b. what do students think of IB-MALL? c. What are the advantages and disadvantages of IB-MALL? Based on that, implications for applying IB-MALL in Sino-foreign cooperative education program, limitation of the study and suggestions for the further study will be presented correspondingly.

5.1 Does IB-MALL improve students' English proficiency?

According to the students' responses, most of the students' had made obvious improvements in their overall English proficiency. The improvements could be summarized specifically in following aspects:

In the listening aspect, students had better listening comprehension when listening to the different types of audio materials despite of the accents and dialects differences. Most of them could grasp the main meaning of the listening materials. According to Rosina Fransisca J. Lekawael (2017), listening skill as a fundamental ability in learning a language requires the listeners to be able to understand the speakers' accent, pronunciation, grammar, vocabulary, and comprehension of the meaning. During the training, they had listened to news, daily conversations, speeches, academic lectures, music, movie clips, and those practices enabled them to be familiarized with different types of English audio materials. The more they listened, the better comprehensions they had.

In the speaking aspect, which closely depends on students' listening abilities. According to Rosina Fransisca J. Lekawael, the speakers have to convert meaning into spoken language, while the listeners have to understand the meaning of the speakers (2017). Most of the students started to express themselves without hesitation. They changed from not willing to open their mouths to trying to organize sentences and words to express ideas. In terms of dialogue, almost all

the students could conduct basic conversations. Besides, students' pronunciations had improved significantly. This was because they had access to authentic English instructions and abundant resources on the internet which allowed them to immerse themselves in an authentic English learning environment at any time or at any place both during the class and off the class.

In the writing part, students all had stepped forward to write in English nevertheless of the length and genre. For most of the students who had never tried to write in English before, this progress could be viewed as an essential milestone in their English learning process. Most of the students could write even longer with less broken sentences and grammar mistakes. Except that, students all had established a basic awareness of the format, especially referencing and citing requirements.

In the reading part, the majority part of the students could read faster and fluently with a better comprehension of the text. Reading is the process of understanding a written text by learners and it depends on the vocabulary and background knowledge of the learner in the second language (Constantinescu, 2007). From this phenomenon, we could also see that students' vocabulary size had grown larger. It had formed a positive circle of reinforcement in that the more they read, the more vocabulary corpus they had; the larger vocabulary corpus they had, less reading blocks or difficulties they encountered which encouraged them to read more. Students started to enjoy reading rather than being forced to read as the reading experience was far more relaxed. Reading for them was not a mechanic English learning practice, but a habit and natural behaviour to acquire more information from the reading.

In addition to the improvements in English proficiency, students also showed improvements in ICT skills and teamwork skills. In IB-MALL context, there was a huge proportion of using electronic devices, internet, different software, etc. Such environments promoted more convenient interactions and cooperation between learners. It made the groupwork easier to be done. During the training, we had arranged many group tasks that aiming to practice students' teamwork

skills by utilizing the functions of IB-MALL. Such practice had enhanced students' teamwork skills. At the same time, the more they make good use of ICT, the better ICT skills they have.

Master different aspects of English proficiency requires different methods. Based on different needs of learning in different English aspects, it was necessary to adopt different tools to learn. Therefore, it was a good idea to applying internet and electronic assisted multimedia to support the learning. the function of the internet, multimedia and electronic devices can make the English learning more effective (Rosina Fransisca J. Lekawael, 2017). In this study, by integrating the internet, multimedia and electronic devices, we were glad to see that the findings above echoed previous researches did by Attewell (2015), Basoglu & Akdemir (2010), Yang Shih-hsien (2012), Amin Zaini & Golnar Mazdayasna (2014) that students have made progress in English listening, speaking, reading, writing, and even ICT skills through the assistance of internet and electronic devices.

5.2 What do students think of IB-MALL?

Lasagabaster and Sierra have pointed out that when evaluating CALL programs, it was necessary to take learners' attitude into considerations (2003). As discussed in the previous chapter, most of the students showed positive attitudes toward using internet and multimedia assistance (IB-MALL) to learn English. This results also followed the previous studies that focusing on students' attitudes toward CALL and CALL related other forms of language learning (Akbulut Y., 2008; Bebetos E. & P. Antonious, 2009; Brown, S.F.R & C. Vician, 2004). The positive attitudes could be summarized as students' preference and recognition of IB-MALL.

Students liked learning English via IB-MALL. Most of the students expressed that they liked being taught and learning English with the facilitation of internet and digital devices based multimedia. They thought it was fun to learn in this way. Most of the students used to be reluctant to take the English class and learning English. But they started to enjoy learning English with the help of IB-

MALL. Comparing to traditional English learning and English class, IB-MALL had won most of the students' preference and favourability. Students attributed the reason for their preference to IB-MALL to its "flexibility", "diversity", and "excitement".

5.3 Advantages of IB-MALL

Continuing the three reasons suggested by the students of IB-MALL above, those three reasons could also be viewed as the advantages of IB-MALL.

First of all, *flexibility*. IB-MALL allowed students to jump in the English learning context at any time and at any place only when internet connection and mobile devices were available. Based on that IB-MALL realized "fragmentization" of the learning, which means the learning time could be very short, and happened at any time or place. This element to a large extent helped the students to release the study pressure. English learning did not have to be sitting in front of a desk for long periods of time (Miangah, T. M., & Nezarat, A., 2012). With IB-MALL, the learning process was not like "learning" in people's stereotype of "learning" which made students feel less stressed. In addition, all the materials could be found, stored, reviewed as many times as they wanted according to their needs. All the flexible functions had supported and formed an individualized study mode.

Second, *diversity*. With the facilitation of the Internet and multimedia, students had access to as much resources as they wanted. When there were questions, the searching could be finished with seconds. As long as the students wanted to learn and know more, there were unlimited resources and different types of knowledge available for them. In addition to in-put the knowledge, IB-MALL also supported diverse out-put forms. Students could present their learning outcomes in multiple forms rather than handing in only written assignments on the paper. This function in fact, promoted students' creativity.

During the class, within the same time, students could reach far more materials and resources than traditional classes. Technologies could inspect students'

answers instantly. This job used to be teachers' manual workload. But with the help of the technical devices, it could be done within several seconds which was much more effective than the teacher to do one by one. The overall teaching speed could be increased. In addition, group meetings and discussions could be done online which also saved much time for the learning. Except that students' teamwork skills definitely could be strengthened, the diversity of IB-MALL promoted the efficiency of learning English as well.

Lastly, *excitement*. Just due to the flexibility and diversity of IB-MALL, this way of learning was interesting. Therefore, students showed increased interest in both IB-MALL and in learning English. Interest at the beginning triggered passion to learn. Then, the functions of IB-MALL allowed more interactions and practices, which at the same encouraged students' both in-class and off-class engagements and participation of learning English. The more they learned, the more skills they would be acquired, the better English abilities they would have, the stronger the motivations and more confidence would be established.

The three features or unique points of IB-MALL echoed the study done by Klopfer E. and his colleagues in which they summarized the characteristics of Internet based computer assisted language learning (IB-CALL) as portability, social interactivity, context sensitivity, and connectivity (2002).

5.4 Limitations of IB-MALL

Despite the advantages of IB-MALL mentioned by the students, they also shared their opinions of the negative aspects of the IB-MALL.

Firstly, IB-MALL was challenging for those students who did not have qualified ICT skills. Lai, C. C., & Kritsonis, W. A. had mentioned that when applying CALL or any other CALL related methods in English learning, it was necessary that both the teacher and the students should be equipped with basic ICT skills (2006). According to students' answers, it costed a certain amount of time to master the ICT operation then they could really start to learn. Although in this study, there was a student expressed that it only took a very short time at the beginning of

the training to solve the technical difficulties which did not influence the English learning, this point should not be ignored.

Secondly, IB-MALL was challenging for those students whose learning style was “slow”. As IB-MALL increased the speed of in-class teaching and learning objectively, it might be too fast for those who learn knowledge with relatively “slower” speed. Especially for those students whose initial English abilities were below the average level, IB-MALL could cause the differentiation of the learning group, and even the gap would be expanded.

Thirdly, IB-MALL decreased interpersonal interaction between the students and the instructors. Dina, A. T., & Ciornei, S. I. (2013) indicated that the role of the teacher in the classroom is of vital importance, and the teachers can provide valuable and practical feedbacks and information. In this training, we planned most of the in-class activities online which turned out to be a not good organization. Students only faced the screen and seldom exchanged eye contact with the instructors, which led to students’ lacking of emotional connections and resulted in worse learning experiences.

5.5 Implications

Based on the findings from the study, here are the suggestions for applying IB-MALL in the future.

5.5.1 Provide sufficient ICT training

ICT competence is not only pre-conditions for IB-MALL context learning, but a necessary skill of the 21st century. Qualified ICT skills require sufficient ICT related training and practices. It is suggested that the college should organize more training and courses to improve students’ ICT skills and enable them to fit the digitalized learning context.

5.5.2 Apply Internet based Multimedia assisted learning (IB-MAL) to other subject studies

According to this study, IB-MALL had unique advantages in learning and teaching. This way could increase teaching and learning efficiency, raise students' interests, motivations, confidence, creativity, teamwork skills, release instructors managing workload... Therefore, it is suggested that to apply internet-based multimedia assisted learning (IB-MAL) to other subjects. With more widely application of IB-MAL, students' ICT skills can be strengthened correspondingly as well.

5.5.3 Combine IB-MALL with contact teaching

For instructors when planning the courses, it should be aware that although IB-MALL is effective, it can never replace the role of the "teacher". Lai, C. C., & Kritsonis, W. A. (2006) also pointed out this aspect that electronic devices, internet, and electronic devices cannot handle learners' unexpected problems or situations. Therefore, the proportion of interpersonal teaching and learning during the class should be guaranteed. In other words, it is better to include both IB-MALL and interpersonal contact teaching.

5.6 Reliability and validity of the study

This study included a limited number of students during a short period of time, therefore the results could only reflect the implementation of IB-MALL under a 2+2 program of one Chinese college. It requires a larger number of participants and longer observing time to yield more reliable and convincing results.

Additionally, the data collection design needs to be improved. Different questionnaire or different questions generate different results. In this study, multiple choices questions were modified based on previous studies which were old and needed to be upgraded. Except that, open-ended questions were fixed which showed limitations in inspiring participants to share opinions. Therefore, the response that generated from open-ended questions were limited.

Moreover, during the training, students learned English also with an authentic foreign teacher with abundant learning materials. Students' improvements might also benefit from those factors. Therefore, the results might not represent an exclusive effect of IB-MALL.

5.7 Suggestions for future studies

Based on the limitations of the study, there are three suggestions for future studies:

First, further studies should be carried out focusing on different aspects of English learning separately. For example, a deeper case study targeting IB-MALL in improving writing abilities and so on. Also, it is well worth exploring that do students' positive attitudes affect students' learning achievements etc.

Second, as a longitudinal study, it is suggested the researchers to include more participants and cover a longer time.

Third, rather than designing open-ended questions, semi-structured interview might yield more data.

6. REFERENCES

- Akbulut, Y., Exploration of the attitudes of freshman foreign language students toward using computers at a Turkish state university. *The Turkish Online Journal of Educational Technology*, 2008. 7(1), 18-28.
- Ali, Z. (2013). The Effectiveness of Using Contextual Clues, Dictionary Strategy and Computer-Assisted Language Learning (Call) In Learning Vocabulary. *International Journal of Business and Social Research*, 1(1), 136-152.
- Attewell, J. (2005). Mobile Technologies and Learning: A technology update and m-learning project summary. *London: Learning and Skills Development Agency*.
- Basoglu, E. B., & Akdemir, O. (2010). A comparison of undergraduate students' English vocabulary learning: Using mobile phones and flash cards. *Turkish Online Journal of Educational Technology*, 9 (3), 1-7.
- Bersin, J. (2004). *The blended learning book: Best practices, proven methodologies, and lessons learned*. John Wiley & Sons.
- Bebetsos, E., & Antoniou, P. (2009). Gender differences on attitudes, computer use and physical activity among Greek university students. *Online Submission*, 8(2).
- Blake, R. (2000). Computer mediated communication: A window on L2 Spanish Interlanguage. *Language Learning & Technology*, 4(1), 120-136.
- Brown, S.F.R. and C. Vician, Mediated Communication. *Journal of the Association for Information Systems*, 2004. 5: 99-107.
- Chan, W. M. (2011). *Media in foreign language teaching and learning*. Boston: De Gruyter Mouton.
- Constantinescu, A. I. (2007). Using Technology to assist in vocabulary acquisition and reading comprehension. *The Internet TESL Journal*, XIII(2). Retrieved from: <http://iteslj.org/Articles/Constantinescu-Vocabulary.html>
- Cohen, L., Manion, L. & Keith, M. (2007). *Research Methods in Education*. USA: Routledge.
- Creswell, J. W., V. L. Plano Clark, M. Gutmann, and W. Hanson. 2003. Advanced mixed methods research designs. In A. Tashakkori and C. Teddlie, Eds. (pp.209-40). *Handbook on mixed methods in the behavioral and social sciences*. Thousand Oaks, CA: Sage.

- Dina, A. T., & Ciornei, S. I. (2013). The advantages and disadvantages of computer assisted language learning and teaching for foreign languages. *Procedia-Social and Behavioral Sciences*, 76, 248-252.
- Dörnyei, Z. with Taguchi, T. (2010). *Questionnaires in Second Language Research: construction, administration, and processing (2nd edition)*. New York: Routledge.
- Dörnyei, Z. 2007. *Research Methods in Applied Linguistics*. Oxford: Oxford University Press.
- Geng Yajin, & Lin Min. (2013). A survey of students' psychological health situation and adaptation in the Sino-foreign cooperative education context. *Social Psychology*, 6 (4).
- Gu, X. (2012). Current Situation of Chinese International Cooperative Education Program. *Chinese Education*, 2 (3).
- Halinen, I., Harmanen, M., & Mattila, P. (2015). Making sense of complexity of the world today: Why Finland is introducing multiliteracy in teaching and learning. In V. Bozsik (Ed.) (pp. 136-153). *Improving literacy skills across learning: Cidree yearbook 2015*. Budapest: Hungarian Institute for Educational Research and Development.
- Hiltz, S. R., & Goldman, R. (2005). What are asynchronous learning networks? In Hiltz, S. R., & Goldman, R. (Eds.) (pp. 3-18). *Learning together online: Research on asynchronous learning networks*. Routledge.
- Heift, T., & Schulze, M. (2015). Tutorial computer-assisted language learning. *Language Teaching*, 48(4), 471-490.
- Hwang, G. J., Tsai, C. C. & Yang, S. J. H. (2008). Criteria, strategies and research issues of context-aware ubiquitous learning. *Educational Technology & Society*, 11(2), 81-91. http://www.ifets.info/journals/11_2/8.pdf
- Ishihara, T., & Ham, J. (2012, June). Foreign language learning enhanced with cloud computing and mobile devices. In *International Conference on e-Learning* (p. 158). Academic Conferences International Limited.
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field methods*, 18(1), 3-20.
- Jagust, T, Boticki, I. and So, H.-J. (2018). A review of research on bridging the gap between formal and informal learning with technology in primary school contexts. In *Journal of Computer Assisted learning* 2018; 34: 417-428. DOI: 10.1111/jcal.12252

- Jamieson, J., Chapelle, C., & Preiss, P. (2005). CALL evaluation by developers, a teacher, and students. *CALICO Journal*, 23(1), 93-138.
- Klopfers, E.; K. Squire, and H. Jenkins. (2002). "Environmental Detectives: PDAs as a window into a virtual simulated world." In: *Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education*. Vaxjo, Sweden: IEEE Computer Society, pp. 95-98
- Lai, C. C., & Kritsonis, W. A. (2006). The advantages and disadvantages of computer technology in second language acquisition. *Online Submission*, 3(1).
- Lamy, M.-N., & Hampel, R. (2007). *Online communication in language learning and teaching*. Hampshire, UK: Palgrave Macmillan.
- Lasagabaster, D., & Manuel Sierra, J. (2003). Students' evaluation of CALL software programs. *Educational media international*, 40(3-4), 293-304.
- Leino, K. (2014). The relationship between ICT use and reading literacy: Focus on 15- year-old Finnish students in PISA studies (Doctoral dissertation, University of Jyväskylä).
- Lekawael, R. F. J. (2017). The impact of smartphone and internet usage on English language learning. *English Review: Journal of English Education*, 5(2), 255-262
- Levy, M., & Stockwell, G. (2006). *CALL dimensions: Options & issues in computer assisted language learning*. Mahwah, NJ, USA: Lawrence Erlbaum Associates.
- Levy, M. (1997) *CALL: Context and conceptualization*. (p.1). Oxford: Oxford University Press.
- Lin, J., Wang, S., & Zhang, W. (2018). Exploration in the Model of Sino-foreign Cooperative Education in Higher education level.
- Mahmoudi, E., & Razak, N. Z. B. A. (2012). Attitude and students' performance in computer-assisted English language learning (CAELL) for learning vocabulary. *Procedia-Social and Behavioral Sciences*, 66, 489-498.
- Mayer, R. E. (2002). Multimedia learning. *Psychology of learning and Motivation*, 41, 85-139.
- Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. *International Journal of Distributed and Parallel Systems*, 3(1), 309.
- Milutinović, M., Labus, A., Stojiljković, V., Bogdanović, Z., & Despotović-Zrakić, M. (2013). Designing a mobile language learning system based on lightweight learning objects. *Multimedia Tools and Applications*, 74(3), 903-935.

- Morris, F. (2005). Child-to-child interaction and corrective feedback in a computer mediated L2 class. *Language Learning & Technology*, 9(1), 29-45.
- Obar, J. A., & Wildman, S. S. (2015). Social media definition and the governance challenge-an introduction to the special issue. *Obar, JA and Wildman, S.(2015). Social media definition and the governance challenge: An introduction to the special issue. Telecommunications policy*, 39(9), 745-750.
- Ogata, H. & Yano, Y. (2004). Knowledge awareness map for computer-supported ubiquitous language-learning. In J. Roschelle, T. W. Chan, Kinshuk & S. J. H. Yang (Eds.), (pp. 19-26). *Proceedings of the 2nd IEEE International Workshop on Wireless and Mobile Technologies in Education, WMTE'04. JungLi, Taiwan, 23-24 March*.
- Pardo-Ballester, C. (2012). CALL Evaluation: Students' perceptions and use o-LoMáTV. *CALICO Journal*, 29(3), 535-547.
- Pirasteh, P. (2014). The Effectiveness of Computer-assisted Language Learning (CALL) on Learning Grammar by Iranian EFL Learners. *Procedia - Social and Behavioral Sciences*, 98, p. 1422-1427
- Qiu Wanli, & Yu Lijuan. (2009). *An exploratory of language training in the Sino-foreign cooperative education* (Doctoral dissertation). University of Fudan.
- Rasiwasia, N., Costa Pereira, J., Coviello, E., Doyle, G., Lanckriet, G. R., Levy, R., & Vasconcelos, N. (2010). A new approach to cross-modal multimedia retrieval. In *Proceedings of the 18th ACM International Conference on Multimedia*, pp. 251-260. ACM
- Su, S. (2011). On the path to improving the application ability of English for students in Chinese-foreign cooperative program. *Journal of Ji Xi University*, p. 58
- Schunk, D. H., & Zimmerman, B. J. (2007). *Motivation and self-regulated learning: Theory, research, and applications*. New York, NY: Lawrence Erlbaum Associates.
- Sun Wei, Han Wei, & Li Meixu. (2014).The current situation, problem, and solution in the Sino-foreign cooperative education. *Modern Educational Management*, (8), 97-101.
- Talebinezhad, M. R., & Abarghoui, M. A. (2013). The Iranian High School Students' Attitude toward CALL and the Use of CALL for EFL Receptive Skills. *Theory & Practice in Language Studies*, 3(2).
- Tsai, M. J. & Tsai, C. C. (2003). Information searching strategies in web-based science learning: The role of Internet self-efficacy. *Innovations in Education and Teaching International*, 40(1), 43- 50.

- Tsai, P.-S., Tsai, C.-C., Hwang, G.-H. (2010). Elementary school students' attitudes and self-efficacy of using PDAs in a ubiquitous learning context. *Australasian Journal of Educational Technology*, 26 (3), 279-380.
- van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy, and authenticity*. London, UK: Longman.
- Wang, P. - L. (2011). The Effect of Computer-Assisted Whole Language Instruction on Taiwanese University Students' English Learning. *English Language Teaching*, 4(4), pp. 10-20.
- Wang, C., & Winstead, L. (Eds.). (2016). Handbook of research on foreign language education in the digital age. *IGI Global*.
- Weller, M., & Mason, R. (2000). Evaluating an Open University web course: Issues and innovations. In Asensio, M., Foster, J., Hodgson, V., & McConnell, D. (Eds.) (pp. 361-368). *Networked learning 2000: Innovative approaches to lifelong learning and higher education through the internet*.
- WUHAN POLYTECHNIC. (2019, 5). Retrieved from <http://www.wtc.edu.cn/437/list.htm>
- Wu, Y. (2010). Situation and Strategy of Sino-foreign Cooperative education program. *Chi Feng Institute Newspaper*, 208-209.
- Wu, Y. T. & Tsai, C. C. (2006). University students' Internet attitudes and Internet self-efficacy: A study at three universities in Taiwan. *Cyberpsychology & Behavior*, 9(4), 73-86.
- Yamada, M. (2009). The role of social presence in learner-centered communicative language learning using synchronous computer-mediated communication: Experimental study. *Computers & Education*, 52(4), 820-833.
- Yan, J. (2012). Sino-foreign Cooperative Educational Program Annual Report. *Business and Education He Nan*.
- Yang, S. H. (2012). Exploring college students' attitudes and self-efficacy of mobile learning. *Turkish Online Journal of Educational Technology-TOJET*, 11(4), 148-154.
- Yu, J., Xu, F., & Bai, F. (2011). Research on the problems and solutions of Chinese Students' Academic writing skills. *Teaching Research*.
- Zaini, A., & Mazdayasna, G. (2014). The Effect of computer assisted language learning on the development of EFL learners' writing skills. *Procedia-Social and Behavioral Sciences*, 98, 1975-1982.
- Zhang, G. (2019). Research about the English Co-teaching Situation Under Sino-foreign Cooperative Education Program in He Nan Province. *Drama Home*.

- Zhang, G., & Luo, J. (2013). New Ides in Designing Module Based English Training Under Sino-foreign Cooperative education programs. *Lan Zhou Education Institute Newspaper*.
- Zhang, J., & Liu, W. (2012). Explore the New Mode in English Co-teaching Under Sino-foreign Cooperative Education Program. *University of Xi Nan Agriculture Newspaper*, 86-90.
- Zhang, L. (2012). Study and Thought on Sino-Foreign Cooperative Education in Higher Vocational Colleges in Jiangsu Province. *Asian Social Science*, pp. 112-121.

7. APPENDIX

Questionnaire 1

Self-Evaluation of the Summer intensive English training

This is a self-evaluation survey about the summer intensive English training, please evaluate your learning outcome with the scale from 1 to 5.

1	2	3	4	5
Strongly disagree	Disagree	Agree somewhat	Agree	Strongly agree

1. I think I have made significant improvement
1 2 3 4 5
2. I think my overall English proficiency has been enhanced
1 2 3 4 5
3. My listening skills have been improved
1 2 3 4 5
4. I can understand different types of English audio materials more accurately.
1 2 3 4 5
5. My speaking skills have been improved
1 2 3 4 5
6. I become more confident in using verbal English to communicate
1 2 3 4 5
7. My academic writing skills have been improved
1 2 3 4 5
8. I can write longer with less mistakes
1 2 3 4 5
9. My reading skills have been improved
1 2 3 4 5
10. I can read faster and understand the text better
1 2 3 4 5
11. My ICT skills have been improved

1 2 3 4 5

12. I'm capable of finishing the tasks and assignments

1 2 3 4 5

13. Do you think that you have make progress after receiving the intensive English training? If yes, please define in detail that in which aspect do you improve.

14. What grade would you give to yourself on the scale of 1-5, and define the reasons.

Questionnaire 2

Attitude toward using IB-MALL to learn English

This questionnaire is designed to collect your attitude toward using internet-based multimedia to learn English. Please answer the questions on the scale of 1-5.

1	2	3	4	5
Strongly disagree	Disagree	Agree somewhat	Agree	Strongly agree

1. I like to be taught by multimedia and internet to learn English
1 2 3 4 5
2. I think it is fun to learn English through the support of internet-based electronic devices
1 2 3 4 5
3. I think this way of using internet and multimedia have promoted my interests in learning English
1 2 3 4 5
4. I'm confident when using internet and multimedia to learn English
1 2 3 4 5
5. I prefer learning English via internet and different APPs, software, online platforms
1 2 3 4 5
6. I enjoy learning English through internet and electronic devices as the assistance.
1 2 3 4 5
7. I feel this way of learning English by using internet and multimedia is better than traditional English teaching and learning method
1 2 3 4 5
8. This internet-based multimedia assisted English learning method can raise my learning autonomy.
1 2 3 4 5
9. Did you enjoy learning English with the support of internet and multimedia? Why or why not?
1 2 3 4 5

10. Is this way of learning better than traditional English class? Why or why not?
11. Can you share your opinions about the advantages and disadvantages of this way of learning? How would you develop this training?

8. ACKNOWLEDGEMENT

First of all, I would like to express my sincere gratefulness to Wuhan Institute of Polytechnic for providing me the chance to conduct my thesis research also finish as an internship. It was a meaningful and unforgettable experience which shed a light on my future career path.

Second, I would like to thank my supervisor Riikka Alanen for giving me clear guidance and support along the whole process of my thesis. Her inspiring suggestions and warm encouragements have motivated me greatly to do better.

Third, a sincere thank you goes to University of Jyvaskyla and master program of Educational Science in the department of psychology and education. I benefited significantly from this study opportunity. It is because all the courses and activities I have participated that brought me to where I am now.

Finally, I want to say thank you to my parents and husband. I would never reach to this point without family's sincere spiritual supports and heartfelt encouragements. They are the most important and strongest backups of mine.