



A STUDY OF ENGLISH STRESS INSTRUCTION BASED ON
SONG LYRICS AND MALL

WU DI

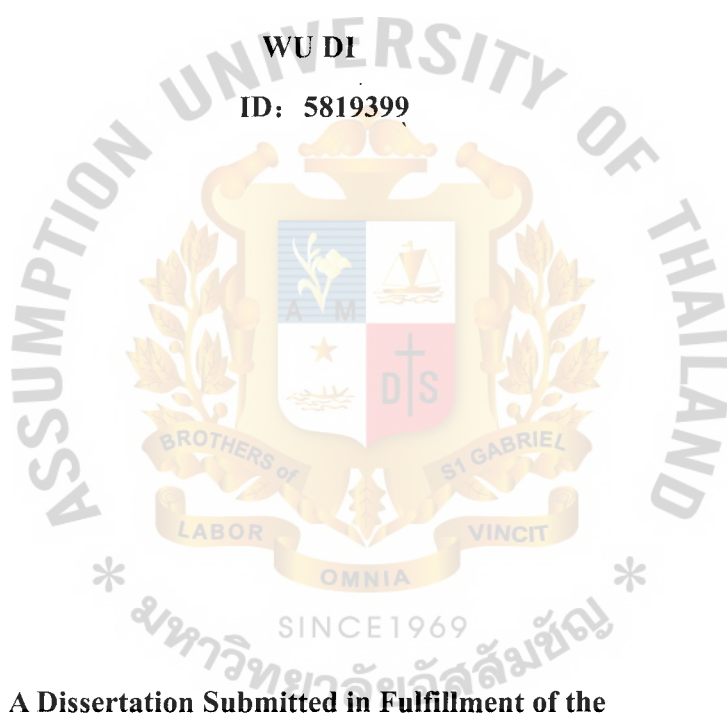
A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY
in English Language Teaching
Graduate School of Human Sciences
ASSUMPTION UNIVERSITY OF THAILAND

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By: WU DI

Field of Study: ENGLISH LANGUAGE TEACHING

Advisor: DR. ARTHUR MCNEILL

Accepted by the Graduate School of Human Sciences, Assumption University in
Fulfillment of the Requirements for the Doctor of Philosophy in English Language Teaching



(Assoc. Prof. Dr. Suwattana Eamoraphan)

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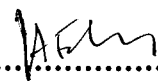
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ABSTRACT

I.D. No.: 5819399

Key words: MALL; SONG LYRICS; ENGLISH STRESS INSTRUCTION;

MOTIVATION

Name: WU DI

Dissertation title: A STUDY OF ENGLISH STRESS INSTRUCTION BASED ON
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Dissertation advisor: Dr. ARTHUR MCNEILL

The stress-timed nature of spoken English challenges most Chinese learners as Chinese is a syllable-timed language. However, empirical studies of Chinese college students' pronunciation have mostly focused on segmental aspects such as consonants and vowels, and few studies have examined suprasegmental (prosodic) features such as English stress. The present research seeks to address the issue of insufficient mastering of English stress among freshmen, non-English majors in Guizhou Education University, P. R. China, and contribute to the nascent research of Chinese students' use of MALL, as well as to explore: 1. whether English stress instruction based on song lyrics and MALL is more effective than English stress instruction based on conventional in-classroom learning; 2. whether English stress instruction based on song lyrics and MALL can yield a higher level of learner motivation compared to English stress instruction based on conventional in-classroom learning; 3. the development of integrating MALL, learning motivation and lyric-reading for English stress learning purpose.

Two groups of students (N=60) participated in the present research by separately receiving a new type of MALL-based lyric-reading instruction and the conventional in-classroom lyric-reading instruction. The awareness of creating MALL-based

lyric-reading instruction was initiated by several previous studies from three areas: MALL, Learning motivation, and English stress instruction. Instruments used in the research comprise a recruitment script for recruiting participants and collecting their basic information, a reading-aloud test for both pre- and post-test, two applications used for the configuration of the MALL-based lyric-reading instruction, an ARCS survey for the investigation of participants' motivation, an interview for gaining participants' insight towards the instruction, and a software program (Praat) for test recording and analysis. Findings from the reading-aloud tests show that the use of MALL-based lyric-reading instruction can help students improve English stress performance than lyric-reading instruction undertaken in a traditional way. Findings from the ARCS survey indicate that the MALL-based lyric-reading instruction could break through motivational barriers and engage students in English stress learning. This promising evidence also expands the sphere of English stress learning studies, as out-of-classroom learning on MALL may be more effective than in-classroom learning, and song lyrics are worth being considered as valuable reading materials not only to help students gain improvement in the performance of English stress, but also have the potential to expand learners' vocabulary size as claimed by students in the interview. Moreover, based on the findings from the research, discussions about the future development of MALL, the selection of feedback for participants' pronunciation correction, and the use of pseudo-environment for language teaching are offered to provide recommendations for future studies conducted in the similar field.

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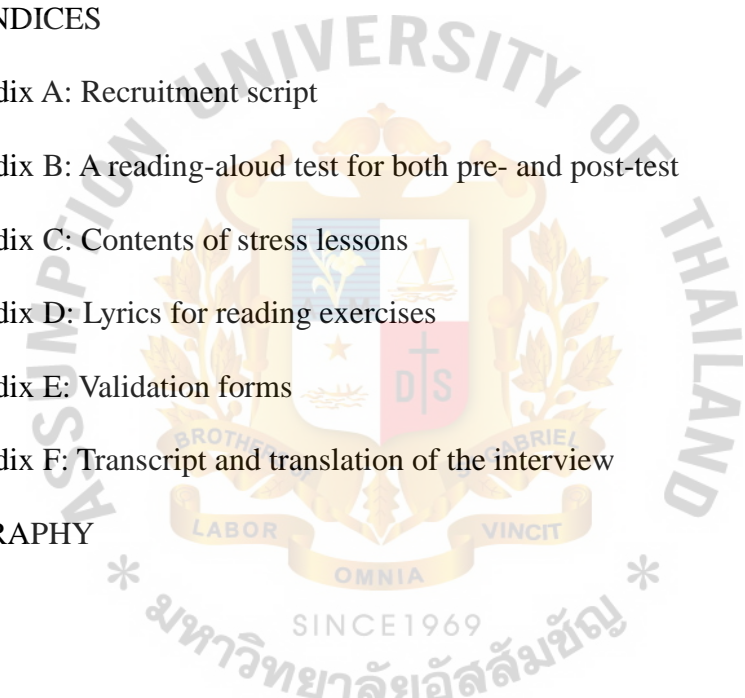
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The watermark is a large, light gray circular emblem. It features a central shield with a cross and the letters 'DS'. Above the shield is a crown. The shield is flanked by two golden lions. Below the shield is a banner with the Latin motto 'LABOR OMNIA VINCIT'. The outer ring of the emblem contains the text 'ASSUMPTION UNIVERSITY OF THAILAND' at the top and 'มหาวิทยาลัยอัสสัมชัญ' at the bottom, with 'SINCE 1969' in the center of the bottom arc.

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LIST OF ABBREVIATIONS

ARCS: Attention, Relevance, Confidence and Satisfaction

ASR: Automatic Speech Recognition

CET: College English Test

CET-SET: CET-Spoken English Test

CG: Control Group

EFL: English as a Foreign Language

ESL: English as a Second Language

EG: Experimental Group

HELLO: Handheld English Language Organization

L1: First Language

L2: Second Language

MALL: Mobile Assisted Language Learning

MAPL: Mobile Assisted Pronunciation Learning

MELL: Mobile English Language Learning

VLT: Virtual Learning Tutor



CHAPTER I INTRODUCTION

1.1 Background of the present research

It is widely reported in the literature that acquiring fluency and accuracy in spoken English represents one of the major challenges to English learners, whether they study English as a foreign language (EFL), or a second language (ESL) (e.g. Abu-Ghararah, 1990; Shumin, 1997; Al Hosni, 2014; Li & Jia, 2006; Gan, 2012). Focusing on China, the context of the present research, college English education has been developing for decades with the goal to cultivate students' comprehensive English abilities (Du, 2012). However, the performance of speaking skills has gained less attention from both educators and students, resulting in the phenomenon known informally as “dumb” English, which is a term used to refer to students' deficiency of speaking skills (Lin, 2002, p.8). “Dumb” English is not equivalent to poor English ability; students who are labeled as “dumb” English users may even have command on a larger vocabulary size than some native speakers (Lin, 2002, p.8). However, an excellent command of vocabulary or grammar does not guarantee good speaking skills. Most Chinese college non-English majors started learning English since primary school, but “dumb” English prevails in colleges even in recent years, impairing the quality of English education (Zhu, 2017, p.176). This phenomenon is a reflection of the downplaying of speaking in English education in China. Ironically, based on a survey conducted with college students in Southern China, “speaking” was chosen by over 76% of the participants as the most important skills to acquire compared to listening, writing, and reading (Fang, 2010, p. 114).

Speaking is a complicated and multifaceted language skill, which comprises other sub-skills, such as vocabulary and grammar mentioned above. Among those sub-skills, pronunciation is advocated as the most influential one (Fraser, 2000, p.7; Nair, Krishnasamy & De Mello, 2006, p. 27). Since speaking and pronunciation are sometimes addressed separately as they are mutually exclusive, there seems to be a

need to first distinguish teaching activities of them, before any further discussion. According to Murphy (1991), speaking activities aim at offering students opportunities for enhancing oral fluency through social communication; whereas pronunciation activities are designed to help students gain accurate control over the sound system. In other words, teaching pronunciation focuses on the relative micro side of how a sound is produced. This process appears to be interpreted by many educators and students as oral development of vowels and consonants. Viewed from a severe perspective, vowels and consonants categorized as segmentals, only contribute to a secondary, supporting role in the teaching of pronunciation; the primary role in pronunciation performance, is dominated by suprasegmentals (prosody) such as stress, rhythm, and intonation (Morley, 1991). Morley's pedagogical priority of prosody was revealed by an investigation into 25 years' literature of pronunciation, and has influenced many studies hereafter. Downplaying of prosody teaching leads to another salient issue, Chinese-accented/ Mandarin-accented English (Xu, 2007; Mok & Dellwo, 2008), which weakens students' confidence to speak and become an un-negligible cause to "dumb" English.

English stress, as one important feature of prosody, confuses most learners in China, because the stress patterns in English and Chinese are strikingly different. Chinese, as the first language (L1) of Chinese college students, is a syllable-timed language, which means durations for producing every syllable in words or sentences are almost the same, whereas English, their second language (L2), is a stress-timed language where the durations of each syllable differ depending on the stress placement (MacKay, 1985). Unfortunately, little attention has been paid to this salient difference from both educators and learners (Juffs, 1990, p. 107; Chen, Fan, & Lin, 1996); students consequently tend to over-emphasize syllables when they are in a "careful speech" mode, bringing breaks in the "continuous flow" of the speech (Zhang & Yin, 2009, p. 145). That means the barriers for a native Chinese speaker to learning English stress derive from the nature of how Chinese is spoken, yet are not easy to surmount. Therefore, addressing and fixing the English stress issue has emerged as an irresistible trend (Xia, 2012, p. 235).

1.2 Statement of the problem

English stress includes word stress and sentence stress. Word stress refers to the prominent role that particular syllables play in a word, while sentence stress, concerns the prominence of certain words in a sentence (Archibald, 1997, p.263-264). Dating back to 1990, a study by Juffs(1990) concluded that perceiving stress was a source of difficulty for Chinese college students (p.107). This conclusion was echoed a decade later by Zhang, Nissen and Francis (2008, p. 4498) who claim that English stress placement is a difficult task for Chinese speakers. Stressing syllables to an inordinate degree is the most common mistake that most English learners in China make when speaking English (Zhang & Yin, 2009, p. 145), especial the college students (Xia, 2012).

Although recently, many instructors and scholars accentuate the importance of helping college students gain improvement in pronunciation, particularly in terms of English stress performance, there are two major barriers precluding them from progressive development. The first barrier is the apparent negligible impact of classroom instruction on learners' speaking skills, particularly in large-class teaching with over 80 students, where students seldom have chance to practice oral English (Meng, 2009) and they are learning with instruction focusing on reading but seldom addressing speaking (Peng, 2014, p. 15; Dong, Shi, Lou, & Ding, 2016). The second barrier, according to Li (2011, p.15), is the lack of learning motivation, which hinders the majority of college students, especially non-English majors, from improving their speaking quality.

Empirical studies of Chinese college non-English majors' pronunciation have mostly focused on the aspect of segmentals, few studies have examined the performance of prosodic features. No research has been conducted for the purpose of improving English stress performance by using song lyrics as the reading material with MALL method. When MALL and song lyric-reading are integrated and introduced into the prosodic instruction of English pronunciation, gaps mentioned

above would be bridged, and the sphere of English language teaching could be expanded.

1.3 Research objectives

The present research aims to: (1) investigate whether English stress instruction based on song lyrics and MALL is more effective than English stress instruction based on conventional in-classroom learning; (2) determine whether English stress instruction based on song lyrics and MALL can yield a higher level of learner motivation compared to English stress instruction based on conventional in-classroom learning; (3) explore the development of integrating MALL, learning motivation and lyric-reading for English stress learning purpose. For convenience, the English stress instruction based on song lyrics and MALL will be referred as MALL-based lyric-reading instruction, and the English stress instruction based on conventional in-classroom learning will be referred as in-classroom lyric-reading instruction hereafter.

1.4 Research Questions and hypotheses:

Due to the need of a serious investigation of the potential of the MALL-based lyric-reading instruction to promote spoken English in general, and the performance of English stress in particular, the study was conducted to find answers to three Research Questions and to test and validate two hypotheses:

Research Question 1: Between MALL-based lyric-reading instruction and in-classroom lyric-reading instruction, which one is more effective in improving Chinese college non-English majors' English stress performance?

Hypothesis 1: MALL-based lyric-reading instruction leads to better stress performance than in-classroom lyric-reading instruction.

Research Question 2: What is the difference in learners' motivation between MALL-based lyric-reading instruction and in-classroom lyric-reading instruction?

Hypothesis 2: MALL-based lyric-reading instruction leads to a higher level of motivation than in-classroom lyric-reading instruction.

Research Question 3: How can MALL-based lyric-reading instruction be developed to improve English stress performance?

While it is appropriate to adopt a positivist approach to answering RQ 1 and RQ 2 (i.e. that objective testing followed by statistical analysis of test scores for RQ 1 and comparison of Likert-scale questionnaire results for RQ 2), RQ 3 can only be answered in two steps: first, to review the process of the development of the MALL-based lyric-reading instruction, and then to examine students' improvement based on the reading-aloud tests' scores and investigate students' feelings and insights, in order to better develop this type of instruction.

1.5 Theoretical framework

Since English stress has not been equally treated compared to other English skills in the traditional in-classroom setting in China (Mi, 2012, p. 88), there seems to be a need to explore out-of-class instruction to motivate and help students improve their speaking performance, especially with the goal of improving English stress performance. Based on Gardner' and Lambert' (1972) L2 learning motivation theory, Wang (2014, p. 13) recently advocates that adopting modern facilities and interesting learning materials could be effective strategies. MALL, which derives from mobile learning but focuses on language learning, has subsequently attracted our attention. Because research shows that mobile devices especially mobile phones, with their modern technology, are able to motivate learners to improve their pronunciation learning in out-of-class study (Saran, Seferoglu & Cagiltay, 2009), particularly when designed following Keller's (2008) Attention, Relevance, Confidence, and

Satisfaction (ARCS) motivation model (Liu & Chu, 2010). A recent study is in parallel with this claim. By adopting an Automatic Speech Recognition (ASR) based application on the mobile phone, Ahn and Lee (2015) find that students show great interest in practicing English speaking and regard the learning process as enjoyable and motivating. The effectiveness of ASR in helping students is also confirmed in terms of short time frame learning (Neri, Mich, Gerosa, & Giuliani, 2008), better speaking performance (Chiu, Liou, & Yeh, 2007), and one-to-one feedback on pronunciation (Jung, 2011).

Once the modern facility for out-of-class instruction is found (on the present study, mobile phones), sources of interesting materials for English stress learning need to be explored. According to Wang's (2014) investigation, enjoying English culture such as English songs plays a critical role in Chinese college students' integrative motivation (p. 12). Song lyrics, as the core component of songs, appear to be worth adopting as the new materials for students to read to improve English stress performance. This is because a key step in learning English stress is to distinguish stressed syllables from unstressed ones, which happens to be, according to DeSantis (2015), a basic technique of reading song lyrics (p.220). Moreover, reading exercise, based on Reed' and Michaud' (2005) auditory feedback loop and Juffs's (1990) study, is advocated as a worthy strategy for the improvement of English stress performance. Therefore, theoretical constructs supporting the present research are from three main areas (MALL, Learning motivation, and Stress instruction), including four principal theories: mobile learning theories, Gardner's and Lambert's (1972) L2 learning motivation theory, Keller's (2008) ARCS motivation model and Reed's and Michaud's (2005) auditory feedback loop, which will be further discussed in Chapter II. Figure 1.1 illustrates the theoretical framework of the research.

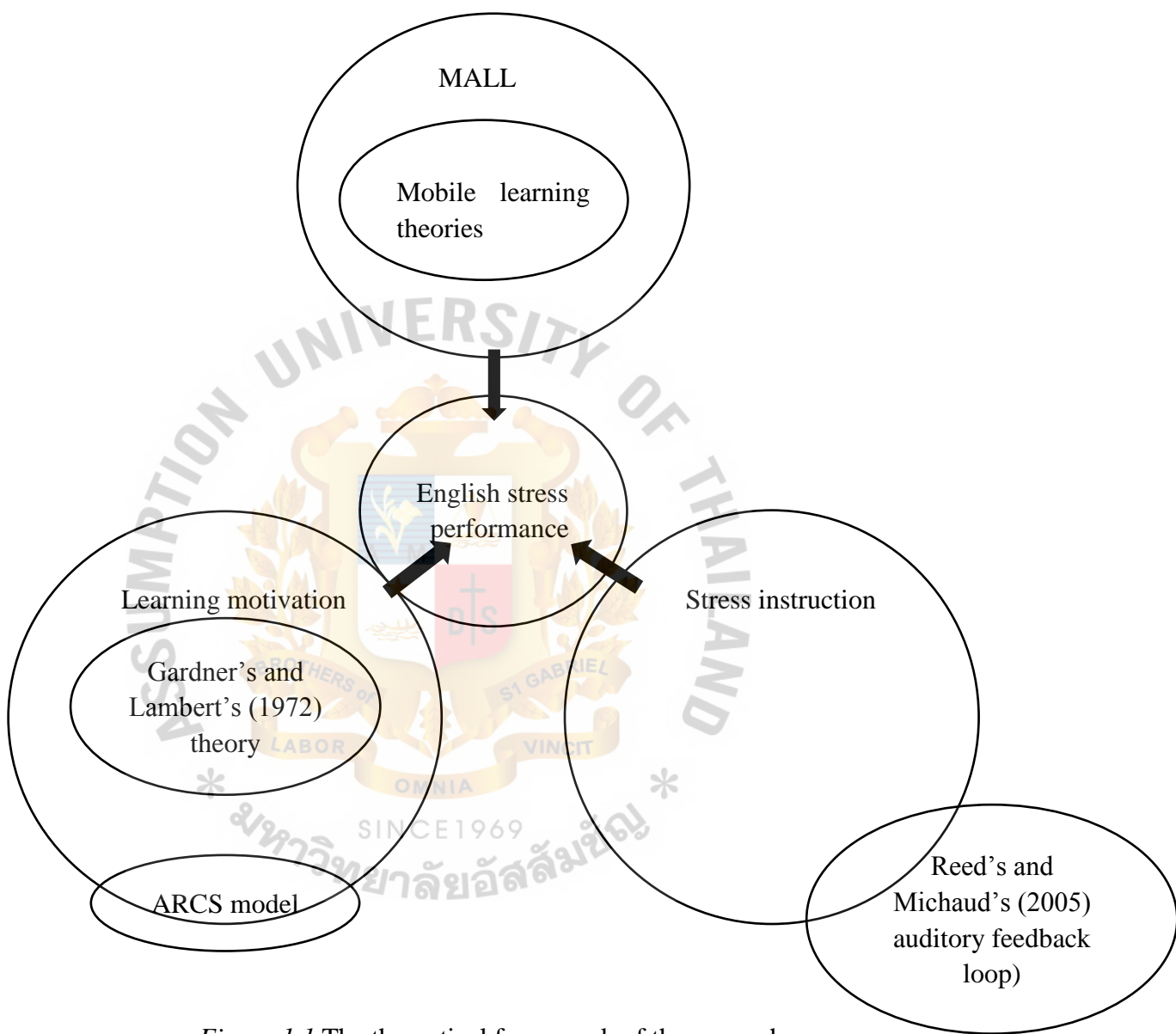
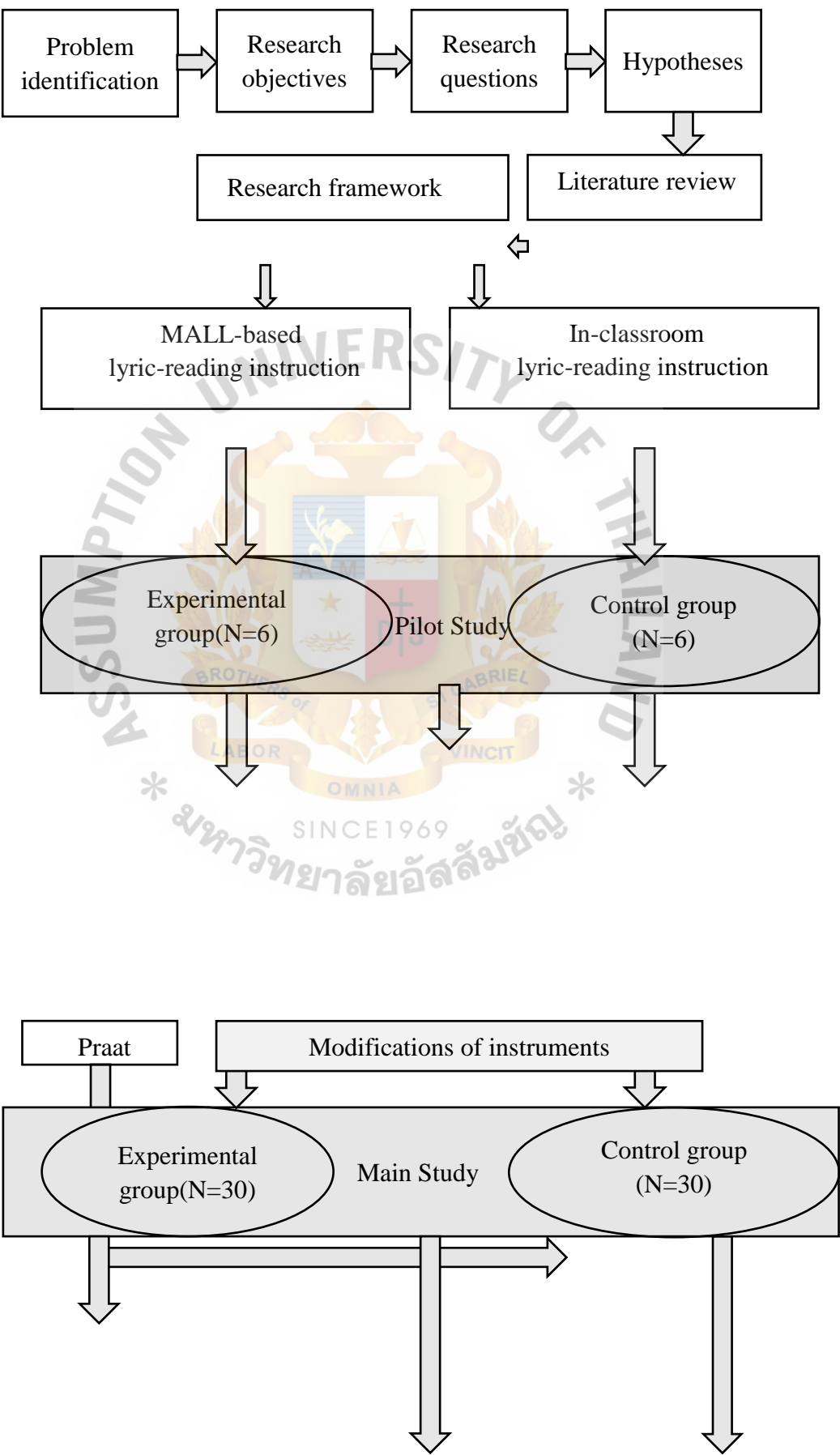


Figure 1.1 The theoretical framework of the research.

1.6 Conceptual framework

The research consists of a Pilot Study and a Main Study. The Pilot Study aimed to examine the feasibility of the research framework, and check and avoid the underlying weakness. The Main Study was conducted to answer the Research Questions. Figure

1.2 shows the conceptual framework of the present research.



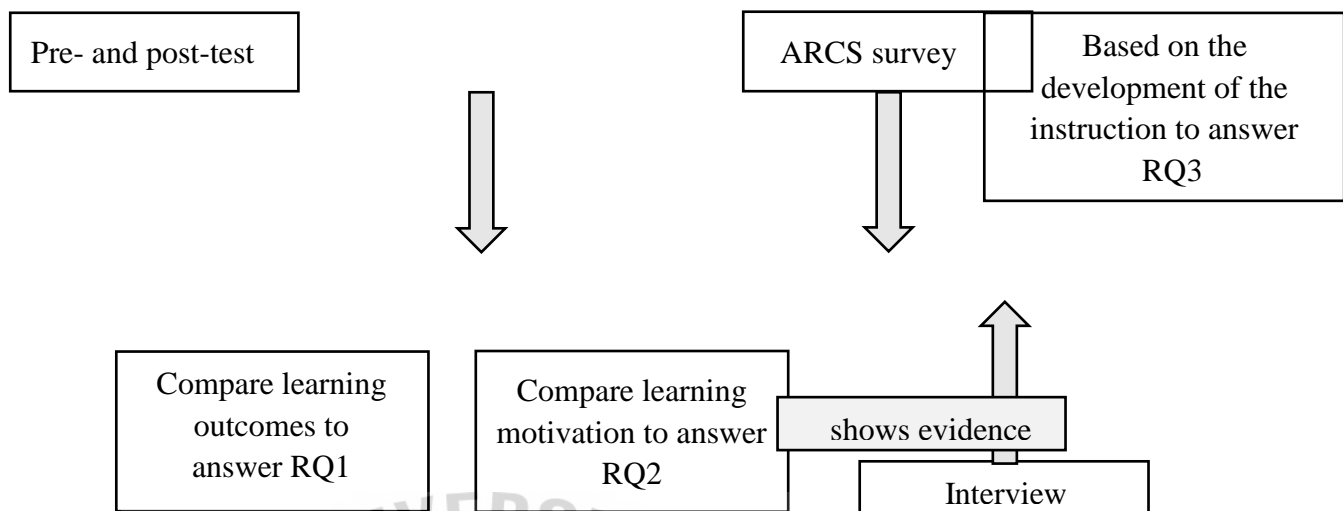


Figure 1.2 The conceptual framework of the research.

1.7 Scope of the study

This study focused on the design of the MALL-based lyric-reading instruction to motivate non-English majors in Guizhou Education University, P. R. China to learn basic principles of English stress. The mobile devices used in the study refer only to mobile phones (iPhone or Android phone). Participants in this study were freshmen whose majors were applied biology, chemistry, physics, and tourism management. English stress learning materials were based on the textbook, *English Pronunciation and Intonation for Communication* (second edition) (Wang, 2005). Song lyrics were used only for reading and no singing was involved. The study explored students' learning motivation in terms of their attention, relevance, confidence and satisfaction towards the instruction they received.

1.8 Definitions of terms

The following is a list of key terms that are used throughout the research.

1. Prosody. The term ‘prosody’ is often and accurately interchanged with ‘suprasegmentals’. The interpretation of these terms is necessary to understand relevant studies. (Adams-Goertel, 2013, p.118)
2. English stress. Stress comprises word stress which focuses on the stress of individual syllables in a word, and sentence stress which gives the general guidelines of how each word in a sentence should be stressed.
3. English stress performance. It refers to students’ actual oral production of word stress and sentence stress. In this study, students’ English stress performance will be investigated by a reading-aloud test with possible scores ranging from 0 to 70.
4. Motivation. This refers to learners’ desires to learn a second language according to their goals. The goals can be instrumental or integrative based on Gardner’s and Lambert’s (1959) L2 learning motivation theory. In this study, learning motivation focused on students’ attention, relevance, confidence and satisfaction towards the instruction they received.
5. MALL-based lyric-reading instruction. An instruction which integrates English stress lessons with song lyric-reading exercises to improve students’ English stress performance. Both lessons and exercises are conducted on mobile applications.
6. In-classroom lyric-reading instruction. An instruction which comprises English stress lessons and song lyric-reading exercises in the classroom setting to improve students’ English stress performance.
7. Connected speech. The natural way fluent speakers speak with certain words emphasized (Griffie,1995, p.28).
8. Popular song. Songs with wide attraction that are normally distributed to large audiences via the music industry, including a variety of genres such as heavy metal, rap, pop, country, etc. “Popular” means “well-liked by many people” (Williams 1983, p.237).
9. Lyrics. Lyrics are the words of a popular song.
10. MALL. Mobile Assisted Language Learning refers to both formal and informal language learning supported by mobile devices and available without temporal and spatial limitations (Kukulska-Hulme & Shield, 2008, p. 3).

11. MELL. Mobile English Language Learning refers to using MALL for English learning purpose.
12. ASR. Automatic Speech Recognition, which is a human voice recognition technology that allows users to obtain immediate evaluation of their English utterances. It is the most prominent feature that distinguishes MALL based lyrics-reading instruction from lyrics-reading instruction.
13. Speak English More. A free download application on smart phone which offers lyric-reading exercises and ASR feedback on pronunciation with an easy to use interface.
14. Pseudo-environment. An environment in the mind that is formed by what people have perceived from the media they are using.

1.9 Significance of the present research

An investigation of the effectiveness of using MALL-based lyric-reading instruction for Chinese college non-English majors' English stress performance and an examination of students' motivation and perceptions towards lyric-reading and MALL could all contribute to the significance of the present research. The plausibility of using lyric-reading for English stress learning could be documented. A comparison of ASR-based feedback and peer-feedback could provide further understandings into what kind of feedback gains better effects on pronunciation learning.

Furthermore, it is hoped that this research will encourage English language educators in China to realize the usefulness of utilizing MALL for pronunciation training. For those who use MALL as a self-regulated approach to improve pronunciation, particularly in English stress, this research will provide an analysis about how to use it in a more efficient way. Last but not least, for those who are in charge of designing pronunciation training applications on mobile phones, this research will give them some insightful suggestions for future development.

1.10 Chapter summary

The demand on pronunciation learning, particularly in terms of English stress, has increased due to the fact that the importance of pronunciation has gained more and more serious attention from scholars. By designing a new type of MALL-based lyric-reading instruction and evaluating its effectiveness, this research seeks to explore remedial methods to address the lack of English stress performance issue among Chinese college non-English majors, as well as to provide recommendations for future studies.

Through a descriptive explanation of the research problem and its context, as well as the research objectives, hypotheses, and questions, this chapter has set the stage for a detailed discussion of the present research in the following chapters. Statement of the problem in this chapter results in the design of the MALL-based lyric-reading instruction as a prospective method to enhance Chinese college non-English majors' English stress performance. Theoretical framework, conceptual framework and scope of the study have been presented as well. The following Literature Review will demonstrate a more comprehensive picture of the theoretical underpinnings of the present research.



CHAPTER II LITERATURE REVIEW

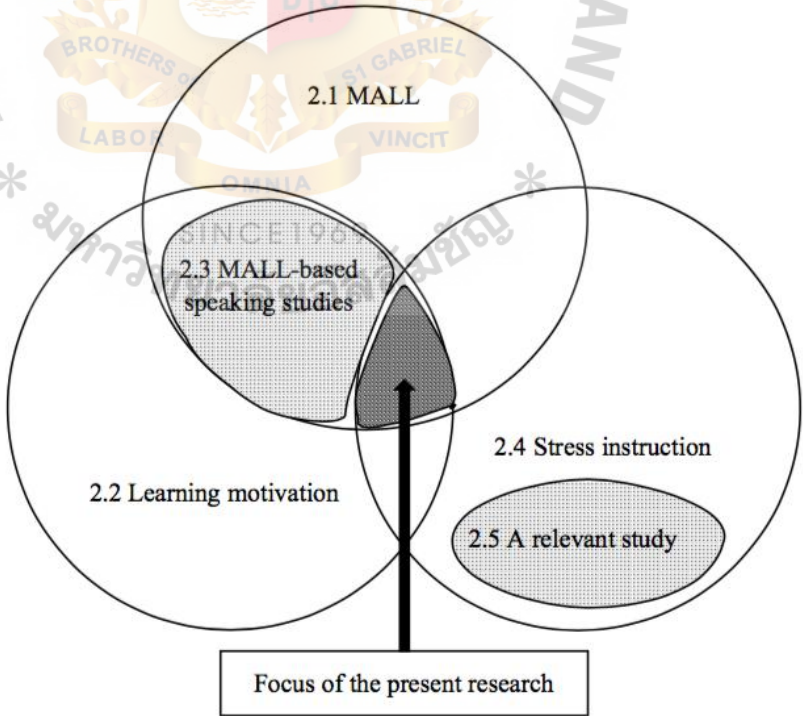
2.0 Introduction

The research focuses on integrating lyric-reading with MALL to form a new type of instruction to enhance Chinese college non-English majors' performance of English stress, and is not an expansion or repetition of a specific existing study. The awareness of designing the MALL-based lyric-reading instruction was initiated by several previous studies from three areas, which are MALL, Learning motivation and English stress instruction. Due to the fact that no studies in those areas overlapped to form a research paradigm that would directly apply to the Research Questions of the present research, this chapter provides a literature review of relevant studies, and details theories or research design that are applied in the study. Figure 2.1 explains the structure of this chapter and highlights the focus of the present study.

Figure 2.1 Thematic structure of the literature review.

2.1 MALL

As can be seen in Figure 2.1, the focus of the present research is overlapped of three



be the an zone

fundamental areas. This section will review the first area, MALL, by firstly positioning MALL within technology-based education (2.1.1), and then reviewing

m-learning theories that MALL embraces (2.1.2). Section 2.1.3 reviews second language learning theories applied in MALL. In section 2.1.4, studies related to pronunciation learning on MALL will be examined, particularly those that are Automatic Speech Recognition (ASR) based.

2.1.1 Positioning MALL within technology-based education

MALL is a subarea of the developing field of mobile learning (m-learning), which is one of the major current trends of how new technology is applied in the educational field. Definitions of mobile learning differ when it is viewed from different perspectives. However, two paths have contributed to the main perspective to conclude the characteristics of m-learning. One of the paths focuses on whether the learning devices are related to mobile technology. For example, O'Malley et al. (2003, p.6) advocate that m-learning is when learners make use of learning opportunities supplied by mobile technologies. The other path accentuates the mobility of learners, as Kukulska-Hulme (2008, p.3) and Pegrum (2015, p. 15) emphasize, m-learning is learning without being limited to a physical location, and it is mobility that differentiates m-learning from other kinds of learning. In general, m-learning can be concluded as learning mediated via mobile technology (i.e. mobile phone) available anytime and anywhere.

By nature, m-learning could be regarded as a kind of extant distance learning (d-learning) and electronic learning (e-learning) (Georgiev, Georgieva, & Smrikarov, 2004, p28-1). In order to deepen the understanding of the newborn m-learning, Georgiev et al. (2004) give a brief introduction of d-learning and e-learning:

Historically distance education has more than one hundred years of experience and traditions. Its main characteristic is the distance and time separation between teacher and students.

E-learning offers new methods for distance education based on computer and net technologies. Simultaneous to e-learning the other forms of d-learning still exist (for example satellite based d-learning).(p.28-1)

They then illustrate the relationship of d-learning, e-learning and m-learning in the form of a three-sphere layout (Figure 2.2).

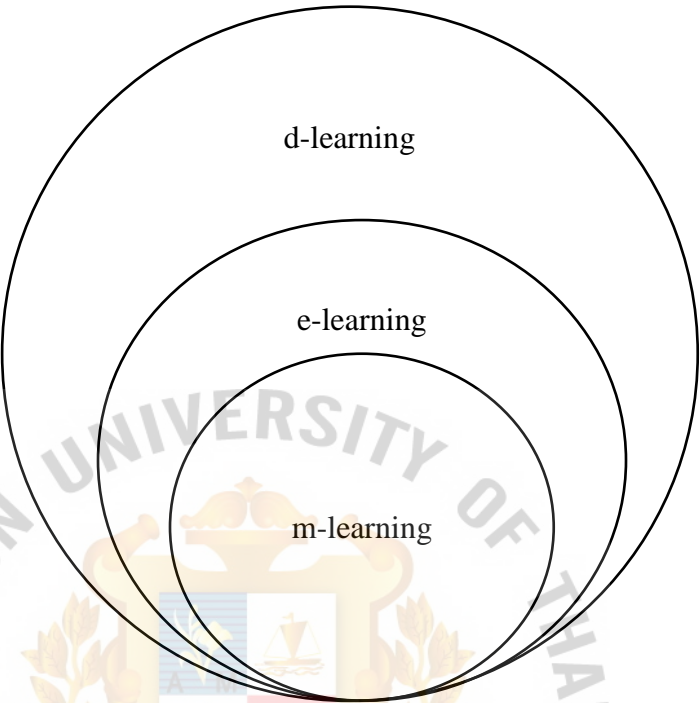


Figure 2.2 The place of m-Learning as part of e-Learning and d-Learning (Georgiev et al., 2004, p28-1)

Following this path, it is not hard to find the position of MALL, which can be illustrated as in Figure 2.3.

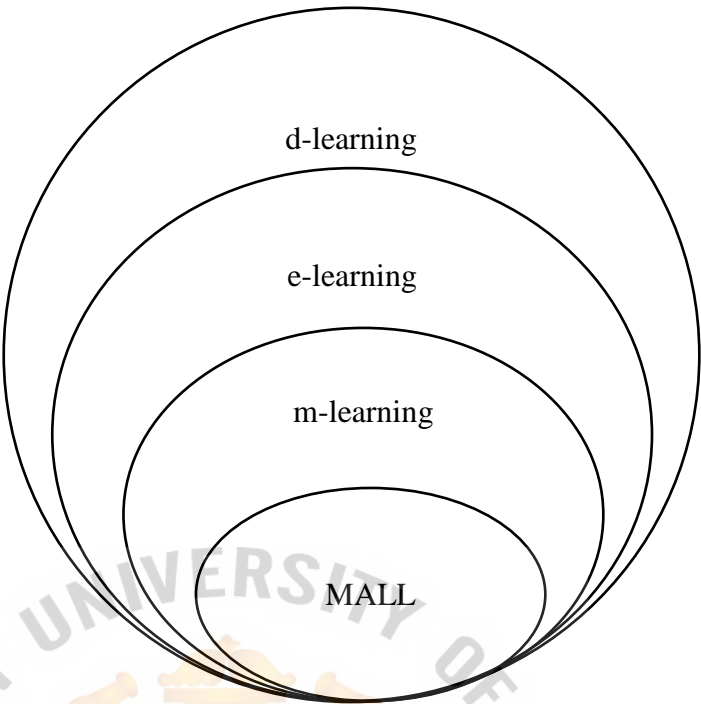


Figure 2.3 The place of MALL as part of m-Learning, e-Learning and d-Learning.

However, the relationships between the adjunct two forms of learning can not be simply explained as the same. In other words, the development of electronic technology leads to a revolution where e-learning is born in the field of d-learning. Similarly, the development of mobile technology gives birth to m-learning from the e-learning area. But MALL is only a specific type of learning model within m-learning, focusing on the application of mobile technology pertinent to supporting language performance. MALL embraces the learning theories of m-learning.

2.1.2 Learning theories of m-learning

Learning theories differ when examining m-learning from different perspectives. Scholars such as Rikala (2013) argue that being supported by different theories makes it impossible to build a coherent theoretical m-learning theory (p. 4); on the contrary, Keskin and Metcalf (2011) list a wide range of learning theories that appear to be relevant for explaining m-learning (Table 2.1).

Table 2.1 Mobile learning theories

Theories	Definitions	Focus
Behaviorist Learning	Learning has occurred when learners evidence the appropriate reinforcement of an association between a particular response and stimulus (Smith and Ragan, 2005)	Information and content delivery in mobile learning Language learning: Test, practices, quiz, listening-practice speaking. Drill and feed back: Mobile Reponse System Content delivery by text messages.
Cognitivist learning	Learning is the acquisition or reorganization of the cognitive structures through which humans process and store information (Good and Brophy, 1990)	Information and content delivery in mobile learning Using Multimedia learning (Dual code, Cognitive Load Theory): Images, audio, video, text, animations
Constructive learning	Learning is an activity process in which learners construct new idea or concepts based on their current and past knowledge (Bruner, 1966)	Context and content-dependent mobile learning. Questions for Exploration. Cases and examples. Problem solved and Decision making applications.
Situated learning	Learning is not merely the acquisition of knowledge by individuals, but instead a process of social participation (Brown et al. , 1989).	Social Context and Social participant dependent mobile learning. Authentic domain activity. Collaborative social interaction. Cooperative activities.
Problem-based learning	Learning aims to develop students' critical thinking skills by giving them an ill-defined problem that is reflective of what they would encounter as a practicing professional.	Problem based context and solved based content-dependent mobile learning. Problems – Solutions. Case centered activities. Collaborative social interaction.
Context awareness learning	Context awareness means gathering information from the environment to provide a measure of what is currently going on around user an the device (Naismith et all, 2004)	Context aware in mobile learning. Context-dependent content management. Contextual event notification. Context-aware communication. Navigation and retrieval of learning materials.

Socio-cultural theory	Learning occurs first through interpersonal (interaction with social environment) than intrapersonal (internalization) (Vygotsky, 1978).	Social Context and Social participant dependent mobile learning. Mobile experts Community of practice. Workplace learning Mobile communication.
Conversational learning	Learning is in terms of conversations between different systems of knowledge (Sharples, 2002).	Interaction and communication dependent mobile learning. Solving a problem. Exploring an environment. Communication between peers via mobile phones.
Lifelong learning	Learning happens all the time and is influenced both by our environment and the particular situations we are faced with (Sharples, 2000).	Lifelong information and interaction with education content in mobile learning Podcasting Information resources Mobile web site
Informal learning	Learning is a process of learning that occurs autonomously and casually without being tied to highly directive curricula or Instruction (Vavoula, 2004)	Information and interaction with education content in informal mobile learning setting; Mobile information resources; Mobiles in a museum setting Field Trips; Science Field Work
Activity theory	Learning occurs with three features-involving a subject (the learners), an object (the task or activity) and tool or mediating artefacts and human behaviour is situated within a social context that influences their actions (Vygotsky, 1987).	User actions in social context dependent mobile learning. Actively participation. Social context Activities.

As can be seen in Table 2.1, different learning theories provide different angles and views to m-learning. Therefore, researchers with different perspectives are able to choose a theory that best meets their research design and goal, so as to maximum the use of m-learning technology and benefit learners. Theories listed in Table 2.1 can also help scholars and researchers distinguish the underpinning learning theory of

MALL-based learning programs such as language learning mobile applications, which will be discussed in the following section.

2.1.3. Second language learning and MALL

Although different learning theories related to m-learning was presented above, those theories have discussed learning in a broad sense. Therefore, a better understanding of how second language learning theories were applied in MALL studies is necessarily needed. Traditional second language learning theories are basically built up from behaviorist, cognitive, and sociocultural perspectives (Lavadenz, 2010, p.19). Behavioral learning theory emphasizes the stimuli-response process of language learning by viewing the learner as a “creature of habit”. Cognitive learning theories focus on psychological phenomena in language learning such as motivation and schemas. Sociocultural perspectives believe that second language learning benefits from the social interactions of learners and are investigating the cultural and historical effects on learning. By combining keyword searching and examination of leading journals, Viberg and Grönlund (2012) give a systematic review of MALL research during 2007 to 2012 (54 articles). Based on the results, they find out that second language learning theories in most MALL studies are vaguely used. Only few studies have clearly claimed theories applied, which are related to cognitive learning theories. This is because most studies are small-scale, exploratory, and conducted in a short period of time (Viberg & Grönlund, 2012, p.5). Consequently, Viberg and Grönlund (2012) have concluded that:

the field of MALL is in its developmental experimental phase and still needs more solid empirical evidence and guidance in order to underpin conclusions about how mobile technologies can improve language learning performance and in order to build theoretical models specific to this field (p.5).

2.1.4 Pronunciation learning on MALL

The literature review-based results from Viberg’s and Grönlund’s (2012) study also demonstrate that although most learners in various MALL research hold an optimistic attitude towards using mobile technologies for improving L2 performance, few studies pay attention to using mobile technology for pronunciation learning. Immature of mobile devices at their age appears to contribute to the reason why pronunciation studies are underrepresented, as Khansa (2013) states, the small screen size and memory size, as well as the hard-to-use keypad frustrate most mobile device users (p. 5). However, the trend of downplaying pronunciation in MALL studies is somewhat changed when Automatic Speech Recognition is integrated in mobile technology.

ASR

Among the new learning technologies provided by mobile phones, ASR (Automatic Speech Recognition) has attracted attention and appears to demonstrate an encouraging potential for pronunciation improvement (Ahn & Lee, 2015, p. 780). By reviewing over 350 studies related to foreign language (FL) learning, Golonka, Bowles, Frank, Richardson and Freynik (2014, p. 70) find that there is strong evidence supporting the fact that ASR is able to enhance pronunciation performance with beneficial feedback efficiently (p. 70). ASR employs several processes, which, in brief, includes five stages, as shown in Table 2.2 (Hunter, 2015, p.69-70):

Table 2.2 Speech process in ASR

Stage	Process
-------	---------

1	The sound of one's speech is recorded by the device's microphone, cleaned up to eliminate extraneous background noise, and digitized (converted to a digital file), which is then compressed and sent to cloud servers for processing.
2	The sound wave is scanned for phonemes; when a phoneme, such as the /d/ of "do" is recognized, the statistical likelihood of subsequent phonemes or silence is used to calculate the accuracy of that /d/ actually being a /d/. The point here is that the process is recursive, not linear; the system has to backtrack continually to ensure comprehension —just as people do when they have to decipher speech under noisy conditions, when encountering unfamiliar accents, or when dealing with homophones; for example, disambiguating "super salad" from "soup or salad."
3	As the string of probable phonemes is recognized, segmentation into legitimate—and probable—words becomes increasingly possible. It is essential to notice that any given utterance is not composed of individual words with silences between them; in fact, much of the silence in an utterance comes from stops within words, rather than between them.
4	As words and strings of words are assembled and transcribed, they are verified again for likelihood of co-occurrence, this time using statistical information from vast collections of text (corpora). This is one reason Siri requires an Internet connection: probabilistic inferences require either training (in the sense of teaching the software to recognize a single user's voice) or access to very large acoustical databases in order to match input to likely phonemes, words, and phrases—and that is simply too much data to store on a smartphone.
5	The transcription is sent back to the device of origin and appears in real time (i.e. that it shows up as soon as it is recognized, or, in the case of question answering applications, the answer is provided).

By integrating ASR into language learning, EFL learners might gain improvement in pronunciation faster than conventional learning (Neri, Mich, Gerosa & Giuliani, 2008), because students could benefit from the opportunity of working on speaking skills individually on a self-regulated pace. Besides, the feedback, which is provided by ASR via comparing student's pronunciation acoustically with a target pronunciation, plays a crucial role in helping students gain improvement in speaking learning (Golonka et al., 2014, p.72-73).

ASR-based feedback

Since providing learners with language feedback could support them in accomplishing their learning goals efficiently (Hawkins, 1987; Ohta, 2000; Chang, Sung, & Chen, 2002), language feedback becomes a more integral part of language learning, particularly in pronunciation, because it can help learners perceive errors they have made then they are able to fix these issues by self-correction. Two forms of feedback are adopted in the present research in terms of the two types of instruction adopted. One is ASR-based feedback for MALL-based lyric-reading instruction, and another is peer feedback (see 2.4.5) for in-classroom lyric-reading instruction.

In a study to investigate the learning outcomes of ASR-based feedback for pronunciation learning, Neri, Cucchiari, and Strik (2008) found that learners taking ASR-based feedback gained the greatest progress, showing a significantly larger development in pronunciation than learners receiving no-feedback. In the same year, research was conducted by Lee (2008) to explore college students' perceptions towards two kinds of pronunciation training software, which were *My English Tutor* with ASR-based feedback function that gave scores according to students' oral output, and *Issues in English* that had no correction feedback. Lee (2008, p.102) then found that students preferred the software with explicit correction feedback. More recently, Wang and Young (2014) investigate the effectiveness of applying a ASR-based speaking learning system to help learners practice English pronunciation. Participants (N=38) whose L1 is Chinese are assigned into an experimental group (EG) and a

control group (CG). While the CG is learning with a single-level-feedback that comprises speaking scores and waveform diagram, the EG is receiving three-level-feedback based on an explicit textual description with immediate recasting of the learners' utterances. The findings of the study show that ASR-based feedback is useful for self-paced pronunciation learning.

ASR-embedded applications

Dozens of ASR-embedded speaking learning applications developed for users in China can be downloaded from both Apple store and Android market in recent 5 years. Among them, Youdao Kouyu Dashi, Duoshuo Yingyu and Keke Yingyu are three popular speaking-focused m-learning applications with high user rating, which are 4.8, 4.7, 4.6 respectively on a five-point scale. For convenience, they will be referred as Youdao, Duoshuo and Keke hereafter.

The main feature of Youdao is providing different topic-related tasks for users to improve speaking by doing exercises such as reading sentences, orally constructing a sentence or shadowing a conversation. Most exercises are ASR-based, which indicates that the app records user's oral outcomes automatically and gives visual feedback in order to help users improve their speaking.

By providing various conversations, Duoshuo offers a virtual partner for users to practice speaking in a one-to-one model, where users' oral outcomes will also be recorded and compared to the in-built phonetic data then given feedback displayed by scores. Apart from conversation exercises, this app features lyric-reading function that users could practice pronunciation by reading/shadowing lyrics of English songs.

Unlike the two applications mentioned above, Keke appears to be more comprehensive by integrating learning exercises from news-listening, news-shadowing, movie or TV clip-shadowing to examination-preparation. However, the core speaking practice has no obvious difference from the former two. It also records users' oral outcomes and compares the recordings with in-built model answers, then gives visual feedback.

Although those applications have no description of the supporting learning theory, it is not hard to identify it according to what Keskin and Metcalf (2011) have proposed in Table 2.1. Some may argue that those applications are matched with “Informal learning theory”, because they are designed for informal use. However, as they offer day to day speaking/reading/shadowing practice, provide model speaking materials that users can listen to, and give ASR-based feedback for users to check their own mistakes in order to help users improve their speaking/pronunciation skills, those features do embrace and embody the “Behaviorist Learning theory” since their designs are based on repetition and re-enforcement as well as reflect much of Behaviorism’s focus on stimulus (S) and response (R). This conclusion is consistent with the findings from Guo’s (2014) study. By analyzing a group of English speaking-focused mobile applications (N=34), which are designed for common ESL/EFL users (not targeting at users of a specific mother language such as Chinese), Guo (2014) finds that 79% of these applications are designed based on Behaviorist Learning Theory (p. 49). The reason may lie in the fact that although Behaviorist Learning Theory has lost popularity within education since 1960s, the basic premise of Behaviorist Learning Theory still has its merits and has influenced the design of English speaking-focused mobile applications as most of the learning applications, whether they are ASR-based or not, are aiming to help users improve English skills by offering practical exercises or drills along with feedback to make learning happen. Behaviorism’s classic “stimulus + response + re-enforcement” formula appears to be suited for aspects of second language learning which benefit from repetition and mechanical practice, such as pronunciation.

2.2 Learning motivation

As shown in Figure 2.1, the focus of the present research was an overlapped area of MALL, Learning Motivation and Stress Instruction. Section 2.2 starts with an introduction of the fundamental L2 learning motivation theory (2.2.1), and then reviews relevant studies which give suggestive solutions to fix Chinese college

non-English majors' lack of motivation towards pronunciation learning (2.2.2). Along with the suggestion from section 2.2.2, methods of how to integrate learning motivation in MALL is discussed in section 2.2.3.

2.2.1 Instrumental motivation and integrative motivation

Dating back to last century, Gardner and Lambert (1959) are the pioneers who proposed a theory of L2 learning motivation, and introduced the categories of instrumental and integrative motivation. In their views, the difference between those two categories lies in the learning goals. Learners with instrumental motivation are normally studying L2 for instrumental goals, such as studying abroad or applying for better jobs; learners with integrative motivation are aiming at cultural integration or communication with the L2 native speakers (Gardner & Lambert, 1972). Their theory, which derives from a social psychological perspective, has dominated the language learning motivation studies for about three decades and inspired scholars and researchers to recognize the importance of motivation in language learning. A variety of L2 motivation models has subsequently been proposed, such as Schumann's model (1999, p. 28), which has a neurobiological focus, Williams and Burden's (1997, p. 121) three-stage model of motivation from a social constructive view, and Dörnyei & Ottó's (1998) motivation model, which divides a learner's motivated behavior into three phases: preactional phase, actional phase, and postactional phase.

2.2.2 Investigation of L2 motivation of college non-English majors in China

It is obvious that, due to its multi-faceted nature, there is no absolute and unanimously accepted concept of motivation, let alone a thorough description of its nature in just one framework. However, investigations of Chinese college students' learning motivation toward English learning have tended to adopt Gardner and Lambert's motivation dichotomy. From the instrumental motivation perspective, Peng & Ali (2015, p. 190) point out that most Chinese non English majors learn English just to pass various tests for career development or other pragmatic reasons. However,

the national College English Test (CET), which is designed to examine the English proficiency of non-English majors, mainly focus on the testing of listening, reading comprehension and writing. CET – Spoken English Test (CET-SET) is only available to those candidates who score above 80% on CET, and is not a regular component of CET. In other words, English education in China is examination-oriented (Dong, Shi, Lou & Ding, 2016, p. 1), and the majority of college non-English majors are infused with the instrumental motivation to pass tests in the hope of improving their career development. Since the most dominant test taken by non-English majors does not focus on speaking, students' English studies become “mute” as mentioned in Chapter I (Peng & Ali, 2015, p. 190).

Wang (2014) examines the integrative motivation of Chinese college students and concludes that nearly half of the students are willing to communicate with English-speakers. To enjoy English songs, movies and other types of culture are also factors that are identified as having a strong influence upon the motivation to study English. Wang (2014) therefore advocates that adopting modern technology and choosing interesting teaching materials could be effective ways to cultivate students' learning motivation. Thus, the idea of creating a new type of instruction incorporating new learning technology and interesting materials, provided the impetus for the conception of the present study. Mobile phones, “with their widespread use and features such as mobility, localization, and personalization” (Saran, Seferoglu & Cagiltay, 2009), have caught scholars' attention and been advocated for out-of-class pronunciation education. The prospect of MALL-based learning program to motivate students for L2 learning has been viewed as one of the future directions for MALL since mobile technologies allow learners to do various learning tasks on mobile phones as introduced in 2.1.

2.2.3 ARCS model in instruction design

Integrating technology in teaching and learning is imperative as learners' learning needs have changed and the technology has developed (Colakoglu & Akdemir, 2010,

p73). Instructional designers need to gain insights of designing and developing effective MALL programme to benefit students who are using mobile devices for language learning. Nevertheless, even when prepared pertinent to sound instructional design principles, most instruction fails in motivating learners (Visser & Keller, 1990). It is necessary for instructional designers to explore the method of integrating motivation with instruction design (Keller & Litchfield, 2002).

Since integrating motivation with MALL is challenging, the ARCS Motivation Theory is proposed to “guide instructional designers and teachers who develop their own instruction to integrate motivational design strategies into the instruction” (Colakoglu & Akdemir, 2008, p. 73). ARCS model is then developed for instructional design aiming to motivate learners (Capshe, 2005) as well as for designing courseware (Suzuki, Nishibuchi, Yamamoto & Keller, 2004). ARCS Motivation Theory contains four conceptual components, which are Attention, Relevance, Confidence and Satisfaction. Attention category refers to gaining learners’ attention and sustaining active engagement of learners (Keller, 2008). Relevance category includes strategies that establish connections between instructional environment and past experiences of learners (Keller, 2008). Confidence category incorporates students’ feelings and expectancy for success (Keller, 2008). The last category satisfaction includes strategies that help learners establish positive feelings about their learning experiences (Keller, 2008). Studies conducted in face-to-face, computer-based, computer-assisted, and e-learning demonstrated the benefits of utilizing ARCS model in motivation and learning (Visser & Keller, 1990; Shellnut, Savage & Knowlton, 1999; Song & Keller, 2001; Suzuki, Nishibuchi, Yamamoto & Keller, 2004).

2.3 Relevant MALL-based speaking studies

In the section, two studies are described in detail as they both relate directly to MALL and L2 Learning Motivation. Although the present study does not directly originate from them, those two studies report positive findings in terms of developing

students' learning motivation with MALL, which provides instrumental bases for the underlying design of the present research.

2.3.1 Liu & Chu (2010): Significant learning outcomes and improved learning motivation

Having seen the potential use of MALL and scarce studies of MALL-based speaking training, Liu and Chu (2010) conducted a quasi-experimental study by providing two groups of students (N=64) the same course content with different approaches, in order to investigate how the MALL-based intervention influences students' learning motivation and learning outcomes in terms of listening and speaking. While the control group (CG) received courses in the conventional way (using printed materials and CD players), the experimental group (EG) took the courses with a MALL-based system called "HELLO" (Handheld English Language Learning Organization).

The study lasted eight weeks. In the Preparation Phase (Week 1), all the students were required to take a pre-test to examine their prerequisite conditions. Then, they joined the "Campus Environment" activity (Phase two, from Week 2 to Week 3). While EG used the Personal Digital Assistant (PDA) phones to improve listening and speaking skills by receiving learning materials from the HELLO server, CG used CD/MP3 player with printed material to do the practice. A test (Test 1) was given to CG and EG at the end of Week 1.

Phase 2 (Week 4 to Week 5) was called "Campus Life" activity, where students in EG used PDA phones to play a learning game by talking to a virtual learning tutor (VLT) to practice location-related conversations when students had to actually arrive that place, such as a library. Students in CG practiced the same conversations by using the same tools as in the last phase. Test 2 was conducted to CG and EG at the end of Week 5.

In Phase 4, "Campus Story" activity (Week 6 to Week 7), all students were asked to create orally a story based on a location on campus and recorded it. The differences

between two groups lay in the fact that students in EG had to arrive at the real location and finish the task in a collaborative manner (teams) while students of CG were in the classroom recorded by voice recorders. Week 8 served as the Evaluation Phase in which, all students took a post-test, an ARCS-based survey and an interview.

By conducting an ANCOVA analysis, Liu and Chu found that EG had gained significant improvement over CG after the learning of Phase two. This was, according to the researchers, because “the HELLO provides many interesting learning materials”. (p.638). This may seem to contradict what they state in the Curriculum design, i.e. that “The two groups used the same course content although the interfaces they used during the classes were different (p.632).” However, interesting learning materials, based on the context, could be interpreted as learning materials are more fun when displayed on PDA phones with images, sounds, and movie clips.

The results of Test 2 and the post-test also suggested similar outcomes, i.e. that EG had gained significant development compared with CG in terms of speaking and listening. According to the ARCS-base survey, students in EG had shown a higher level of learning motivation than those in CG. The interview revealed that talking to the VLT helped students gain confidence in speaking without worry of making mistakes or being mocked by others.

Although their research design seems to be carefully crafted, it is not without flaws. One prominent benefit of MALL is that learning could be conducted without temporal or spacial limitations. However, in Liu’s (2010) and Chu’s (2010) study, students were only allowed to study in their free time in Phase 2. In other phases, they were required to complete the learning tasks during the class time in the campus with their team members. In other words, the mobility of MALL was not deeply explored in their study.

Another issue that may arouse concern is that the duration of the tuition for each week was only 45 minutes, which means 90 minutes per phase. Based on the test results, students in EG gained significant improvement in terms of listening and speaking after each phase. However, the short duration may not give a relatively full account of the effect of each treatment.

2.3.2. Ahn & Lee (2015): Motivated students and an ASR-based application

To address the under-researched area of MALL, specifically to support speaking, Ahn and Lee (2015) conducted a study using an ASR-embedded mobile application, *Speaking English 60 Junior*, as a development tool for students (N=302) lacking speaking skills.

The learning procedures in this application comprise two sections: a lesson and a task. The lesson provided students with self-paced drills and exercises to practice speaking skills; the task part offered students learning activities with virtual scenarios, where students could have conversations with virtual characters.

After two weeks of using this application out of the classroom, students completed a survey with both quantitative and qualitative items. More than half of the students found that learning with *Speaking English 60 Junior* was convenient and helpful, and nearly half of the students found that the learning experience was interesting and comfortable, compared to learning in the classroom.

What appears to meet the expectation of the researchers is that *Speaking English 60 Junior* expanded students' opportunities to speak in an EFL context, because lack of an English-speaking environment is a commonly mentioned but seldom approached issue among EFL learners. Using the recording function, students can record their own oral outcomes then compare their recordings with the model speaking. This process made 56 students report that they were able to check their errors in pronunciation and to make progress in it.

As the leading function of this application, ASR was highly appraised by 66 students, for it raised students' consciousness of their own speaking and made learning tasks more interactive by giving immediate feedback. Therefore, it enhanced students learning motivation towards speaking.

Although there is a prominent limitation in Ahn's and Lee's (2015) study, as they admitted, i.e. that no actual improvements were measured, the positive findings from the questionnaire still cast favorable light on using ASR-embedded application to motivate students to improve their speaking skills, particularly in the EFL context.

2.4 Stress instruction

This section reviews research related to the third basic area shown in Figure 2.1, from what comprises English stress (2.4.1) to the challenges for English stress performance (2.4.2), and then moves on to a discussion of lyrics as reading materials for English stress learning (2.4.3), lyric-reading methods (2.4.4) and peer feedback for reading exercises in classroom setting (2.4.5).

2.4.1 Word stress and sentence stress

As mentioned in Chapter I, English stress comprises word stress and sentence stress. Word stress refers to the prominent role that particular syllables play in a word, while sentence stress, concerns the prominence of certain words in a sentence. They are components integrated in spoken English to properly express the intended meaning of the speaker, particularly to clarify meanings in words and sentences. All in all, word stress focuses on the stress patterns on a syllable-scale in a word while sentence stress emphasizes the stress patterns on a word-scale in a sentence.

Stress patterns in a word on the syllable-scale are relatively stable when the word is pronounced in isolation (Brown, 1990, p. 51). In English, when a word has more than one syllable, there is a syllable conventionally operating as the stress syllable with the characteristics of high pitch, high intensity and long duration. Those features are important in the process of identifying the word itself. There may be views of taking word stress as auxiliary parts of the pronunciation a word, Brown (1990), on the contrary, highlights the importance of word stress as the essential framework where consonants and vowels can function well (p. 51). To be more specific, she gives an example:

I remember a student asking me a question about / ə'ni:mɪzm/ in *King Lear* which I was unable to understand at first. I assumed that he must meant something to do with *anaemia* which has, of course, an appropriate stress pattern for the form that he produced. Eventually I arrived at / 'ænimɪzm/. Notice that although *animism* makes sense in the context whereas *anaemia* does not, my instantly preferred interpretation was one that held the stress pattern that had been produced, even

though this involved supposing that both segmental and semantic errors had been made.

Unlike word stress, sentence stress is not fixed on words. Put another way, stress patterns in a sentence on the word-scale are not stable: some words are stressed while others are not. Brown explains the principle of sentence stress in her seminal book, *Listening to Spoken English* (1990),

In all cases where ‘contrastive stress’ is not involved, nearly all grammatical words will lose their stress when they are combined together to form an utterance, whereas nearly all lexical words will keep their stress (p.53).

Brown explains that grammatical words are the words that show the relations between the parts of an utterance, such as conjunctions, prepositions, pronouns; Lexical words are the words that carry the meaning of the utterance – nouns, main verbs, adjectives and adverbs. ‘Contrastive stress’ means any word can be stressed logically if it indicates particular emphasis or contrast, as the examples given by Cai (2008):

We `heard `John `talking (plain statement of fact).
 We `heard John talking (implied contrast-“but we didn’t see him”).
 We heard `John talking (implied contrast-“but didn’t hear Mary”).
 `We heard John talking (implied contrast-“but others didn’t”).
 We heard John `talking (implied contrast-“but we didn’t hear him singing”).

Brown’s conception of word stress and sentence stress is advocated by other scholars and forms the basis for the exploration of English stress in various studies, particularly in terms of research investigating students whose L1 is Chinese (Juffs, 1990; Chen, Fan & Lin, 1996; Cai, 2008;). Although conducted using different methods and from different perspectives, those studies all point out that, placing word stress or sentence stress in a correct manner remains a big challenge to students as their L1 (Chinese) and L2 (English) share no similarity in stress nature.

2.4.2 Challenges for improving English stress performance

Among the factors that contribute to Chinese learners' low level of English stress performance, many scholars believe that the most significant one is the inherent stress nature difference between those two languages (Chen, Fan, & Lin, 1996; Cai, 2008, p. 64). As introduced in Chapter I, Chinese is syllable-timed, indicating that syllables in an utterance are equally timed, whereas English is stress-timed, which means that durations of producing stressed and unstressed syllables are not the same. In order to visualize this striking but also wildly ignored difference between Chinese and English, Chen et al. (1996, p.2) use the following illustration to show the distinction:

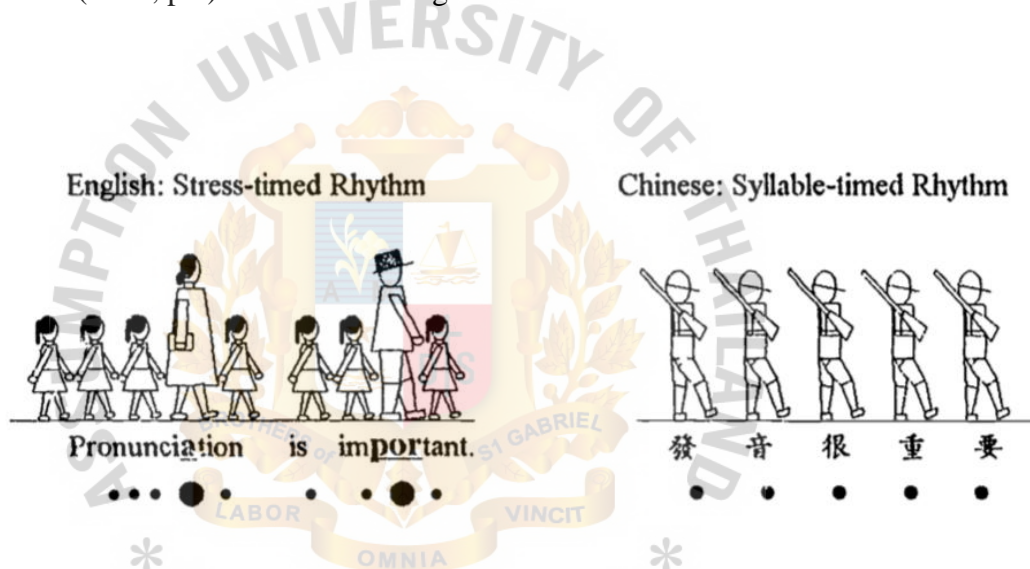


Figure 2.4 Difference between rhythms of English and Chinese

The contrast of stressed and unstressed syllables creates the rhythm of English (Brown, 1990). Although rhythm is not the central topic of this study, it demonstrates the basic stress difference between English and Chinese. As can be seen above, on the left, Chen et al use teachers as stressed syllables and students as unstressed syllables to show the rhythm of English. It is clear to see that stressed syllables and unstressed syllables have different length and weight. By contrast, on the right, represented by soldiers, every syllable in Chinese has the same physical features. The physical features of height can be interpreted as pitch, width as duration and weight as intensity, in pronunciation. This illustration gives a vivid description of the nature of stress in English and Chinese.

Although there are discrepancies regarding this dichotomy, such as Low's (2006) argument that languages can not be strictly categorized into syllable-timed and stress-timed, suggesting syllable-based and stress-based would be more accurate descriptions, the inherent difference of how syllable is stressed between Chinese and English does have a significant influence on Chinese learners' performance of English stress. Peperkamp and Dupoux (2002) elaborate this by focusing on the regularity of stress placement, claiming that the more regular the L1 stress system is, the more obstacles learners will encounter in improving their performance of the stress of a stress-timed L2. Put another way, the barriers for a native Chinese speaker to learning English stress derive from the nature of how Chinese is spoken, yet are not easy to surmount.

Since the English stress system confuses most learners in China, addressing and fixing this issue has emerged as an irresistible trend (Xia, 2012, p. 235). Claims about helping college students to improve their English stress performance can be traced back to scholars such as Xu (2007), who proposes a method of cultivating consciousness of distinguishing stressed and unstressed syllables in English. Mirroring this method, Zhang and Yin (2009, p.145) point out that what learners lack but need is the deliberate teaching of English stress.

However, teaching prosodic features of English such as stress seems to be very challenging (Adams-Goertel, 2013, p.117). This point is echoed by Mi (2012, p. 88), who finds that teachers in China are unenthusiastic about teaching prosody, therefore students lack the chances of learning stress in the traditional classroom setting. This is a common phenomenon in most colleges in China, particularly with non-English majors, who started learning English from middle school but still lack speaking skills when they are in college with English as a compulsory subject. Studies show that one of the principal reasons for the disappointing progress in speaking skills is that, instruction in English class seldom addresses speaking (Peng, 2014, p. 15; Dong, Shi, Lou, & Ding, 2016). This type of instruction might also cast a negative influence on students' learning motivation (Chen & Goh, 2011, p. 8).

2.4.3 Lyrics as learning material

Following the above positive experiences of adopting new tools to deliver instructional materials, more interesting teaching materials for English stress learning, going beyond the traditional textbook, need to be explored. Considering poetry/poems as effective reading materials for sentence stress learning, Ting, Kuo, Chiang and Pierce (2013) attempted to help college students, whose L1 is Chinese improve their speaking performance with the implement of the poem-reading based instruction. The results show that students have gained significant progress in word stress learning. Poetry/poem appears to be considered as effective texts for college students to read in terms of English stress learning.

A traditional academic perspective regards poetry as serious texts placed in a historical or thematic framework of other printed texts. Focusing on rap music, Gioia (2003) points out that rap music is the most widely accessible form of popular poetry, and he uses the term ‘popular’ to mainly refer to “well-liked by many people” (Williams 1983, p.237). In the same way, Bradley (2009) argues that rap songs are a form of poetry in his study *Book of Rhymes: The Poetics of Hip Hop*:

The fact that rap is music does not disqualify it as poetry; quite the contrary, it asserts rap’s poetic identity all the more. The ancient Greeks called their lyrical poetry *ta mele*, which means ‘poems to be sung.’ For them and for later generations, poetry, in the words of Walter Pater, ‘aspires towards the condition of music.’ It has only been since the early twentieth century that music has taken a backseat to meaning in poetry. (p. xvii)

Although Gioia and Bradley introduce the concept that rap songs equal poems and promote it, they do not broaden the discussion of the connection of songs and poetry to other musical genres. This gap is bridged by Jones (2012) who focuses on the similarities between lyrics of popular music and poetry. Those similarities include sound effects, the use of imagery and the expression of emotions. She then concludes that,

The interconnectedness of the music and the lyrics has to be conceded, but still, there are similarities in the words of lyrics and words of poems. Song lyrics are more similar to traditionally structured poetry than to more modern forms. (107)

While Gioia, Bradley and Jones argue that popular songs are poems, DeSantis (2015, p.220) adds that reading song lyrics needs the understanding of the sense of the inherent stress patterns, such as distinguishing between strong and weak syllables:

As an example: Let's pretend this sentence is a lyric in your song. When you read it out aloud, you will naturally apply a stress or "accent" to some syllables, while others will be spoken more softly. We'll mark the strong syllables with a / and the weak ones with a *.(By convention, these stress markings are placed over the first vowel in the syllable.):

/ * / * / * / * / * / * /
 Let's pretend this sentence is a lyric in your song.

As can be seen, reading lyrics needs a general sense of the stress placement on syllables, which is similar to what is required in the principle of English stress, as introduced by Cai (2008, p. 64) :

Words which are usually stressed in English unemphatic speech belong to content words, namely, nouns, adjectives, numerals, notional verbs, adverbs, demonstrative, interrogative, indefinite pronouns and possessive pronouns functioning as nouns. Those that are usually unstressed in English unemphatic speech are form words, namely, auxiliary and modal verbs, verb to be, monosyllabic prepositions, monosyllabic conjunctions and articles. Personal pronouns, possessive pronouns (except absolute ones: mine, hers...), reflexive pronouns, reciprocal pronouns and relative pronouns are also usually unstressed.

Therefore, if we read the lyrics/sentence in DeSantis's study with the word stress and sentence stress principles introduced by Brown (1990), the sentence will be marked with the same symbols like this:

/ * / * / * * * / * * * /
 Let's pretend this sentence is a lyric in your song.

Now it is obvious that it shares almost the same stress patterns with DeSantis' example, except for the grammatical words 'is' and 'in', which should be un-stressed as introduced in 2.1.1 if 'contrastive stress' is not involved.

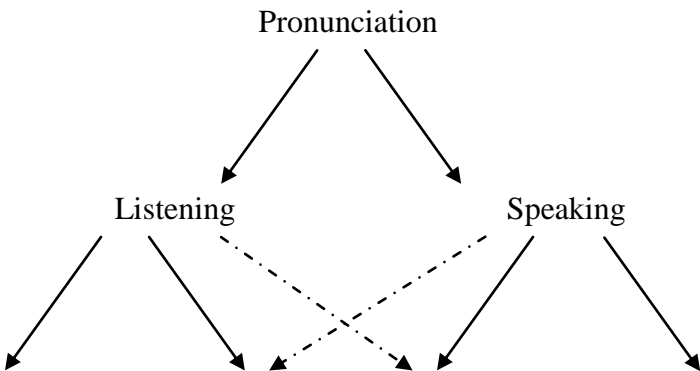
Dicussed from different perspectives, popular song lyrics appear to merit being considered as valuable new materials to motivate Chinese students to learn English stress. The reasons are: (a) popular songs are poems and should be treated as such (Gioia, 2003; Bradley, 2009; Jones, 2012); (b) poem-reading appears to help students

whose L1 is Chinese to gain improvement in performance of English stress (Ting et al., 2013); (c) lyric-reading needs to distinguish the inherent stress patterns in the context as the principle of English stress requires (DeSantis, 2015, p.220) and (d) to enjoy English songs is one of the factors that are identified as having a strong influence upon Chinese college students’ motivation to study English (See 2.2.2. Investigation of L2 motivation of college non-English majors in China).

2.4.4 Lyric-reading method: shadowing and reading-aloud

Adopting reading as a method for improving pronunciation supports the view presented by Reed and Michaud (2005) that most problems of ESL learners are caused by their incapability to distinguish the differences between the sound pronounced and the sound taught. As a result, they utilize an “auditory feedback loop” to demonstrate the connection between learner’s perception and production of a sound.

In this loop, a learner pronounces a sound, hears a model sound, then pronounces the perceived model sound again. The loop breaks after the learner is able to form the model sound and replaces the old sound with the model sound in mind, otherwise, the procedure of production to perception will be repeated. The break of the loop also indicates that the learner has completed the model sound learning. This loop bolsters the prominence of learning the targeted sound via a process integrating listening and speaking. It also shows how learner’s perception of the model sound has been facilitated. Reed and Michaud (2011) demonstrate the relationship between speaking and listening process by a pronunciation model which addresses both suprasegmentals and segmentals. (See Figure 2.5)



Content Intent/Stress Endings C&V Sounds

Figure 2.5 Integrated model of pronunciation (Reed & Michaud, 2011, p.98)

In this model, English stress is listed as one of the main components of pronunciation, because Reed and Michaud argue that learners who struggle with issues such as English stress may suffer from listening problems, for example, they know every word in a sentence spoken by a speaker but fail in understanding the meaning of the sentence. Meanwhile, the lack of speaking skills also makes their own oral outcomes hard to understand.

Based on this model, if a learner wants to acquire the English stress principles, he/she first looks at the text and read it by himself/herself, then the learner listens to a model sound then tries to mimic the sound by reading the text again. The learning goal will be achieved when the learner is able to read the text with correct stress placement. Reading, therefore, may be of importance in the process of acquiring English stress.

To be specific, two main advocated reading practices are shadowing and reading-aloud. While the latter seems to be very traditional, the former is highlighted as an effective method by many scholars (Tamai, 1997; Kunihiro& Senda, 2000 ; Luo et al, 2008; Mori, 2011).

Shadowing was initially used as a method for training novice interpreters, but has more recently been introduced into the EFL field for prosodic learning in spoken English. Tamai (1997) sees shadowing as “an active, cognitively demanding exercise where learners simultaneously track speech they hear and vocalize it as clearly as possible”. This conception is well accepted in Asian English research community.

In 2011, Mori (2011) conduct a study with twenty university non-English majors in Japan. During the ten-week training, students are asked to join a serious of speaking training sessions with an aim to improving their pronunciation. The speaking practice comprises four stages:

First, JS (students) were instructed to shadow the first or second half of the news clip as often as they could for five minutes trying not to look at their textbooks as much as possible. Second, they were told to look at their textbooks and read the transcribed version of the same news clip aloud for five minutes while checking any parts that they had not successfully shadowed. Third, they were instructed to shadow the news clip again for ten minutes without looking at their textbooks. Fourth, they were given seven minutes to read the text aloud several times while recording their voices, after which they were allowed to listen to their own recordings. This last stage of practice was added so that JS could realize how much progress they had made in their English pronunciation during the session (p. 5).

In other words, students in Mori's study follow four steps: 1. to shadow the text with the possibility of looking at the text, 2. to read transcription with looking at the text and checking out errors, 3. to shadow without text and 4. to listen to their recordings then read the text aloud. By carrying out acoustic analyses of students' recordings in both pre- and post-test, Mori found out that students gained significant improvement in terms of distinguishing stressed and unstressed syllables in sentences by effectively using duration, pitch and intensity, which are the main ought-to-master features of English stress.

However, the border between shadowing and reading can be ambiguous if Mori's study is subjected to greater scrutiny. A confusion may arise when shadowing and repetition are not strictly differentiated, as Hamada states (2012):

As shown in the example below, it differs from superficially similar tasks such as repetition in that shadowing is an on-line process: learners must vocalize the speech the moment they hear it. In contrast, repeating is an off-line task, allowing learners' silent pauses to reflect on and reproduce what they have heard. This subtle difference is crucial: learners focus exclusively on incoming sounds when shadowing, improving their speech perception of the target language (Kadota, 2007).

Based on Hamada's statement, the difference between shadowing and repetition could be explained as follows:

Shadowing:

Audio: Let's pretend this sentence is a lyric in your song.

Students: Let's pretend this sentence is a lyric in your song.

Repetition:

Audio: Let's pretend this sentence is a lyric in your song.

Students: (pause) Let's pretend this sentence is a lyric in your song.

Nonetheless, Hamada fails to explain what may seem to be a nuance but indeed is a prominent difference between shadowing and repetition, which is how long the pause is. Hamada only states that incoming information is stored in the mind for two seconds, which shadowing practice should take advantage of. Therefore, the pause in repetition is supposed to be more than two seconds. However, in many studies such as Mori's, the two-second limitation is not well explained, so it is hard to distinguish which one (shadowing or repetition) is actually used. Considering the benefits of shadowing in helping learners promote pronunciation skills in terms of English stress, this study will adopt shadowing as the main practice in the lyric-reading instruction.

2.4.5 Learning feedback in classroom setting

As introduced in 2.1.4, language feedback becomes a more integral part of language learning, and the MALL-based lyric-reading instruction in the present research will adopt ASR-based feedback. For the in-classroom lyric-reading instruction which serves as the benchmark that demonstrates traditional reading method in the classroom, peer feedback will be adopted because evidence shows that peer feedback improves learners' learning (Falchikov, 2001) as learners are actively engaged in articulating evolving understandings of subject matter.

Peer feedback

Peer feedback is expected to support the learning process by providing an intermediate check of the performance against the criteria, accompanied by feedback

on strengths, weaknesses and/or tips for improvement (Falchikov, 1996). As shown by Gielen et al. (2010), in traditional classroom learning settings, peer feedback can be beneficial for learning because peer feedback induces uncertainty. In other words, students may misinterpret teacher feedback passively which leads to misunderstanding, whereas peer feedback might prompt students into discussion or further interaction with teachers to dispel doubts, resulting in a deeper understanding of the subject. In contrast, no further discussion will be evoked from teacher feedback as students may assume that the teacher has already addressed all errors and that there is no need for further corrections. What Gielen et al. (2010) have found seems to be consistent with the theory that peer evaluation can provide formative feedback that teachers cannot otherwise provide (Ballantyne, Hughes & Mylonas, 2002). It is well documented that in academic settings, students learn more effectively when the assessment includes peer feedback.

By reviewing studies related to peer learning from 1981 to 2006, Topping (2007) points out that students of peer learning could benefit from peer feedback as they are learning in an interaction by identified as helpers or those are helped. Asghar (2010) puts forward that reciprocal peer feedback is able to increase learner motivation. To employ peer feedback as an aid to learning in order to narrow the gap between perceived and evident skills competence, Cushing et al. (2011) investigate the perceived benefit of peer feedback on students' learning. They then find that giving constructive peer feedback can improve students' awareness of their skills education and training needs. Praver, Rouault and Eidswick (2011, p.90) echo this point by claiming that peer feedback helps students detect areas for remedial action and develop their English skills.

All in all, it is not hard to believe that peer feedback is constructive for learning, particularly in the development of language skills, when it is immediate, given thoughtfully and draws attention to any disparity between the perceived and actual performance. By receiving peer feedback, students could see different ways of understanding, including how others conceive the language skills targeted, which in turn greatly boosts learning.

2.5 A relevant study of instruction for stress learning

As shown in Figure 2.1, this section reviews a study in the sphere of Stress Instruction. This is a study which also reflects the design of the present research in terms of stress-focused reading instruction.

Ting, Kuo, Chiang and Pierce (2013): The stress-focused reading instruction

Noticing that the connection between intelligibility and the control of connected speech and English stress had been established, Ting, Kuo, Chiang and Pierce (2013) conducted a study by giving college students (N=49), whose L1 is Chinese, three different types of instruction to help them improve their intelligibility.

In their 12-week study (50 minutes per week), the first group (N = 17) was arranged to receive the explicit instruction of connected speech modification (CS-focused group); the second group (N = 19) received the explicit stress instruction (Stress-focused group), and the third group (N = 13) served as the Control group.

Choosing a text book *Sound Concepts: An Integrated Pronunciation Course* (Reed & Michaud, 2005) as the major teaching material, both CS-focused group and Stress-focused group adopted Reed and Michaud's auditory feedback loop (discussed in 2.4.4) as error-checking method. The treatment of CS-focused group focused on connected speech learning, such as contraction, h-deletion, elision, and flapping etc. The Stress-focused group emphasized on poem-reading in order to improve students' rhythm and English stress performance.

A 24-sentence self-developed reading text was used for the pre- and post-test, and the rating was given by a native speaker and a non-native speaker, both of whom are experienced pronunciation instructors. The mean scores in the pre-test are 7.76 (CS-focused group), 7.60 (Stress-focused group) and 7.68 (Control group), which show no significant difference. After the treatment, the mean scores of three groups are 8.32, 8.17 and 7.70. Both CS-focused group and Stress-focused group were found to perform significantly better than Control group. In the further explanation, Stress-focused group was found to make significant progress in word stress and

rhythm ($p = .046$, and $.035$). As discussed 2.4.2, English rhythm is created by the contrast of stressed and unstressed syllables, it seems to be reasonable to argue that students in Stress-focused group have gained significant progress in English stress performance.

Since Ting et al. (2013) succeed in helping Chinese learners improve their speaking performance in terms of English stress, their research design, instruction design and instruments adoption may be beneficial to the present study, as summarized in Table 2.3.

Table 2.3. Summary of relevant design method of Ting et al. (2013).

Item	Ting et al.	Present study
Learning material	a classic text book	a recommended text book
Number of groups	3 (including a control)	2 (including a control)
Reading-aloud test	a self-developed reading text	a self-developed reading text
Learning duration in the instruction	600 minutes (10 hours)	\geq 10 hours

2.6 Chapter summary

In the seeking of MALL-based lyric-reading instruction, it is quite necessary to explore the appropriate approach and method to motivate students to learn English stress in an out-of-classroom setting as the present research aims to do. Therefore, by illustrating the structure of literature review pertaining to three main areas: MALL, Learning motivation and English stress instruction, this chapter details each area by providing theories or empirical studies related to the design of the present research. Initial idea of designing the present research is also supported by theories or evidence found in the relevant literatures. Finally, empirical findings from prior studies, particularly from Liu & Chu (2010), Ahn & Lee (2015) and Ting et al. (2013), have informed the conceptual framework governing the present research.



CHAPTER III: RESEARCH METHODOLOGY

3.0 Introduction

In response to the Research Questions and hypotheses, this chapter introduces the design of the present research, providing details of participants, instruments, the design of two types of instruction applied in the experiment and the process of data collection and analysis.

3.1 Research Questions and hypotheses:

Research Question 1: Between MALL-based lyric-reading instruction and in-classroom lyric-reading instruction, which one is more effective in improving Chinese college non-English majors' English stress performance?

Hypothesis 1: MALL-based lyric-reading instruction leads to better stress performance than in-classroom lyric-reading instruction.

Research Question 2: What is the difference in learners' motivation between MALL-based lyric-reading instruction and in-classroom lyric-reading instruction?

Hypothesis 2: MALL-based lyric-reading instruction leads to a higher level of motivation than in-classroom lyric-reading instruction.

Research Question 3: How can MALL-based lyric-reading instruction be developed to improve English stress performance?

3.2 Research design

The present research adopted a quasi-experimental design, using both quantitative and qualitative methods to collect and analyze data in order to investigate an area in which MALL, learning motivation and stress-focused instruction overlap. It is an area unexplored by prior studies.

Mixed methods

Traditionally, qualitative and quantitative research paradigms are the two main methods for conducting educational research. There once was a long dispute, reported by Johnson and Onwuegbuzie (2006), between purists from both quantitative and qualitative sides that “qualitative and quantitative research paradigms, including their associated methods, cannot and should not be mixed (p.14).” Johnson and Onwuegbuzie (2006) take the side of opposing this point of view. They highlight the “mixed methods” as the third research paradigm, because mixed methods are able to utilize the strength as well as minimize the weakness from both quantitative and qualitative research paradigms. Subsequently, Johnson and Onwuegbuzie (2006) list the benefits of adopting mixed methods as it can:

- provide quantitative and qualitative research strengths
- answer a broader and more complete range of research questions because the

researcher is not confined to a single method or approach.

- use the strengths of an additional method to overcome the weaknesses in another method by using both in a research study.
- provide stronger evidence for a conclusion through convergence and corroboration of findings.
- produce more complete knowledge necessary to inform theory and practice. (p.21)

The quasi-experimental design

Highlighted by Wiersma and Jurs (2005), an invention designed to develop students' achievement should be subjected to rigorous experimental treatment. Along with this view, this study adopted an experimental design. However, due to the fact that there would be variables that are hard to control, a quasi-experimental design (Seliger & Shohamy, 1989) would be an optimal choice for conducting the experiment in the study. The other main benefits of using quasi-experimental design are that it deals with treatment groups and outcome measures by examining representatives of the population, and still maintains the mundane realism, which means "the extent to which a laboratory event is real-world like" (Gefen & Ridings, 2002, p. 56). Therefore, the quasi-experimental design was adopted as the main approach in the mixed methods of this study. In order to answer RQ 1, a reading-aloud test was conducted as both pre- and post-test to examine participants' English stress performance. Regarding RQ 2, an ARCS survey was conducted to gain the quantitative data in terms of participants' motivation level towards the two types of instruction. On the purpose of gaining participants' feelings, manners and reactions, an interview was conducted after the experiment. The interview data was then subjected to content analysis to answer RQ 3 with findings from the reading-aloud test. Besides, a pre-test survey was used to collect participants' basic information.

3.3 Population

The population of the present research is non-English majors in Guizhou Education University, P. R. China. Population of a piece of research tends to be based

on similarity, or at least have similar features. Since the entire population is usually too large to investigate, a sample is commonly chosen to represent the population. (Cohen et al., 2000). In other words, due to the fact that it is not practical to examine all the non-English majors in Guizhou Education University, a sample was used instead.

3.4 Sample

Although there is no “clear-cut” answer to the question how large the samples for a research should be, the “rule-of-thumb” is that thirty cases should be the anticipated minimum for each variable (Cohen et al., 2002, p.101). Along with this point, 60 participants from Guizhou Education University, whose L1 is Chinese, were enrolled in this study. They were all freshmen, non-English majors (majoring in applied biology, chemistry, physics, and tourism management), aged between 18 and 19 years. They all used either an iPhone or an Android phone. Experimental group (EG) and control group (CG) were then formed with 30 participants randomly assigned to each group. Participants in EG were numbered from E01 to E30 and receiving the MALL-based lyric-reading instruction; whereas participants in CG were numbered from C01 to C30 and taking in-classroom lyric-reading instruction.

3.5 Research instruments

Instruments used in this study comprise a recruitment script for recruiting participants and collecting their basic information (see Appendix A), a reading-aloud test for both pre- and post-test (see Appendix B), two applications used for the configuration of the MALL-based lyric-reading instruction, an ARCS survey for the investigation of participants’ motivation, an interview for gaining participants’ insight towards the instruction, a software program for data recording and analysis, and a software program for statistical analysis.

3.5.1 Instrument for pre- and post-test: A reading-aloud test

As stress lessons for participants from both groups to learn English stress were compiled based on a phonetics textbook, *English Pronunciation and Intonation for Communication* (second edition) (Wang, 2005) (see 3.6.1), a reading-aloud test with possible scores ranging from 0 to 70, was subsequently compiled based on this textbook to test participants' performance of English stress. The test is made up of five sections. Section 1 serves to test the principle of word stress; Section 2, test the pronunciation of the most unstressed syllable schwa; Section 3, test the principle of contrastive stress; Section 4, test principle of unstressed forms of the function words; Section 5, test the principle of sentence stress.

The reading-aloud test was sent to three phonetics experts who have doctor degree related to English language teaching and focus on phonetic research, to assess and confirm the content validity as Lynn (1986) recommends that three experts are the minimal acceptable number for a content validation effort. The Item-Objective Congruence (IOC) was used to evaluate the items based on the score range from -1 to +1. Congruent = + 1, Questionable = 0, and Incongruent = -1. The items that had scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were reserved. Based on the feedback from three experts (Appendix E, p.160-165), Section 1 (IOC=1), Section 2 (IOC=0.8), Section 3 (IOC=0.87), Section 4 (IOC=0.97) and Section 5 (IOC=1). The final version was subsequently confirmed (Appendix B).

3.5.2. Instrument for motivation measurement: An ARCS survey

Since the MALL-based lyric-reading instruction was designed based on Keller's (2008) ARCS model to motivate students to engage in learning (see 3.5.4), an ARCS survey whose learning motivation scale was developed based on Keller's (2008) ARCS model, was used to collect participants' learning motivation towards each type of instruction to see whether there was significant difference between two groups. This survey covered four categories: Attention (Group A), Relevance (Group R),

Confidence (Group C) and Satisfaction (Group S) with a total of 15 statements, which are itemized in Table 3.1. Participants were asked to respond to the statements based on a five- point Likert-scale: 5 for “strongly agree”,4 for “agree”, 3 for “neutral”, 2 for “disagree” and 1 for “strongly disagree.”

The ARCS survey was sent to three phonetics experts as introduced in 3.5.1 to assess and confirm the content validity (Appendix E, p.165-p.166). The IOC of each questions is 1.00 respectively, except C3 (IOC=0.67). Therefore, all questions were reserved. Internal consistency of the survey was also confirmed (see p.68 and p. 81)



Table 3.1: The ARCS survey

Items	Statements	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly agree 5
Attention	A1 Song lyric-reading attracts my attention.					
	A2 Reading song lyrics helps me focus my attention.					
	A3 I can concentrate on the learning activities.					
	A4 Reading song lyrics can arouse my curiosity.					
	A5 Reading song lyrics is interesting for me.					
	R1 I can relate the content of song lyrics to					

Relevance	the knowledge that I am already familiar with.					
	R2 The content of song lyrics is linked to my interests in English learning.					
	R3 The content of song lyrics is worth learning.					
	R4 Reading song lyrics has been very helpful to me.					
Confidence	C1 The progressive method of song lyric-reading meets my expectations.					
	C2 I can control my progress in song lyric-reading exercises.					
	C3 I am confident that I can accomplish all the exercises in song lyric-reading.					
	C4 I am confident that I can apply what I learn from song lyric-reading to my spoken English.					
Satisfaction	S1 I enjoy song lyric-reading exercises.					
	S2 I am satisfied with my learning achievement in song lyric-reading.					

3.5.3 Instrument for gaining reactions: An interview

An interview was conducted to gain students’ insights and feelings in order to answer RQ 3 in step two as stated in section 1.4. The interview comprises four questions with an aim to investigate: 1. whether song lyric-reading is interesting, 2. whether song lyric-reading is useful, 3. whether they are satisfied with the learning achievements and 4. whether they will continue lyric-reading for stress learning.

Participants in both group were interviewed individually. Four interview questions are:

- Q1. “Do you think the song lyric-reading is interesting? Why or Why not?”
- Q2. “Do you think the song lyric-reading is useful? Why or Why not?”
- Q3. “Are you satisfied with your stress learning achievement? Why or Why not?”
- Q4. “Will you continue reading lyrics for stress learning? Why or Why not?”

The interview questions were sent to three phonetics experts as introduced in 3.5.1 to assess and confirm the content validity (Appendix E, p.166), and the IOC of each question is 1.00 respectively. Therefore, all questions were reserved.

Four questions were then translated into Chinese and participants were required to answer the questions in Chinese as well, because Chinese is their L1 and answering in L1 helped them express their thoughts in a fluent way.

3.5.4 Instrument for the MALL-based lyric-reading instruction:

Regarding the purpose of the present study, stress learning in this instruction comprises stress lessons and lyric-reading exercises. Therefore, an application served as the platform for watching stress lessons and an application used for lyric-reading are needed. In order to select the applications that best match our goals, the following guidelines proposed by Howard and Major (2005), Tomlinson (2010), and Liu and He (2014) were followed. The guidelines are summarized in Table 3.2:

Table 3.2 Guidelines for selecting appropriate applications:

Item	Selection guidelines
1	ASR-based self-correction feedback should be provided (more details see “ASR-embedded applications”, p.22).
2	Lyric-reading should be provided.
3	Learning activities should stimulate interaction and be interesting.
4	Learners should be encouraged to develop learning skills when they use online resources.



5	Learners should be able to easily adapt the material to their own needs and language.
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Two applications were finally selected for the experimental instruction. One was QQ, the most popular instant messaging mobile application in China. Another was Duoshuo Yingyu (means “speak English more”), which was an ASR-based pronunciation training mobile application features lyric-reading. For convenience it is referred as “Speak English More” hereinafter. QQ served as the platform for participants to receive, store and watch stress lessons; Speak English More was adopted for lyric-reading exercises. Figure 3.1 shows the interfaces of a video lesson on QQ and a piece of lyric-reading exercises on Speak English More.

(a video lesson on QQ)

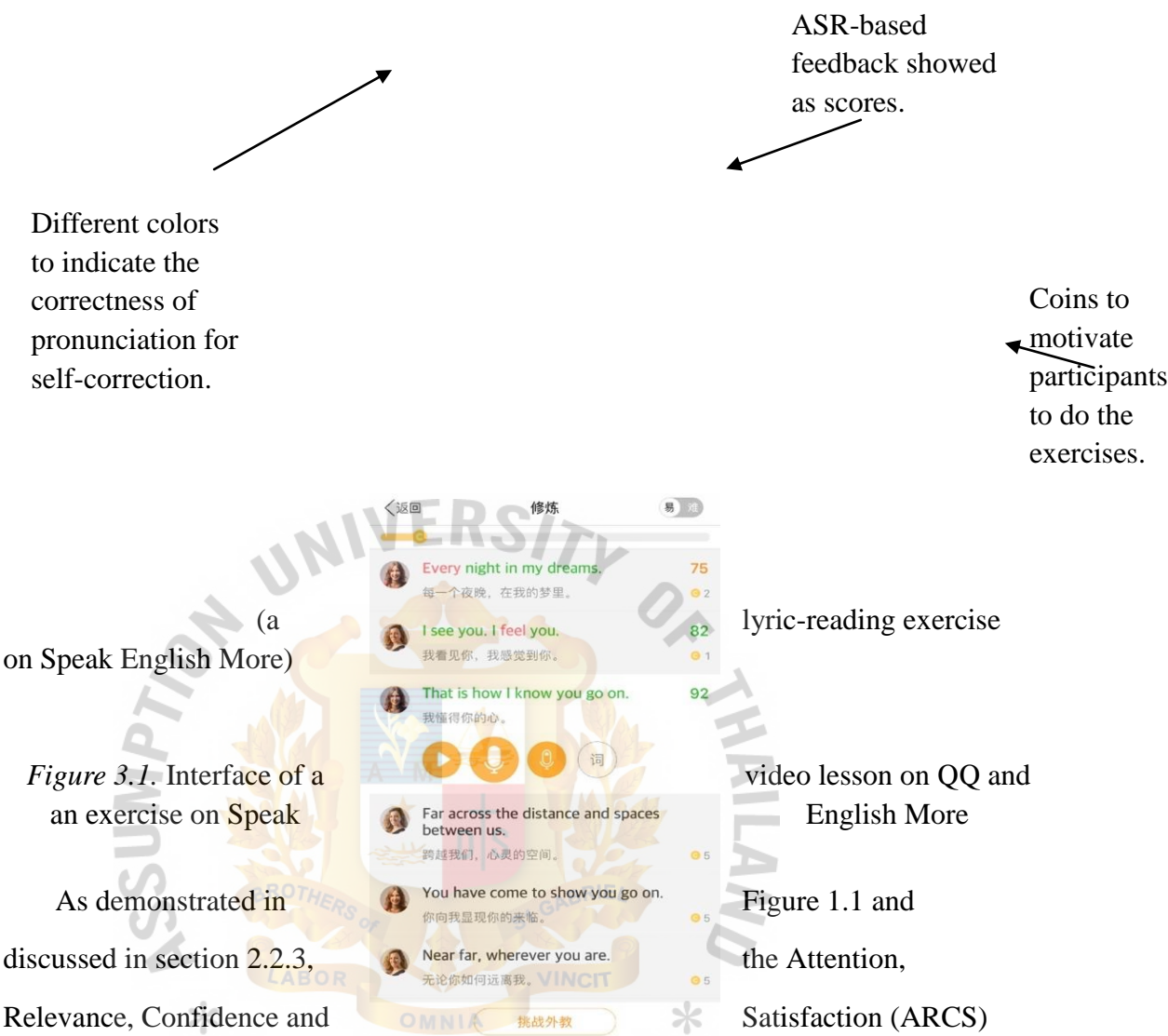


Figure 3.1. Interface of a an exercise on Speak

As demonstrated in discussed in section 2.2.3, Relevance, Confidence and model of motivation (Keller, 2008) is based on Keller’s (1979) proposal that learners can be motivated by crafted external conditions. Table 3.3 depicts how these two applications embody the ARCS model.

Table 3.3 ARCS model embodied in QQ and Speak English More

ARCS model	Utilized form	Goals
Attention	Multimedia interface on QQ and Speak English More; English stress lessons are in	Stimulate participants’ visual and auditory senses to attract their attention.

	video format.	
Relevance	Lyrics are from popular songs and are easy to read.	Practice English stress students know but have not mastered.
Confidence	Encouraging coins and scores are shown on practice pages; reading scores may be shared on personal social media page.	Participants can build their confidence and gain a sense of satisfaction from accomplishment of learning activities.
Satisfaction		

Besides, as illustrated in Figure 1.1 and discussed in 2.1.2, the lyric-reading exercises on Speak English More also embrace one of the mobile learning theories as listed in Table 2.1, the Behaviorist Learning Theory, by offering practical exercises along with feedback to make learning happen.

3.5.5 Instrument for recording and analyzing English stress: Praat

Praat, a free scientific computer software package for both recording (in reading-aloud tests and interviews) and analyzing speech in phonetics designed by Boersma and Weenink (1992), was introduced by Wilson (2008) as an instrument to analyze English stress. It can be downloaded free of charge from <http://www.praat.org> for a range of operating systems, such as Mac and Windows.

When a sound was recorded in Praat, the acoustic information will be shown. Take Figure 3.2 for instance, a word “English” was pronounced by a student and recorded by Praat. As can be seen, the vowel length of “English” will be illustrated in the upper window, and the pitch diagram (blue) and the intensity diagram (yellow) will be shown in the lower window.

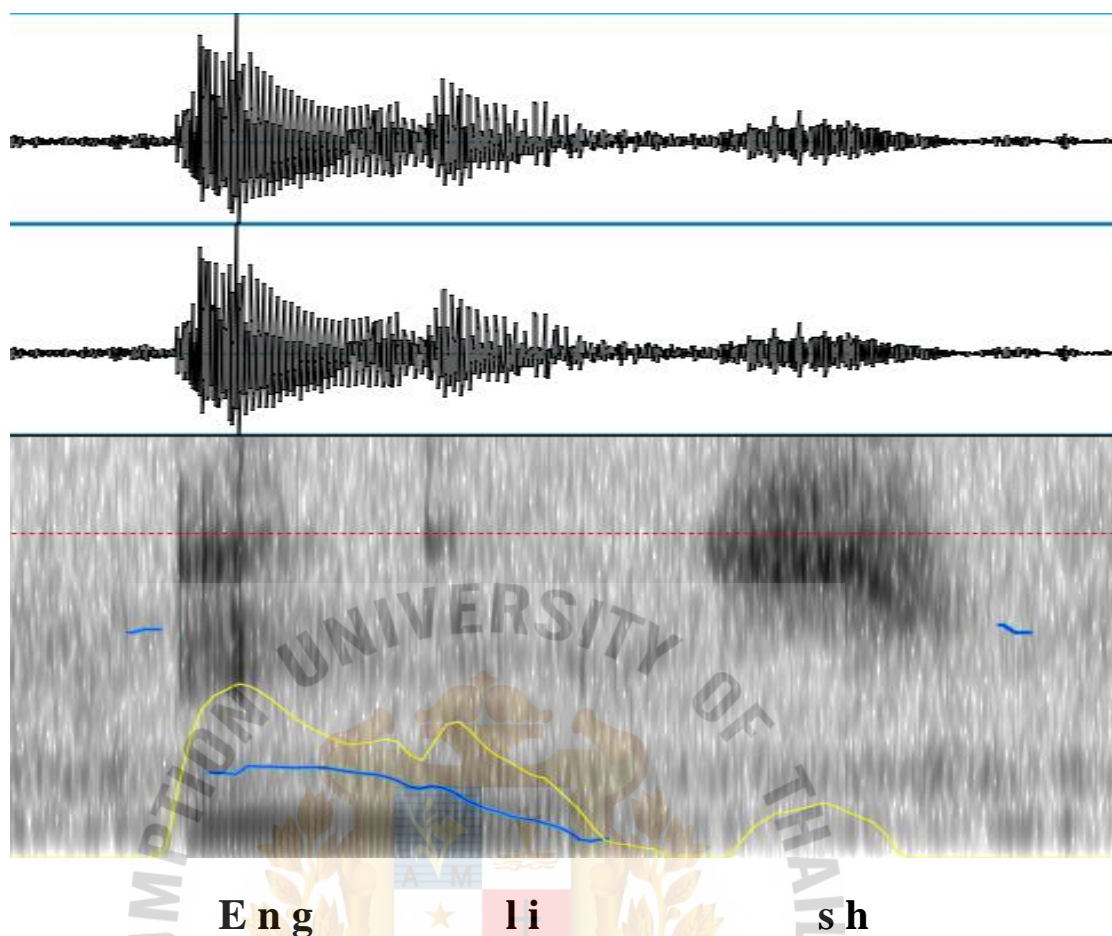


Figure 3.2, vowel length, pitch and intensity in the edit window of Praat.

Since a stressed syllable can be straightforwardly interpreted and shown on Praat as high pitch, high intensity (loudness) and longer vowel duration. In the study, Praat is adopted to record participants' oral production in the reading-aloud tests and analyze the recordings in terms of English stress by obtaining acoustic information as described above.

By extracting the pitch, intensity and duration features from Praat, it is clear and useful to use Praat to analyze word stress and sentence stress. Fig. 3.3 and Fig.3.4 show a pair of examples of analysis of the word “economy”, produced by a participant in EG. It is visible that with high pitch, high intensity and long vowel duration, the participant misplaces stress on the third syllable “no” in the pretest. However, after learning with the instruction, a noticeable improvement is found in the post-test with the high pitch, high intensity and long duration moving to the second

syllable “co”, which is the right syllable upon which to place the stress in “economy”; meanwhile, the reduction of duration in “no” suggests that there is also an improvement in pronouncing the unstressed syllable.

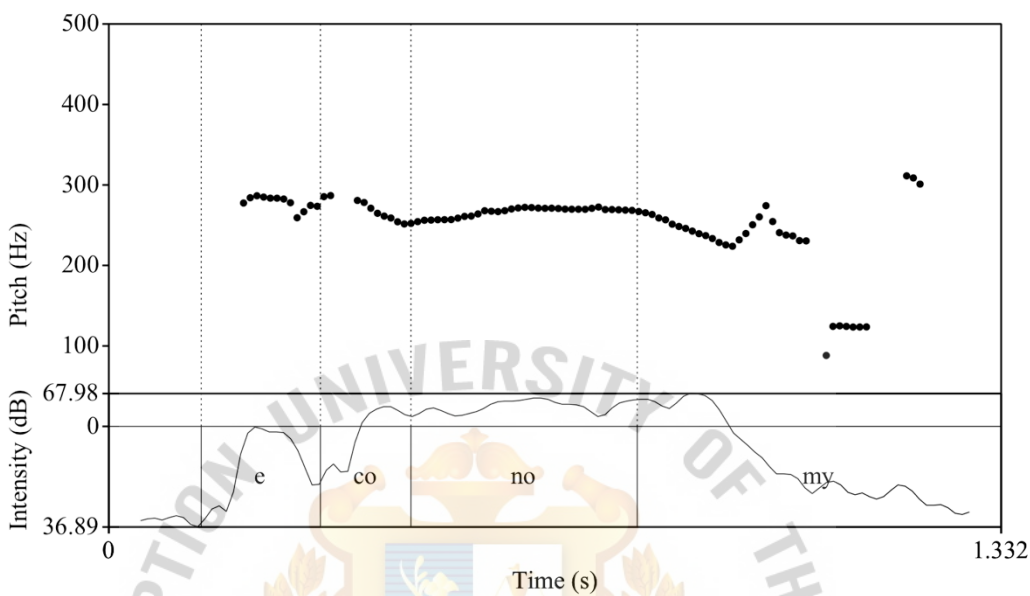


Figure 3.3 Stress features of “economy” (Pre-test EG participant)

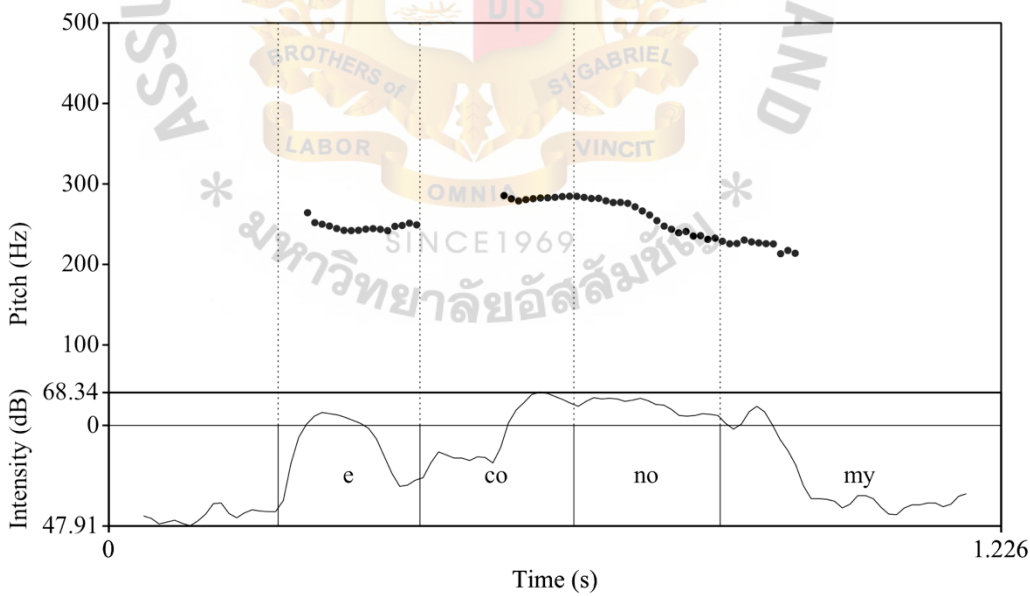


Figure 3.4 Stress features of “economy” (Post-test EG participant)

Figure 3.5 and Figure 3.6 show a pair of examples of using Praat to analyze stress placement in a sentence, “You friend is giving you some advice”, produced by a

participant in CG.

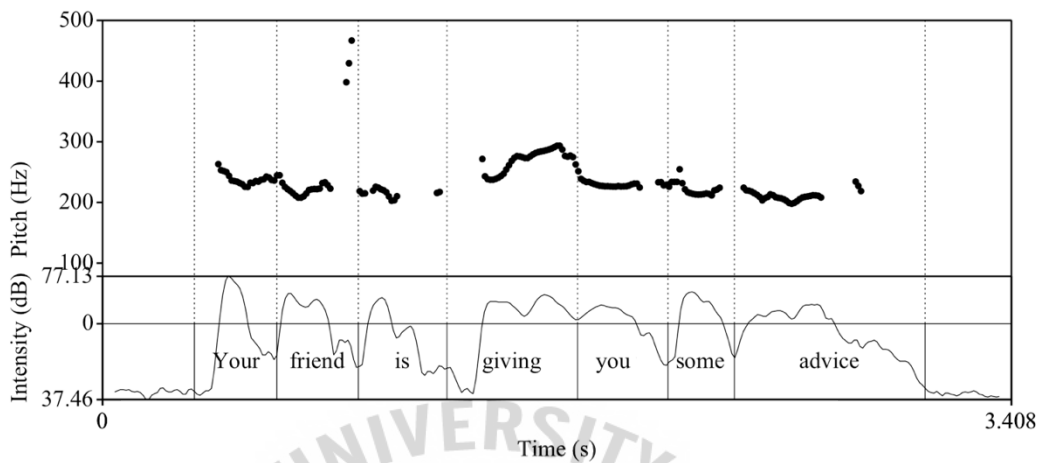


Figure 3.5 Stress features of a sentence (Pre-test CG participant)

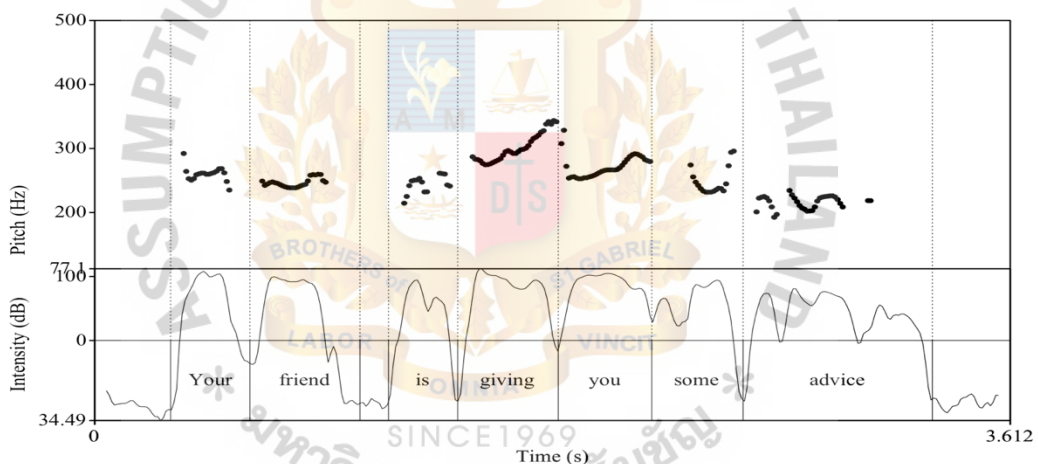


Figure 3.6 Stress features of a sentence (Post-test CG participant)

As can be seen, after receiving the in-classroom lyric-reading instruction, an improvement in placing stress on the content words such as friend and giving is clearly showed. However, this participant still tends to over-stress function words, such as your, is and you, which should be produced in a weak form as taught in stress lessons (Appendix C).

3.6 Design of the instruction

As introduced in Chapter I, two types of instruction are applied in this study. One is the MALL-based lyric-reading instruction received by participants in EG, and the other one is the in-classroom lyric-reading instruction used in CG.

3.6.1 MALL-based lyric-reading instruction

As introduced in 3.5.4, a mobile application, QQ, served as the platform for participants to receive, store and watch stress lessons; another application, Speak English More was adopted for lyric-reading exercises. Fig. 3.7 demonstrates how they were incorporated into the MALL-based lyric-reading instruction.



Figure 3.7. Configuration of the MALL-based lyric-reading instruction

Content of stress lessons and lyric-reading

Eight lessons that aim at improving learners' speaking performance in terms of English stress at an elementary level were compiled based on a phonetics textbook, *English Pronunciation and Intonation for Communication* (second edition) (Wang, 2005), which won the first prize for excellent teaching materials of general colleges and universities in China. They are: Lesson 1, Introduction of syllable and stress; Lesson 2, Pronounce full, clear vowel sounds; Lesson 3, Stress of compound nouns; Lesson 4, Unstressed syllable: schwa; Lesson 5, Strong forms and weak forms of function words (1); Lesson 6, Strong forms and weak forms of function words (2); Lesson 7, Sentence stress (1); Lesson 8, Sentence stress (2). All lesson contents were examined and approved by three experts and the IOC of each lesson was 1.00 respectively (See Appendix E, p.166-167).

Eight pieces of song lyrics, "My heart will go on", "Let her go", "Baby", "Rolling in the deep", "You belong with me", "Pretty boy", "As long as you love me" and "Someone like you" were selected from the repertoire of *Speak English More* as stress practice materials, which embody the most relevant stress features that each corresponding lesson has taught to the participants. All selected song lyrics were examined and approved by three experts, and the IOC of each piece of song lyric was 0.67 respectively (See Appendix E, p. 167).

Steps of the English stress lesson

Eight stress lessons were compiled and arranged from the introduction of stress, how to pronounce the key sound of a stressed syllable (the full, clear vowel sound) as well as the stress rule of compound nouns, to the reduced schwa sound, strong forms and weak forms of function words, and the rules of sentence stress. Each lesson was

comprised of three parts. The first part was the introduction of the key terms related (15 minutes), the second part was to teach the participants how to pronounce the target sounds (15 minutes), and the last part was for students to practice the target sounds or to do some stress exercises (15 minutes). Take Lesson 1 for instance (see Appendix C for all stress lessons):

Topic: Introduction of syllable and stress

Objectives: 1, to teach students what a syllable is and how to distinguish syllables; 2, to help students find the stressed syllable in a word. 3, to teach students to pronounce a stressed syllable with long duration, high pitch and full vowel sound as well as to pronounce an unstressed syllable with short duration, lower pitch and reduced vowel sound.

Steps 1: Introduction of the key terms related. (15 minutes)

What is a syllable? A syllable is a unit of pronunciation having one vowel sound, with or without surrounding consonants, forming the whole or a part of a word; e.g., there are two syllables in *water* and three in *banana*. An English word can have one, two, three or even more syllables.

How many syllables are there in this word? driveway ____
How many syllables are there in this sentence? Drive him away ____

What is stress?

In words of more than one syllable, one of them will receive more stress than the others.
Stressed syllables are usually longer, louder, and higher in pitch. In English, stressed syllables are usually long syllables with clear vowel sounds:

Steps 2: How to pronounce the target sounds (15 minutes)

The word banana has 3 syllables. Syllable 1 is not stressed and so is short. Syllable 2 is stressed and so is long with a clear vowel sound / a:/. Syllable 3 Is not stressed and so is also short.

ba	Na	na
Syllable 1	Syllable 2	Syllable 3
(short)	(long)	(short)

Try to join syllables together smoothly when they speak. The voice keeps going from one syllable to the next. Learn to speak smoothly.

The teacher says: baNAna not ba-NA-na
 Students repeat: baNAna

How about the following words?

suc cess
Syllable 1 Syllable 2
(higher)

suc cess ful
Syllable 1 Syllable 2 Syllable 3
(higher)

per son
Syllable 1 Syllable 2
(higher, longer)

Steps 3: Practice the target sounds and do some exercises (15 minutes)

Read the chart of vowels loudly.

Find how many syllables are there in those words?

family today truck mobile downtown improve pronunciation

Read the words above aloud and pay attention to the stressed syllables.

Read the words above aloud and pay attention to reduce the sound of unstressed syllables.

Review the pronunciation tips:

Stressed syllables:

- are long
- have a pitch change
- have full vowel sounds

Unstressed syllables:

- are short
- often have a reduced vowel sound

All lessons were recorded into video format and sent to participants in EG via QQ, who received the MALL-based lyric-reading instruction.

Steps of the lyric-reading exercise

The exercise of lyric-reading in the MALL-based lyric-reading instruction comprises four steps with different processes and goals (Table 3.4). As demonstrated in Figure 1.1 and discussed in section 2.4.4, based on the Reed’s and Michaud’s (2005) auditory feedback loop, shadowing was adopted as the main practice in the lyric-reading exercise.

Table 3.4: Summary of the lyric-reading exercise

Step	Process	Goal
1. Listening (5 minutes)	Listen to the model lyric-reading recording embedded in Speak English More.	To help the participants perceive and experience the stress pattern.
2. Shadowing (15 minutes)	Listen to the recording again then shadow the lyrics aloud while ASR was on. Then listen to the playback and check the score. (When ASR function was on, Speak English More would automatically record what participant had said and give a score on the scale of 0 to 100 as a feedback.)	To imitate the stress pattern by listening and reading aloud; self-correction was provided in this step.
3. Blind shadowing (15 minutes)	It was a repetition of step 2 but lyrics were not displayed in this step.	To strengthen what participant have learned in the previous steps.
4. Reading aloud (10 minutes)	Listen to the model lyric-reading recording again then read the lyrics aloud with ASR was off.	To review the stress pattern so as to enhance the stress performance.

In order to check whether participants who received MALL-based lyric-reading instruction had watched stress lessons and completed lyric-reading exercises, they were

required to summarize key points from lessons in Chinese and submit exercises recordings to the researcher via QQ, as shown in Figure 3.8.



Figure 3.8 Samples of stress lesson summaries (left) and lyric-reading exercise recordings (right) submitted by participants in EG.

3.6.2 In-classroom lyric-reading instruction

Fig. 3.9 demonstrates the configuration of the in-classroom lyric-reading instruction. The in-classroom lyric-reading instruction also consisted of two parts: stress lessons and lyric-reading exercises, and the content of the stress lessons and the materials of lyric-reading exercises are same with that of the MALL-based lyric-reading instruction. What differentiated this instruction from the MALL-based lyric-reading instruction was that, stress lessons were presented in a traditional in-classroom way; lyric-reading exercises were carried out in the classroom with participants in pairs; the model lyric-reading recordings were played via speakers by a teacher; participants in pairs gave feedback to each other for self-correction.

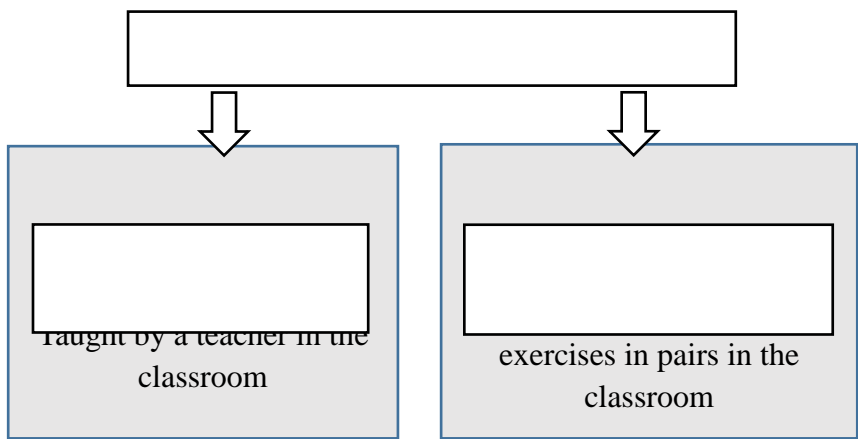


Figure 3.9 Configuration of the in-classroom lyric-reading instruction

3.7 Collection of data

Both qualitative and quantitative methods were used to collect the data. Quantitative data include: 1. scores of both pre- and post-reading-aloud-test. Each participant’s reading-aloud process was recorded and saved by Praat. 2. ARCS survey results. After receiving the 8-week instruction, each participant completed and submitted an ARCS survey online.

Qualitative data include: 1. information from a recruitment script. The recruitment script (Appendix A) was translated into Chinese and handed out to each participant to collect their basic information in order to contact them. 2. recordings of the interview. An interview was conducted and recorded with each participant after they have finished the 8-week instruction. Research Questions and instruments related to each source of data see Table 3.9 Summary of the research process.

3.8 Data analysis

Data analysis of the present research included three parts as there were three types of data needed to be analyzed according to the Research Questions and hypotheses: 1. Scores from both pre- and post-reading-aloud-test; 2. Scores from the ARCS survey; 3. Recordings of the interview.

Part 1. Tests data analysis. Praat was applied to analyze each participant's reading-aloud tests according to the test scoring rubric. After obtaining all participants' scores, an independent-samples t-test was utilized to compare the mean scores of EG and CG of the pre- and post-test to investigate whether Research Question 1 and Hypothesis 1 can be answered.

Part 2. ARCS survey analysis. After collecting all the surveys from all participants, scores of each survey was calculated and transcribed from raw data into formal form. The formal data were then analyzed in terms of confirming the internal consistency of the ARCS survey based on the procedure recommended by Liu & Chu (2010, p.637). Once the confirmation was completed, an independent samples t-test was conducted to the data in order to examine whether Research Question 2 and Hypothesis 2 can be answered.

Part 3. Interview data analysis. Recordings of interview were firstly translated from Chinese into English. Then, the recordings and translations were proofread by two English teachers in China (Wang Heng, English Translation B.A., and Chinese International Education M.A., Email: 1025611438@qq.com; Xiang Yuying, English Major B.A., and Mass Communication M.A. from University of Leicester, UK, Email: yukixiang@qq.com) to confirm the accuracy of translation. The translation was meticulously read five times and key items were then highlighted by coding. These codes were later abstracted into themes, and were reviewed and checked for multiple times. Subsequently, those identified themes were shown as evidence in response to RQ 3.

3.9 The Pilot Study

Since conducting the present research involved the use of various instruments, different types of experimental instruction and statistical analysis, it was necessary to perform a Pilot Study to examine the feasibility of the research framework, and check and avoid the underlying weakness. The Pilot Study began from the second week of September in 2017 and ended at the second week of October in 2017. It adopted a quasi-experimental design. The subjects were 12 freshmen, non-English majors (majoring in applied biology, chemistry), aged between 18 and 19 years from Guizhou Education University, P. R. China. They all used either an iPhone or an Android phone. Participants were randomly assigned to the experimental group (EG) and numbered from E01 to E06, taking MALL-based lyric-reading instruction, or to the control group (CG) and numbered from C01 to C06, taking in-classroom lyric-reading instruction. Table 3.5 summarizes the procedures involved in the Pilot Study.

Table 3.5 Design of the Pilot Study

Week	EG	CG	Topics of the Stress Lesson	Lyric-reading materials
1	Orientation and pre-test			
2	MALL-based lyric-reading instruction	In-classroom lyric-reading instruction	Introduction of syllable and stress	“My heart will go on”
3			Pronouncing full, clear vowel sounds	“Let her go”
4			Stress of compound nouns	“Baby”
5			Unstressed syllable: schwa	“Rolling in the deep”
6	Post-test, interview and ARCS survey			

Following the research design as introduced in 3.2, both qualitative and quantitative methods were used to collect the data. Quantitative data consisted of scores from pre- and post-test as well as the ARCS survey. Qualitative data comprised the pretest survey and the interview. The scores of pre- and post-test were obtained by using Praat in analyzing the acoustic information of participants’ reading recordings according to the scoring rubric. The significance level was set at $p < 0.05$ for all statistical analysis. Students’ feelings towards the treatment were acquired by the interview recordings.

3.9.1 Learning results of the Pilot Study

Table 3.6 shows the descriptive statistics and group comparison results of the reading-aloud tests. As can be seen, based on the mean scores in the pre-test, CG slightly outperforms EG but both of them are under 40. In the post-test, the result changes dramatically as the mean score of EG is over 50 while that of CG is under 45. Based on the independent samples t-test, a significant difference is found in the post-test scores between EG and CG ($t = 2.254$, $p = 0.048$), with a large effect size (Cohen’s $d = 1.302$) according to Cohen’s criterion (1992), while both groups do not differ in the pre-test ($t = 0.226$, $p = 0.826$). This confirms the effectiveness of the MALL-based lyric-reading instruction in improving speaking performance in terms of English stress.

Table 3.6 Mean scores and t-values obtained from the Pre- and Post-test (Pilot Study).

Tests	EG (<i>n</i> =6)		CG (<i>n</i> =6)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Pre-test	37.17	8.208	38.17	7.083	0.226	0.826
Post-test	51.67	6.439	43.00	6.870	2.254	0.048

3.9.2 Results of learning motivation in the Pilot Study

A total of 12 valid ARCS surveys were submitted during the final week of the pilot study, with a response rate of 100%. The Pilot Study adopted the procedure recommended by Liu & Chu (2010, p.637), using Cronbach’s α to confirm the internal consistency of the ARCS survey. After calculation, each category reported the Cronbach’s α as 0.818 (Attention), 0.871(Relevance), 0.817(Confidence) and 0.889 (Satisfaction), respectively; the Cronbach’s α for the survey was 0.940. These alpha coefficients exceed 0.7, which confirmed the internal consistency of the survey.

In order to establish whether there are statistical differences between the groups’ mean scores, an independent samples t-test was then conducted. The results are summarized in Table 3.7.

Table 3.7 Mean Scores and t-values obtained from the ARCS survey in Pilot Study.

Category	Item	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Attention	A1 Song lyric-reading attracts my attention.	EG = 4.17	EG = 0.408	0.767	0.461
		CG = 3.83	CG = 0.983		
	A2 Reading song lyrics helps me focus my attention.	EG = 4.50	EG =0.548	2.712*	0.022
		CG = 3.67	CG =0.408		
	A3 I can concentrate on the learning activities.	EG = 3.83	EG = 0.408	2.828*	0.018
		CG = 3.18	CG = 0.521		
	A4 Reading song lyrics can arouse my	EG = 4.50	EG = 0.548	1.464	0.174
		CG = 4.00	CG = 0.632		

	curiosity.				
	A5 Reading song lyrics is interesting for me.	EG = 4.67	EG =0.516	4.472*	0.001
		CG = 3.33	CG =0.516		
Relevance	R1 I can relate the content of song lyrics to the knowledge that I am already familiar with.	EG = 3.67	EG = 0.516	0.447	0.664
		CG = 3.83	CG =0.753		
	R2 The content of song lyrics is linked to my interests in English learning.	EG = 4.17	EG =0.753	0.767	0.461
		CG = 3.83	CG =0.753		
	R3 The content of song lyrics is worth learning.	EG = 4.33	EG = 0.516	0.000	1.000
		CG = 4.33	CG = 0.516		
	R4 Reading song lyrics has been very helpful to me.	EG = 4.17	EG = 0.408	0.542	0.599
		CG = 4.00	CG = 0.632		
Confidence	C1 The progressive method of song lyric-reading meets my expectations.	EG = 4.33	EG = 0.516	2.236*	0.049
		CG = 3.67	CG = 0.516		

	C2 I can control my progress in song lyric-reading exercises.	EG = 4.67	EG =0. 516	6.822*	0.000
		CG = 2.83	CG =0.408		
	C3 I am confident that I can accomplish all the exercises in song lyric-reading.	EG = 4.50	EG = 0.548	1.195	0.260
		CG = 4.17	CG = 0.408		
	C4 I am confident that I can apply what I learn from song lyric-reading to my spoken English.	EG = 4.17	EG = 0.408	1.414	0.188
		CG = 3.83	CG = 0.408		
Satisfaction	S1 I enjoy song lyric-reading exercises.	EG = 4.50	EG = 0.548	2.390*	0.040
		CG = 3.83	CG = 0.408		
	S2 I am satisfied with my learning achievement in song lyric-reading.	EG = 4.50	EG =0.548	3.508*	0.006
		CG = 3.17	CG =0.753		

(* indicates the difference is significant at p < 0.05)

The data illustrate that there is a significant difference in Item A2 ($t = 2.712$, $p = 0.022$), which means that participants in EG hold a higher level of attention than those in the CG; in Item A3 ($t = 2.828$, $p = 0.018$), which indicates that EG reports a high level of agreement in concentrating on learning activities; in A5 ($t = 4.472$, $p = 0.001$), which reveals that EG find lyric-reading more interesting than CG did. The difference in Item C1 ($t = 2.236$, $p = 0.049$) is also significant as participants in EG show a higher level of confidence in whether song lyric-reading can help them achieve their learning goals, as is the difference in C2 ($t = 6.822$, $p = 0.000$) where participants in EG show more autonomy in controlling the learning progress. Significant differences are also found in Item S1 ($t = 2.390$, $p = 0.040$) and Item S2 ($t = 3.508$, $p = 0.006$), which reveal that lyric-reading in EG are reported to be more enjoyable and satisfactory.

All participants ($N=12$) were interviewed in the Pilot Study. Only one participant (E05) is a male student and the rest of them are female students. None of the participants has used MALL for English learning before. According to the interviews, four participants in EG mentioned that song lyric-reading was more fun and useful than textbook reading. One of the participants (E06) stated,

We have studied many textbooks since primary school. However, it is hard to remember what we have learnt whether it was a dialogue or an article. Since I used song lyrics, which was easy to memorize, for study, my pronunciation has improved a lot. Therefore, whether it is English stress learning or spoken English learning, lyrics reading has become my new beginning and I must keep doing it for further study. (original Chinese: 从小学到现在我们学了很多课本, 不管是对话还是文章, 很难很难记住。学了歌词以后, 记忆比较清晰一点, 各方面的话, 发音感觉提高比较快。不管从重音学习还是口语学习来说, 歌词学习是我的一个起步点, 我应该踩着它慢慢慢慢地往上走。)

In contrast, although five participants in CG admitted that reading lyrics was fun, they also expressed their nervousness about reading in front of others, claiming this was still a challenge which makes them feel uncomfortable in the classroom. As one participant (C03) stated,

Reading lyrics was interesting but I did not gain much improvement because I was not motivated. I am not satisfied with my achievement. (original Chinese: 我觉得很有趣, 但我觉得没有学到多少, 上课的时候不是很积极, 对学习成果不算满意。)

3.9.3 An issue concerning the scoring rubric in the Pilot Study

Although the Pilot Study showed good results, as expected, an issue with the scoring rubric was raised in the process of examining the findings. The reading-aloud test for both pre- and post-test aimed to investigate participants' pronunciation in terms of English stress, therefore, the scoring rubric only focused on word stress or sentence stress. Other features of pronunciation, such as the vowel sounds, were not taken into consideration in the scoring. In this situation, an issue appeared to arise, as participants could score when pronouncing a word with correct stress placements but incorrect vowel sound of the stressed syllable. For example, the word “idiom” /'ɪdiəm/ in the reading-aloud test was pronounced by one participant as /'aɪdiəm/, and a point was still awarded. Scoring tests like this might convey a wrong message to the student if we reassessed it from a strict pedagogical view.

3.9.4 A modification for the Main Study

The purpose of conducting the Pilot Study was to examine the feasibility of the design for the main study. The experimental results show that the use of MALL-based lyric-reading instruction can produce better learning outcomes than lyric-reading study undertaken in a traditional way. The ARCS survey and interview results indicate that the MALL-based lyric-reading instruction could break through motivational barriers and engage students in stress learning. This evidence also confirms the feasibility of the research design. However, a modification was necessary as an issue was found in terms of the scoring rubric of the reading-aloud test. In the Main Study, a point was awarded in the reading-aloud tests only when the stress placement was correct and the vowel sound of the stressed syllable was correct.

3.10 The development of the MALL-based lyric-reading instruction related to RQ3

As shown in the conceptual framework (Figure 1.2) and stated in section 1.4, RQ 3 can only be answered in two steps. The first step is to review the process of the development of the MALL based lyric-reading instruction. According to the theoretical discussion in Chapter II, the MALL-based lyric-reading instruction needs to integrate stress lessons and lyric-reading exercises with mobile applications. Along with this conception, the MALL-based lyric-reading instruction was developed by firstly selecting two appropriate applications as the basic platforms, one for receiving, storing and watching stress lessons and the other for doing lyric-reading exercises. The applications were not randomly selected, and the selection was strictly followed guidelines in order to embody the ARCS model in order to motivate students to improve English stress performance (see section 3.5.4).

After the mobile applications were selected, it was of importance to carefully choose the proper contents for both stress lessons and lyric-reading exercises. As discussed in section 3.6.1, a phonetics textbook awarded for its excellent teaching materials for college English education in China was selected as the textbook for eight stress lessons. And eight pieces of popular song lyrics were then chosen in correspond to the topic of each lesson. Stress lessons were compiled to help students improve their stress performance from understanding basic rules to be in command of both word stress and sentence stress skills. Lyric-reading exercises were conducted to motivated students to practice and apply what they have learnt from the lessons, in order to gain improvement in their English stress performances. The stress lesson was generally set with three parts: 1. Introduction of the key terms related (15 minutes), 2. How to pronounce the target sounds (15 minutes) and 3. Practice the target sounds and do some exercises (15 minutes). The lyric-reading exercise was strictly followed four steps: 1. Listening to the model recording (5 minutes), 2. Shadowing the model recording (15 minutes), 3. Blind shadowing the model recording and 4. Reading aloud the lyrics (10 minutes).

Received by students in EG, the MALL-based lyric-reading instruction was then investigated in a Pilot Study. Based on group comparison results of the reading-aloud tests (3.9.1), students in the EG do outperform those in the CG, which shows that the MALL-based reading instruction helped students improve their English performance in a significant way. However, since the scoring rubric in the Pilot Study was not stringent enough (3.9.3), to fully answer RQ 3, the MALL-based lyric-reading instruction needs to be examined with a large sample and a longer learning duration in the Main Study, especially with a more stringent scoring rubric in the reading-aloud tests to compare the learning results.

3.11 The procedures of the Main Study

The Main Study adopts a quasi-experimental design with 60 participants who were non-English majors from Guizhou Education University, P. R. China. Participants were randomly assigned to the experimental group (EG) and numbered from E01 to E30, taking MALL-based lyric-reading instruction, or to the control group (CG) and numbered from C01 to C30, taking lyric-reading instruction. The Main Study began in the fourth week of October in 2017 and ended in the last week of December in 2017. Table 3.8 summarizes the procedures involved in the Main Study.

Table 3.8 Design of the Main Study

Week	EG	CG	Topics of the Stress Lesson	Lyric-reading materials
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1	Orientation and pre-test			
2	MALL-based lyric-reading instruction	In-classroom lyric-reading instruction	Introduction of syllable and stress	“My heart will go on”
3			Pronouncing full, clear vowel sounds	“Let her go”
4			Stress of compound nouns	“Baby”
5			Unstressed syllable: schwa	“Rolling in the deep”
6			Strong forms and weak forms of function words (1)	“You belong with me”
7			Strong forms and weak forms of function words (2)	“Pretty boy”
8			Sentence stress (1)	“As long as you love me”
9			Sentence stress (2)	“Someone like you”
10	Post-test, interview and ARCS survey			

Week 1

Day 1. 60 freshmen non-English majors were recruited from Guizhou Education University and they were informed that participation in this study was completely anonymous and voluntary, and was required 45 minutes for taking an English stress course and 45 minutes for doing a piece of lyric-reading exercise per week, for 8 weeks. They were also told that they needed to complete two reading-aloud tests, an ARCS survey and an interview with only four questions. They were then randomly assigned to EG or CG, and numbered. On the Recruitment Scripts, they filled their basic information including age, gender, major and QQ number. Two online QQ groups (one for EG and one for CG) were subsequently created for informing participants the further information.

- Day 2. Pre-test for 15 participants from EG.
- Day 3. Pre-test for 15 participants from EG.
- Day 4. Pre-test for 15 participants from CG.
- Day 5. Pre-test for 15 participants from CG.

Week 2 to Week 9

Participants of CG were taking the English Lessons in class on each Wednesday from 6 p.m. to 6:45 p.m., and doing the lyric-reading exercises in class on each Friday from 6 p.m. to 6:45 p.m.

Participants of EG were receiving the English Lessons and Lyric-reading exercises from the online QQ group on each Monday and were asked to submit their lesson summaries and lyric-reading recordings to the QQ group before 7 p.m. of each Friday.

Week 10

- Day 1. Pre-test, ARCS survey and interview for 15 participants from EG.
- Day 2. Pre-test, ARCS survey and interview for 15 participants from EG.
- Day 3. Pre-test, ARCS survey and interview for 15 participants from CG.
- Day 4. Pre-test, ARCS survey and interview for 15 participants from CG

3.12 Summary of the research process

This chapter begins with introducing the rationale for the theory and principles adopted in the design of the present research, and then details the methods and instruments applied with an emphasis on the description of the design of MALL-based lyric-reading instruction. As can be seen, the rationale is a conclusion of relevant discussions from Chapter II, and the findings of the Main Study will be provided in the next chapter. Therefore, this chapter mainly serves as a bridge from theoretical discussion to the empirical finding. The research process is summarized in Table 3.9.

Table 3.9 Summary of the research process

Research Questions	Source of Data	Research Instrument	Validation of	Method of Data	Expected Results
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			instrument s	Analysis	
1. Between in-classroom lyric-reading instruction and MALL based lyric-reading instruction, which one is more effective in improving Chinese college non-English majors' English stress performance?	Scores of both pre- and post-test of EG and CG.	A reading-aloud test compiled from a popular textbook (Wang, 2005)	Content validity of the reading-aloud test was confirmed.	Recordings of pre- and post-test were analyzed by Praat; Scores were compared by the independent samples t-test.	EG will outperform CG significantly.
2. What is the difference in learners' motivation between in-classroom lyric-reading instruction and MALL based lyric-reading performance?	Scores of ARCS survey.	The ARCS survey developed based on Keller's ARCS model (Keller, 2008).	Content validity of the ARCS survey was confirmed.	Scores were compared by the independent samples t-test.	There will be significant differences in some items of ARCS survey.
3. How can MALL based	Scores of reading-a	The reading-al	Content validity of	Reading-aloud	1.To confirm the

lyric-reading instruction be developed to improve English stress performance?	loud tests; interview s.	oud test; the interview.	both the reading-al oud test and the interview were confirmed.	scores were comparte d by the independ ent samples t-test. Interview data was subjected to content analysis.	effectiveness of this instruction based on the comparison of the tests’ results in terms of students’ English stress performance in both groups. 2.To show evidence (students’ insights and feelings) in response to the development of the MALL based lyric-reading instruction.
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CHAPTER IV FINDINGS OF THE MAIN STUDY

4.0 Introduction

This chapter presents the findings from the Main Study, which are in response to Research Questions 1, 2 and 3 as well as to Hypothesis 1 and 2.

4.1 Findings related to Research Question 1, Hypothesis 1 and Research Question

3

As introduced in Chapter III, Praat was used to analyze data from both pre-and post-reading-aloud tests in terms of the acoustic features of stressed syllables. Each participant’s test scores were then given according to the scoring rubric. Table 4.1 shows all participants’ scores in both pre-and post-reading-aloud tests.

Table 4.1 Reading-aloud test scores of all participants.

		Pre-test	Post-test		Pre-test	Post-test
EG	E01	32	53	E16	31	50
	E02	37	57	E17	30	49
	E03	38	62	E18	23	47
	E04	38	57	E19	21	44
	E05	25	49	E20	25	45
	E06	35	51	E21	20	42
	E07	31	49	E22	27	58
	E08	30	53	E23	21	49
	E09	33	54	E24	25	55
	E10	23	54	E25	23	42
	E11	27	49	E26	32	56
	E12	25	54	E27	20	43
	E13	34	58	E28	20	37

	E14	31	50	E29	25	41
	E15	26	44	E30	25	50
CG	C01	31	48	C16	35	40
	C02	37	49	C17	26	36
	C03	37	50	C18	37	46
	C04	36	41	C19	26	29
	C05	35	48	C20	29	37
	C06	22	43	C21	22	30
	C07	22	34	C22	28	37
	C08	34	37	C23	25	27
	C09	23	32	C24	32	36
	C10	35	51	C25	35	44
	C11	37	39	C26	37	46
	C12	24	36	C27	29	31
	C13	23	36	C28	21	36
	C14	23	29	C29	36	47
	C15	29	49	C30	32	49

In order to answer the Research Question 1, an independent samples t-test was conducted. Table 4.2 presents the descriptive statistics of the reading-aloud tests.

The results of the reading aloud pre-test reveal that both groups did not differ in English stress performance ($t = 1.489, p = 0.142$). Interestingly, the performance of the students in the post-test, however, shows a significant difference between the EG and the CG ($t = 5.989, p = 0.000$), with a large effect size (Cohen’s $d = 1.546$) according to Cohen’s criterion (1992). In other words, the students in the EG outperformed those in the CG in terms of stress performance. This result offers a positive answer to the Research Question 1 and Hypothesis 1, and confirms the effectiveness of the MALL-based lyric-reading instruction in improving Chinese college non-English majors’ English stress performance. The result is also in respond to Research Question

3, giving positive feedback to the development of the MALL-based lyric-reading instruction. However, in order to fully answer Reach Question 3, students’ feelings and insights towards lyric-reading and stress learning need to be analyzed based on the interview data in section 4.3 as proposed in section 1.4.

Table 4.2 Mean Scores and t-values obtained from the Pre- and Post-tests.

Tests	EG (n=30)		CG (n=30)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Pre-test	27.77	5.513	29.93	5.759	1.489	0.142
Post-test	50.07	5.977	39.77	7.281	5.989	0.000

4.2 Findings related to Research Question 2 and Hypothesis 2

A total of 60 valid ARCS surveys were submitted after the experiment, with a response rate of 100%. The main study adopted the procedure recommended by Liu & Chu (2010, p.637), using Cronbach’s α to confirm the internal consistency of the ARCS survey. After calculation, each category reported the Cronbach’s α as 0.801, 0.847, 0.832 and 0.812, respectively; the Cronbach’s α for the survey was 0.924. These alpha coefficients exceed 0.7, which confirmed the internal consistency of the survey. Mean Scores and standard deviation obtained from the ARCS survey are shown on Table 4.3 (EG) and Table 4.4 (CG).

Table 4.3 Mean Scores and standard deviation obtained from the ARCS survey (EG)

Category	Item	<i>M</i>	<i>SD</i>
	A1 Song lyric-reading attracts my attention.	4.40	0.498
	A2 Reading song lyrics helps me focus my attention.	4.17	0.379

Attention ($M = 4.27$)	A3 I can concentrate on the learning activities.	4.07	0.521
	A4 Reading song lyrics can arouse my curiosity.	4.33	0.547
	A5 Reading song lyrics is interesting for me.	4.37	0.556
Relevance ($M = 4.05$)	R1 I can relate the content of song lyrics to the knowledge that I am already familiar with.	3.93	0.254
	R2 The content of song lyrics is linked to my interests in English learning.	4.17	0.531
	R3 The content of song lyrics is worth learning.	4.00	0.371
	R4 Reading song lyrics has been very helpful to me.	4.10	0.481
	C1 The progressive method of song lyric-reading meets my expectations.	4.20	0.484
	C2 I can control my		

Confidence ($M = 4.25$)	progress in song lyric-reading exercises.	4.30	0.535
	C3 I am confident that I can accomplish all the exercises in song lyric-reading.	4.13	0.434
	C4 I am confident that I can apply what I learn from song lyric-reading to my spoken English.	4.37	0.556
Satisfaction ($M = 4.38$)	S1 I enjoy song lyric-reading exercises.	4.43	0.568
	S2 I am satisfied with my learning achievement in song lyric-reading.	4.33	0.547

As can be seen on Table 4.3, the low standard deviation suggests that most students in EG scored very close to the mean score. Besides, among the four categories, the mean score of Satisfaction is higher than the other three, which suggests that a higher level of satisfaction motivates students in EG to do the song lyric-reading exercises.

Table 4.4 Mean Scores and standard deviation obtained from the ARCS survey (CG)

Category	Item	<i>M</i>	<i>SD</i>
Attention (<i>M</i> = 3.92)	A1 Song lyric-reading attracts my attention.	4.13	0.571
	A2 Reading song lyrics helps me focus my attention.	3.77	0.568
	A3 I can concentrate on the learning activities.	3.33	0.802
	A4 Reading song lyrics can arouse my curiosity.	4.27	0.521
	A5 Reading song lyrics is interesting for me.	4.07	0.521
Relevance (<i>M</i> = 4.06)	R1 I can relate the content of song lyrics to the knowledge that I am already familiar with.	3.87	0.434
	R2 The content of song lyrics is linked to my interests in English learning.	4.27	0.521
	R3 The content of song lyrics is worth learning.	4.03	0.320
	R4 Reading song lyrics has been very helpful to me.	4.07	0.450

Confidence ($M = 3.72$)	C1 The progressive method of song lyric-reading meets my expectations.	3.50	0.777
	C2 I can control my progress in song lyric-reading exercises.	3.23	0.817
	C3 I am confident that I can accomplish all the exercises in song lyric-reading.	3.97	0.320
	C4 I am confident that I can apply what I learn from song lyric-reading to my spoken English.	4.17	0.531
Satisfaction ($M = 3.67$)	S1 I enjoy song lyric-reading exercises.	3.93	0.450
	S2 I am satisfied with my learning achievement in song lyric-reading.	3.40	0.814

As shown in Table 4.4, the low standard deviation suggests that most students in CG scored very close to the mean score. In terms of the four categories, the mean score of Relevance is the highest, which indicates that students in CG were motivated mostly because they thought lyric-reading was relevant to their interests.

A t-test (independent samples) comparison of the mean scores of the two groups was then conducted to investigate the differences between EG and CG. Based on the

results, there are significant differences between the groups in all categories except “Relevance”.

In terms of the first category of the ARCS survey, “Attention”, as shown on Table 4.5, there is a significant difference in Item A2 ($t = 3.207, p = 0.002$), suggesting participants in EG show higher levels of attention than those in CG. There is also a significant difference in Item A3 ($t = 4.199, p = 0.000$) in terms of the perceived attractiveness of those two types of instruction. EG participants appear to show a high level of agreement in concentrating on learning activities. As for Item A5 ($t = 2.157, p = 0.035$), learners’ interest in lyric-reading, participants in EG found lyric-reading more interesting than those in CG.

Table 4.5 Mean Scores and t-values obtained from the ARCS survey (Attention).

Category	Item	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Attention	A2 Reading song lyrics helps me focus my attention.	EG = 4.17	EG = 0.379	3.207	0.002
		CG = 3.77	CG = 0.568		
	A3 I can concentrate on the learning activities.	EG = 4.07	EG =0.521	4.199	0.000
		CG = 3.33	CG =0.802		
	A5 Reading song lyrics is interesting for me.	EG = 4.37	EG = 0.556	2.157	0.035
		CG = 4.07	CG = 0.521		

In terms of the third category of the ARCS survey, “Confidence”, as shown on Table 4.6, a significant difference is also found in Item C1 ($t = 4.188, p = 0.000$) in response the statement about whether song lyric-reading meets participants’

expectations. According to the interview responses, the “use of mobile technology” may be the main reason leading to this result. Participants in EG showed greater preference for lyric-reading practice. This result mirrors Wang’s (2014) conclusion that adopting modern technology could be an effective way to cultivate students’ learning motivation. There is also a highly significant difference in Item C2 ($t = 5.981, p = 0.000$) which is about controlling the progress of the learning activity; participants in EG believed they had more autonomy in controlling the learning progress.

Table 4.6 Mean Scores and t-values obtained from the ARCS survey (Confidence).

Category	Item	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Confidence	C1 The progressive method of song	EG = 4.20	EG = 0.484	4.188	0.000
	lyric-reading meets my expectations	CG = 3.50	CG = 0.777		
	C2 I can control my progress in song	EG = 4.30	EG = 0.535	5.981	0.000
	lyric-reading exercises.	CG = 3.23	CG = 0.817		

In terms of the last category of the ARCS survey, “Satisfaction”, as shown on Table 4.7, significant differences are found in Item S1 ($t = 3.779, p = 0.000$) and Item S2 ($t = 5.215, p = 0.000$), which demonstrate that lyrics reading on mobile phones is judged to be more enjoyable and satisfactory than lyrics reading in the classroom. The questionnaire findings are augmented by interviews, where most of the participants in EG stated a similar point that the visible achievements on the screen motivate them to practice and to achieve a new higher score. The reason might be that since there were

no temporal and spacial limitations with mobile learning, students in EG could repeat lyric-reading exercises until satisfactory scores were obtained.

Table 4.7 Mean Scores and t-values obtained from the ARCS survey (Satisfaction).

Category	Item	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Satisfaction	S1 I enjoy song lyric-reading exercises.	EG = 4.43	EG = 0.568	3.779	0.000
		CG = 3.93	CG = 0.450		
	S2 I am satisfied with my learning achievement in song lyric-reading.	EG = 4.33	EG = 0.547	5.215	0.000
		CG = 3.40	CG = 0.814		

As can be seen above, the findings from the ARCS survey provide affirmative answers to Research Question 2 and Hypothesis 2 in terms of the difference in learners’ motivation between lyric-reading instruction and MALL based lyric-reading instruction.

4.3 Findings related to Research Question 3

As stated in section 1.4, Research Question 3 can only be answered in two steps. The first step is to review the process of the development of the MALL based lyric-reading instruction, which was completed in section 3.10. The second step is to examine the reading-aloud test’ scores (See 4.1) and investigate students’ feelings and insights, in order to better develop this type of instruction.

This section will firstly demonstrate findings from the interview, then provide evidence to answer Research Question 3 in terms of the second step.

4.3.1 Findings from the interview

60 participants were interviewed in terms of four questions, and only five of them are male students (E01, E15, E25, C16, C26). None of them have used song lyrics as reading materials for pronunciation learning before, and only one student (E17) has been using mobile applications (not the application used in this study) for pronunciation improvement. By analyzing the interview contents, fourteen themes are identified (eleven of them are positive and three of them are negative) as shown in Table 4.8.

Table 4.8 Summary of themes identified from the interview.

Themes	Positive	Negative
	1. Lyric-reading is interesting and full of fun. (E03, E04, E10, E24, E25, E27, E28, C13, C15, C20, C22, C27)	12. Not interested in m-learning. (E01)
	2. Lyric-reading is more attractive than textbook-reading. (E08, E19, C01, C15, C23, C29)	13. Not all songs are interesting. (C09)
	3. Song lyrics are related to my daily life. (E16, E22, E30, C12)	14. Lack of learning or practice. (E15, E16, E20, E25, E27, C06, C09, C11, C13)
	4. Speaking opportunities expanded. (E15, E19, E27, E29, C03, C19)	
	5. ASR feedback is useful. (E04, E20, E28)	
	6. Lyrics are easy to read. (E09, C23, C29)	
	7. Vocabulary size expanded. (E07, E13,	

	E14, E21, E22)	
	8. English stress performance improved. (E07, E08, E17, E21, E22,E24,E29, C20, C21,C25,C27,C28,C29, C30)	
	9. Listening comprehension improved. (E02,E06)	
	10. Keep reading lyrics to achieve learning goals (E20, E22, E26, C01, C18, C20, C24)	
	11. MALL is convenient. (E10, E14, E17, E25, E28)	

Q1. “Do you think the song lyric-reading is interesting? Why or Why not?”

Of the 60 students, 58 claimed that song lyric-reading was interesting or very interesting. Among the positive feedback, the most frequently mentioned reason was that enjoying English songs was one of participants’ hobbies. Therefore, they liked to read lyrics, and found lyric-reading interesting.

Theme 1: Lyric-reading is interesting and full of fun

Seven students (E03, E04, E10, E24, E25, E27, E28) in EG addressed Theme 1 in response to Q1, and they tended to relate the fun of lyric-reading to the fun of singing songs or enjoying the music. Two of them also related the fun to the use of mobile learning (E04, E28)

E03: It is interesting as I like singing very much. (original Chinese: 我觉得歌词朗诵非常有趣, 因为我非常喜欢唱歌。)

E04: *It is full of fun to read lyrics aloud on the mobile phone and you can do it over and over again. When you saw your scores getting better, you would feel a sense of achievement. (original Chinese: 在手机上朗读歌词还是非常有趣的, 你可以在手机上朗读一次一次地提升自己, 而且看到分数一次一次的上升, 感觉还是很有成就感的。)*

E10: *It is full of fun because lyric-reading corporates English learning with songs, which makes English learning less boring. After you have done the lyric-reading exercise, you would feel different when listening to the song again. (original Chinese: 我觉得挺有趣的, 因为歌词朗读把英语学习与音乐结合起来了, 学习英语不再那么枯燥乏味了, 等你把歌词都练习了一遍再去听那首英文歌的话, 感觉就会不一样。)*

E24: *It is full of fun. First, I like singing and lyric-reading helps us learn how to sing as well as how to study English. Second, learning English in this way can also help those who do not like sing learn English. (original Chinese: 我觉得英语歌词朗读非常的有趣。第一, 因为我本身就喜欢唱歌, 所以, 歌词朗读的话我们既可以学到唱歌, 也可以学到英文。第二, 对于不太喜欢唱歌的人来说, 他/她可能喜欢学英语, 所以说他/她在学习英语的时候也可以培养他学习的兴趣。)*

E25: *It is interesting because lyrics are easy to understand comparing to textbooks, which are hard to understand and read-aloud. (original Chinese: 我觉得有趣。因为歌词很通俗易懂, 不像课文一样难以理解和阅读。)*

E27: *It is interesting because I normally listen to some English songs to practice my English. I think learning English with song lyric-reading is very good and I even have more interests in learning English lyrics. (original Chinese: 我觉得有趣。因为私下我都会听一些英文歌来练习英语, 然后老师这次又组织了这个*

歌词朗诵，我觉得这样读英语的方法特别好，自己也有更多的兴趣去学习英文歌词。)

E28: *It is full of fun because I like singing as well as reading English aloud.*

Besides, using a mobile application to learn is very convenient. (original Chinese: 我觉得有趣。因为我喜欢唱歌，也喜欢读英语。而且在手机上利用软件学习，这是非常方便的。)

Five students in CG (C13, C15, C20, C22, C27) echoed Theme 1 in their interviews. They also tended to relate the fun of lyric-reading to the fun of enjoying English songs.

C13: *I think it is interesting. The reason is that I like songs and it is easier for me to start learning from what I like. (original Chinese: 我觉得有趣，因为从我最喜欢的音乐出发，更容易上手。)*

C15: *I think lyric-reading is full of fun because I like English songs and their lyrics are more fun than textbooks. (original Chinese: 我觉得歌词朗读挺有趣的。因为平时都喜欢听英文歌，歌曲的歌词比平时的课文更有趣。)*

C20: *I think lyric-reading is full of fun because I like to listen to English songs. By doing lyric-reading exercises, I am more capable of memorizing what I have been taught in the stress courses. (original Chinese: 我觉得歌词朗读挺有趣的。因为我平时自己也喜欢听歌，有时候也听英文歌曲，通过歌词来练习，就会记住老师教过我们的这些。)*

C22: *It is interesting because lyrics bring me the coherent feeling which makes lyric-reading easy. (original Chinese: 我觉得有趣，因为歌词给我一种很连贯的感觉，会感觉读起来很顺口。)*

C27: *It is interesting because I like songs and it is easy to learn when following the theme of the lyric. (original Chinese: 我觉得还是比较有趣。因为本人比较喜欢听歌，然后练习的时候会跟着歌词的意思走，所以更容易记住。)*

As can be seen above, students from both groups tended to attribute the fun of lyric-reading to the fun of enjoying English songs. In terms of the positive responses to interview question 1, another more frequently addressed theme is that lyric-reading is more interesting and attractive compared to textbook-reading (Theme 2). They described textbook-reading as drab, boring and monotonous.

Theme 2 Lyric-reading is more attractive than textbook-reading

Although only two students in EG addressed this theme, they both compared lyric-reading with textbook-reading then gave conclusions that lyric-reading was more attractive.

E08: *It is interesting because lyrics are not as monotonous as textbooks. So it is more fun to read lyrics aloud. When you have fun, you would like to study. (original Chinese: 有趣。因为它的句子不是平常的英文课本的那种枯燥无味的，所以在朗诵的过程当中，比平时的课文更加有趣。有趣的话就更喜欢去学习。)*

E19: *Actually, lyric-reading is very interesting because it attracts my attention, and is not like textbook-reading, which is drab. (original Chinese: 我觉得歌朗读其实挺有趣的，因为它可以吸引我的注意力，就不像读课文，很枯燥。)*

Four students in CG addressed this theme in response to Q1, and they tended to describe textbook-reading as boring.

C01: *It is interesting because lyric-reading is not like textbook-reading, which is boring.* (original Chinese: 我觉得歌词朗读有趣, 因为相对于朗读课本, 歌词朗读不会显得很枯燥。)

C15: *It is very interesting as song lyrics are more interesting than boring textbooks.* (original Chinese: 我觉得歌词朗读挺有趣的, 歌曲的歌词比平时枯燥的课文更有趣。)

C23: *It is very interesting because English articles are hard to learn but lyric-reading can arouse our interests and is not boring.* (original Chinese: 我觉得歌词朗读还是挺有趣的, 因为我们用英语文章来学的话, 会觉得比较冗长, 用歌词朗读会激起我们的兴趣, 不觉得那么无聊。)

C29: *It is interesting because normally we study English with textbook-reading, which is not as fun as lyric-reading.* (original Chinese: 我觉得歌词朗读很有趣, 因为平时学习英文都是读课文, 没有读歌词有趣。)

Some other students expressed a similar feeling as materials in the textbook are too formal to read whereas lyrics are close to their daily lives (Theme 3).

Theme 3 Song lyrics are related to my daily life

Four students in EG addressed this theme and accentuated the close relationship between lyrics and daily lives made lyric-reading interesting.

E16: *It is interesting as many words of lyrics are those I am familiar with in my daily life.* (original Chinese: 我觉得挺有趣的, 因为它里面有很多单词日常很常见。)

E22 : *It is interesting. First, song lyrics are related to my daily life. Second, lyrics contain stories and I like to watch corresponding music videos, which attract my attention, before I do the lyric-reading learning. (original Chinese: 对我而言, 歌词朗读有趣。原因如下, 一, 歌词比较贴近生活。二, 歌词是比较有故事性的, 学习歌词会搜相关的MV 来看, 这样会吸引人。)*

E30: *Lyrics are interesting and attractive comparing to textbooks, and are more relevant to our daily lives. (original Chinese: 我觉得歌词朗读很有趣, 因为它相比书上很枯燥的课文, 更贴近我们的生活, 也更吸引同学们的注意力。)*

Theme 3 was echoed by only one student in CG.

C12: *Lyric-reading is interesting as it can relate to daily life, which is more acceptable. (original Chinese: 我觉得歌词朗读有趣, 因为它更贴近生活, 更能让学生接受。)*

Q2. "Do you think the song lyric-reading is useful? Why or Why not?"

In terms of this question, 56 students gave positive feedback. An important reason was identified as Theme 4, speaking opportunities expanded. In other words, joining this experiment enabled them to find a chance to practice spoken English, because normally they do not have classes that focus on speaking or pronunciation

Theme 4 Speaking opportunities expanded

Four students from EG echoed this theme and thought this was why song lyric-reading was useful for their English study.

E15: *Participating in this study increased my opportunities of speaking English.*
(original Chinese: 歌词朗读增加了我们口语的交流机会。)

E19: *It is useful because reading those lyrics and practicing with those virtual English teachers can help me improve my pronunciation a lot.* (original Chinese: 我觉得挺有用的, 因为我觉得读那些歌词, 和跟英文老师的对话, 可以严格地要求我英语的发音, 得到很大的提升。)

E27: *It is useful. Normally, I am afraid of speaking English because my pronunciation is not good. This opportunity helps us practice our pronunciation and is useful.* (original Chinese: 当然有用。平时我们学英语的时候, 都不敢开口说英语, 因为自己的口语太难听, 都不敢张口说。这次得到这个机会, 让我们锻炼, 对我的帮助还是有的。)

E29: *It is very useful as it helps us practice our speaking skills and make us relaxed.*
(original Chinese: 挺有用的。它可以锻炼我们的口语也能让我们放松。)

Two students in CG addressed Theme 4 and one of them (C19) even gave an example to explain the reason.

C03: *Lyric-reading helps us practice English pronunciation.* (original Chinese: 朗读歌词可以帮助我们练习英语口语的发音。)

C19: *It is useful. Before receiving this type of instruction, I did not know how to speak in English. After this study, I have improved my pronunciation. What impressed me most was how to pronounce “to” according to English stress rules.*
(original Chinese: 有用的。之前都不怎么开口说英语。这个学习之后, 纠正了很多发音, 印象最深就是介词to的读法。)

In response to Q2, four students (E04, E20, E21, E28) from EG mentioned the importance of feedback on Speak English More which was identified as Theme 5, ASR feedback is useful. All of them claimed that the ASR feedback helped them check their errors easily, therefore their pronunciation skills were improved. In contrast, none of students from CG has addressed the peer-feedback they received.

Theme 5 ASR feedback is useful

E04: *Lyric-reading on my mobile phone is very useful. It improves my English stress performance as the scores of exercises are getting better than before. The feedback also shows my errors to remind me of self-correcting. (original Chinese: 手机上歌词朗读非常有用, 不仅可以提高自己的英语重音, 看到分数一次次上升, 在对比下, 可以知道前面哪些地方是不足的, 自己提升自己。)*

E20: *The answer is affirmative and it is useful. I think the two main merits of using this mobile application are the model pronunciation of native speaker English teachers which we could imitate, and the feedback it supplies. The feedback shows us which word we did not pronounce correctly and visualize our errors with different colors. We then repeat practice that sentence. (original Chinese: 答案是肯定的, 当然是有用的。这个APP 两个最大的优点我认为是, 第一个有外教的发音, 让我们在学的时候可以模仿。第二就是这个APP 可以根据我们读的情况给予评分, 并且会提示我们有哪些单词读得不够标准, 会用不同的颜色给我们进行一个视觉上的判断, 这样我们会一遍一遍重复读那个句子。)*

E28: *I think it is useful. The mobile app helps us improve our speaking skills by imitating those model pronunciation recordings built within. (original Chinese: 我觉得有用。在手机上可以模仿那些人的发音, 对我们的口语是非常有帮助的。)*

In terms of Q2, students from both groups mentioned that lyric-reading was useful because lyrics were easy to read and learn compared to learning materials from textbooks. This is a viewpoint that is identified as Theme 6.

Theme 6 Lyrics are easy to read

E09: *It is useful, particularly for oral English. Articles are hard to read aloud comparing to lyrics, which are much shorter. (original Chinese: 我觉得是有用的, 尤其对于英语口语。 如果通过文章的句子来练习会显得麻烦, 很难练, 歌词比较短。)*

C23: *Lyric-reading is very useful because textbook-reading is too difficult. (original Chinese: 我觉得歌词朗诵挺有用的, 如果用其它的文章的话, 会觉得它太复杂了。)*

C29: *It is useful as what you have learnt from the courses could be applied into lyric-reading exercises easily. (original Chinese: 我觉得有用, 因为在歌词朗读课上学到的知识可以轻松地运用到朗读中。)*

Another interesting finding in terms of Q2 was stated by four students (E13, E14, E21, E22). They all thought that lyric-reading was useful because it helped them learn some new words. This is a finding identified as Theme 7.

Theme 7 Vocabulary size expanded

Theme 7, which is out of the initial expectation of the present research, was only echoed by students from EG. Although two groups were sharing the same copies of song lyrics for stress learning, none of the students in CG addressed Theme 7. One

student from EG (E07) addressed this theme in response to Q1, and other students (E13, E14, E21, E22) echoed this theme in terms of Q3.

E13: *It is useful because I have improved my spoken English and expanded my vocabulary size too via lyric-reading learning. (original Chinese: 我觉得有用。因为在歌词朗读中，可以学到一些口语，也可以学到新的单词。)*

E14: *It is useful because you could learn grammar, English stress and new words from English lyrics. (original Chinese: 我觉得有用。因为在英文歌里，可以学习别人的一些语法，重音和一些平时不知道的词汇。)*

E21: *It is useful because I have learnt some new words including how to pronounce them. (original Chinese: 我觉得相对而言比较有用。因为我会接触一些新的词语的读法，会学习到一些新单词。)*

E22: *It is useful because I could learn some authentic idioms (original Chinese: 我觉得很有用。歌词里的一些词组是非常地道的，会通过学习歌词朗读来了解到英语里面相关的地道用语。)*

Q3. “Are you satisfied with your stress learning achievement? Why or Why not?”

48 participants expressed positive feedback to this question. Most of them mentioned that, before receiving the instruction, they had nearly no knowledge about English stress or they only knew simple rules of word stress; after the experiment, they have learnt the principles of English stress. Their English stress performance was improved (Theme 8).

Theme 8 English stress performance improved

Seven students (E07, E08, E17, E21, E22, E24, E29) from EG addressed Theme 8 in the response to Q3. Knowing how to place stress in words and sentences made them feel satisfied towards lyric-reading learning.

E07: *I am very satisfied. I knew nothing about English stress before but now I can at least distinguish where stress is when speaking English. (original Chinese: 非常满意。在此之前对重要一点都分不清楚，至少现在读英语，讲口语的时候，能分辨重音。)*

E08: *I am satisfied because I did not know there was English stress. But after receiving the instruction I have known and I think I should pay more effort on learning it. (original Chinese: 满意。因为之前不知道有英语重音这种说法，通过学习英语重音之后，就知道了这方面的知识，但是我觉得还应该更加努力地学习。)*

E17: *I am satisfied because I developed my performance of English stress. (original Chinese: 比较满意。因为从不懂到现在会有意识地去注意重音的读法，所以还是比较满意的。)*

E21: *I am satisfied because our prior English teachers did not emphasize where to place stress. After the learning, I know what those stressed words are in speaking (original Chinese: 相对而言比较满意。以前我们英语老师教学都不会强调哪一些音节该重读。通过重音学习，我知道了哪一些单词该重读。)*

E22: *I am satisfied. I only knew word stress and some pieces of the English stress rule before. This time, the learning is more methodical in terms of word stress, sentence stress, and stress rule for both content words and function words. (original Chinese: 满意。之前我对重音的理解只局限于音标之上，而且只用自己不完整的规律去理解重音，而这次学习重音就比较系统。这次学习不仅*

局限于单个词，还从句子上，短文内容上，学到了虚词还有实词之类和在句子中的弱读式和强读式。)

E24: *I am satisfied because my prior teachers never taught us English stress. We pay attention to tests, but those tests do not examine English stress. Therefore, I have learnt a lot in terms of English stress this time and I am satisfied. (original Chinese: 很满意。因为老师从来没有给我们说过英语重音，只注重考试，考试也不考重音。所以在这次英语重音的学习上我学到了很多，我很满意。)*

E29: *I am satisfied because I did not know English stress before but after study I even know there are strong forms and weak forms of words in speaking. (original Chinese: 挺满意的。因为平常都不知道有重音这种说法，学习重音后才知道重音有弱读与强读。)*

As discussed in Chapter II, most Chinese college non-English majors are studying English in an exam-oriented system where they do not pay attention to what the English tests are not focusing on. The response of E24 to Q3 reflects this phenomenon.

There were also seven students (C20, C21, C25, C27, C28, C29, C30) in CG addressing Theme 8, and their statements do reflect the fact as stated in 2.4.2 that teachers in China are unenthusiastic about teaching prosody, and Chinese college students lack the chances of learning stress in the traditional classroom setting.

C20: *I am satisfied because I have learnt a lot about what is English stress and how to stress in speaking. Before this learning, I can not tell what English stress is. (original Chinese: 满意。因为我之前直接分不清什么是重音和重音发音的位置，但是我学习了这个之后，就懂了很多。)*

C21: *I am satisfied. I never paid any attention to English stress before this learning. Now, I would like to learn and focus on English stress.* (original Chinese: 满意。以前我从来不会在乎重音, 这次学习以后, 我发现我会去了解 and 重点看重音。)

C25: *I am satisfied. I knew nothing about English stress and how to stress in speaking. I am happy that I have learnt English stress and gained a little improvement after receiving the instruction* (original Chinese: 比较满意。我以前完全不理解重音, 也不知道怎么把重音发出来, 通过老师的教导, 我能够有一点改进和收获也是很开心的。)

C27: *I am satisfied because I did not know English stress before. After receiving the instruction, I know what English stress is, where to stress and where not to stress.* (original Chinese: 比较满意。因为以前没注意过重音也不知道什么是重音, 通过这次学习, 知道了重音是什么, 哪些地方该放重音, 哪些地方该弱读。)

C28: *I am kind of satisfied. I think learning English stress is important. After taking those courses, I have learnt a lot about English stress, which I did not know and understand. I do make some achievement in terms of English stress performance.* (original Chinese: 还算满意。我感觉学习重音真的很重要, 听了这么多课, 也学到很多东西, 包括以前不知道的和不懂的, 都在重音学习上取得了一定的成果。)

C29: *I am satisfied very much because I had no idea about English stress and strong forms and weak forms of pronunciation. Since I have learnt those principles, I can apply that knowledge in speaking.* (original Chinese: 我很满意。因为之前

我从来不知道英语还有重音，强读弱读的区别，自从学习了它之后，我就能在读英语的时候就会要用到重音，强读，弱读这些。)

C30: *I am satisfied because this is my first time of learning English stress. My teachers did not teach me English stress and only told us where a stressed syllable was within a word. (original Chinese: 比较满意。因为我第一次接触到重音学习，之前都没有老师给我们讲过重音，只讲过某个单词的重音在哪。)*

In terms of Q3, responses from E02 and E06 show an interesting point view which is identified as Theme 9.

Theme 9 Listening comprehension improved

E02: *I am satisfied because learning English stress improves my pronunciation and listening comprehension. (original Chinese: 满意。通过重音学习，我对自己的发音或者听力中有很大的进步。)*

E06: *I am satisfied because after receiving the instruction, I am aware that pitches change on different syllables in a sentence and which part is emphasized in a sentence. Besides, even I can not understand the meaning of a sentence when taking listening exams, but I can tell which part this sentence is emphasized.*

(original Chinese: 满意，因为学习了重音之后，可以知道每一个句子不是每一个音的音调都一样。学习了之后，可以知道一个句子自己强调的部分是哪个部分，或者英语听力上面，一个句子不完全懂它的意思是什么，但可以知道它强调的东西。)

Although Theme 9 was only echoed by two students based on their personal learning experiences, and the relationship between English stress and listening comprehension is out of the scope of the present research, however, Theme 9 suggests a

new path for future study related to English stress performance among Chinese college non-English majors.

Q4. “Will you continue reading lyrics for stress learning? Why or Why not?”

In response to Q4, 54 students claimed that they would continue reading lyrics for English stress learning for various reasons, and most reasons are related to their English learning goals (Theme 10).

Theme 10 Keep reading lyrics to achieve learning goals

Three students from EG addressed Theme 10 in their statements for lyric-reading exercise can help them improve their English learning.

E20: *I will continue reading lyrics for stress learning because practice makes learning perfect. (original Chinese:熟能生巧。)*

E22: Lyric-reading relates to my life and lyrics are written with stories, which attract me. So I will learn English by lyric-reading. (original Chinese:歌词朗读贴近生活，还比较有故事性，能够吸引我进去。会通过学习歌词朗读来学习英语。)

E26: *I like sing as well as learning English. When combing song lyrics with English learning, it's half effort with double effects. (original Chinese:我会。因为我喜欢唱歌，也喜欢英语，把两者结合起来的话，会达到事半功倍的效果。)*

Four students from CG echoed Theme 9 by specifically pointed out that they wanted to improve their spoken English via song lyric-reading.

C01: *Lyric-reading helps me improve my spoken English, and speaking fluently in English will bring me benefits in my future work. (original Chinese: 进行歌词朗读可以提高我们的英语口语, 提高英语口语在以后的工作中会有很大的帮助。)*

C18: *I will because lyric-reading can enhance what I have learnt in terms of English stress, and will help me improve my spoken English. (original Chinese: 会, 我觉得歌词朗读可以巩固以前重音学习的内容, 可以继续提高我的英语口语。)*

C20: *I will because I want to improve my spoken English (original Chinese: 会, 因为我想提高我的口语。)*

C24: *I will because learning English stress could improve my spoken English. (original Chinese: 会继续学习。因为英语重音学习会提高我的口语。)*

In response to Q4, five students from EG (E10, E14, E17, E25, E28) contributed their motivation of doing lyric-reading to the convenience of MALL (Theme 11).

Theme 11 MALL is convenient

E14: *Although I am not an English major, but if I have time I will continue using that application to do lyric-reading to improve my spoken English. (original Chinese: 有时间的话, 我也会继续用那个 App 对自己的歌词朗读进行。虽然不是英语专业, 可以对自己的口语有一些帮助。)*

E25: *I will because I like listening to songs and have saved many English songs on my mobile phone. I will keep doing reading-aloud exercises to improve my*

spoken English. (original Chinese: 会。我喜欢听歌, 我的手机上有很多英文歌, 每天听的数量也不少。我会继续不定量的地去读一些英语, 继续我的英语口语, 练就自己。)

E28: I will because lyric-reading on mobile phone is very convenient whenever you are free. It is a way to improve my spoken English. (original Chinese: 会, 因为在手机上进行歌词朗读是非常方便的, 而且有空的时候都可以学习。可以通过这样的练习来提高自己的口语。)

E17 admitted that she was in favor of MALL but her preference was to use dub application to improve her pronunciation.

E17: I prefer to use the mobile application "Fun Dubbing" to learn English as it is more fun to dub movie clips and imitate the pronunciation or intonation of the original clips. (original Chinese: 用手机APP学习英语我比较喜欢“英语趣配音”, 因为这个比较有趣, 训练的内容都是电影里的场景, 我会有意识地去模仿电影里的语音, 语调。)

E10 even suggested watching English TV dramas as an alternative for English stress performance so as to avoid the boredom caused by monotonous learning method.

E10: I will continue learning English stress, but will not only use lyric-reading, because taking one instruction in a long duration will make learning boring. So we could use other ways of learning such as watching English TV dramas. 应该会继续, 但不会只用这一种方法来学习, 毕竟每天千篇一律的学习, 用同一种方法的话, 也会变得枯燥。可以结合看美剧或者其它的方式, 学习也能坚持更久。)

Negative feedback of the interview

It is clear to see that the majority of students were fond of lyric-reading for the popularity of English songs and its close-to-life attribute. However, in response to Q1, two students (E01 and C09) expressed contrary opinions (Theme 12 and Theme 13) :

Theme 12 Not interested in m-learning

E01: *Personally, I do not like mobile learning and I prefer learning in a traditional classroom with teachers guiding by my side, which I think is the useful way.*

Therefore, I do not like the application, Speak English More. (original Chinese: 对我个人而言, 我就不喜欢网络学习, 我还是比较喜欢传统的那种课堂学习, 老师在一旁指导, 我觉得这样对自己的学习才有用, 所以我不喜欢歌词朗诵这个软件。)

Theme 13 Not all songs are interesting

C09: *It depends on what kind of songs you like. If you like that kind of songs, you will find them interesting. If they are not the songs I like, I will find them less interesting. (original Chinese: 要看是什么歌词。比如说你喜欢哪种种类的歌。如果你喜欢那种歌, 你才觉得它有趣, 如果不是我喜欢的, 我会觉得可能不是那么有趣。)*

Even they both showed negative feelings toward the instruction they have received, they still gained improvement in English stress performance according to the learning outcomes of reading-aloud tests. Their scores of pre-test are 23 (C9) and 32 (E1), and scores of post-test, 32 (C9) and 53 (E1).

Negative feedback towards those four interview questions account for only a small part of all responses. However, they do reveal a limitation of this research, which is the practice duration of EG can not be strictly controlled. Students in EG

were asked to follow the instruction to do the lyric-reading exercise for 45 minutes per week. In the response to Q3, five students from EG (E15, E16, E20, E25, E27) stated that they were not satisfied with their stress learning achievement because they did not strictly follow the instruction, indicating that they did not complete the 45-minute-long video course or exercise (Theme 14).

Theme 14 Lack of learning or practice

E15: *I am not satisfied as I spent not enough time on learning English stress.*

(original Chinese: 我花在这上面的时间很少, 对自己不满意。)

E16: *I am not satisfied as I did not practice as often as I could.*(original Chinese:

对取得的成就不满意, 因为我没有经常练习。)

E20: *I am not satisfied because I have only studied three video courses carefully, and I did not review what I had learnt.* (original answers in Chinese: 不够满意。我只认真学习了三节视频课, 下去也没有巩固复习。)

E25: *I did not spend enough time on learning so I have not gain much*

improvement. (original answers in Chinese: 我没有真正的付出, 所以收获得很少。)

E27: *I am not satisfied as I did not spend enough time on learning and exercises.*

(original answers in Chinese: 不满意, 因为我没有花很多时间在这个练习上, 练习得特别少)

Surprisingly, four students from CG (C06, C09, C11, C13) who were not satisfied with their achievement also echoed Theme 14, admitting that they did not pay enough attention to learning or exercising when taking the lyric-reading instruction in the classroom.

C06: *I am not satisfied as I did not spend enough time on exercises. (original answers in Chinese: 对取得的成就不满意, 因为练得太少了。)*

C09: *I am not satisfied as I did not spend enough time on learning. (original answers in Chinese: 不满意, 因为课上得太少了。)*

C11: *I am not satisfied because I did not spend enough time on it and have gain little improvement in English stress performance. (original answers in Chinese: 对取得的成就不满意, 因为个人原因, 没有花太多时间在这上面, 对重音的掌握不好, 就初步了解了一些。)*

C13: *I am not satisfied as I did not pay enough time and attention on learning it. (original answers in Chinese: 不满意, 一, 学不够, 二, 不扎实。)*

4.3.2 Findings from the interview related to Research Question 3

As stated in the beginning of section 4.3, findings from the interview serve to gain students' feelings and insights in order to fully answer Research Question 3. Demonstrated from 4.3.1, in response to four interview questions, the majority of answers is positive. Those positive answers show supporting evidence to the development of MALL-based lyric-reading instruction.

Based on the interview data, 14 Themes are identified into positive and negative categories. This study believes that, the positive feedback (Theme 1 to Theme 11) is the evidence to support the development of the MALL-based lyric-reading instruction. However, the negative feedback (Theme 12 to Theme 14) is those aspects that need to be aware of and avoided in the future development of the MALL-based lyric-reading instruction. Therefore, four suggestions for the development of the MALL-based lyric-reading instruction based on the interview data are summarized:

1. Lyric-reading should be kept as the core component because it is well accepted by students, and it is effective and useful for improving English stress performance according to the findings from section 4.1 as well as the interview. In the selection of song lyrics for students to read, those that are related to their daily lives are more preferred. In other words, lyrics that reflect college campus life or youth are more acceptable than other themes.

2. Model recordings (by native speakers) should be kept and enriched. Although there were only two students from EG (in terms of Theme 5) mentioned how Model recordings help them improve their pronunciation, this awareness is in accord with Adams-Goertel's (2013, p. 120) and Liu's (2015, p. 596) observation that "one of the most formidable challenges facing the L2 learner is their language instructor". It is important to recognize that many language learners only hear the target language modeled by their instructors, who are non-native speakers. Those instructors may also suffer from insufficient prosodic skills. In other words, L2 learners such as Chinese college non-English majors are longing for native-speaker teaching in pronunciation or speaking learning. Based on the tests results and the interview, students in EG do benefit from those model recordings. Therefore, for the future development of the MALL-based lyric-reading instruction, model recordings recorded by native speakers need to be kept, and enriched, such as adding "reading tips" explained by a native-speaker English teacher with different reading speed demonstrated.

3. ASR feedback is useful but needs to be enhanced. As introduced in Chapter III, one prominent difference between EG and CG is the feedback. Although there is no finding shows that ASR feedback is better than peer feedback from the reading-aloud tests and the ARCS survey, responses from the interview do reveal a fact that only students from EG claimed that they had benefited from the feedback, and none of students from CG mentioned feedback. Therefore, ASR feedback needs to be kept in the MALL-based lyric-reading instruction. However, due to its limitation, i.e. that only scores are provided and no acoustic information presented, the feedback of MALL-based lyric-reading instruction might need to be upgraded into mixed-feedback (See 5.3.3).

4. Surveillance of the completion of the lyric-reading exercises should be more stringent. In the experiment, every participant in EG was required to do the lyric-reading exercise for 45 minutes per week and then submitted their last exercise recordings (Speak English More can only save one piece of recording of each lyric-reading exercise). As reflected in the interview, five students from EG admitted that they did not strictly fulfill the 45-minute requirement, and they also thought the lack of learning or practice led to the unsatisfactory learning results. Based on their reading-aloud test scores, all of their post-test scores are lower than the mean score of EG. Therefore, it is reasonable to suggest that, a built-in timer needs to be designed and added in the lyric-reading exercise application, in order to examine and ensure students have completed the exercises up to the time required.

4.4 L1 Transfer Influence

Another issue which attracts attention is the error rate of the stress placement on the pronoun “he”. Based on the data analysis results, over 55% participants in both groups stressed “he” in the pre-test where it should not be stressed, and the error rate did not decrease in the post-test. As one kind of function words, pronouns in English are usually pronounced as weak forms and are unstressed. This principle was taught in the lesson of “Strong forms and weak forms of function words (1)” and reviewed in the lesson of “Sentence stress (1)”. However, participants appear to gain no improvement in acquiring this rule even after the treatment. This phenomenon echoes what Deterding (2006, p. 194) outlined in his study, i.e. that Chinese speakers have the tendency to stress pronouns in English speaking. It is certainly true that this tendency is affected by the transfer of their L1 pronunciation skills as pronouns are normally stressed in spoken Chinese. There seems to be a need to focus on the L1 transfer influence in the future investigation of English stress performance.

4.5 Chapter summary

This chapter describes procedures and findings of the Main Study, as well as answers three Research Questions and two hypotheses. Findings from the learning outcomes reveal that students who were receiving MALL-based lyric-reading instruction gained significant improvement when comparing to those with in-classroom lyric-reading instruction, although there was no difference in the content of stress lesson and lyric-reading materials between the two groups. Findings from the ARCS survey show that students in EG hold a higher level of motivation towards English stress learning and the underlying causes are unveiled based on the analysis of interviews. Findings from the interview offer supportive feedback to the future development of the MALL-based lyric-reading instruction.

CHAPTER V DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The main purpose of this chapter is to conduct further discussions based on the findings. Hence, summary of the research, and implication of findings are provided. In addition, the limitations of the present research are outlined here, followed by recommendations to guide the future research.

5.1 Summary of the research

The present research, which integrates song lyric-reading and MALL with English stress learning into a new type of instruction, the MALL-based lyric-reading instruction, seeks to address the issue of insufficient mastering of English stress among Chinese college non-English major students, as well as to make an effort to

enrich the research in terms of Chinese students' use of MALL. The experimental results show that the use of the MALL-based lyric-reading instruction can produce better learning outcomes than lyric-reading study undertaken in a traditional way. The ARCS survey results confirm that participants with the MALL-based lyric-reading instruction reported a high level of learning motivation in terms of Attention, Confidence and Satisfaction. According to the interviews, participants in EG thought song lyric-reading with MALL was more fun than textbook reading, which they regarded as boring and sterile. In contrast, participants in the CG stated that reading lyrics was fun but reading in front of others was still a challenge which made them uncomfortable sometimes. The strong endorsement of MALL from the participants of the present study confirms its value as a component of courses in spoken English, particularly in situations where class sizes are large. The results also raise questions about whether segmental features of pronunciation should be included within the scoring system of prosodic features with regard to stress, and the L1 pronoun transfer influence on English stress learning.

5.2 Limitations of the present research

Although this research yielded promising results in terms of using MALL-based lyric-reading instruction to motivate college non-English majors to enhance English stress performance, some limitations can not be avoided and should be acknowledged.

First, as mentioned in Chapter IV, several participants from both EG and CG “confessed” in the interview that they did not strictly follow the instruction, particularly in completing the 45-minute-long exercise. Lack of stringent surveillance of participants' completion of exercise seems to be a limitation of the present research.

Second, although the ASR-based scoring system can give participants visual feedback in terms of their pronunciation, the feedback is not as rich as that of Praat. In other words, Praat gives specific description of English stress, i.e. that the vowel duration, intensity and pitch of a syllable in waveforms, whereas Speak English More

only gives general description of pronunciation such as scores and marks of mispronounced words. As introduced in Chapter I, English pronunciation comprises two parts, segmentals and suprasegmentals; English stress, along with intonation and rhythm, constitutes suprasegmentals. It would be better for MALL applications to provide specific acoustic information as Praat does to users, for them to learn pronunciation in terms of certain features from segmentals or suprasegments they want to acquire. However, as pointed out by Kommissarchik and Kommissarchik (2000, p.86), it is hard for a user to read and comprehend standard visual feedback such as waveforms and spectrograms from a speech recognition software. They claim that the easy-to-understand feedback is what the speech analysis technology is developing for. Although the feedback from Speak English More seems to be the easy-to-understand type, as discussed before, it lacks the richness in terms of a specific feature of pronunciation. Therefore, there seems to be a gap between the types of feedback from what is comprehensible to a user, to what is useful for a user. The feedback issue will be further discussed in next section.

Third, although the potential of MALL in language education generally appears to lie beyond our expectations, the long-term effectiveness of MALL-based lyric-reading instruction and how it might best be targeted merit further research, preferably through longitudinal studies, such as one semester, with large populations of learners.

5.3 Implication for English teaching and learning

Findings of the main study point to several significant implications for English teaching for Chinese college non-English majors.

5.3.1 MELL

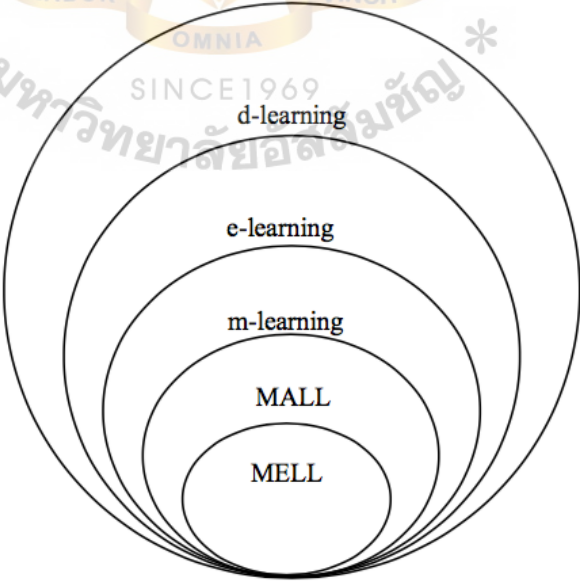
As discussed in Chapter II, MALL is a specific type of learning model within m-learning which is under e-learning of d-learning. However, with a development of a subfield of MALL focusing on English learning, Elaish, Shuib, Ghani and

Yadegaridehkordi (2017) in their recent study highlight Mobile English Language Learning (MELL) as the next generation of learning model within MALL. Their proposal seems to further develop the sphere of d-learning family (Fig. 5.1).

Figure 5.1 The place of MELL within other relevant learning models.

MELL is proposed to provide a profounder understanding of in which way MALL can be English carefully reviewing 69 articles between 2010 Elaish et al. that the research conducted with whose L1 is

applied to assist learning. By selecting and copies of published and 2015, (2017) find out majority of (50.85%) is participants Chinese to help



them improve English performance. It is then clear that using MALL for English learning purpose has become a trend within the Chinese English education field.

However, most studies (50.72%) aim to address English skills as a whole package, the most focused area is vocabulary (21.73%) and speaking or pronunciation is barely mentioned individually. Besides, motivation (37.68%) is ranked as the biggest problem that learners faced, and is the only problem that is reported annually. Based on their evidence-based discussion, the present research seems to make an effort to fill the blank in MELL in terms of motivating students to enhance their pronunciation learning, as well as rectify the paucity of research on MELL field.

From the perspective of the present research, distinguishing MELL from MALL is necessary for exploring the effectiveness of the modern mobile technologies for English learning, particularly in terms of pronunciation learning. This is because as revealed in the literature review of the present research, and in the answers to the interview questions, speaking skill, as one of the most principal English abilities, has been ignored by most Chinese college non-English majors. In order to help them gain improvement in speaking, fostering their pronunciation skills plays a crucial role. Due to the fact that pronunciation comprises of many features, such as vowel sounds, consonant sounds, English stress, intonation and rhythm, it is worth trying to cultivate their pronunciation skills step by step. Therefore, giving English learning on MALL a clear definition helps not only educators and students, but also researchers and scholars, take a right path to walk on. It is highly possible that in the future, there will be another sphere, such as Mobile Assisted Pronunciation Learning (MAPL), existing within MELL as shown in Fig. 5.1

5.3.2 Song lyrics for vocabulary learning

As mentioned in Chapter IV, in response to interview questions, some students stated that lyric-reading helped them expand their vocabulary size. This is a finding which is out of the initial expectation of the present research design. However, this finding seems to be accord with what Eken (1996) advocated in her study related to using songs in the language classroom. Among the eight reasons she enumerated for applying songs in foreign language teaching, the first one is that a song may be used to

present new vocabulary (p. 46). However, concerns about using songs in classroom teaching concentrate on the discipline problem it may bring as the music of songs may create chaos or students may be reluctant to sing (Kusnierek, 2016, p.24).

Based on students' feedback towards the interview from the present research, lyric-reading seems to be a potential method for vocabulary learning, because what brings a learner an opportunity for expanding vocabulary size in a song are lyrics, not the melody. This is what Eken (1996) suggested but did not elaborate. Besides, the negative effect of using songs in the classroom may be offset by lyric-reading as there will be no music playing in lyric-reading. The difference between lyric-reading and traditional text-book reading lies in the reading materials not in the form of reading method. According to the conducting of the present research, there was no chaos caused in the classroom with lyric-reading. However, as both pronunciation improvement and vocabulary improvement rely on the frequent encounter with the target language (Cobb, 1997; Horst, Cobb & Meara, 1998; Cortese & Khanna, 2007), lyric-reading for vocabulary learning seems to be worth further exploring .

5.3.3 Mixed-feedback

In the present research, two types of feedback for participants' self-correction in terms of English stress learning were adopted. One is ASR-based feedback on Speak English More in EG and another is peer-feedback from the partner in pairs in CG. In response to Q2 of the interview, while there were participants from EG initiatively giving positive comments to the feedback on Speak English More, none of the participants from CG have mentioned the peer-feedback they received.

Compared to the peer-feedback, ASR-based feedback seems to be more accurate, easy to read, timely, and helping participants avoid suffering embarrassment in front of their classmates. This finding may convey a plausible reasoning that traditional learning in the classroom has less effect on pronunciation, particularly in the feedback part. However, in a study conducted by Lee (2008) using MyET (My English Tutor), a voice-recognition based program, to help college students whose L1 is Chinese learn

English pronunciation, a different voice was raised. MyET can record and give students immediate and detailed feedback in real time as what Speak English More provides to participants in the present research. Lee (2008) has found that, although students were in favor of the feedback provided by MyET, they still preferred the feedback from a human teacher who can be interacted with (p. 103). This point of view was also echoed by a student (E1) during the interview as demonstrated in Chapter IV. Lee (2008) has subsequently suggested that the traditional teaching with a teacher, and the technology-based teaching may be complementary (p. 103). In other words, even ASR-based feedback on MALL seems to have many merits, feedback from a real teacher can not be ignored or underestimated. This is because technologies nowadays are still not intelligent enough and the feedback they provide seem to be mechanical, but a real teacher can give students more sophisticated feedback with a real interaction. Moreover, as discussed in section 5.2, current display of feedback on Speak English More lacks the detail of specific features of English Stress, and Praat, which can show those features, is not easy to use. Therefore, it may be reasonable to suggest that, for students' self-correction in terms of pronunciation learning, such as improving English stress performance, the mixed-feedback, which integrates ASR-based feedback, Praat-based analysis with feedback from real teachers, should be designed and applied.

5.3.4 Pseudo-environment for English language teaching

It is well known that the environment is fundamental in language teaching. Normally when teaching environment is discussed under the English language teaching background, it refers to a place which is tangible, such as a classroom where a teacher stands in front of a blackboard and students sit on their chairs. However, in the EG of the present research, English stress video lessons were recorded by the teacher with a computer, and then sent via QQ to students to store, watch or replay on their mobile phones. The teaching environment of the MALL-based lyric-reading

instruction for EG seems to be intangible and totally different from the teaching environment in the in-classroom lyric-reading instruction for CG. Some may argue that the teaching environment for EG is where the students using their phones to watch the video courses, however, this view can not hold true as the environment which really influences the teaching process is the pseudo-environment.

Pseudo-environment was firstly proposed by Lippmann (1922) to depict how media influence audiences. Conventionally when MALL has been discussed in the educational field, the majority of discussion is from either pedagogical or technological perspective. The medium nature of mobile phone appears to be negligible. As the main component of MALL, the mobile phone is a medium in itself and has contributed to the increased consciousness and idea of personal media (Oksman, 2010). Lippmann (1922) believes that a person's behavior is stimulated by the his/her pseudo-environment, which they construct in the mind according to what they perceive from the mass media, and then is acted upon in the real world. This is a theory that has a principal influence for scholars and researchers to analyze people's reaction towards media. Scholars such as Fujitake (1968) even distinguish pseudo-environment in a broad sense and a narrow sense. The former means a subjective perception of a real environment, which corresponds to Lippmann's (1922) claim, and the latter refers to the media's portrayal of reality. After conducting a thorough review of the literature on people's perceptions among the real environment, the world depicted by media, and the pseudo-environment in their minds, Fujitake (1968) then concludes that people are more inclined to form a pseudo-environment in the mind which is formed by what they have perceived from the media, and then equate the pseudo-environment with the real environment.

The key concept of pseudo-environment contends the fact that it is the cognitive reality rather than the physical reality that is of prime importance to influence people's mind activities. Along with this viewpoint, students in EG with MALL-based lyric-reading were taught in a pseudo-environment created by the multi-media content provided by the mobile phone, and it was the pseudo-environment that affected students to perceive the stress skills they needed to learn and then acted upon in the

real word. Therefore, teaching and learning happened in this pseudo-environment, not in the physical environment where the students were watching the videos.

Distinguishing different types of environment is necessary and important as the English teaching environment for Chinese college non-English majors seems to be hard to fulfill students' needs, particularly in speaking or pronunciation teaching. Reported by Meng (2009), the typical English class for Chinese college non-English majors is in a large size, normally with over 80 students, precluding students from gaining improvement in the quality of spoken English. However, based on the findings from the present research, it is reasonable to propose that pseudo-environment could be implemented for English teaching in order to address and fix the over-sized in-classroom teaching environment issues for speaking or pronunciation teaching, because there is no "crowded" problem in the pseudo-environment and every student gets even chances to speak and practice.

5.4 Recommendations for future research

According to the 41st China Statistical Report on Internet Development (CNNIC, 2018), by December 2017, 15.8% Internet users in China access the Internet for online education, where students, 1/5 of which are in colleges, are the largest group of Internet users with mobile phone the main device they use to access the internet. If a decade ago, facilitating oral skills via mobile learning seemed to be in the infancy, nowadays, with the progress of mobile technology and the growth of mobile learners as well as the interface-friendly, easy to use language learning applications, MALL captures more attentions from both EFL learners and educators, and has been integrated into language learning at various levels. This highlights the great potential of the use of MALL, which appears to lie beyond our expectations.

However, the future development of MALL in terms of pronunciation teaching in China appears to be uncertain as studies conducted to examine Chinese students' use of MALL are still scarce (Zou, Yan & Li, 2018). More studies are needed in the future. Thus, in providing a perspective on improving pronunciation learning on MALL, a

number of viewpoints is summarized (Table 5.1) in terms of how MALL based lyric-reading instruction can be developed to enhance learning outcomes.

Table 5.1 Summary of key suggestions for the design of future research.

Item	Suggestions for:	Contents:
1	Research goal	<div>1. Using MALL-based lyric-reading instruction to learn English stress learning, particularly in helping Chinese non-English major get rid of the L1 pronoun transfer influence.</div> <div>2. Using MALL-based lyric-reading instruction to learn English rhythm.</div>
2	Research approach	Mixed methods; both qualitative and quantitative data are needed to be collected and analyzed.
3	Research design	Quasi-experiment with at least two groups (a control group and an experimental group).
4.	Learning environment	Enhanced-pseudo-environment
5.	Learning feedback	Mixed feedback which integrates ASR-based feedback, Praat-based feedback with feedback from real teachers.
6.	Surveillance of students' self-paced study	More stringent. e.g., adding timer function (see 4.3.2).

Based on suggestions from Table 5.1, for the future studies on relevant fields, mix-methods are still highly recommended. As shown in Chapter III, quantitative data

confirmed the effectiveness of the instruction in terms of promoting motivation and enhancing stress performance, but qualitative data has gained students' feelings which revealed major limitations of the present research as reported in section 5.2. For the research design, it could be Quasi-experiment with at least two groups. Based on those suggestion and discussions in this section, several research scenarios are subsequently proposed for the future research, i.e. that to examine the difference of influence among ASR-based feedback, real teachers' feedback and mix-feedback on the performance of English stress; to conduct a study focusing on helping Chinese college non-English majors get rid of pronoun transfer in English stress performance; to study the cognitive difference of students towards real learning environment and the pseudo-environment with empirical findings; to investigate the effectiveness of MALL-based lyric-reading instruction for rhythm performance.

The learning environment for future studies conducted with the similar objectives of the present research could construct an enhanced pseudo-environment supported by mobile technology. "Enhanced" means to reflect more features of the real-environment, such as adding interaction function between students and teachers, or students with students, in order to motivate students to study. The learning feedback implemented could be mixed feedback as explained in 5.3.3 and the surveillance of students' self-paced study should be more stringent as explained in 4.3.2.

Besides, based on the findings in the main study, although students from EG achieved significant improvement, over 55% of them still made a mistake that was caused by their L1 transfer influence. It is highly suggested that for the future study, lessons and exercises focused on reducing unnecessary stress on pronouns should be added in. Moreover, it is worth trying using the upgraded MALL-based lyric-reading instruction to help students improve pronunciation performance, particularly in terms of another important feature of suprasegmentals, rhythm. This is because, as discussed in Chapter II, the contrast of stressed and unstressed syllables creates the rhythm of English (Brown, 1990). If students benefit from lyric-reading on MALL for improving English stress performance, they may also gain significant improvement in

terms of English rhythm with the same method.

5.5 Chapter summary

This chapter evaluates the contribution of the present research to existing research and concludes the limitations. This chapter also revisits the empirical findings from a broad view, then MALL, song lyric-reading, learning feedback and learning environment are further elaborated, followed with discussions to the development of the present research in terms of the setting of the research goal, research approach, research design, learning environment, learning feedback and the surveillance of students' learning on MALL. Those suggestions could be considered for the design of future studies which will be undertaken in the similar areas.



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Appendix A: Recruitment script

You may notice that after many years of English study, as a non-English major, word

stress and sentence stress in pronunciation are still concepts that you are aware of but not familiar with. In order to assist Chinese college non-English majors to be command of word stress and sentence stress in speaking, we would like to invite you to participate in this research, which introduces lyric-reading for English stress learning.

In this research, you will need to complete the following tasks:

1. Complete a pre-reading-test. This will take approximately 10 minutes.
2. Join a study group for English stress learning. The learning will take 90 minutes per week, 8 weeks in total.
3. Complete a post-reading-test. This will take approximately 10 minutes.
4. Complete a survey. This will take approximately 10 minutes. None of the information you provide in this study will be overly personal in nature.
5. Complete an interview with four questions. This will take approximately 10 minutes

This research is anonymous. Your participation is completely voluntary and is not connected to your course grades in any way. Results from this research will help us better design the instruction for English stress learning.

If you like to join this study, please fill the following blanks:

QQ number:

Gender:

Age:

Major:

招募词

同学们：

你们好。经过多年的英语学习，你有没有发现自己在开口说英语时，仍然是汉腔英语（Chinese-accented English）。这是因为我们在说第二语言的时候，会受到第一语言发音的影响。英语发音是有重读音节和弱读音节的区分的，汉语发音虽然也有轻重之别，但只是辅助性的。汉腔英语背离了英语特有的发音模式，想要改善这一现象，必须学习和掌握英语重音的发音技巧。作为非英语专业的学生，重音学习常常被忽视，现在，我们带来了一次免费的英语重音学习活动，通过这次学习，你可以改善汉腔英语口语，说英语时听上去更地道。

欢迎你加入重音学习。参加此次活动，你只需要完成以下任务：

- 1. 参加每周一次的英语重音课（45 分钟），持续八周。
- 2. 参与每周一次的英语重音练习（45 分钟），持续八周。
- 3. 参与一次课前测试（5 分钟）和一次课后测试（5 分钟）。
- 4. 您还有可能需要填写一张兴趣问卷（10 分钟）或参与一次采访（12 分钟）。

本次课程的学习和练习方式分为两种，一种是在传统的教室里进行（控制组），一种是在手机上进行（实验组）。你参与的方式会依据你分入的小组而决定，加入以后你会得到一个学号。本次学习全程是不记名的。你的参与完全是自愿的，参与与否都不会对的学习成绩造成任何影响。

感谢你的参与，这次学习的研究结果将有助于进一步完善我们的课程设计。

如果你愿意参与此次学习，请填写以下信息：

QQ 号：2246979767 性别：女
年龄：19 专业：化学

小组类别：实验组 小组编号：E02

A sample of Recruitment Script completed by a participant from CG (C04)

招募词

同学们：

你们好。经过多年的英语学习，你有没有发现自己在开口说英语时，仍然是
汉腔英语（Chinese-accented English）。这是因为我们在说第二语言的时候，会
受到第一语言发音的影响。英语发音是有重读音节和弱读音节的区分的，汉语发
音虽然也有轻重之别，但只是辅助性的。汉腔英语背离了英语特有的发音模式，
想要改善这一现象，必须学习和掌握英语重音的发音技巧。作为非英语专业的学
生，重音学习常常被忽视，现在，我们带来了一次免费的英语重音学习活动，通
过这次学习，你可以改善汉腔英语口语，说英语时听上去更地道。

欢迎你加入重音学习。参加此次活动，你只需要完成以下任务：

- 1. 参加每周一次的英语重音课（45 分钟），持续八周。
- 2. 参与每周一次的英语重音练习（45 分钟），持续八周。
- 3. 参与一次课前测试（5 分钟）和一次课后测试（5 分钟）。
- 4. 您还有可能需要填写一张兴趣问卷（10 分钟）或参与一次采访（12 分钟）。

本次课程的学习和练习方式分为两种，一种是在传统的教室里进行（控制组），
一种是在手机上进行（实验组）。你参与的方式会依据你分入的小组而决定，加入
以后你会得到一个学号。本次学习全程是不记名的。你的参与完全是自愿的，参
加与否都不会对的学习成绩造成任何影响。

感谢你的参与，这次学习的研究结果将有助于进一步完善我们的课程设计。

如果你愿意参与此次学习，请填写以下信息：

QQ 号：1769490448 性别：女
年龄：18 专业：应用化学

小组类别：控制组 小组编号：C04

Appendix B: A reading-aloud test for both pre- and post-test

Reading-aloud Test

Part 1. Read the Following Words.

- 1) argument 2) opinion 3) operation 4) Canadian 5) post office
6) creation 7) grandfather 8) economy 9) timetable 10) education

Part 2. Read the Following Phrases and Sentences, Paying Special Attention to the Schwa.

- 1) Milk or tea? 2) It's impossible. 3) young lovers.
4) have a look. 5) There is no future.

Part 3. The Following Pairs of Sentences in Part A are Exactly the Same, and Sentences in Part B are Different Responses to Those in Part A. Read Each Sentence in Part A Out with Regarding to the Response in Part B, Placing Stress on the Proper Word.

A	B
1) a. They bought two bottles.	Not three?
b. They bought two bottles.	Not cans?
2) a. I think that animal is a big cat.	No, it's a baby cat.
b. I think that animal is a big cat.	Not a dog?
3) a. Frank wrote the report.	No, he translated it.
b. Frank wrote the report.	No, Jack did.
4) a. Does she speak English?	No, Chinese.
b. Does she speak English?	No, but she can read it.

- 5) a. Mary wants to go on Monday. When?
 b. Mary wants to go on Monday. Who?

Part 4. Read the Following Sentences, Paying Attention to the Pronunciation of the Unstressed Forms of the Function Words.

- 1) Ask the girl. 2) Bring her flowers.
 3) Give me a new bike. 4) Tony told us a new story.
 5) I like apples and oranges. 6) Just as you do.
 7) What are you eating? 8) They can take a taxi.
 9) My sisters are at home. 10) I will bring it to you.

Part 5. Read Aloud the Following Paragraph, Paying Attention to the Sentence Stress. Before Reading, You Have to Predict the Unstressed Words and Stressed Words. Use a Pen to Highlight Them If Necessary.

A big head and a big mouth

An idiom is a group of words with a special meaning. The words in the idiom do not have their usual, ordinary meanings. English is full of idioms. You know some already, and you will certainly learn more.

Many idioms mention parts of the body: the head, the hands, the heart, and so on. You might hear a girl say, “My brother’s getting a big head.” The boy’s head isn’t growing! A big head is an idiom: the boy thinks he is very important and special. His sister doesn’t think he is. She says that he’s getting too confident.

A friend might tell you, “Be careful. That girl has a big mouth.” The literal meaning is that the girl’s mouth is large. However, to have a big mouth is also an idiom. Your friend means the girl talks too much or she tells other people’s secrets. Your friend is giving you some advice: You shouldn’t tell that girl any private information. You can’t trust her to keep quiet.

Appendix C: Contents of stress lessons

Lesson 1

Topic: Introduction of syllable and stress

Objectives: 1, to teach students what a syllable is and how to distinguish syllables; 2, to help students find the stressed syllable in a word. 3, to teach students to pronounce a stressed syllable with long duration, high pitch and full vowel sound as well as to pronounce an unstressed syllable with short duration, lower pitch and reduced vowel sound.

Steps 1: Introduction of the key terms related. (15 minutes)

What is a syllable? A syllable is a unit of pronunciation having one vowel sound, with or without surrounding consonants, forming the whole or a part of a word; e.g., there are two syllables in *water* and three in *banana*. An English word can have one, two, three or even more syllables.

How many syllables are there in this word? driveway ____
How many syllables are there in this sentence? Drive him away ____

What is stress?

In words of more than one syllable, one of them will receive more stress than the others.

Stressed syllables are usually longer, louder, and higher in pitch. In English, stressed syllables are usually long syllables with clear vowel sounds:

Steps 2: How to pronounce the target sounds (15 minutes)

The word banana has 3 syllables. Syllable 1 is not stressed and so is short. Syllable 2 is stressed and so is long with a clear vowel sound / a:/. Syllable 3 is not stressed and so is also short.

ba	Na	na
Syllable 1	Syllable 2	Syllable 3
(short)	(long)	(short)

Try to join syllables together smoothly when they speak. The voice keeps going from one syllable to the next. Learn to speak smoothly.

The teacher says: baNAna not ba-NA-na
 Students repeat: baNAna

How about the following words?

suc cess
Syllable 1 Syllable 2
 (higher)

suc cess ful
Syllable 1 Syllable 2 Syllable 3
 (higher)

per son
Syllable 1 Syllable 2
 (higher, longer)

Steps 3: Practice the target sounds and do some exercises (15 minutes)

Read the chart of vowels loudly.

Find how many syllables are there in those words?

family today truck mobile downtown improve pronunciation

Read the words above aloud and pay attention to the stressed syllables.

Read the words above aloud and pay attention to reduce the sound of unstressed syllables.

Review the pronunciation tips:

Stressed syllables:

- are long
- have a pitch change

Unstressed syllables:

- are short
- often have a reduced vowel sound

Lesson 2

Topic: Pronounce full, clear vowel sounds

Objectives: 1, to review Lesson 1; 2, to learn how to pronounce the diphthong; 3, to practice the pronunciation of diphthongs.

Step 1: Review of vowel sound in a stressed syllable. (15 minutes)

What is the sound of the vowel in a stressed syllable?

- * A stressed syllable's vowel is LOUD er
- * A stressed syllable's vowel is L-O-N-G er
- * A stressed syllable's vowel is CLEAR er
- * A stressed syllable's vowel is HIGH er This lesson is about how to pronounce full, clear vowel sounds.

- Say /ɑ:/. Keep your voice going as you pronounce the vowel /ɑ:/.
- Try again. /ɑ:/. You can keep your voice going if you take a deep relaxed breath before you use your voice.
- Try to pronounce the long vowel sound /ɑ:/ again.
- Say the word far. /ɑ:/ in far is a clear and long vowel.
- Say the word father. There are two syllables in the word father. The first syllable is longer than the second syllable because it is stressed.
- Say the word father again. Try to make the first syllable long.

Practice other vowels:

/æ/ /eɪ/ /ɛ/ /i:/ etc.

Step 2: Introduction of diphthong (15 minutes)

The diphthong is two vowel sounds pronounced one after the other within the same syllable. When you pronounce diphthongs, you change the shape of your mouth as you move from one sound to the other.

- Now, say /əʊ/. Keep your voice going as you pronounce the vowel /əʊ/.
- Try again /əʊ/.
- Say the word phone. /əʊ/ in phone is a clearly pronounce diphthong.
- Now, say the word photo. There are two syllables in the word photo. /əʊ/ can be found in both of these syllables, but the first syllable is longer than the second syllable because it is stressed.
- Say the word photo again. Try to make the first syllable long.

Step 3: Practice other diphthongs (15 minutes)

/ɪə/ : ear, beer, tear

/eə/ : aired, bear, hair,

/ʊə/ : tour, sure, pure

/eɪ/ : age, wait, paper

/aɪ/ : time, nice, buy

/ɔɪ/ : voice, boil, toy

/əʊ/ : home, most, boat

In words with two or more syllables, the stressed syllable is longer than the unstressed ones. Remember to speak with appropriate syllable length.

Mark the stress patterns of the following words. Check out the answers with your teacher. Speak the following words with appropriate length.

Example: tomatoes •_• arguments ____••

1. potatoes_____ 2. bananas_____ 3. computer_____

4. oranges_____ 5. monitor_____

Lesson 3

Topic: Stress of compound nouns

Objectives: 1, to review Lesson 2; 2, to learn the stress rule of compound nouns; 3, to practice how to stress compound nouns.

Step 1: Review of diphthong in Lesson 2 and introduction of compound nouns .(15 minutes)

Compound nouns usually consist of two words (two components).The first component may be a noun, a gerund, an adjective, or a verb, the second component is a noun.Compound nouns could be written separately,

For example: credit card; high school; light bulb; post office.
or as one word.

For example: airplane, highland, lighthouse, railroad.

Step 2: How to stress compound nouns. (15 minutes)

Compound nouns are very common in English. Many dictionaries give compound nouns as separate entries, but their stress is not always indicated.

In compound nouns, stress falls on the first component (the first word),

(Read the following words):

FOOTball; ARMchair; MAILbox

PHOtograph; TELEgram; TELEScope

WRITing desk; SWIMming pool

Even if the two words are written separately, stress still falls on the first word.
HIGH school; HOT dog

Language learners usually have no problem with stress in compound nouns written as single words (POSTcard; PANcake) but may have difficulty identifying compound nouns written as two separate words (CREDit card; WEDding cake).

Step 3: Practice how to stress compound nouns.(15 minutes)

Read the following compound nouns after marking out their stress patters.(p. 85)
(---for stressed syllables; • for unstressed syllables; ---- can be used for syllables with secondary stress)

Example: living room ---- • • or ---- •----

- | | |
|------------------|-----------------|
| 1. bathroom | 2. daylight |
| 3. walking stick | 4. classroom |
| 5. popcorn | 6. night school |
| 7. reading test | 8. airport |
| 9. mobile phone | 10. summer camp |

Lesson 4

Topic : Unstressed syllable : schwa

Objectives: 1, to review Lesson 3; 2, to learn the rule of reducing vowel sounds; 3, to practice the schwa sound.

Step 1: Review Lesson 3 and introduce the schwa sound.(15 minutes)

A stressed syllable may contain any one of the vowel sounds except the schwa, but any vowel except the diphthongs /aʊ/ and /ɔɪ/ can be reduced to /ə/ or /ɪ/. In spoken English, there are many more unstressed syllables than there are stressed syllables. This explains why the two vowels, /ə/ and /ɪ/ are the most frequently used vowel sounds in spoken English.

Step 2: How to pronounce the schwa sound. (15 minutes)

Now, say the following words:

leader lecture marker

These words all contain the schwa/ə/ in the second syllable. Try to pronounce it as a relaxed and easy sound. Also, since it is in the weak syllable, /ə/ is much shorter than the vowel in the stressed syllable.

Any English vowel letter can be pronounced as the schwa /ə/ in certain words:

allow	a	/ ə /
firemen	e	/ ə /
possible	i	/ ə /
command	o	/ ə /
support	u	/ ə /

Step 3: Practice 1. Listen to the following words and write down the vowel sounds of the bold letters. (7 minutes)

Example: some /ʌ/ tiresome /ə/

1. **fort** comfort
2. romance **Roman**
3. **locality** localism
4. **table** comfortable

Practice 2. Identifying the schwa /ə/ (8 minutes)

1. Listen to the recording of these words or sentences.
2. Underline the letters that are pronounced as /ə/.
3. Check the answers.
4. Read each word or sentence and pay attention to the schwa.

Example: We need some water.

1. Give her a dollar.
2. It's a lot of money.
3. Come at once.
4. Get them for me.
5. Go and have a look.

Lesson 5

Topic: Strong forms and weak forms of function words (1)

Objectives: 1, to review Lesson 4; 2, to learn what are function words and the two forms of function words; 3, to practice the pronunciation of strong forms and weak forms of function words.

Step 1: Review Lesson 4 and learn the strong forms and weak forms of a content word. (15 minutes).

In this lesson, we will learn strong forms & weak forms – two different ways of pronouncing a word. As we all know, many function words in English have two pronunciation: a strong form (or stressed form) and an weak form (or reduced form, unstressed form). The unstressed form is thus an alternative pronunciation of a word which is so reduced in its articulation that it consists of a different set of phonemes.

/ə / is the most frequently used vowel in the unstressed form and next comes /ɪ /.

The importance of learning unstressed forms:

Two reasons are said to be most important in learning to use the unstressed forms is English. Firstly, most native speakers of English find an “all-strong form” pronunciation very unpleasant. Secondly, learners who are not familiar with the use of weak forms are likely to have difficulty understanding native speakers.

Step 2: When to use strong forms. (15 minutes)

Strong forms of function words are used only in the following cases:

- a. when they occur at the end of a sentence
- b. when they are being contrasted
- c. when they are used for emphasis
- d. when they are cited or quoted

Otherwise, function words are used in weak forms. As compared with strong forms, the weak forms of these words show the following features:

- a. reductions of the length of sounds,
- b. obscuration of vowels towards the schwa,
- c. elision of vowels and consonants.

Step 3: Practice strong forms and weak forms of the function words.(15 minutes)

Practice:

1. Listen to the following words. First you will hear the function word in its strong form and weak form. Then you will hear a sentence with the weak form of the word. (p.108)
2. Repeat the sentences and pay attention to the weak form of the function word.

Words	Strong form	Weak form	Sample sentence
1. a	/eɪ/	/ə/	We've got a dog.
2. an	/æn/	/ən/	Take an apple.
3. her	/hɜ:/	/hə/,/ɜ:/,/ə/	What's her name?
4. his	/hɪz/	/ɪz/	John had his haircut.
5. our	/aʊə/	/ɑ:/	We can do it on our own.
6. some	/sʌm/	/səm/,/sm/	Get me some water.
7. the	/ði/	/ðɪ/ /ðə/	They saw the young and the old.
8. your	/jɔ:/	/jə/	Take your time.
9. he	/hi:/	/hɪ/,/ɪ/	What did he do?
10. me	/mi:/	/mɪ/	Let me have a look.
11. she	/ʃi:/	/ʃɪ/	Did she come?
12. them	/ðem/	/ðəm/,/ ðm/	Let them go.

Lesson 6

Topic: Strong forms and weak forms of function words (2)

Objectives: 1, to review of the main points of using strong forms and weak forms; 2, to enforce the skill of pronouncing strong forms and weak forms of the function words.

Step 1: Review Lesson 5 and learn some new rules.(15 minutes)

When to use strong forms

Strong forms of function words are used only in the following cases:

- a) when they occur at the end of a sentence
- b) when they are being contrasted
- c) when they are used for emphasis
- d) when they are cited or quoted

As compared with strong forms, the weak forms of these words show the following features:

- a) reductions of the length of sounds,
- b) obscuration of vowels towards the schwa,
- c) elision of vowels and consonants.

Step 2: Practice. (30 minutes)

- 1 Listen to the following words. First you will hear the function word in its strong form and weak form. Then you will hear a sentence with the weak form of the word.
- 2 Repeat the sentences and pay attention to the weak forms of function words.

Words	Strong form	Weak form	Sample sentence
13. us	/ʌs/	/əs/	He told us a story.
14. we	/wi:/	/wɪ/	Here we are.
15. you	/ju:/	/ju/	Did you see my pen?
16. him	/hɪm/	/ɪm/	Give him a pen.
17. am	/æm/	/əm/,/m/	I'm proud of it.
18. are	/ɑ:/	/ə/	What are you doing?
19. be	/bi:/	/bɪ/	Don't be late.
20. can	/kæn/	/kən/,/kn/	What can I do?
21. do	/du:/	/də/,/d/	What do you do on Sundays?
22. does	/dʌz/	/dəz/	When does the train leave?
23. had	/hæd/	/həd/,/əd/,/d/	How many had he had?
24. has	/hæz/	/həz/,/əz/,/z/,/s/	What has happened?
25. have	/hæv/	/həv/,/əv/,/v/	The kids have gone.
26. is	/ɪz/	/z/,/s/	He is coming.
27. must	/mʌst/	/məst/,/məs/	We must go now.
28. shall	/ʃæl/	/ʃəl/, /ʃl/	What shall we do?
29. was	/wɒz/	/wəz/,/wz/	He was out.
30. were	/wɜ:/	/wə/	We were all late.
31. will	/wɪl/	/wəl/,/əl/	That will do.
32. at	/æt/	/ət/	Look at him.
33. for	/fɔ:/	/fə/,/fr/	Is it for me?
34. from	/frɒm/	/frəm/,/frm/	They come from the States.
35. of	/ɒv/	/əv/,/v/,/f/	It's very kind of you.
36. to	/tu:/	/tə/	You don't have to worry.
37. and	/ænd/	/ənd/,/ən/,/nd/,/n/	We had fish and chips.
38. as	/æz/	/ əz/	Just as you like.
39. but	/bʌt/	/ bət/	It's good but expensive.
40. so	/səʊ/	/sə/	It's not so cold here.
41. than	/ðæn/	/ðən/,/ðn/	It's bigger than this.
42. that	/ðæt/	/ðət/	He said that he was coming.

Lesson 7

Topic: Sentence Stress (1)

Objective: to learn basic rules of sentence stress.

Step 1: Introduction of sentence stress. (15 minutes)

We have made some general observations regarding the location of stress in isolated words. But since speech is made up of words strung together, we must also look at these words in groups, in phrases, or in sentences in order to observe what happens to the stress pattern. Sentence stress refers to the word or words in a sentence that receive a stress. In most sentences you will find a series of both stressed and unstressed words.

In a sentence, stressed and unstressed syllables are jointed together smoothly. Stressed syllables are long, have a pitch change and have full vowel sounds while unstressed syllables are short and often have a reduced vowel sound. A reduced vowel sound is a short, unclear vowel sound. The short vowel sound in unstressed syllables is very often the sound /ə /, which is the most common of all sounds in English.

Step 2: Learn what to stress in a sentence? (15 minutes)

In an English utterance, stressed words give information to the listener and unstressed words join the information words together. Correct pronunciation of stressed and unstressed words is thus extremely important for effective communication in English.

Content words and function words

Content words are usually nouns, verbs, adjectives, and adverbs. They give information about **who, what, when, where, why and how**. They express the main idea or content of the phrase or sentence. They carry the message and therefore are usually stressed.

Remember in Lesson 5 we have learned, function words have strong & weak forms.

Strong forms of function words are used only in the following cases:

- e. when they occur at the end of a sentence
- f. when they are being contrasted
- g. when they are used for emphasis
- h. when they are cited or quoted

Step 3: Practice. (15 minutes)

Listen to the following conversations. Write the information in the appropriate box in the table.

Conversation A serves as an example. Listen to the conversations and underline the stressed words in the sentences.

Conversation	Who	What	Where	When
A	Bob	Buy books	Bookstore	In an hour
B				
C				

- A

Hi, Bob. Are you going to the library?
I have to go to the bookstore. I need to get some books.
When are you going?
In an hour.
- B

I'm going to the library. Would you like to come too, Pat?
I'm sorry, but I have to work in the lab. I have to finish my report.
Oh, I see. Are you going now?
I'll be ready in a few minutes.
- C

Are you taking a vacation this summer, Linda?
Sure. I'll be away from August 5th to August 18th.
Where are you going?
Pairs

Unstressed words are usually function words like articles, pronouns, possessives, prepositions, auxiliary verbs, and conjunctions. These words connect the information words to form grammatical sentences.

- If you stress all the words in an utterance, you may sound unpleasant or even cause misunderstanding because:
1.

You are giving too much information, and
2.

Native English speakers usually stress all words only when they are impatient or angry.

Lesson 8

Topic: Sentence stress (2)

Objectives: 1, to review lesson 7; 2, to learn how to apply sentence stress rules in reading a long paragraph.

Step 1: Review Lesson 7. (10 minutes)

Step 2: Learn new rules of sentence stress. (10 minutes)

In an English sentence the content words are usually stressed and the function words are usually unstressed.

Besides, contracted negative forms of auxiliary, modal verbs and the link verb to be, need to be stressed.

e.g. He **won't** be late.
It **doesn't** matter.

Step 3: Learn how to apply sentence stress rules in reading a paragraph.(25 minutes)

Listen to the following talk.

1. Mark the content words in the following passage then read the passage, paying attention to the stress on the content words.
2. Mark the function words in the following passage then read the passage, noticing not to stress function words.
3. Mark the contracted negative forms of auxiliary, modal verbs and the link verb to be then read the passage, paying attention to the stress on the negative forms.
4. Read this passage again, and pay attention to stressed words and unstressed words.

Electric Cars

People were interested in making electric cars as early as the 1840s. One small electric car was made then, but it didn't work well. Then, in 1912, General Motors produced an electric truck. These electric vehicles were of course not made for the public to buy.

General Motors was the first to try again in the last decade. It was a big challenge. An electric car needs a battery. But the batteries are heavy and don't work well. None of them could power a car far enough for long enough. And the new technology cost a lot.

They did succeed finally. The car they built was called the EVI and it became available in California in 1998. It was the first electric car designed and sold by a large automobile company.

Appendix D: Lyrics for reading exercises

Week 1: My heart will go on

Part 1

Every night in my dreams
I see you, I feel you
That is how I know you go on.
Far across the distance and spaces between us
You have come to show you go on.
Near far, wherever you are.
I believe that the heart does go on.
Once more, you open the door.
And you're here in my heart.
And my heart will go on and on.

Part 2

Love can touch us one time and last for a lifetime.
And never let go till we're gone
Love was when I loved you.
One true time I hold to.
In my life we'll always go on.
You're here. There's nothing I fear.
We'll stay forever this way.
You are safe in my heart.

Week 2: Let her go

Part 1

Well you only need the light when it's burning low
Only miss the sun when it starts to snow
Only know you love her when you let her go
Only know you've been high when you're feeling low
Only hate the road when you're missing home
Only know you love her when you let her go
And you let her go
Staring at the bottom of your glass
Hoping one day you'll make a dream last
But dreams come slow and they go so fast

Part 2

You see her when you close your eyes
 Maybe one day you'll understand why
 Everything you touch surely dies
 Staring at the ceiling in the dark
 Same old empty feeling in your heart
 Cause Love comes slow and it goes so fast
 Well you see her when you fall asleep
 But never to touch and never to keep
 Cause you loved her too much and you dived too deep

Week 3: Baby

Part 1

You know you love me; I know you care
 Just shout whenever, and I'll be there
 You are my love, you are my heart
 And we would never ever ever be apart
 Are we an item? Girl, quit playing
 We're just friends, what are you saying?
 Said there's another and look right in my eyes
 My first love broke my heart for the first time
 And I was like Baby, baby, baby
 I thought you'd always be mine

Part 2

for you I would have done whatever
 And I just can't believe we ain't together
 And I want to play it cool, but I'm losing you
 I'll buy you anything, I'll buy you a diamond ring
 And I'm in pieces, baby fix me
 And just shake me till you wake me from this bad dream
 I'm going down, down, down, down
 And I just can't believe my first love won't be around

Part 3

When I was 13, I had my first love,
 There was nobody that compared to my baby
 And nobody came between us or could ever come above
 She had me going crazy, oh, I was star-struck,
 She woke me up daily, don't need no Starbucks.
 She made my heart pound,
 I skipped a beat when I see her in the street and at school on the playground
 but I really want to see her on the weekend.

She knows she got me dazing because she was so amazing
And now my heart is breaking but I just keep on saying

Week 4: Rolling in the deep

Part 1

There's a fire starting in my heart
Reaching a fever pitch, it's bringing me out the dark
Finally, I can see you crystal clear
Go ahead and sell me out and I'll lay your ship bare
See how I leave with every piece of you
Don't underestimate the things that I will do
There's a fire starting in my heart
Reaching a fever pitch
And it's bringing me out the dark
The scars of your love remind me of us
They keep me thinking that we almost had it all
The scars of your love, they leave me breathless
I can't help feeling

Part 2

We could have had it all
Rolling in the deep
You had my heart inside of your hand
And you played it, to the beat
Baby, I have no story to be told
But I've heard one on you
And I'm gonna make your head burn
Think of me in the depths of your despair
Make a home down there
As mine sure won't be shared
Throw your soul through every open door
Count your blessings to find what you look for
Turn my sorrow into treasured gold
You'll pay me back in kind and reap just what you sow

Week 5: You belong with me

Part 1

You're on the phone with your girlfriend. She's upset.
She's going off about something that you said.

Cause she doesn't get your humor like I do.
 I'm in the room, it's a typical Tuesday night.
 I'm listening to the kind of music she doesn't like.
 And she'll never know your story like I do.
 But she wears short skirts I wear T-shirts
 She's cheer captain and I'm on the bleachers

Part 2

Dreaming about the day when you wake up.
 And find what you're looking for has been here the whole time.
 If you could see that I'm the one who understands you.
 Been here all along so why can't you see. You belong with me,
 Walking the streets with you and your worn-out jeans.
 I can't help thinking this is how it ought to be.
 Laughing on a park bench thinking to myself. Hey, isn't this easy?
 And you've got a smile that could light up this whole town.

Week 6: Pretty Boy

Part 1

I lie awake at night
 See things in black and white
 I've only got you inside my mind
 You know you have made me blind
 I lie awake and pray that you will look my way
 I have all this longing in my heart
 I knew it right from the start

Part 2

Oh my pretty pretty boy I love you
 Like I never ever loved no one before you
 Pretty pretty boy of mine
 Just tell me you love me too
 Oh my pretty pretty boy I need you
 Oh my pretty pretty boy I do
 Let me inside
 Make me stay right beside you

Part 3

I used to write your name
 and put it in a frame
 And sometimes I think I hear you call
 right from my bedroom wall

You stay a little while
 and touch me with your smile
 And what can I say to make you mine
 to reach out for you in time
 Oh pretty boy say you love me too

Week 7: As long as you love me

Part 1

Although loneliness has always been a friend of mine
 I'm leaving my life in your hands
 People say I'm crazy and that I am blind, risking it all in a glance
 How you got my blind is still a mystery
 I can't get you out of my head
 Don't care what is written in your history.
 As long as you're here with me
 I don't care who you are, where you're from, what you did
 As long as you love me.
 Who you are, where you're from
 Don't care what you did, as long as you love me

Part 2

Every little thing that you have said and done feels like it's deep within me
 Doesn't really matter if you're on the run.
 It seems like we're meant to be
 I've tried to hide it so that no one knows
 But I guess it shows, when you look into my eyes
 What you did and where you're coming from
 I don't care as long as you love me baby
 Who you are, as long as you love me
 What you did? I don't care as long as you love me.

Week 8: Someone Like You

Part 1

I heard that you're settled down
 That you found a girl and you're married now.
 I heard that your dreams came true.
 Guess she gave you things I didn't give to you.
 Old friend, why are you so shy?
 It ain't like you to hold back or hide from the light.

Part 2

I hate to turn up out of the blue uninvited.
But I couldn't stay away, I couldn't fight it.
I had hoped you'd see my face and that you'd be reminded.
That for me it isn't over.
Never mind, I'll find someone like you.
I wish nothing but the best for you too.

Part 3

Don't forget me, I beg. I'll remember you said.
Sometimes it lasts in love but sometimes it hurts instead.
Sometimes it lasts in love but sometimes it hurts instead.
You know how the time flies.
Only yesterday was the time of our lives.
We were born and raised in a summer haze.
Bound by the surprise of our glory days.



Appendix E: Validation forms

- Expert 1: Dr. Supong Tangkiengsirisin
Language Institute Thammasat University, Thailand;
- Expert 2: Dr. Hongliu Jiang
School of Foreign Languages and Cultures
Sichuan University, China;
- Expert 3: Dr. Janpha Thadphoothon
English Department of Dhurakij Pundit University, Thailand.

In order to demonstrate three experts’ comments in every form, S, H, J represents the comments of Dr. Supong Tangkiengsirisin, Dr. Hongliu Jiang and Dr. Janpha Thadphoothon respectively.

1. Content validity of the reading-aloud test for Pre-and Post-test.

Part 1

Items	Objectives	Relevant scale (please tick the relevant scale)		
		Not relevant	Relevant, but needs alteration	Very relevant
argument	on the first syllable of a word.			S, H, J
opinion	on the secondary syllable of a word.			S, H, J
economy	on the secondary syllable of a word.			S, H, J
Canadian	on the secondary syllable of a word.			S, H, J

post office	on a compound noun that is written as two words.			S, H, J
creation	on the secondary syllable of a word.			S, H, J
grandfather	on a compound noun that is written as a word			S, H, J
operation	on the third syllable of a word.			S, H, J
timetable	on a compound noun that is written as a word			S, H, J
education	on the third syllable of a word.			S, H, J
<p>Comments:</p> <p>For compound nouns, it's a little bit complex for testees to make choices before they learn the rules. (H)</p>				

Part 2

Items	Objectives	Relevant scale		
		(please tick the relevant scale)		
	To test the pronunciation of the mostly used unstressed vowel, the schwa sound /ə/ , which appears in the five vowel letter (a, e, i, o, u).	Not relevant	Relevant, but needs alteration	Very relevant
Milk or tea ?	To test /ə/ in or.			S, H, J
It's impossible.	To test /ə/ in impossible.			S, H, J
nature lovers.	To test /ə/ in lover.		What about the word “nature”? (S)	H, J
Go and have a look.	To test /ə/ in a.		(What about the word	H, J

			“and”? (S)	
You may use it in the future.	To test /ə/ in future.		What about the word “the”? (S)	H, J
Comments:				

Part 3

Items	Objectives	Relevant scale		
		(please tick the relevant scale)		
	To test the right placement of word stress in a sentence in terms of the information the speaker wants to convey.	Not relevant	Relevant, but needs alteration	Very relevant
They bought two bottles. a. Not three? b. Not cans?	For response a the stressed word is two; for response b the stressed word is bottles.			S, H, J
I think that animal is a big cat. a. No, it’s a baby tiger. b. Not a dog?	For response a the stressed word is big; for response b the stressed word is cat.		H	S, J
Frank wrote the report.	For response a the			S, H, J

a. No, he translated it. b. No, Jack did.	stressed word is wrote; for response b the stressed word is Frank.			
Does she speak English? a. No, she speaks Chinese. b. No, but she can read it.	For response a the stressed word is English; for response b the stressed word is speak.		/ “No, Chinese”. (J)	S, H
Mary wants to go on Monday. a. When? b. Who?	For response a the stressed word is Monday; for response b the stressed word is Mary.			S, H, J
Comments: The “baby tiger” contains two pieces of new information which make the choice open.(H)				

Part 4

Items	Objectives	Relevant scale		
		(please tick the relevant scale)		
	To test the right pronunciation of the weak form	Not relevant	Relevant, but needs alteration	Very relevant
Ask the girl.	of the determiner: the			S, H, J
Bring her flowers.	of the determiner: her			S, H, J

Give me a new bike.	of the pronoun: me			S, H, J
Tony told us a new story.	of the pronoun: us			S, H, J
I like apples and oranges.	of the connective: and			S, H, J
Just as you do.	of the connective: as			S, H, J
What are you eating?	of the auxiliary verb: are			S, H, J
They must take that bus.	of the auxiliary verb: must		“They can take a taxi”. (J)	S, H
My sisters are at home.	of the preposition: at			S, H, J
I will bring it to you.	of the preposition: to			S, H, J
Comments:				

Part 5

Items

An (1)**idiom** is a group of words with a special meaning. The words (2)**in** the idiom (3)**do** (4)**not** have their usual, (5)**ordinary** meanings. English is full of idioms. You know some (6)**already**, and you will certainly learn (7)**more**.

Many idioms mention parts of the (8)**body**: the (9)**head**, the (10)**hands**, the (11)**heart**, and so on. You might hear (12)**a** girl say, “My brother’s getting a big (13)**head**.” (14)**The** boy’s head (15)**isn’t** growing! A big head is (16)**an** idiom: the boy thinks (17)**he** is very (18)**important** and (19)**special**. His sister (20)**doesn’t** think he is. She (21)**says** that he’s getting too (22)**confident**.

A friend might tell (23)**you**, “Be (24)**careful**. That girl has a big (25)**mouth**.” (26)**The** literal meaning is that the girl’s mouth is (27)**large**. However, have a big mouth is also an (28)**idiom**. Your friend means the girl (29)**talks** too much (30)**or** she tells other people’s (31)**secrets**. Your friend

(32) is giving you (33) some advice: You (34) shouldn't tell that girl any private information. You (35) can't trust her to keep quiet.			
Objectives	Relevant scale (please tick the relevant scale)		
	Not relevant	Relevant, but needs alteration	Very relevant
Content words as (1)(4)(5)(6)(7)(8)(9)(10)(11)(13)(18)(19) (21)(22)(24)(25)(27)(28)(29)(31) need to be stressed.			S, H, J
Function words as (2)(3)(12)(14) (16)(17)(23)(26)(30)(32)(33) are usually unstressed words.			S, H, J
Contracted negative forms of auxiliary, modal verbs and the link verb to be, need to be stressed. (15)(20)(34)(35)			S, H, J
Comments:			

2. Content validity of the ARCS Survey.

Items	Dr. Supong Tangkiengsirisin			Dr. Hongliu Jiang			Dr. Janpha Thadphoothon			Percent-Agreement
	-1	0	1	-1	0	1	-1	0	1	(%)
A1			•			•			•	100
A2			•			•			•	100
A3			•			•			•	100

A4			•			•			•	100
A5			•			•			•	100
R1			•			•			•	100
R2			•			•			•	100
R3			•			•			•	100
R4			•			•			•	100
C1			•			•			•	100
C2			•			•			•	100
C3			•			•		•		67
C4			•			•			•	100
S1			•			•			•	100
S2			•			•			•	100

3. Content validity of the Interview Questions.

Questions	Dr. Supong			Dr. Hongliu			Dr. Janpha			Percent-Agreement
	Tangkiengsirisin			Jiang			Thadphoothon			
	-1	0	1	-1	0	1	-1	0	1	
Q1			•			•			•	100
Q2			•			•			•	100
Q3			•			•			•	100
Q4			•			•			•	100

4. Content agreement of the Stress Lessons.

Stress Lesson	Dr. Supong			Dr. Hongliu			Dr. Janpha			Percent-Agreement
	Tangkiengsirisin			Jiang			Thadphoothon			
	-1	0	1	-1	0	1	-1	0	1	(%)
Lesson 1			•			•			•	100

Lesson 2			•			•			•	100
Lesson 3			•			•			•	100
Lesson 4			•			•			•	100
Lesson 5			•			•			•	100
Lesson 6			•			•			•	100
Lesson 7			•			•			•	100
Lesson 8			•			•			•	100

5. Content agreement of the Lyrics.

Lyrics	Dr. Supong Tangkiengsirisin			Dr. Hongliu Jiang			Dr. Janpha Thadphootho n			Percent-A greement
	-1	0	1	-1	0	1	-1	0	1	(%)
My heart will go on		•				•			•	67
Let her go		•				•			•	67
Baby		•				•			•	67
Rolling in the deep		•				•			•	67
You belong with me		•				•			•	67
Pretty Boy		•				•			•	67
As long as you love me		•				•			•	67
Someone Like You		•				•			•	67

Comments: It is not clear how these words will be practiced. These lyrics are for singing, not for reading. How can we be sure that their use for reading practice would be effective? (Dr. Supong Tangkiengsirisin)

6. Signatures from three experts.

Dr. Supong Tangkiengsirisin

Electric Cars

People were interested in making electric cars as early as the 1840s. One small electric car was made then, but it didn't work well. Then, in 1912, General Motors produced an electric truck. These electric vehicles were of course not made for the public to buy.

General Motors was the first to try again in the last decade. It was a big challenge. An electric car needs a battery. But the batteries are heavy and don't work well. None of them could power a car far enough for long enough. And the new technology cost a lot.

They did succeed finally. The car they built was called the EVI and it became available in California in 1998. It was the first electric car designed and sold by a large automobile company.

Table 8: agreement of compilation of lesson 8

Objectives	Agreement scale (please tick the relevant scale)		
	Disagree	Agree, but needs alteration	Strongly Agree
This lesson aims at teaching participants to stress contracted negative forms of auxiliary, modal verbs and the link verb to be, and reviewing the basic knowledge of sentence stress taught in lesson 7.			
Comments:			

Signature: 

Associate Professor Dr. Supong Tangkiengsirisin

30/08/2017

Many idioms mention parts of the (8)body: the (9)head, the (10)hands, the (11)heart, and so on. You might hear (12)a girl say, "My brother's getting a big (13)head." (14)The boy's head (15)isn't growing! A big head is (16)an idiom: the boy thinks (17)he is very (18)important and (19)special. His sister (20)doesn't think he is. She (21)says that he's getting too (22)confident.

A friend might tell (23)you, "Be (24)careful. That girl has a big (25)mouth." (26)The literal meaning is that the girl's mouth is (27)large. However, have a big mouth is also an (28)idiom. Your friend means the girl (29)talks too much (30)or she tells other people's (31)secrets. Your friend (32)is giving you (33)some advice: You (34)shouldn't tell that girl any private information. You (35)can't trust her to keep quiet.

Objectives	Relevant scale (please tick the relevant scale)		
	Not relevant	Relevant, but needs alteration	Very relevant
Content words as (1)(4)(5)(6)(7)(8)(9)(10)(11)(13)(18)(19)(21)(22)(24)(25)(27)(28)(29)(31) need to be stressed.			
Function words as (2)(3)(12)(14)(16)(17)(23)(26)(30)(32)(33) are usually unstressed words.			
Contracted negative forms of auxiliary, modal verbs and the link verb to be, need to be stressed. (15)(20)(34)(35)			
Comments:			

Signature:

Associate Professor Dr. Supong Tangkiengsirisin

30/08/2017

I had hoped you'd see my face and that you'd be reminded.
That for me it isn't over.
Never mind, I'll find someone like you.
I wish nothing but the best for you too.

Part 3
Don't forget me, I beg. I'll remember you said.
Sometimes it lasts in love but sometimes it hurts instead.
Sometimes it lasts in love but sometimes it hurts instead.
You know how the time flies.
Only yesterday was the time of our lives.
We were born and raised in a summer haze.
Bound by the surprise of our glory days.

Table 8: agreement of the selection of lyrics 8

Objectives	Agreement scale (please tick the relevant scale)		
	Disagree	Agree, but needs alteration	Strongly Agree
Lyrics 8 will be used to practice sentence stress, especially for placing the stress on contracted negative forms of auxiliary, modal verbs and the link verb to be.			
Comments:			

Overall comments:

These lyrics are for singing, not for reading. How can we be sure that their use for reading practice would be effective?

Signature: 
Associate Professor Dr. Supong Tangkiengsirisin
30/08/2017

S1 I enjoy song lyric-reading on MALL.	To examine the relevance between intrinsic motivation and the accomplishment of song lyric-reading on MALL.			/
S2 I am satisfied with my learning achievement in song lyric-reading on MALL.	To examine the relevance between extrinsic rewards and the accomplishment of song lyric-reading on MALL.			/
Comments: Some of these items are very similar.				

References:

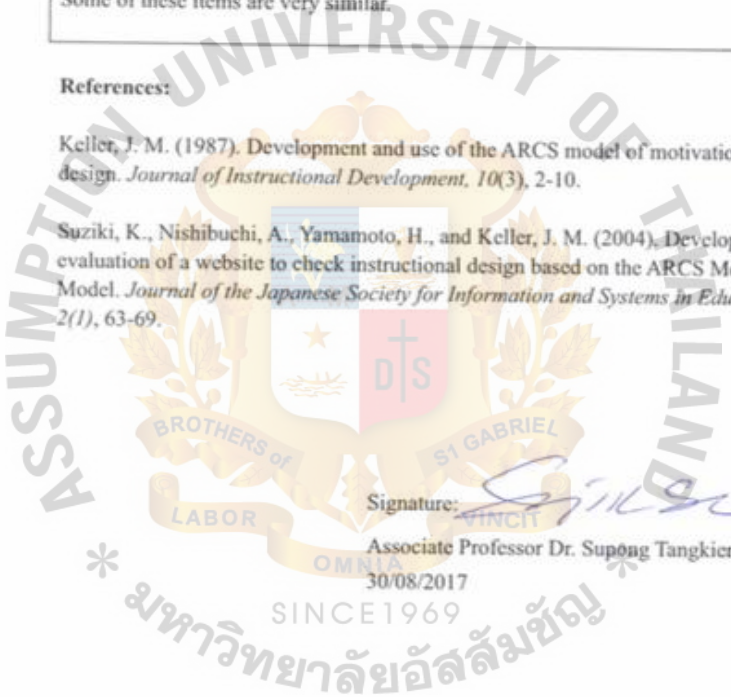
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Signature: 

Associate Professor Dr. Supong Tangkiengsirisin

30/08/2017



Dr. Hongliu Jiang

Many idioms mention parts of the (8)body: the (9)head, the (10)hands, the (11)heart, and so on. You might hear (12)a girl say, "My brother's getting a big (13)head." (14)The boy's head (15)isn't growing! A big head is (16)an idiom: the boy thinks (17)he is very (18)important and (19)special. His sister (20)doesn't think he is. She (21)says that he's getting too (22)confident.

A friend might tell (23)you, "Be (24)careful. That girl has a big (25)mouth." (26)The literal meaning is that the girl's mouth is (27)large. However, have a big mouth is also an (28)idiom. Your friend means the girl (29)talks too much (30)or she tells other people's (31)secrets. Your friend (32) is giving you (33)some advice: You (34)shouldn't tell that girl any private information. You (35)can't trust her to keep quiet.

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Function words as (2)(3)(12)(14) (16)(17)(23)(26)(30)(32)(33) are usually unstressed words.			/
Contracted negative forms of auxiliary, modal verbs and the link verb to be, need to be stressed. (15)(20)(34)(35)			/
Comments:			

Signature: Jiang Hongliu
Associate Professor Dr. Jiang
01/09/2017

I had hoped you'd see my face and that you'd be reminded.
That for me it isn't over.
Never mind, I'll find someone like you.
I wish nothing but the best for you too.

Part 3
Don't forget me, I beg. I'll remember you said.
Sometimes it lasts in love but sometimes it hurts instead.
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Only yesterday was the time of our lives.
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Table 8: agreement of the selection of lyrics 8

Objectives	Agreement scale (please tick the relevant scale)		
	Disagree	Agree, but needs alteration	Strongly Agree
Lyrics 8 will be used to practice sentence stress, especially for placing the stress on contracted negative forms of auxiliary, modal verbs and the link verb to be.			√
Comments:			

Signature: *Jiang Hongliu*
Associate Professor Dr. Jiang
01/09/2017

S1 I enjoy song lyric-reading on MALL.	To examine the relevance between intrinsic motivation and the accomplishment of song lyric-reading on MALL.			/
S2 I am satisfied with my learning achievement in song lyric-reading on MALL.	To examine the relevance between extrinsic rewards and the accomplishment of song lyric-reading on MALL.			/
Comments:				

References:

Keller, J. M. (1987). Development and use of the ARCS model of motivational design. *Journal of Instructional Development*, 10(3), 2-10.

Suziki, K., Nishibuchi, A., Yamamoto, H., and Keller, J. M. (2004). Development and evaluation of a website to check instructional design based on the ARCS Motivation Model. *Journal of the Japanese Society for Information and Systems in Education*, 2(1), 63-69.



BROTHERS of
LABOR
OMNIA
S1 GABRIEL
VINCIT

SINCE 1969

มหาวิทยาลัยอัสสัมชัญ

Signature: *Jiang Hongliu*
Associate Professor Dr. Jiang
01/09/2017

Electric Cars

People were interested in making electric cars as early as the 1840s. One small electric car was made then, but it didn't work well. Then, in 1912, General Motors produced an electric truck. These electric vehicles were of course not made for the public to buy.

General Motors was the first to try again in the last decade. It was a big challenge. An electric car needs a battery. But the batteries are heavy and don't work well. None of them could power a car far enough for long enough. And the new technology cost a lot.

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This lesson aims at teaching participants to stress contracted negative forms of auxiliary, modal verbs and the link verb to be, and reviewing the basic knowledge of sentence stress taught in lesson 7.			/
Comments:			

Signature: Jiang Honglin
Associate Professor Dr. Jiang
01/09/2017

Dr. Janpha Thadphoothon

S1 I enjoy song lyric-reading on MALL.	To examine the relevance between intrinsic motivation and the accomplishment of song lyric-reading on MALL.			/
S2 I am satisfied with my learning achievement in song lyric-reading on MALL.	To examine the relevance between extrinsic rewards and the accomplishment of song lyric-reading on MALL.			/
Comments: C4 I am confident that I can apply what I learn from song lyric-reading on MALL to my English reading. (only reading I would have thought this can help develop their speaking skills.)				

References:

Keller, J. M. (1987). Development and use of the ARCS model of motivational design. *Journal of Instructional Development*, 10(3), 2-10.

Suziki, K., Nishibuchi, A., Yamamoto, H., and Keller, J. M. (2004). Development and evaluation of a website to check instructional design based on the ARCS Motivation Model. *Journal of the Japanese Society for Information and Systems in Education*, 2(1), 63-69.


Signature:
Dr. Janpha Thadphoothon
02/09/2017

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Part 3
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Comments:			

Signature: 
Dr. Janpha Thadphoothon
02/09/2017

<p>Many idioms mention parts of the (8)body: the (9)head, the (10)hands, the (11)heart, and so on. You might hear (12)a girl say, "My brother's getting a big (13)head." (14)The boy's head (15)isn't growing! A big head is (16)an idiom: the boy thinks (17)he is very (18)important and (19)special. His sister (20)doesn't think he is. She (21)says that he's getting too (22)confident.</p> <p>A friend might tell (23)you, "Be (24)careful. That girl has a big (25)mouth." (26)The literal meaning is that the girl's mouth is (27)large. However, have a big mouth is also an (28)idiom. Your friend means the girl (29)talks too much (30)or she tells other people's (31)secrets. Your friend (32) is giving you (33)some advice: You (34)shouldn't tell that girl any private information. You (35)can't trust her to keep quiet.</p>			
Objectives	Relevant scale (please tick the relevant scale)		
	Not relevant	Relevant, but needs alteration	Very relevant
			/
			/
			/
Comments:			

Signature: 

Dr. Janpha Thadphoothon

02/09/2017

Electric Cars


People were interested in making electric cars as early as the 1840s. One small electric car was made then, but it didn't work well. Then, in 1912, General Motors produced an electric truck. These electric vehicles were of course not made for the public to buy.

General Motors was the first to try again in the last decade. It was a big challenge. An electric car needs a battery. But the batteries are heavy and don't work well. None of them could power a car far enough for long enough. And the new technology cost a lot.

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This lesson aims at teaching participants to stress contracted negative forms of auxiliary, modal verbs and the link verb to be, and reviewing the basic knowledge of sentence stress taught in lesson 7.			/
Comments:			

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Signature: 
Dr. Janpha Thadphoothon
02/09/2017

Appendix F: Transcript and translation of the interview

Transcript and translation of the interview were proofread by two English teachers in China:

1, Xiang Yuying, English Major B.A., and Mass Communication M.A. from University of Leicester, UK, Email: yukixiang@qq.com

2,Wang Heng, English Translation B.A., and Chinese International Education M.A., Email: 1025611438@qq.com.

They were then represented by X, and W to demonstrate their agreement scale on the transcript and the translation of the interview content from both EG and CG.

Agreement scale of the transcript and translation (EG)

Number/ questions		Transcript and the translation.	Agreement scale of the transcript.				Agreement scale of the translation.			
			Disagree	alteration	Agree, but needs	Strongly agree	Disagree	alteration	Agree, but needs	Strongly agree
E01	Q 1	Personally, I do not like mobile learning and I prefer learning in a traditional classroom with teachers guiding by my side, which I think is the useful way. Therefore, I do not like the application, Speak English More. (original Chinese:对我个人而言, 我就不喜欢网络学习, 我还是比较喜欢传统的那种课堂学习, 老师在一旁指导, 我觉得这样对自己的学习才有用, 所以我不喜欢歌词朗诵这个软件。)				X, W				X,W
	Q 2	I didn't like reading lyrics, so I think it is not useful.(original				X, W				X,W

		Chinese:我不喜欢歌词朗诵，所以我觉得没有用。)						
	Q 3	I am not satisfied because I didn't learn much(original Chinese:不满意，因为我学得不是太多。)			X, W			X, W
	Q 4	I don't like learning on apps, so I won't do lyric-reading.(original Chinese:我反感学习软件，所以我不会进行歌词朗读。)			X, W			X, W
E02	Q 1	It's interesting because I can learn the meaning and pronunciation of lyrics. (original Chinese:有趣。通过朗读歌词，我们可以了解到歌词的意思和发音。)			X, W			X, W
	Q 2	It's useful because I can not only learning the meaning of a song but also learn some skills of pronunciation.(original Chinese:有用。在朗读的过程中，不仅学到了歌曲中的意思，还学到了一些发音。)			X, W			X, W
	Q 3	I am satisfied because learning English stress improves my pronunciation and listening comprehension.(original Chinese:满意。通过重音学习，我对自己的发音或者听力中有很大的进步。)			X, W			X, W
	Q	Yes, I will because			X, W		X:	W

	4	reading lyrics helps me improve my English as well as enrich my campus life.(original Chinese: 会。通过朗读歌词，不仅可以学习英语，还可以丰富自己的课外生活。)					campus life could be “extra curricular activities”	
E03	Q 1	It is interesting as I like singing very much. (original Chinese:我觉得歌词朗诵非常有趣，因为我非常喜欢唱歌。)			X, W			X, W
	Q 2	I feel okay because lyric-reading is not as fun as singing.(original Chinese:一般。我觉得歌词朗读的时候没有歌曲有感情。)			X, W			X, W
	Q 3	I learnt something I didn't know.(original Chinese:学习到了之前没有注意到的问题。)			X, W			X, W
	Q 4	I will because English stress plays a important role in lyric-reading.(original Chinese:我会。因为在歌词朗读的过程中英语重音占了重要部分。)			X, W			X, W
E04	Q 1	It is full of fun to read lyrics aloud on the mobile phone and you can do it over and over again. When you saw your scores getting better, you would feel a sense of achievement. (original			X, W			X, W

		Chinese:在手机上朗读歌词还是非常有趣的，你可以在手机上朗读一次一次地提升自己，而且看到分数一次一次的上升，感觉还是很有成就感的。)					
	Q 2	Lyric-reading on my mobile phone is very useful. It improves my English stress performance as the scores of exercises are getting better than before. The feedback also shows my errors to remind me of self-correcting. (original Chinese:手机上歌词朗读非常有用，不仅可以提高自己的英语重音，看到分数一次次上升，在对比下，可以知道前面哪些地方是不足的，自己提升自己。)			X, W		X, W
	Q 3	I'm satisfied but I think I didn't spend enough time to read lyrics.(original Chinese:比较满意。感觉自己朗读的歌词的时间不足够。)			X, W		X, W
	Q 4	I will because I like English songs and could do lyric-reading exercises myself(original Chinese:我会继续。我喜欢英语歌，听歌的时候可以自己练习。)			X, W		X, W
E05	Q 1	It is kind of interesting but singing is better.			X, W		X, W

		(original Chinese:还可以，歌词朗读比唱歌差一点，唱歌更有连贯性。)						
	Q 2	It is useful but singing is more fluent than reading.(original Chinese:应该比平时有用，唱的时候连贯性强。)			X, W			X, W
	Q 3	It is kind of satisfied because I can tell where to stress.(original Chinese:还算满意。重音可以告诉我们重点在哪里。)			X, W			X, W
	Q 4	Yes, I will because lyric-reading is fun.(original Chinese:会的。歌词朗读挺有趣的。)			X, W			X, W
E06	Q 1	It is interesting because reading lyrics can teach you pronunciation skills.(original Chinese:有趣，因为歌词里面有发音技巧。)			X, W			X, W
	Q 2	It is useful because I can know the difference between my pronunciation and others' pronunciation(original Chinese:有用，可以知道自己发音和别人的差别。)			X, W			X, W
	Q 3	I am satisfied because after receiving the instruction, I am aware that pitches change on different syllables in a sentence			X, W			X, W

		and which part is emphasized in a sentence. Besides, even I can not understand the meaning of a sentence when taking listening exams, but I can tell which part this sentence is emphasized. (original Chinese:满意,因为学习了重音之后,可以知道每一个句子不是每一个音的音调都一样.学习了之后,可以知道一个句子自己强调的部分是哪个部分,或者英语听力上面,一个句子不完全懂它的意思是什么,但可以知道它强调的东西。)					
	Q 4	Yes, I will. But I won't study too often. (original Chinese:会,但是学习的次数会减少。)			X, W		X, W
E07	Q 1	Very interesting because I can learn new words in lyric-reading.(original Chinese:很有趣,可以从歌词朗读中学到更多的单词。)			X, W		X, W
	Q 2	It is very useful because I can learn some skills in improving my singing.(original Chinese:非常有用.可以学到一些平时唱歌唱不清的句子。)			X, W		X, W
	Q	I am very satisfied. I			X, W		X, W

	3	knew nothing about English stress before but now I can at least distinguish where stress is when speaking English. (original Chinese:非常满意。在此之前对重要一点都分不清楚,至少现在读英语,讲口语的时候,能分辨重音。)						
	Q 4	(original Chinese:会继续。因为歌词朗读对重音有帮助。)			X, W			X, W
E08	Q 1	It is interesting because lyrics are not as monotonous as textbooks. So it is more fun to read lyrics aloud. When you have fun, you would like to study. (original Chinese: 有趣。因为它的句子不是平常的英文课本的那种枯燥无味的,所以在朗诵的过程当中,比平时的课文更加有趣。有趣的话就更喜欢去学习。)			X, W			X, W
	Q 2	It is useful because we like those lyrics.(original Chinese:有用。歌词朗读的句子是大家喜爱的歌词。)			X, W			X, W
	Q 3	I am satisfied because I did not know there was English stress. But after receiving the instruction I have known and I think I should pay more effort			X, W			X, W

		on learning it .(original Chinese: 满意。因为之前不知道有英语重音这种说法，通过学习英语重音之后，就知道了这方面的知识，但是我觉得还应该更加努力地学习。)					
	Q 4	I will continue because lyric-reading is interesting and useful.(original Chinese:会继续，因为歌词朗读既有趣又有用。)			X, W		X, W
E09	Q 1	It is interesting because lyric-reading is important to my feelings.(original Chinese:很有趣。歌词朗读对于自己的情感是非常重要的。)			X, W		X, W
	Q 2	It is useful, particularly for oral English. Articles are hard to read aloud comparing to lyrics, which are much shorter. (original Chinese:我觉得是有用的，尤其对于英语口语。如果通过文章的句子来练习会显得麻烦，很难练，歌词比较短。)			X, W		X, W
	Q 3	I am satisfied because I am interested in improving spoken English(original Chinese:比较满意，因为我自己本身对口语学习很感兴趣的。)			X, W		X, W
	Q	I will continue			X, W	X:	W

	4	because I like the achievement.(original Chinese:我会继续, 完成歌词朗读会让我有成就感。)					“because I like te sense of achievin g my goals”	
E10	Q 1	It is full of fun because lyric-reading corporates English learning with songs, which makes English learning less boring. After you have done the lyric-reading exercise, you would feel different when listening to the song again. (original Chinese:我觉得挺有趣的, 因为歌词朗读把英语学习与音乐结合起来了, 学习英语不再那么枯燥乏味了, 等你把歌词都练习了一遍再去听那首英文歌的话, 感觉就会不一样。)			X, W			X, W
	Q 2	It is very useful because lyrics related to lives.(original Chinese:我觉得挺有用, 歌词更贴近生活。)			X, W			X, W
	Q 3	I am satisfied because I know different placement of stress expresses different meanings.(original Chinese:比较满意, 至少我现在知道重音位置不同, 句子意思不同。)			X, W			X, W
	Q 4	I will continue learning English			X, W			X, W

		stress, but will not only use lyric-reading, because taking one instruction in a long duration will make learning boring. So we could use other ways of learning such as watching English TV dramas. (original Chinese:应该会继续, 但不会只用这一种方法来学习, 毕竟每天千篇一律的学习, 用同一种方法的话, 也会变得枯燥。可以结合看美剧或者其它的方式, 学习也能坚持更久。)						
E11	Q 1	It is interesting because it attracts me.(original Chinese:有趣, 它吸引了我读英语的兴趣。)			X, W			X, W
	Q 2	It is interesint because lyrics are easy to remember.(original Chinese:还是有用的, 因为歌词比较容易记住。)			X, W			X, W
	Q 3	It is satisfied because now I know where to place stress.(original Chinese:满意, 因为学习后我明白朗读时哪些地方是需要重音的。)			X, W			X, W
	Q 4	I will continue becace it helps my English learning.(original Chinese:我会继续学习。因为我觉得会对我的英语有所帮助。)			X, W			X, W

E12	Q 1	It is interesting because I have learnt the rules of English stress. (original Chinese:有趣, 因为可以学到与重音相关的东西, 这是平时不会注意的。)			X, W			X, W
	Q 2	It is useful but I prefer to watch movies for English learning.(original Chinese:有用, 但我个人喜欢看电影来学习。)			X, W			X, W
	Q 3	It is satisfied in the beginning but not satisfied in the end. (original Chinese:比较满意, 前期认真学习了, 满意。后期没有认真学, 不满意。)			X, W			X, W
	Q 4	Yes, I will but I will choose to study English stress with other method.(original Chinese:会, 但会从另外的方面进行重音的学习。)			X, W			X, W
E13	Q 1	It is interesting because those lyrics are from classic songs.(original Chinese:挺有趣的, 因为歌词朗读中可以复习经典歌。)			X, W			X, W
	Q 2	It is useful because I have improved my spoken English and expanded my vocabulary size too via lyric-reading learning. (original Chinese:我觉得有用。)			X, W			X, W

		因为在歌词朗读中， 可以学到一些口语， 也可以学到新的单 词。)						
	Q 3	Not satisfied because I didn't study hard.(original Chinese: 不太满意。 因为自己没有很认真 的学。)			X, W			X, W
	Q 4	I will because I have learnt the method from the eight lessons.(original Chinese: 我会的。八 节课给力我们方法， 继续学习会提高的。)			X, W			X, W
E14	Q 1	It is interesting because it makes me want to learn English more.(original Chinese: 有趣，因为 可以增进自己学英语 的兴趣。)			X, W			X, W
	Q 2	It is useful because you could learn grammar, English stress and new words from English lyrics. (original Chinese:我 觉得有用。因为在英 文歌里，可以学习别 人的一些语法，重音 和一些平时不知道的 词汇。)			X, W			X, W
	Q 3	It is satisfied because I have known some rules of English stress.(original Chinese:还算满意。因 为了解了重音方面的 知识。)			X, W		W: I am satisfied.	X
	Q 4	Although I am not an English major, but if I			X, W			X, W

		have time I will continue using that application to do lyric-reading to improve my spoken English. (original Chinese:有时间的话,我也会继续用那个App 对自己的歌词朗读进行。虽然不是英语专业,可以对自己的口语有一些帮助。)						
E15	Q 1	It is interesting because we have more chances to speak in English.(original Chinese:很有趣。歌词朗读增加了我们口语的交流。)			X, W			X, W
	Q 2	Participating in this study increase my opportunities of speaking English. (original Chinese:歌词朗读增加了我们口语的交流机会。)			X, W			X, W
	Q 3	I am not satisfied as I spent not enough time on learning English stress. (original Chinese:我花在这上面的时间很少,对自己不满意。)			X, W			X, W
	Q 4	I will continue because speaking ability is very important.(original Chinese:我会继续学习。因为英语口语对于我们是非常重要的。)			X, W			X, W
E16	Q 1	It is interesting as many words of lyrics are those I am familiar			X, W			X, W

		with in daily life. (original Chinese: 我觉得挺有趣的, 因为它里面有很多单词日常很常见。)						
	Q 2	It is useful because I know the sentence stress rules.(original Chinese:有用。因为知道了读长句的时候什么时候重读。)			X, W			X, W
	Q 3	I am not satisfied as I did not practice as often as I could.(original Chinese:对取得的成就不满意, 因为我没有经常练习。)			X, W			X, W
	Q 4	I will continue because English stress is very important for English learning.(original Chinese:会继续, 因为重音对英语的学习很重要。)			X, W			X, W
E17	Q 1	It is interesting as long as the lyrics are not too long.(original Chinese:有趣。但遇到复杂的句子会失去兴趣。)			X, W			X, W
	Q 2	It is useful because I improved my pronunciation.(original Chinese:有用。因为单词和句子的发音都可以得到训练。)			X, W			X, W
	Q 3	I am satisfied because I developed my performance of English stress. (original Chinese:比较满意。因为从不懂			X, W			X, W

		到现在会有意识地去注意重音的读法，所以还是比较满意的。)						
	Q 4	I prefer to use the mobile application “Fun Dubbing” to learn English as it is more fun to dub movie clips and imitate the pronunciation or intonation of the original clips. (original Chinese:用手机 APP 学习英语我比较喜欢“英语趣配音”，因为这个比较有趣，训练的内容都是电影里的场景，我会意识地去模仿电影里的语音，语调。)			X, W			X, W
E18	Q 1	It is interesting because lyric-reading is not with much pressure.(original Chinese:很有趣。歌词朗读不会有那么多的压力。)			X, W			X, W
	Q 2	It is interesting because I can practice my spoken English.(original Chinese:有用，可以锻炼自己的口语。)			X, W			X, W
	Q 3	It is fine. At least, I know what is stress.(original Chinese:还可以。分得清了什么是重音。)			X, W			X, W
	Q 4	I will but only read some of them.(original Chinese:会的，只是一部分。)			X, W			X, W

E19	Q 1	Actually, lyric-reading is very interesting because it attracts my attention, and is not like textbook-reading, which is drab. (original Chinese:我觉得歌朗读其实挺有趣的,因为它可以吸引我的注意力,就不像读课文,很枯燥。)			X, W			X, W
	Q 2	It is useful because reading those lyrics and practicing with those virtual English teachers can help me improve my pronunciation a lot. (original Chinese:我觉得挺有用的,因为我觉得读那些歌词,和跟英文老师的对话,可以严格地要求我英语的发音,得到很大的提升。)			X, W			X, W
	Q 3	I am very satisfied because my spoken English was not good before learning stress.(original Chinese:挺满意的,因为之前的口语没有起伏。)			X, W			X, W
	Q 4	I will because I already get used to it.(original Chinese:会继续的。因为已经成了一种习惯。)			X, W			X, W
E20	Q 1	It is interesting and new to me.(original Chinese:挺有趣的,挺新颖的。)			X, W			X, W
	Q 2	The answer is affirmative and it is			X, W			X, W

	<p>useful. I think the two main merits of using this mobile application are the model pronunciation of native speaker English teachers which we could imitate, and the feedback it supplies. The feedback shows us which word we did not pronounce correctly and visualize our errors with different colors. We then repeat practice that sentence.</p> <p>(original Chinese: 答案是肯定的，当然是有用的。这个 APP 两个最大的优点我认为，第一个有外教的发音，让我们在学的时候可以模仿。第二就是这个 APP 可以根据我们读的情况给予评分，并且会提示我们有哪些单词读得不够标准，会用不同的颜色给我们进行一个视觉上的判断，这样我们会一遍一遍重复读那个句子。)</p>						
Q 3	<p>I am not satisfied because I have only studied three video courses carefully, and I did not review what I had learnt. (original answers in Chinese: 不够满意。我只认真学习了三节视频课，下去也没有巩固复习。)</p>			X, W			X, W

	Q 4	I will continue reading lyrics for stress learning because practice makes learning perfect. (original Chinese:熟能生巧。)			X, W			X, W
E21	Q 1	It is interesting especially when I saw my scores getting higher than before.(original Chinese:很有趣。看到分数变高会有成就感。)			X, W			X, W
	Q 2	It is useful because I have learnt some new words including how to pronounce them. (original Chinese:我觉得相对而言比较有用。因为我会接触一些新的词语的读法，会学习到一些新单词。)			X, W			X, W
	Q 3	I am satisfied because our prior English teachers did not emphasize where to place stress. After the learning, I know what those stressed words are in speaking (original Chinese:相对而言比较满意。以前我们英语老师教学都不会强调哪一些音节该重读。通过重音学习，我知道了哪一些单词该重读。)			X, W			X, W
	Q 4	I will because I find learning English stress more fun than before.(original			X, W			X, W

		Chinese: 会继续的。因为对学习英语重音会越来越感兴趣。)						
E22	Q 1	It is interesting. First, song lyrics are related to my daily life. Second, lyrics contain stories and I like to watch corresponding music videos, which attract my attention, before I do the lyric-reading learning. (original Chinese:对我而言，歌词朗读有趣。原因如下，一，歌词比较贴近生活。二，歌词是比较有故事性的，学习歌词会搜相关的 MV 来看，这样会吸引人。)			X, W			X, W
	Q 2	It is useful because I could learn some authentic idioms (original Chinese:我觉得很有用。歌词里的一些词组是非常地道的，会通过学习歌词朗读来了解到英语里面相关的地道用语。)			X, W			X, W
	Q 3	I am satisfied. I only knew word stress and some pieces of the English stress rule before. This time, the learning is more methodical in terms of word stress, sentence stress, and stress rule for both content words and function words. (original Chinese:满意。之前我对重音的			X, W			X, W

		理解只局限于音标之上，而且只用自己不完整的规律去理解重音，而这次学习重音就比较系统。这次学习不仅局限于单个词，还从句子上，短文内容上，学到了虚词还有实词之类和在句子中的弱读式和强读式。)					
	Q 4	Lyric-reading relates to my life and lyrics are written with stories, which attract me. So I will learn English by lyric-reading. (original Chinese:歌词朗读贴近生活，还比较有故事性，能够吸引我进去。会通过学习歌词朗读来学习英语。)			X, W		X, W
E23	Q 1	It is fun because we can read it fluently.(original Chinese:很有趣，因为可以让我们读得更顺口。)			X, W		X, W
	Q 2	It is useful because we can learn more from reading lyrics than reading textbooks.(original Chinese:有用。比起课文朗读，我学习到更多东西，学得更好。)			X, W		X, W
	Q 3	Not satisfied because I didn't review what I learnt.(original Chinese:不满意。自己没有复习。)			X, W		X, W
	Q 4	No. because I don't like English			X, W		X, W

		learning.(original Chinese:不会。对英语学习不感兴趣。)						
E24	Q 1	It is full of fun. First, I like singing and lyric-reading helps us learn how to sing as well as how to study English. Second, learning English in this way can also help those who do not like sing learn English. (original Chinese:我觉得英语歌词朗读非常的有趣。第一，因为我本身就喜欢唱歌，所以，歌词朗读的话我们既可以学到唱歌，也可以学到英文。第二，对于不太喜欢唱歌的人来说，他/她可能喜欢学英语，所以说他/她在学英语的时候也可以培养他学习的兴趣。)			X, W			X, W
	Q 2	It is useful. Lyric-reading helps me learn more about English(original Chinese:有用。朗读歌词时可以学到英语方面的知识。)			X, W			X, W
	Q 3	I am satisfied because my prior teachers never taught us English stress. We pay attention to tests, but those tests do not examine English stress. Therefore, I have learnt a lot in terms of English stress this time and I am			X, W			X, W

		satisfied. (original Chinese:很满意。因为老师从来没有给我们说过英语重音，只注重考试，考试也不考重音。所以在这次英语重音的学习上我学到了很多，我很满意。)						
	Q 4	I will because I like singing.(original Chinese: 会继续，因为我比较喜欢唱歌。)			X, W			X, W
E25	Q 1	It is interesting because lyrics are easy to understand comparing to textbooks, which are hard to understand and read-aloud. (original Chinese:我觉得有趣。因为歌词很通俗易懂，不像课文一样难以理解和阅读。)			X, W			X, W
	Q 2	I think it is useful because I like both songs and English.(original Chinese:我觉得有用，我喜欢听歌，我喜欢英语。)			X, W			X, W
	Q 3	I did not spend enough time on learning so I have not gain much improvement. (original answers in Chinese:我没有真正的付出，所以收获得很少。)			X, W			X, W
	Q 4	I will because I like listening to songs and have saved many English songs on my			X, W			X, W

		mobile phone. I will keep doing reading-aloud exercises to improve my spoken English. (original Chinese:会。我喜欢听歌，我的手机上有很多英文歌，每天听的数量也不少。我会继续不定量的地去读一些英语，继续我的英语口语，练就自己。)						
E26	Q 1	It is fun and I could learn the stress rules.(original Chinese:很有趣。可以学习到重音的知识。)			X, W			X, W
	Q 2	It is useful because it help you learn English with passion.(original Chinese:很有用。不仅能提升你的兴趣，还能帮助你学习。)			X, W			X, W
	Q 3	Not yes not no because English is a long journey.(original Chinese:我的答案是相对的，因为学习英语是一个持续的过程。)			X, W			X, W
	Q 4	I like sing as well as learning English. When combing song lyrics with English learning, it’ s half effort with double effects. (original Chinese:我会。因为我喜欢唱歌，也喜欢英语，把两者结合起来的话，会达到事半功倍的效果。)			X, W			X, W

E27	Q 1	It is interesting because I normally listen to some English songs to practice my English. I think learning English with song lyric-reading is very good and I even have more interests in learning English lyrics. (original Chinese: 我觉得有趣。因为私下我都会听一些英文歌来练习英语，然后老师这次又组织了这个歌词朗诵，我觉得这样读英语的方法特别好，自己也有更多的兴趣去学习英文歌词。)			X, W			X, W
	Q 2	It is useful. Normally, I am afraid of speaking English because my pronunciation is not good. This opportunity helps us practice our pronunciation and is useful. (original Chinese: 当然有用。平时我们学英语的时候，都不敢开口说英语，因为自己的口语太难听，都不敢张口说。这次得到这个机会，让我们锻炼，对我的帮助还是有的。)			X, W			X, W
	Q 3	I am not satisfied as I did not spend enough time on learning and exercises. (original Chinese: 不满意，因为我没有花很多时间在			X, W			X, W

		这个练习上，练习得特别少)						
	Q 4	Yes I will practice English stress if I am free.(original Chinese: 会的，有时间会刻意去练习英语重音。)			X, W			X, W
E28	Q 1	It is full of fun because I like singing as well as reading English aloud. Besides, using a mobile application to learn is very convenient. (original Chinese: 我觉得有趣。因为我喜欢唱歌，也喜欢读英语。而且在手机上利用软件学习，这是非常方便的。)			X, W			X, W
	Q 2	I think it is useful. The mobile app helps us improve our speaking skills by imitating those model pronunciation recordings built within. (original Chinese:我觉得有用。在手机上可以模仿那些人的发音，对我们的口语是非常有帮助的。)			X, W			X, W
	Q 3	I am satisfied because learning English stress helps me improve me spoken English.(original Chinese:满意。学习英语重音提高了我的口语。)			X, W			X, W
	Q 4	I will because lyric-reading on			X, W			X, W

		mobile phone is very convenient whenever you are free. It is a way to improve my spoken English. (original Chinese:会,因为在手机上进行歌词朗读是非常方便的,而且有空的时候都可以学习。可以通过这样的练习来提高自己的口语。)						
E29	Q 1	It is fun when reading lyrics.(original Chinese:有趣。读起来挺好玩的。)			X, W			X, W
	Q 2	It is very useful as it helps us practice our speaking skills and make us relaxed. (original Chinese:挺有用的。它可以锻炼我们的口语也能让我们放松。)			X, W			X, W
	Q 3	I am satisfied because I did not know English stress before but after study I even know there are strong forms and weak forms of words in speaking. (original Chinese:挺满意的。因为平常都不知道有重音这种说法,学习重音后才知道重音有弱读与强读。)			X, W			X, W
	Q 4	I will. This is a way to practice our spoken English.(original Chinese:会的,这样能锻炼我们的口语能力。)			X, W			X, W

E30	Q 1	Lyrics are interesting and attractive comparing to boring textbooks, and are more relevant to our daily lives. (original Chinese:我觉得歌词朗读很有趣，因为它相比书上很枯燥的课文，更贴近我们的生活，也更吸引同学们的注意力。)			X, W		W: ...as well as attract our attention.	X,
	Q 2	It is useful because English songs relate to our lives and we like listening to English songs.(original Chinese:有用，因为英文歌贴近我们的生活，我们都会听。)			X, W			X, W
	Q 3	I am very satisfied because now I am more confident about my pronunciation.(original Chinese:挺满意的。现在对自己的发音比以前自信。)			X, W			X, W
	Q 4	I will because I already accustom myself to lyric-reading.(original Chinese:我会的，因为朗读歌词现在已经成了一种习惯。)			X, W			X, W

Agreement scale of the transcript and translation (CG)

Number/ questions	Transcript and the translation.	Agreement scale of the transcript.			Agreement scale of the translation.		
		Disagree	alteration	Agree, but needs	Disagree	alteration	Agree, but needs

C01	Q 1	It is interesting because lyric-reading is not like textbook-reading, which is boring. (original Chinese:我觉得歌词朗读有趣, 因为相对于朗读课本, 歌词朗读不会显得很枯燥。)			X, W			X, W
	Q 2	It is useful for English stress learning(original Chinese:有用。对重音学习有帮助。)			X, W			X, W
	Q 3	I am satisfied because my English improves a lot.(original Chinese:比较满意。和之前相比, 进步很大。)			X, W			X, W
	Q 4	Lyric-reading helps me improve my spoken English, and speaking fluently in English will bring me benefits in my future work. (original Chinese:进行歌词朗读可以提高我们的英语口语, 提高英语口语在以后的工作中会有很大的帮助。)			X, W			X, W
C02	Q 1	It is interesting because there are new words and grammar to learn in lyric-reading.(original Chinese:有趣, 因为歌词朗读里有新鲜的单词和语法。)			X, W			X, W
	Q 2	It is not that useful because normally we don't use those sentences from lyrics.(original Chinese:用处不是特别大, 因为平常用不到这样的句子。)			X, W			X, W
	Q	I am satisfied because I			X,			X, W

	3	have learnt the rules of stress. (original Chinese: 满意, 因为我对重音有了一定的了解和学习。)			W			
	Q 4	I will do lyric-reading in different steps because it provides little help in stress learning. (original Chinese: 我会分阶段进行歌词朗读, 因为歌词朗读对重音学习的帮助不是特别的明显。)			X, W			X, W
C03	Q 1	It is very interesting. (original Chinese: 挺有趣的。)			X, W			X, W
	Q 2	Lyric-reading helps us practice English pronunciation. (original Chinese: 朗读歌词可以帮助我们练习英语口语的发音。)			X, W			X, W
	Q 3	I am very satisfied. (original Chinese: 挺满意的。)			X, W			X, W
	Q 4	I will. (original Chinese: 会的。)			X, W			X, W
C04	Q 1	It is very interesting. (original Chinese: 挺有趣的。)			X, W			X, W
	Q 2	It is very useful because I can learn new words when singing. (original Chinese: 很有用, 唱歌的同时可以学到一些单词。)			X, W			X, W
	Q 3	It is just okay. (original Chinese: 还可以。)			X, W			X, W
	Q 4	I will. (original Chinese: 会的。)			X, W			X, W
C05	Q 1	It is interesting because I can learn the pronunciation of new words. (original			X, W			X, W

		Chinese:挺有趣的，可以学到单词的读法。)						
	Q 2	It is useful because I can learn some new words.(original Chinese:挺有用的，因为歌词朗读可以让我们学到一些英语单词。)			X, W			X, W
	Q 3	I am not very satisfied because I didn't learn much(original Chinese:不是很满意。学到的东西不是那么多。)			X, W			X, W
	Q 4	Maybe not because I am not an English major.(original Chinese:可能不会，因为我不是英语专业的。)			X, W			X, W
C06	Q 1	It is interesting because lyric-reading can help singing songs.(original Chinese:有趣，因为会读歌词唱英文歌也挺方便的。)			X, W		X: singing English songs.	W
	Q 2	It is useful because listening to the songs can help me find the stress placements.(original Chinese:有用，可以听音乐，知道哪些地方可以重读。)			X, W			X, W
	Q 3	I am not satisfied as I did not spend enough time on exercises. (original Chinese:对取得的成就不满意，因为练得太少了。)			X, W			X, W
	Q 4	I will because lyric-reading is interesting and can improve my stress learning.(original Chinese:会，因为歌词			X, W			X, W

		朗读有趣，也可以提高重音方面的口语。)						
C07	Q 1	It is interesting because it arouses my curiosity. (original Chinese:挺有趣，因为它可以唤起我阅读的好奇心。)			X, W			X, W
	Q 2	It is useful because now I know the strong forms and weak forms. (original Chinese:很有用，可以让我知道重读和弱读的区别。)			X, W			X, W
	Q 3	Satisfied because I didn't know the difference between strong forms and weak forms, but now I know.(original Chinese:还算满意，以前不知道重读弱读，现在能区分重读弱读。)			X, W			X, W
	Q 4	I will because it can improve my spoken English.(original Chinese:应该会，因为可以锻炼我的口语，我的口语应该会更好。)			X, W			X, W
C08	Q 1	It is fun because most of us like to sing and lyrics are easy to read.(original Chinese:我觉得有趣，很多人喜欢唱歌，歌里的单词也比较简单。)			X, W			X, W
	Q 2	Useful because we are familiar with lyrics.(original Chinese:有用。歌词我们比较熟悉，歌词朗读朗朗上口。)			X, W		W: and lyrics are easy to read.	X,
	Q 3	Very satisfied because I can read a whole			X, W			X, W

		<p>sentence now and I benefit from the stress lessons.(original Chinese:特别满意，因为我对句子的朗读可以成句了，老师也教了我们发音，挺可以的。)</p>						
	Q 4	<p>I will but not just lyric-reading.(original Chinese:我会继续，但不只是歌词朗读。)</p>			X, W			X, W
C09	Q 1	<p>It depends on what kind of songs you like. If you like that kind of songs, you will find them interesting. If they are not the songs I like, I will find them less interesting. (original Chinese: 要看是什么歌词。比如说你喜欢哪种种类的歌。如果你喜欢那种歌，你才觉得它有趣，如果不是我喜欢的，我会觉得可能不是那么有趣。)</p>			X, W			X, W
	Q 2	<p>Useful because lyric-reading is easy (original Chinese: 有用。因为歌词朗读可以让我们觉得朗朗上口。)</p>			X, W		X: lyric-reading is catchy.	W
	Q 3	<p>I am not satisfied as I did not spend enough time on learning. (original Chinese:不满意，因为课上得太少了。)</p>			X, W			X, W
	Q 4	<p>I will because reading my favorite lyrics makes me happy.(original Chinese: 会。选择自己喜欢的歌词朗读时很开心的事情。)</p>			X, W			X, W

C10	Q 1	It's fun because I like music.(original Chinese:有趣, 因为我自己喜欢音乐。)			X, W			X, W
	Q 2	It's useful because after doing lyric-reading, I find my singing is different.(original Chinese:有用, 学习歌词朗读后, 自己唱英文歌会有不一样的感觉。)			X, W			X, W
	Q 3	Satisfied because what I gained is satisfied.(original Chinese:满意。付出和回报是成正比的。)			X, W		W: because no pain, no gain.	X
	Q 4	I will if I have time to do it .(original Chinese:会的。有机会会继续歌词朗读的。)			X, W			X, W
C11	Q 1	It is fun because reading lyrics is different from reading textbooks. (original Chinese: 还是有趣的。读歌词和读文章有差别的。)			X, W			X, W
	Q 2	It is useful because I can know the difference between my reading and others' reading.(original Chinese: 挺有用的, 听别人读的和自己读的有很大的差别。)			X, W			X, W
	Q 3	I am not satisfied because I did not spend enough time on it and have gain little improvement in English stress performance. (original Chinese:对取得的成就不满意, 因为个人原因, 没有花太多时间在这上面, 对重音的掌握不好, 就初步了			X, W			X, W

		解了一些。)						
	Q 4	Maybe I don't have much time to do it, but learning English stress helps reading sentences.(original Chinese:可能没有太多时间,但是学习重音对读句子有很大帮助。)			X, W			X, W
C12	Q 1	Lyric-reading is interesting as it can relate to daily life, which is more acceptable. (original Chinese:我觉得歌词朗读有趣,因为它更贴近生活,更能让学生接受。)			X, W			X, W
	Q 2	It's useful because reading lyrics needs skills which related to English stress. (original Chinese:有用,因为歌词里的发音连贯,我们需要用歌词来学习重音。)			X, W			X, W
	Q 3	Satisfied. At least, now I know the rules of stress.(original Chinese:比较满意,至少知道了重音的发音方式。)			X, W			X, W
	Q 4	If I have free time, I will continue stress learning because it improves my spoken English(original Chinese:有时间的情况下会继续学习英语重音,因为可以提高我的口语。)			X, W			X, W
C13	Q 1	I think it is interesting. The reason is that I like songs and it is easier for me to start learning from what I like.			X, W			X, W

		(original Chinese:我觉得有趣，因为从我最喜欢的音乐出发，更容易上手。)						
	Q 2	It is useful because I can improve my learning skills via lyrics.(original Chinese:有用。因为可以通过歌词记得学习的技巧。)			X, W			X, W
	Q 3	I am not satisfied as I did not pay enough time and attention on learning it. (original Chinese:不满意，一，学不够，二，不扎实。)			X, W			X, W
	Q 4	I will because I love singing.(original Chinese:我会的，因为我爱唱歌。)			X, W			X, W
C14	Q 1	It is fun because it encourages us to learn.(original Chinese:有趣，因为可以提高同学们的积极性。)			X, W			X, W
	Q 2	It is useful because I like English songs.(original Chinese:很有用，因为对于我来说，我很喜欢听歌。)			X, W			X, W
	Q 3	It is just okay because I wasn't working hard.(original Chinese:还可以，因为自己还不够努力。)			X, W			X, W
	Q 4	I will because English learning is important.(original Chinese:学习英语很重要，我会继续。)			X, W			X, W
C15	Q 1	I think lyric-reading is full of fun because I like English songs and their lyrics are more fun than			X, W			X, W

		textbooks. (original Chinese:我觉得歌词朗读挺有趣的。因为平时都喜欢听英文歌，歌曲的歌词比平时的课文更有趣。) It is very interesting as song lyrics are more interesting than boring textbooks. (original Chinese: 我觉得歌词朗读挺有趣的，歌曲的歌词比平时枯燥的课文更有趣。)					
	Q 2	It is interesting therefore we will pay attention to lyrics when listening to songs. (original Chinese:有趣，就能让我们听歌时都会去注意一下。)			X, W		X, W
	Q 3	Satisfied. Learning English stress drives me pay attention to stress in reading books, songs and oral practice. (original Chinese:满意，因为不仅学到了重音知识，平时读书，听歌，口语练习的时候都会注意这些。)			X, W		X, W
	Q 4	I might. I may pay attention to stress when singing songs. (original Chinese:可能会很少.可能歌词在唱的时候会注意重音。)			X, W		X, W
C16	Q 1	It is interesting. Learning English is boring but lyric-reading is fun.(original Chinese:很有趣，学习英语很枯燥，所以歌词朗读是有趣的。)			X, W		X, W

	Q 2	It is useful because it improves my listening skills.(original Chinese: 有用, 帮助我们听听力。)			X, W			X, W
	Q 3	I am satisfied because I can learn more if I keep doing it.(original Chinese: 还是满意, 因为坚持能学到更多东西。)			X, W			X, W
	Q 4	I will because it's better to learn more.(original Chinese: 会, 因为多学习一点对自己总是好的。)			X, W			X, W
C17	Q 1	It is fun because lyric-reading is good.(original Chinese: 有趣, 歌词朗朗上口, 更加吸引人。)			X, W		X: lyric-reading is catchy.	W
	Q 2	It is useful because it helps me sing English songs.(original Chinese: 有用, 能帮助我唱英文歌。)			X, W			X, W
	Q 3	I am satisfied because I know stress can help me express different meanings.(original Chinese: 满意, 因为我知道重音分布不同, 表达的意思不同, 有助于我的表达。)			X, W			X, W
	Q 4	I will because learning stress helps me improve listening skills.(original Chinese: 会, 因为重音帮助了我在听力上的提高。)			X, W			X, W
C18	Q 1	It is fun because I can apply stress rules to lyric-reading.(original Chinese: 有趣, 因为歌			X, W			X, W

		词朗读可以把重音运用起来。)						
	Q 2	It is kind of useful. However, I can learn some grammar.(original Chinese:不是太有用，但是可以知道里面的语法。)			X, W			X, W
	Q 3	Satisfied because I have learnt the skills of reading English texts aloud.(original Chinese:满意，因为我知道了读英语的技巧。)			X, W			X, W
	Q 4	I will because lyric-reading can enhance what I have learnt in terms of English stress, and will help me improve my spoken English. (original Chinese:会，我觉得歌词朗读可以巩固以前重音学习的内容，可以继续提高我的英语口语。)			X, W			X, W
C19	Q 1	It is fun because normally we speak English in sentences. Reading lyrics can improve me speaking skills.(original Chinese:有趣，因为英语读的时候是按句，歌词会比较广泛，就是单纯的读，提高口感。)			X, W			X, W
	Q 2	It is useful. Before receiving this type of instruction, I did not know how to speak in English. After this study, I have improved my pronunciation. What impressed me most was			X, W			X, W

		how to pronounce “to” according to English stress rules. (original Chinese:有用的。之前都不怎么开口说英语。这个学习之后，纠正了很多发音，印象最深就是介词 to 的读法。)						
	Q 3	Satisfied because before this learning I didn’t want to speak English(original Chinese:满意。因为之前都不开口说英语。)			X, W			X, W
	Q 4	I may continue but I may choose to use BBC English materials to learn English.(original Chinese:不一定会进行朗读，我可以听 BBC 英语来学习。)			X, W			X, W
C20	Q 1	I think lyric-reading is full of fun because I like to listen to English songs. By doing lyric-reading exercises, I am more capable of memorizing what I have been taught in the stress courses. (original Chinese:我觉得歌词朗读挺有趣的。因为我平时自己也喜欢听歌，有时候也听英文歌曲，通过歌词来练习，就会记住老师教过我们的这些。)			X, W			X, W
	Q 2	It is very useful. When you practice more, your English stress skills will improve.(original Chinese:挺有用的。再次去听，有帮助更好的学习重音。)			X, W			X, W

	Q 3	I am satisfied because I have learnt a lot about what is English stress and how to stress in speaking. Before this learning, I can not tell what English stress is. (original Chinese:满意。因为我之前直接分不清什么是重音和重音发音的位置，但是我学习了这个之后，就懂了很多。)			X, W			X, W
	Q 4	I will because I want to improve my spoken English (original Chinese:会，因为我想提高我的口语。)			X, W			X, W
C21	Q 1	It is fun to practice with songs.(original Chinese:歌词非常有趣，能够在听音乐方面比较有练习。)			X, W			X, W
	Q 2	It is useful because lyrics could remind us of what we have learnt.(original Chinese:有用，当我们听英语歌词，可以让我们想到学习过的英语。)			X, W			X, W
	Q 3	I am satisfied. I never paid any attention to English stress before this learning. Now, I would like to learn and focus on English stress.(original Chinese:满意。以前我从来不会在乎重音，这次学习以后，我发现我会去了解和重点看重音。)			X, W			X, W
	Q 4	I will because I think stress is important.(original			X, W			X, W

		Chinese:会。因为我觉得重音还是比较重要的。)						
C22	Q 1	It is interesting because lyrics bring me the coherent feeling which makes lyric-reading easy. (original Chinese:我觉得有趣,因为歌词给我一种很连贯的感觉,会感觉读起来很顺口。)			X, W			X, W
	Q 2	It is useful because I like English songs and enjoy reading lyrics.(original Chinese:有用,因为我自己很喜欢英文歌曲,读的时候兴趣也会提上来。)			X, W			X, W
	Q 3	I am satisfied because I have been improving my English since Lesson 1.(original Chinese:满意,从第一节课到最后,一直在进步。)			X, W			X, W
	Q 4	I will because this study was about lyric-reading and I will keep doing it for my English learning.(original Chinese:会,因为本次学习是围绕歌词朗读进行的,为了提升自己的英语,会继续歌词朗读。)			X, W			X, W
C23	Q 1	It is very interesting because English articles are hard to learn but lyric-reading can arouse our interests and is not boring. (original Chinese:我觉得歌词朗读还是挺有趣的,因为			X, W			X, W

		我们用英语文章来学的话，会觉得比较冗长，用歌词朗读会激起我们的兴趣，不觉得那么无聊。)					
	Q 2	Lyric-reading is very useful because textbook-reading is too difficult. (original Chinese:我觉得歌词朗诵挺有用的，如果用其它的文章的话，会觉得它太复杂了。)			X, W		X, W
	Q 3	I am satisfied because I didn't know what stress was. Besides, it help us improve listening comprehension.(original Chinese:挺满意的。之前不知道什么是重音，对我们听力方面还是挺有用的。)			X, W		X, W
	Q 4	I will because I think English plays an important role for my future.(original Chinese:会继续学习的，如果在英语方面没有特别的话，以后出去都没什么用。)			X, W		X, W
C24	Q 1	Intresting because it helps me improve my spoken English.(original Chinese:有趣，因为朗读歌词有助于提高口语。)			X, W		X, W
	Q 2	It is useful because lyric-reading is fun.(original Chinese:有用，因为歌词朗读很有趣。)			X, W		X, W
	Q 3	I am satisfied because my spoken English improved.(original			X, W		X, W

		Chinese: 满意，我的口语有一部分的提高。)						
	Q 4	I will because learning English stress could improve my spoken English. (original Chinese:会继续学习。因为英语重音学习会提高我的口语。)			X, W			X, W
C25	Q 1	It is interesting because I can learn pronunciation from lyric-reading.(original Chinese:很有趣，因为能从喜欢的歌词里面知道发音。)			X, W			X, W
	Q 2	It is useful because it helps me focus on English stress learning and I will improve my pronunciation with my teacher's help.(original Chinese:很有用，会让我注重英语的发音，通过听老师的发音来提升自己。)			X, W			X, W
	Q 3	I am satisfied. I knew nothing about English stress and how to stress in speaking. I am happy that I have learnt English stress and gained a little improvement after receiving the instruction (original Chinese:比较满意。我以前完全不理解重音，也不知道怎么把重音发出来，通过老师的教导，我能够有一点改进和收获也是很开心的。)			X, W			X, W
	Q 4	I will because after learning I know how to			X, W			X, W

		distinguish English stress.(original Chinese: 会继续去学习英语重音, 学习重音后知道怎样去辨别。)						
C26	Q 1	It is fun but it would be more fun in singing.(original Chinese:有趣, 但是如果唱出来会更有趣。)			X, W			X, W
	Q 2	Any reading is useful and the key part in learning is yourself.(original Chinese:只要是朗读都有用, 关键在于自己。)			X, W			X, W
	Q 3	It's okay because I didn't study very carefully.(original Chinese:还行, 感觉没认真的学。)			X, W		W: study very hard.	X
	Q 4	I will because I am instrested in lyrics and pronunciation.(original Chinese:会的, 因为我本身就对歌词, 发音比较感兴趣。)			X, W			X, W
C27	Q 1	It is interesting because I like songs and it is easy to learn when following the theme of the lyric. (original Chinese:我觉得还是比较有趣。因为本人比较喜欢听歌, 然后练习的时候会跟着歌词的意思走, 所以更容易记住。)			X, W			X, W
	Q 2	It is useful because lyrics are easy to remember and useful for learning stress.(original Chinese:有用, 记歌词比较快, 对重音学习有			X, W			X, W

		帮助。)						
	Q 3	I am satisfied because I did not know English stress before. After receiving the instruction, I know what English stress is, where to stress and where not to stress. (original Chinese:比较满意。因为以前没注意过重音也不知道什么是重音,通过这次学习,知道了重音是什么,哪些地方该放重音,哪些地方该弱读。)			X, W			X, W
	Q 4	I will because enjoying English songs is one of my hobbies.(original Chinese:会,听歌也是我的一大兴趣。)			X, W			X, W
C28	Q 1	It is fun when you enjoy the lyrics, besides the teaching is good.(original Chinese:很有趣,自己去听歌,感受它的内容,老师教的挺好的。)			X, W			X, W
	Q 2	It is useful because lyrics are useful for stress learning.(original Chinese:有用,好的歌词对读重音挺有用的。)			X, W			X, W
	Q 3	I am kind of satisfied. I think learning English stress is important. After taking those courses, I have learnt a lot about English stress, which I did not know and understand. I do make some achievement in terms of English stress performance. (original			X, W			X, W

		Chinese:还算满意。我感觉学习重音真的很重要，听了这么多课，也学到很多东西，包括以前不知道的和不懂的，都在重音学习上取得了一定的成果。)						
	Q 4	I will because lyric-reading is better than textbook-reading.(original Chinese: 会继续的，歌词朗读比朗读其它的文章好。)			X, W			X, W
C29	Q 1	It is interesting because normally we study English with textbook-reading, which is not as fun as lyric-reading. (original Chinese:我觉得歌词朗读很有趣，因为平时学习英文都是读课文，没有歌词有趣。)			X, W			X, W
	Q 2	It is useful as what you have learnt from the courses could be applied into lyric-reading exercises easily.(original Chinese:我觉得有用，因为在歌词朗读课上学到的知识可以轻松运用到朗读中)。			X, W			X, W
	Q 3	I am satisfied very much because I had no idea about English stress and strong forms and weak forms of pronunciation. Since I have learnt those principles, I can apply that knowledge in speaking. (original Chinese:我很满意。因			X, W			X, W

		为之前我从来不知道英语还有重音，强读弱读的区别，自从学习了它之后，我就能在读英语的时候就会要用到重音，强读，弱读这些。)						
	Q 4	I will do it for learning stress because I think once you have learnt English stress, it is better to apply those knowledge.(original Chinese:我会的。因为在我看来，重音学了就要马上运用。)			X, W			X, W
C30	Q 1	It is fun because lyric-reading can help you sing English songs.(original Chinese:有趣，因为歌词朗读方便以后唱英语歌，大胆的唱。)			X, W			X, W
	Q 2	The traditional textbook-reading is boring and drab. Lyrics are easy to remember.(original Chinese:传统朗读比较无聊，无趣，歌词让我们记忆深刻。)			X, W			X, W
	Q 3	I am satisfied because this is my first time of learning English stress. My teachers did not teach me English stress and only told us where a stressed syllable was within a word. (original Chinese:比较满意。因为我第一次接触到重音学习，之前都没有老师给我们讲过重音，只讲过某个单词的重音在哪。)			X, W			X, W

	Q 4	I will do lyric-reading when I am free to relax myself and learn English stress.(original Chinese:我会在业余时 间进行歌词朗读，放松 自己，学习重音。)			X, W			X, W
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Signature:

Signature of Xiang Yuying



C30	Q 1	It is fun because lyric-reading can help you sing English songs.(original Chinese:有趣, 因为歌词朗读方便以后唱英语歌, 大胆的唱。)			✓			✓
	Q 2	The traditional textbook-reading is boring and drab. Lyrics are easy to remember.(original Chinese:传统的朗读比较无聊, 无趣, 歌词让我们记忆深刻。)			✓			✓
	Q 3	I am satisfied because this is my first time of learning English stress. My teachers did not teach me English stress and only told us where a stressed syllable was within a word. (original Chinese:比较满意。因为我第一次接触到重音学习, 之前都没有老师给我们讲过重音, 只讲过某个单词的重音在哪。)			✓			✓
	Q 4	I will do lyric-reading when I am free to relax myself and learn English stress.(original Chinese:我以后会在业余时间尽量进行歌词朗读, 放松自己, 继续重音学习。)			✓			✓

Signature: *Xiang Yuying*
Xiang yuying
12/08/2018

Signature of Wang Heng

C30	Q 1	It is fun because lyric-reading can help you sing English songs.(original Chinese:有趣, 因为歌词朗读方便以后唱英语歌, 大胆的唱。)			✓			✓
	Q 2	The traditional textbook-reading is boring and drab. Lyrics are easy to remember.(original Chinese:传统的朗读比较无聊, 无趣, 歌词让我们记忆深刻。)			✓			✓
	Q 3	I am satisfied because this is my first time of learning English stress. My teachers did not teach me English stress and only told us where a stressed syllable was within a word. (original Chinese:比较满意。因为我第一次接触到重音学习, 之前都没有老师给我们讲过重音, 只讲过某个单词的重音在哪。)			✓			✓
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Signature: Wang Heng

Wang Heng
12/08/2018

BIOGRAPHY

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EDUCATIONAL BACKGROUND:

Sept. 2015-2017	<p>Ph.D. in English Language Teaching</p> <p>Graduate School of Human Sciences</p> <p>Assumption University, Thailand</p>
Sept. 2006-June 2009	<p>Master Degree of Arts</p> <p>Major: Communication Studies</p> <p>College of Literature and Journalism</p> <p>Sichuan University, China</p>
Sept. 2002-June 2006	<p>Bachelor Degree of Engineering</p> <p>Major: Chemical Engineering and Technology</p> <p>College of Chemical Engineering</p> <p>Sichuan University, China</p>

PUBLICATIONS OF ACAMEMIC AREICLES:

1. Wu, D (2018). Teaching English Stress: Can Song-Lyric reading Combined with Mobile Learning Be Beneficial to Non- English Majors? *The New English Teacher*, Vol. 12, No. 2, August 2018.
2. Wu, D (2018). Learning Motivation and MALL: Insights from an Experiment in Teaching English Stress. *Proceedings of Innovation in English Language Teaching and Learning: 1st International Conference on English Studies* (pp. 66-75). Krabi, Thailand: Thaksin University.

3. Wu, D (2018). Acquiring English Stress: A Study of Speaking Instruction Based on Song Lyrics and MALL. *Proceedings of Using Innovation and Enhanced Technologies: 16th International Conference on Developing Real-Life Learning Experience* (pp. ISD01-1- ISD01-8). Bangkok, Thailand: King Mongkut's Institute of Technology Ladkrabang.

PRESENTATIONS AT INTERNATIONAL CONFERANCES:

As a Parallel speaker:

1. The 37th Thailand TESOL International Conference, Jan 19-21, 2017
2. The 38th Thailand TESOL International Conference, Jan 26-27, 2018
3. The 16th International Conference on Developing Real-Life Learning Experience: Using Innovation and Enhanced Technologies, May 31-June 1, 2018
4. The 1st International Conference on English Studies: Innovation in English Language Teaching and Learning, June 28-29, 2018

