

**THE EFFECTS OF SIGNALING PRINCIPLE
IN A SONG-BASED COURSEWARE ON STUDENTS'
LISTENING SKILLS AND MOTIVATION**

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by

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KESAN-KESAN PRINSIP SIGNALING DALAM KOSWER BERASASKAN LAGU PADA KEMAHIRAN MENDENGAR DAN MOTIVASI PELAJAR-PELAJAR

ABSTRAK

Kajian ini adalah satu usaha untuk mendapatkan gambaran tentang kesan prinsip multimedia signaling dalam koswer berasaskan lagu kepada pelajar yang berbeza jantina. Kajian terdahulu telah menunjukkan bahawa prinsip signaling dan lagu-lagu dapat meningkatkan pembelajaran. Walau bagaimanapun, tidak ada bukti yang menunjukkan kesan gabungan kedua-dua elemen tersebut dalam meningkatkan kemahiran mendengar bahasa Inggeris. Matlamat kajian ini adalah untuk membangunkan satu koswer berdasarkan lagu (SBC) dalam meningkatkan kemahiran mendengar pelajar Tingkatan 1. Dengan menggunakan kaedah persampelan rawak, semua 120 pelajar dari dua buah sekolah lelaki dan perempuan dipilih untuk mengambil bahagian dalam kajian ini. Para peserta telah menggunakan sama ada koswer signaling atau koswer tanpa signaling. Keputusan menunjukkan bahawa kumpulan signaling mengatasi kumpulan tanpa signaling. Pelajar perempuan mencapai skor motivasi dan peningkatan pembelajaran lebih tinggi apabila menggunakan koswer lagu dengan signaling berbanding dengan pelajar lelaki. Dapatan kajian juga menunjukkan bahawa pelajar lelaki menunjukkan peningkatan motivasi mereka dalam pembelajaran bahasa apabila menggunakan berdasarkan koswer lagu dengan signaling.

THE EFFECTS OF SIGNALING PRINCIPLE IN A SONG-BASED COURSEWARE ON STUDENTS' LISTENING SKILLS AND MOTIVATION

ABSTRACT

This study was an attempt to gain insights into effects multimedia signaling principle in a song-based courseware on different gender of students. Prior studies have shown that signaling and songs improve learning. However, there is no evidence showing effect of the combination of these two elements in improving listening skills of English language. The goal of this study was to develop a song-based courseware (SBC) to enhance listening skills that was appropriate for Form 1 students. Using random sampling method, all 120 students from two single-sex schools were chosen to participate in this study. The participants were presented either signaled or non-signaled multimedia courseware. The result suggested that the signaled group outperformed the non-signaled group. Female students had higher motivation and learning gain score in the signaling condition compared with the male students. The finding also revealed that the male students boosted their motivation in learning language when using song-based courseware with signaling.

CHAPTER 1

INTRODUCTION

1.1 Overview

The aim of this study is to design, develop and evaluate the effectiveness of a song-based courseware (SBC) in improving different gender students' listening skill.

First of all, this chapter discusses some background to the statement of the problem, which then leads to the specification of the problem statement, purpose of the study and objectives of the research. Moreover, the respective research questions and hypotheses are discussed and it is followed by a description of the framework for the research namely the theoretical underpinnings that guide the research procedure. Subsequently, this chapter also provides an explanation on the significance, the limitations and the operational definitions of the research which form the basis of this research.

1.2 Background of the Study

English language has been referred to as a 'Global language' and it is often taught as a second language worldwide. In all Malaysian schools, English is taught as a second language which is also a compulsory subject in both primary and secondary school. At the university level, local undergraduates are required to register a stipulated credit hour of English courses based on the result of their Malaysian University English Test (MUET), which is an English proficiency assessment course and a compulsory requirement for students who plan to pursue tertiary education at

Malaysian universities (Malaysian Examination Council, 2006). Though much has been done to enhance English as the most important language, there is a steady decline in the standard of English language in Malaysia (Mustafa & Zarina, 2009). Academics and the Malaysia government have expressed their undivided concern over the deteriorating level of English proficiency among the students in schools, colleges and universities (Badioze Zaman, 1998; Md Yasin, Wan Mohd Shaupil, Mukhtar, Abd Ghani & Rashid, 2010). In 2014, Deputy Prime Minister Tan Sri Muhyiddin announced that English is a must-pass subject for the SPM by 2016, a policy move that was reinforced in the Malaysia Education Blueprint 2013-2015 (The Star Online, Sept. 2014). This would give students the incentive to put in extra effort to improve their English language proficiency. However, the government backtracked on its plans to implement the policy on grounds that it must give students and teachers more time to prepare (The Star Online, Oct. 2015).

Achieving the linguistic competences of four language skills namely listening, speaking, reading and writing is the main objective of learning English. Through the normal course of a day, listening is used nearly twice as often compared to speaking and four to five times when compared to reading and writing (Rivers, 1981: 136). In spite of its importance in daily communication and educational processes, listening has long been the neglected skill in every field for example in second language acquisition, teaching, assessment and research (Sadighi & Zare, 2006). In Malaysia, the teaching of listening and speaking often take a backseat in English classrooms due to lack of awareness, attention, time and interest from teachers and students (MELTA, 2010). However, its perceived significant role in language learning and teaching these recent years contributes to the increasing focus on listening skill. This

can be seen through the introductory of Oral Proficiency in English for Secondary School (OPS-English) programme which is employed to improve Form One students' listening and speaking skills in Malaysia.

Listening is central to the lives of students throughout all levels of educational development (Coakley & Wolvin, 1997; Feyten, 1991; Wing, 1986). Moreover, listening is the most frequently used language skill in the classroom (Ferris, 1998; Murphy, 1991; Vogely, 1998). According to Aziea and Wasilah (2000), through listening, students are able to elicit the vocabulary, grammar and proper pronunciation. To add up, numerous studies indicated that efficient listening skills were more important than reading skills as a factor contributing to academic success (Coakley & Wolvin, 1997; Truesdale, 1990). In addition, listening skills are an essential aspect of the development of motivation which empowers students to develop their communication and critical thinking skills necessary for functioning competently in the ESL classroom, the workplace, the home and other places where language learners engage with the public (Hlaviso, 2012). Interestingly, motivation is also needed to make sure students engaging in the listening activities well. Countless studies have demonstrated that motivation is positively linked to success in learning the English language or any other second language. The motivation of learners very much affects their willingness to take part in the process of learning. Motivated learners are enthusiastic, eager to work hard, concentrate on the tasks given, do not require constant encouragement, willingly confront challenges, and could even motivates others, facilitating collaborative learning (Fadel & Khaled, 2013). Learners' motivation may be influenced simultaneously by many variables. Material is only one of them. Because listening is complicated, using appropriate teaching

materials makes it easier for learners learning English language. Learners will learn nothing if teaching materials are not interesting and motivating. Teachers need to think carefully about making the content interesting and the activities successful. Else, lack of motivation towards listening activity will be a problem in the listening class. From researcher's experience, many students complained that they became tired of listening to the tape from beginning to the end with some mechanical exercises. Without interest, motivation and variation in teaching and learning, students felt bored in listening classes. As a result, the passive attitude kept students from making much progress in listening comprehension. As such, a lot of researchers suggest using authentic materials for more positive effects on learners' learning experience and motivation. Ross (2006) says that the example of authentic listening materials is listening to song. The learners will be interested and not be frightened or worried when they are practising listening. The use of song stimulates and motivates learners to comprehend the content of materials.

Furlong and Maynard (1995) point out that learning will take place really well when students can identify themselves and are interested in the subjects of discussion and teaching materials. Using songs in English classroom can be motivating to students who enjoy music, which most of them really do. Schoepp (2001) claims that songs have become an integral part of our language experience and that they can be of great value if used in coordination with a language lesson. A variety of activities fostering all language skills (listening, reading, writing and speaking) as well as language systems such as pronunciation, grammar and vocabulary can be developed using songs (Lenka, 2011). Schoepp (2001) explains the affective, cognitive and linguistic reasons which grounded in learning theory for using songs in classroom.

- i. Affective reasons: The Affective Filter Hypothesis is one of five proposed hypotheses by Krashen (1983). It provides a description of affective factors for example motivation, self-confidence and low-anxiety which are related to success in learning a language. Krashen states that for optimal learning to occur the affective filter must be weak, which means that a positive attitude towards learning is present. Songs are one method for achieving a weak affective filter and promoting language learning as songs create a relaxing and pleasurable classroom.
- ii. Cognitive reasons: The main cognitive reason for using songs in classroom is because songs offer opportunities for developing automaticity Rahman (2001). Songs have repetitive and rhythmical characters that help students remember words, phrases or even whole sentences and so enhance the process of automaticity in language learning. Moreover, Rahman (2001) points out that studies have shown that brain function is increased when listening to music and this promotes more complex thinking.
- iii. Linguistic reasons: Songs expose students to an authentic language and also offer many examples of colloquial English, different accents, grammar structures and topics for discussion (Lenka, 2011). Cross (2008) draws attention to the fact that songs are known to be a negative source of grammar input, therefore, songs must be well chosen.

For all these reasons, songs can be seen as a device having highly instructional and not only for entertaining purpose. The worldwide utilization of songs in language

teaching and learning is not new although its practice among teachers and educators is still limited. In Malaysia, there are limitations in using songs in classroom due to the English as a Second Language (ESL) curriculum does not give necessary attention to songs. For example, few songs are distributed into coursebook in the school curriculum and as such, teachers may have difficulty in choosing appropriate songs for classroom teaching and finally, some teachers may not know the strategies in using songs and skills in designing the learning tasks (Tse, 2012). Definitely, student's English proficiency and competency will be enhanced if songs are given more emphasis and used strategically in teaching and learning environment. This initiative would surely bring a positive environment to the classroom, increase students motivation to learn English and strengthen students-teacher relationship.

The computer technology has become widely prevalent among a lot of students and the medium of choice in many higher institutions of learning (Al-Khawalade, 2003; Bauer, 2002). Globally, there have been increasing interests in the role of computer technology to make learning more efficient and effective (Kozma, 2003). Sivinkachala and Bialo (2000) reported that prolonged use of technology significantly increases learning among at risk students and improve their attitudes toward learning, self confidence and self-esteem. In fact, rapid developing information technology also influences English teaching from a teacher-centered mode to a student-centered mode. The computer technology stimulates student active learning motivation and interest in English, creates a good English learning environment and improves the efficiency and quality of English teaching. Therefore, the use of computer technology to assist English teaching is an inevitable option. However, despite promising benefits computer technology in education offers, the focus must be given

to present the lesson in such a way that makes meaningful and enjoyable learning. Fortunately, computer technology advancement has introduced multimedia as a significant medium of instruction and a powerful means to present information effectively and interestingly.

Multimedia has been variously reported as a beneficial learning tool in second language learning (Almekhlafi, 2006; Chun & Plass, 1996; Hamzah, 2004; Kramsch & Andersen ; Tsou et al, 2002;). According to Yeh and Wang (2003) the potential effects of multimedia on language learning is due to its capability to present information in dual presentation mode. Clark and Mayer (2008) state that people learn better from words and pictures than from words alone. So, multimedia learning is intended to foster learning better than solely verbal messages in explaining ideas to learners. The basic assumption underlying this belief is because “when words and pictures are both presented, people have an opportunity to construct verbal and visual mental models and build connection between them” (Clark & Mayer, 2008; Mayer, 2009).

Mayer (2001) discusses nine principles which are multimedia principle, spatial contiguity principle, temporal contiguity principle, coherence principle, modality principle, redundancy principle, signaling principle, segmenting principle and pre-training principle that shape the design and organization of multimedia presentations. These principles adhere to Mayer’s cognitive theory of multimedia learning and the principles describe how students learn better from the multimedia elements. In this study, one of those principles: signaling principle is tested to see its effect in directing students’ attention toward the minimal pairs in the wordy song lyric while

listening to an English song. This principle states that students learn better when cues that highlight and guide the students' attention to the key elements in the lesson are added. A study on signaling principle conducted by Mautone & Mayer (2001) to some students (nonsignaled group) received a narrated animation explaining how an airplane achieves lift and then took a transfer test. For another students (signaled group) received the same instruction and test, except that the narration was signaled. The narrator began by listing the three steps and the narrator inserted a heading sentence before each section. The result showed that signaling benefited the students, yielded medium effect size 0.60. Signaling principle will be applied in only one of two learning modes in this study to make a comparison which mode is more useful and more effective in guiding students' attention to the song-based English lesson.

1.2.1 Preliminary Investigation (PI)

The main purpose of English language lesson is to enable students to understand and to communicate in that language. As such, using authentic materials is a basic tool to let students achieve that aim. Listening to authentic materials like songs is highlighted as the best opportunities to introduce the real language to them. Songs are one type of this authentic material that students are enjoying and taking advantage from them. The use of English songs in English classrooms can successfully provide a harmonious classroom atmosphere, reducing students' anxiety, fostering their interests and motivating them to learn the target language.

In order to identify the problems in listening among secondary school students, a Preliminary Investigation has been carried out at a rural secondary school in Kelantan using song. Based on researcher's experience as an English teacher, the

students from rural area only exposed to the language for about an hour during English lesson everyday and they lacked of awareness on the importance of mastering the English language. The listening test has been administered by using two instruments; a listening test and a semi-structured interview. The test has been conducted to eight form one students who were four randomly chosen boys and girls respectively. Based on their previous UPSR result, the English proficiency level of these students are intermediate (B grade).

In this listening test, the subjects had to listen to a song entitled 'Last Kiss' to fill in the blanks in the lyric. Two modes were used in this survey in order to show the score differences of two techniques. First mode: Listening Without Choice of Answer (LWTCA) was conducted in a way in which the students need to fill in the blanks without the choice of possible answers and second mode: Listening with Choice of Answer (LWCA) provided the students with the choice of answers. The tape would be played twice for each method. This was important as to give the listeners a second chance at retrieving word that they had missed out the first time so they can change their answer.

1.2.1.1 Outcomes

In the test, the subjects were required to answer a total of 17 blanks. For every correct answer, the students will be awarded 1 mark and if the student answered incorrectly, 1 mark will be deducted from the total mark. Therefore, the highest possible score for these two methods were 17 marks. In order to evaluate the students' capability in listening skill, the achievement-mark has been fixed as 9 marks which is half of the full mark. This is because the rural area students'

achievement is quiet low compared to urban area students. As such the achievement-mark needs to be set accordingly.

The mean score in the Method 1 (LWTCA) was 3.88. The minimum score obtained by the subjects was 1 mark, while the maximum score was 6 marks. Method 2 (LWCA) was administered right after the Method 1 (LWTCA). The subjects were required to listen to the same song just like in Method 1 and answer the seventeen blanks with the choice of answers. An analysis of their result shows that, there is a very marked improvement in the subjects' scores. The mean score for Method 2 (LWCA) was 12.63. The minimum score obtained by the subjects was 10 marks, while the maximum score was full mark, (17). Those two methods show a very huge gap of differences in score and a summary of these results is presented in Table 1.1.

Table 1.1 Result of Listening Test

Test	Subject	Mean score
LWTCA	8	3.88
LWCA	8	12.63

Table 1.1 shows the highest mean score was found in Method 2 (LWCA). The results indicate a tremendous gap of 8.75 between these two modes (LWTCA and LWCA). In Mode 1 (LWTCA), the subjects' performance was below the achievement-mark and it was found that Mode 2 (LWCA) was really a big shocking with every single subject passed the achievement-mark successfully. By evaluating the massive gap in score of these two methods, it suggested that the subjects were very dependable on the help of choices of the words in order to complete the blanks. The subjects hardly

tried to fill in the blanks when there were no choices in Method 1 (LWTCA). Nevertheless, it is evident that this significant improvement in the Mode 2 (LWCA) is attributed to the actual potential of the students to be authentic and good listeners with suitable ongoing listening activities in spite of currently having difficulties in listening.

In order to probe the specific problems faced during the listening test, a further investigation was carried out by interviewing these eight subjects. The interview was semi-structured so that a better insight into the issues at hand could be gained.

Table 1.2 The Factors Thought to be Contributing to Listening Problem

Factor	Number of student
Pronunciation	8
Confusion between words with almost/same sound	8
Unfamiliar word	7
Accent/ Dialect	7
Lost during listening	4

The data presented in Table 1.2 elicited that most of the respondents believed that ‘pronunciation’ (8 students) and ‘confusion between words with almost/same sound’ (8 students) are the main problems which created frequent hindrance to the respondents during listening practice. It was further highlighted in the table that ‘unfamiliar word’ and ‘accent/dialect’ were also frequently existed in the process of listening. Whereas, ‘lost during listening’ was considered the least factor in contributing to listening problem. Based on the data collected and interpreted, following conclusions were drawn:

- i. 'Pronunciation' and 'confusion between words with almost/same sound' were the major obstacles in the development of listening skills among the students.
- ii. 'Unfamiliar words' and 'accent/dialect' were also problems, which frequently existed in the listening process.

The subjects informed that previously, listening activity have been carried out not more than twice in their English lesson every year, this situation apparently and strongly implies that students face listening problems as the result of little attention towards this skill in the English language classroom. Despite the recognition of the critical role that listening skills play in communication and acquisition of language, it remains one of the least focused skill in language learning. In fact, teachers believe that exposing students to spoken language is sufficient instruction in listening comprehension (Miller, 2003). The lack of emphasis on listening skills has led to problems faced by students in listening activities. The marked improvement in Method 2 was evidence that they do have a potential to be authentic and good listeners with ongoing listening activities. The reason why they are dependable to the choice of answers in listening Method 2 (LWCA) is because of the lack of listening practices and activities in English class. Their listening ability will absolutely boost with a little bit more attention to listening skill in English class by using suitable and interesting ways.

Multimedia has been reported as a beneficial learning tool in second language learning (Almekhlafi, 2006; Hamzah, 2004). According to Yeh and Wang (2003) the potential effects of multimedia on language learning is due to its capability to present information in dual presentation mode. In multimedia learning, the instructional

materials can be presented in two modes for example, words and pictures. In such a presentation, a direct connection can be established in the students' memory between the two types of retrieval clues. These two modes enable the students to learn better than a single mode of instructional materials such as words alone (Plass, Chun, Mayer, & Leutner, 1998). Moreover, Mayer (2009) posited that the rich attributes accorded by multimedia such as interactivity, sound, animation and immediate feedback provides an environment that is lively and engaging. As such the combination of two elements of multimedia and authentic material like song will make the learning of the English language easier when students are immersed in an interactive and authentic learning environment (Wang, 2005).

Listening is one of the most challenging skills for ESL learners to develop as it is probably the least explicit of the four language skills (Vandergrift, 2004). It is a demanding process, not only because of the complexity of the process itself but also due to factors that characterize the listener, the speaker, the content of the message and any visual support that accompanies the message (Brown and Yule, 1983). Vandergrift (2004) stated that listening plays a very important role in the learning of a second language. This is because it gives the learner information from which to build the knowledge necessary for using the language. Listening provides the necessary input for learners to acquire the language needed for practicing a language. Understanding spoken language is a necessary condition for language acquisition (Rost, 1990). For too long listening has been given little attention in the English language classroom. The lack of emphasis on listening skills has led to problems faced by students in comprehending listening texts.

On the basis of data interpretation and conclusions of the preliminary investigation, it is obvious that there is a need to help students to overcome their problems in listening to English language input. More attention to listening skill is needed to improve the real listening capability of the students by using an interesting, fun and meaningful lesson.

1.3 Problem Statement

Listening is believed to be a main foundation in learning foreign language and one of the means of language communication. People will acquire language by understanding the linguistic they hear. Thus foreign language learner should have a good listening ability to receive language input necessary for using a language.

The result of Preliminary Investigation (PI) showed that the students encountered many challenges in listening in which ‘pronunciation’ and ‘confusion between words with almost/same sound’ were the main obstacles in the listening process. The students could not differentiate or identify the words that differ by only a single sound (minimal pair) for example between the segments of /b/ and /p/ and hence cause a slow recognition in listening comprehension. The context knowledge could help here if the students have the ability to use their top down skills effectively.

Based on the researcher’s experience, it is very difficult for students to understand English through listening. Normally, the students feel at a loss when listening to new text in the lab, even though the text is considered easy. After listening to the tape for the first time, more than 60% of the students could not understand the meaning of the material they listened to. Even the tape is played again up to five times, at least 20%

of students did not understand it. To make it sound even serious, the tape has to be stopped to explain the difficult and unfamiliar words and occasionally it is a need to explain material sentence by sentence to help them. This situation indicates a big issue as the students only understand the whole text after being provided with so much help from the teacher. As consequence, they are uninterested, afraid and bored to do listening again. They might not have self-confidence to have an interaction with English speaking people due to their listening comprehension abilities. This battle of psychological suggestion hinders them to do so.

Fauziah (2011) who had conducted a research in an educational setting in Malaysia reported that speaking and listening were least effectively developed and the focus was more on reading and writing. Consequently, the Ministry of Education, Malaysia has introduced Oral Proficiency in English for secondary schools or OPS-English to enhance the aural and oral skills of Malaysian students by providing vast opportunities for students to engage in fun and non-threatening student-centered activities.

It would be wise to develop listening by raising language learners' pronunciation awareness after taking consideration that the difficulty in listening comprehension might stem from pronunciation. In a previous research, two Japanese students were taught to pronounce and discriminate English words that contain unfamiliar phonemic contrasts (e.g *rock* and *lock*) and it resulted in good improvement of their listening skill. Moreover, teaching pronunciation was found to be easier than teaching listening discrimination. Teaching listening discrimination resulted in

collateral improvement in pronunciation and, to a lesser extent, vice versa (Shimamune & Smith, 1995).

Rhymes in songs provide excellent chances of listening, learning, imitating and repeating similar sounds for the students learning and practicing pronunciation of English language. As the students usually listen to songs repeatedly, this will allow students to have an indirectly exposure to the sounds of the language for many times and have a meaningful pronunciation practice through an enjoyable way.

Najjar (1996) found that learning was higher when information was presented via computer-based multimedia systems than traditional classroom lectures. Multimedia courseware offers many benefits of being interactive, flexible, modular, practical, consistent, timely, engaging and cost-effective. It provides the ability to enhance the effectiveness of learning process and achieve measurable performance results of the learner (Hick, 1997).

Therefore the combination of multi benefits found from multimedia and song then will be just perfect in developing a courseware to assist students' listening skills by using songs. With this in mind, this study applies one multimedia principle (Mayer, 2011) which is signaling principle. According to Mayer (2001), students learn better when cues that highlight the organization of the essential material are added. Mautone & Mayer (2001) examined the effects of signaling and found out that students who received the signaled version of the narrated animation performed better on a subsequent test of problem-solving transfer than did students who

received the unsignaled version with the effect size of .74. Signaling seems to give benefits in the process of selecting and organizing relevant information.

Hence, two learning modes of the courseware were developed. They were; (a) non-signaling mode where pictures (graphic video) and audio narration (song) are presented concurrently without signaled on-screen text (lyric) and (b) signaling mode where pictures (graphic video) and audio narration (song) are presented concurrently with some signaled on-screen text (lyric). Those signaled words are target words to be learned. The Students are able to learn the pronunciation of the focused word as the narration will be reading it to them and the song will let them listen how to pronounce the words correctly. The students are able to create and integrate their own 'schema' to understand better by looking at the graphics and watching the videos. At the end of the day, the students will get a chance to improve their listening skill with the increasing knowledge of the English sound. Therefore, this research implemented a courseware to create pronunciation awareness of English words with phonemic contrast (minimal pair) in order to enhance students' listening skill.

1.4 Purpose of the Study

The purpose of the study was to examine the effect of applying signaling principle to the use of songs in the courseware. This is hope to improve listening skill through the learning or reinforcement of knowledge of minimal pairs (a pair of words with one sound difference only) to form 1 students. The independent variable was the mode of instruction with two treatment conditions, namely (i) Multimedia Non-Signaling Song-Based (MNSSB) and (ii) Multimedia Signaling Song-Based (MSSB). The dependent variables of this study were (a) learning gain score and (b) motivation.

Different gender of students (male and female) was used as moderating variable in the study.

The present study was divided into two parts as below:

- i. The first part was to design and develop a song-based courseware that delivers the lesson through two treatment conditions. The design and development of treatment conditions of the courseware were described in Chapter 4.
- ii. The second part was to study the effect of the two treatment conditions (independent variables) among different gender of students (moderator variable) on their learning gain score and motivation (dependent variables).

The mode of instruction which was the independent variable encompasses the integration of two factors namely (i) principle of multimedia (Signaling Principle) and (ii) songs. The use of songs integrated with the application of signaling principle was applied in the present study.

1.5 Research Objectives

The objectives of the present study were as follows:

- i. To design and develop a song-based courseware with two treatment conditions namely, (i) Multimedia Non-Signaling Song-Based (MNSSB) and (ii) Multimedia Signaling Song-Based (MSSB) for the learning or reinforcement of knowledge of minimal pair (refer to Section 1.1.2) pronunciation in order to enhance listening skill.

- ii. To investigate the effects of the Multimedia Non-Signaling Song-Based (MNSSB) treatment condition compared to the Multimedia Signaling Song-Based (MSSB) treatment condition on different gender students' learning gain score and motivation.

1.6 Research Questions

The present study was designed to address specifically one set of questions as follows:

What was the effect of Non-Signaling Mode (MNSSB) and Signaling Mode (MSSB) on different gender of students' learning gain score and motivation?

The subsidiary questions were as follows:

- i. (a) Is there a significant difference in learning gain score between students in Mode A (MNSSB) and students in Mode B (MSSB)?
(b) Is there a significant difference in learning gain score of male students compared to the female students in Mode A (MNNSB) and students in Mode B (MSSB)?
- ii. (a) Is there a significant difference in motivation between students in Mode A (MNSSB) and students in Mode B (MSSB)?
(b) Is there a significant difference in motivation of male students compared to the female students in Mode A (MNNSB) and students in Mode B (MSSB)?

1.7 Research Hypotheses

Null hypotheses were formulated as the hypotheses for this study. It provided the researcher with statistical test starting point. The significance level α was tested at 0.05 and hence concluded on either to affirm or negate the null hypotheses statement. Below were the null hypotheses that correspond to the above research questions:

H₀₁: There is no significant difference in learning gain score between students in Mode B (MSSB) and students in Mode A (MNSSB).

H₀₂: There is no significant difference in learning gain score of male students compared to the female students when using MNSSB.

H₀₃: There is no significant difference in learning gain score of male students compared to the female students when using MSSB.

H₀₄: There is no significant difference in learning gain score of male students using MSSB and MNSSB.

H₀₅: There is no significant difference in learning gain score of female students using MSSB and MNSSB.

H₀₆: There is no significant difference in motivation (IMMS score) between students in Mode A (MNSSB) and students in Mode B (MSSB).

H₀₇: There is no significant difference in motivation (IMMS score) of male students compared to the female students when using MNSSB.

H₀₈: There is no significant difference in motivation (IMMS score) of male students compared to the female students when using MSSB.

H₀₉: There is no significant difference in motivation (IMMS score) of male students using MNSSB and MSSB.

H₀₁₀: There is no significant difference in motivation (IMMS score) of female students using MNSSB and MSSB.

1.8 Theoretical framework

1.8.1 The Learning Theories

The basis for designing instructional multimedia is a theory of learning. Whether one realizes it or not, the best decisions for design are based on knowledge on learning theories (Mergel, 1998). Theories are useful because they provide other possibilities and ways of seeing the world. There are considerable differences of opinion about what conditions and actions facilitate most learning (Alessi & Trollip, 2001). A solid foundation in learning theory is an essential element in the preparation of an Instructional Systems Design (ISD) for professionals because it permeates all dimensions of ISD (Shiffman, 1995). Different learning theories can be applied depending on the learner and situation. The instructional designer must understand the strengths and weaknesses of each learning theory to optimize its appropriateness as a basis for an instructional design strategy. The learning theories incorporated in the design of the song-based courseware are; (a) Mayer's Cognitive Theory of Multimedia Learning, (b) Alessi and Trollip Model for Instructional Design and Development (c) Gagne's Nine Events of Instructions, (d) Keller's ARCS Model of Motivational Design, (e) Krashen's Affective Filter Hypothesis and (f) Krashen's Input Hypothesis.

1.8.1.1 Theories on the use of songs to facilitate second language acquisition

The theoretical foundation that offers a deeper understanding on the benefits of using music in the classroom to facilitate second language acquisition originated from two of Stephen Krashen's Theory (1982) which is Input Hypothesis theory and Affective Filter Theory. There are several features of Krashen's theory of Language Acquisition that are strongly relevant in the use of the song in language learning.

i. Affective Filter Hypothesis

The Affective Filter Hypothesis is one of five proposed hypotheses developed by Stephen Krashen. Basically, it is an explanation of how the affective factors relate to language learning. According to the Affective Filter Hypothesis, certain emotions, such as anxiety, self-doubt, and mere boredom interfere with the process of acquiring a second language. They function as a filter between the speaker and the listener that reduces the amount of language input the listener is able to understand. These negative emotions prevent efficient processing of the language input. The hypothesis further states that the blockage can be reduced by sparking students' interest, providing low anxiety environments and supporting the learner's self-esteem. It is particularly appealing to educators because it provides an explanation to why some learners learn and others not. Krashen (1982) explains that for optimal learning to occur the affective filter must be weak. A weak affective filter means that a positive attitude towards learning is present. If the affective filter is strong the learner will not seek language input, and in turn, not be open for language acquisition.

The practical application of the Affective Filter Hypothesis is that teachers must provide a positive atmosphere conducive to language learning. Songs are one method for achieving a weak filter and promoting language learning as songs provide enjoyment in learning language.

ii. Input Hypothesis

Input Hypothesis Theory is one of the important theories in second language acquisition proposed by Krashen (1981; 1982). It attempts to explain how a learner acquires a second language in a considerably the same way and a predictable order (Cook 2000). According to Krashen (1981), this order is universal in nature. In details, this theory provides a description of how learners acquire a second or foreign language. It argues that people can acquire a language in only one way by understanding a comprehensible input “ $i+1$ ” where “ i ” represents the current competence and “ 1 ” represents the new incoming information. He further defines “ $i+1$ ” as comprehensible input which means that students should be able to understand what is being presented to them. In other words, the language input must contain “ $i+1$ ” and not “ $i+2$ ” or “ $i+0$ ” which means students are only able to acquire language when the incoming information is a “little beyond” their current level of knowledge. Input Hypothesis Theory is also important because it states that “the best methods are those that supply “comprehensible input” in low anxiety situations, containing messages that students really want to hear. These methods do not force early production in the second language but allow students to produce when they are “ready” recognizing that improvement comes from supplying

communicative and comprehensible input, and not from forcing and correcting production (Krashen, 1981).

This theory is related with how the choice of right and suitable songs that well suited to the level of targeted groups lead to successful process of acquiring language through listening. Furthermore, Miyake (2009) states that using songs in class is deeply enjoyable and holds students interest and attention. So, it reflects that song enhances a good atmosphere in the classroom. Thus the courseware (SBC) in this study will incorporate Affective Filter Hypothesis and Input Hypothesis as a basis underlying hypotheses to promote the use of songs in improving students' listening skill by enhancing their pronunciation knowledge on minimal pair.

1.8.2 Instructional Design Theories

Reiser & Dempsey (2007) defines Instructional Design as a systematic process that is employed to develop education and training programs in a consistent and reliable fashion. In addition, Instructional Design models or theories may be regarded as frameworks for developing modules or lessons that increase and enhance the possibility of learning and also promote the engagement of learners so that they learn faster and gain deeper levels of understanding. The theoretical foundations that provide clear guidelines to design and develop a proposed learning environment mainly originated from Mayer's Cognitive Theory of Multimedia Learning (Clark & Mayer, 2003; 2008; Mayer, 2001), Gagne's Nine Events of Instructions (Gagne, 1985) and Alessi and Trollip Model for Instructional Design and Development (Alessi and Trollip, 2001).