An Intervention to Increase Students' Engagement and Achievement in College English Classes in China Using the MUSIC® Model of Motivation

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ABSTRACT

Communicative Language Teaching (CLT) is regarded as an effective approach to teaching foreign languages because it focuses on students' engagement and communicative competence. In the realm of educational psychology, researchers have identified many teaching strategies that can have positive effects on students' motivation and engagement. Jones (2009, 2015) synthesized these strategies and created the MUSIC® Model of Motivation. MUSIC is an acronym for the strategies related to e**M**powerment, **U**sefulness, **S**uccess, **I**nterest and **C**aring. The MUSIC model can be used to help instructors to redesign their instruction to motivate and engage their students in learning activities. The purpose of this research was to examine the effectiveness of incorporating the MUSIC model strategies into CLT classes at a university in China.

I used a self-report survey comprised of seven subscales (representing five motivation-related variables and two engagement variables) to collect data on students' course perceptions and their engagement in a college English class. The participants were first year college students at a university in central China ($n = 259$). Independent samples $t$-tests, regression, and correlation were used to answer the following two research questions:

1. Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

2. To what extent do students' MUSIC model perceptions relate to their engagement and achievement?

The results indicated that there was a significant difference between the traditional lecture class and the CLT classes incorporating MUSIC model strategies. Students in CLT classes perceived more control in the class, found the course to be more useful, were more interested, and perceived more caring from their teacher. As a result, students in CLT classes put forth more effort and achieved higher scores on a standardized English test. In addition, the results revealed that students' MUSIC model perceptions predicted their engagement both in CLT classes and the traditional classes. However, the results showed that the MUSIC model components did not significantly predict student achievement. These findings suggest that the MUSIC model and the MUSIC Inventory are ideal tools for Chinese college English teachers to use when they design instruction.

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GENERAL AUDIENCE ABSTRACT

Communicative Language Teaching (CLT) is regarded as an effective approach to teaching foreign languages because it focuses on students' engagement and their proficient communication.  Jones (2009, 2015) organized motivation strategies into the five components of the MUSIC® Model of Motivation: e**M**powerment, **U**sefulness, **S**uccess, **I**nterest and **C**aring (MUSIC is an acronym). The MUSIC model can help instructors redesign their instruction to motivate and engage their students. The purpose of this research was to examine the effectiveness of incorporating the MUSIC model strategies into CLT classes at a university in China.

The participants were 259 first year college students at a university in central China. At the end of the semester, students answered a questionnaire regarding their College English course perceptions. The results indicated that students in CLT classes incorporating MUSIC strategies perceived more control over their coursework, found the course to be more useful, were more interested, and felt more cared for by their teacher. As a result, students in CLT classes put forth more effort and achieved more than students in the traditional classes. In addition, the MUSIC model components predicted students' engagement. These findings suggest that the MUSIC model and the MUSIC Inventory are ideal tools for Chinese college English teachers to use when they design instruction

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## Chapter 1: Introduction

**English Language Learning in China**

The popularity of English language learning in China began in the late 1970s due to the Reform and Opening Up policy in order to promote the nation's modernization and integration with the developed western countries (Adamson & Morris, 1997; Cortazzi & Jin, 1996; Hu, 2003; Maley, 1995). Since the reform, Chinese Ministry of Education has added the English course to secondary and college curriculum systems (Hu, 2005). Later, the English course entered into the curriculum of elementary schools across the nation in 2002 (Hu, 2005). Because the English course is a crucial subject in every level entrance exam, such as exam to secondary school, and exam to college, both schools and parents pay a lot of attention to the English learning in order to help students get a higher score on the English tests. The English test scores are important because high scores increases students' access to the top schools and universities (Hu, 2005). In the big cities and coastal areas such as Beijing, Shanghai, and Guangzhou, young parents prefer to send their children to the bilingual kindergartens in order to support their children with a good foundation of English learning (Hu, 2002; Jiang, 2003). Therefore, in the past four decades, China has made English language acquisition a national priority (Hertling, 1996; Lam, 2002).

In Chinese higher education, the English course is a compulsory and core subject for every undergraduate (Hu, 2005). There are two major types of English classes on college campus, general college English and specialist college English (Hu, 2005). The former is a compulsory core subject for all non-English majors, while the latter is for the English majors. For the non-English majors, each undergraduate must take the college English courses for at

least two school years for the Band Four National College English Test (CET) (Hu, 2005). The same is true for the postgraduates with Band Six CET (Hu, 2005). For the English majors, there is a Band Four English test in the second school year and a Band Eight test in the fourth school year. The certificates of these national tests are key to success in the job market. Therefore, almost all Chinese undergraduates and graduates spend much time and effort on their English language learning. For those who plan to further their education abroad, they study English more diligently to get a higher grade on the Test of English as a Foreign Language (TOEFL) or Graduate Record Examination (GRE) (Hu, 2005). The English course has been very important for undergraduates in the past 40 years.

**The Need of Communicative Language Teaching (CLT)**

With increased globalization and the corresponding global challenges in the 21$^{st}$ century, the Chinese government began to pay more attention to the English course in the higher education (Shu & Hua, 2009). As a result, Chinse Ministry of Education announced the new syllabus of the college English course in 2004 and called for the new communicative language teaching (CLT) approach to improve undergraduates' communicative competence, especially in listening and speaking (Ministry of Education, 2004). At the same time, the new syllabus mandated that the English course should enhance students' competency of self-regulated learning ability and meet the needs of the nation's social development and international exchange (Ministry of Education, 2004). As a result, in the National College English Test (NCET), the vocabulary and structure section was cancelled, and the percentage of listening increased from 20% to 35% (Zheng & Cheng, 2008). In January 2016, the NCET was reformed so that the former short dialogue and conversation sections were removed and three pieces of radio news and three excerpted lectures were added to the tests. The content of the revised

listening section was the same type and level as those in test of English as a foreign language (TOEFL) ("the reform of listening section in CET," January 1, 2016). These changes both in the national syllabus and the NCET demonstrated the present goal of the college English course: to use the CLT approach to improve students' communicative competence.

The importance of CLT in college English class and students' communicative competence increased gradually in the next few years and several national policies emphasized its significance in higher education. In May 2010, the Chinese government passed the National Medium and Long-term Plan for Education Reform and Development. In this document, the expectations of the higher education are described as follows.

> Higher education institutions should enhance international exchange and cooperation. They should promote reform and development through openness. They should implement programs for different levels and disciplines of study in order to increase the internationalization of Chinese higher education. They should learn advanced educational theories and practices from foreign countries to promote China's education reform. In doing so, the influence, competency, and international status of Chinese education will be elevated. In order to attain openness, they should cultivate high quality international talents who bring international perspectives, allowing them to participate on the global scale. (Shu, 2013, p. 91, I translated it into English)

Besides the above reform, the Chinese government also launched a new reform in higher education in 2016. In March 2016, the National People's Congress and the Chinese People's Political Consultative Conference (also known as Two Sessions, NPC and CPPCC) were held in Beijing, and the Supply-Side Reform became the focus of the two sessions ("The Premier in the

press conference," March 16, 2016). As for higher education, the Supply-Side Reform means sending high-quality graduates into society and meeting the needs of the global market. Therefore, the core of the Supply-Side Reform in Chinese higher education is the improvement of teaching quality and cultivation of high quality graduates ("The Premier in the press conference," March 16, 2016).

Under such background, many researchers argue that the college English class should meet the needs of Chinese economic development and of the global market and that the college English course must prepare college students with communicative competence to meet these needs (Cheng, 2006; Shu, 2012, 2013; Shu & Hua, 2009; Meng & Xu, 2005). However, many college English teachers do not understand how to motivate and engage students in English learning to improve communicative competence using CLT, even though they know that the lecture is not an ideal approach (Wen & Ren, 2011; Zhou, 2005). At the same time, research indicated that most college students know the importance of English for their short-term and long-term goals, but they do not have strong interest and are less motivated in the English course due to the disadvantages of the traditional lecture structure (Jones, Li, & Lu, 2015).

Table 1

*The Comparison between CLT and Lecture Class*

|  | CLT class | Traditional class |
| --- | --- | --- |
| Focus | Student motivation and **engagement** | Teacher's authority and didactic manner; possibly **less engagement** |
| Role of teacher | Facilitator | A sage on the stage |
| Learners' needs | Meet the needs | Meet some needs |
| Role of student | Active learners | Passive learner, quiet listeners in class, no interaction with teacher or peers |

Note. This table is based on information provided in *Approaches to Language Teaching and Learning* (Zhou & Niu, 2015).

Consequently, the focus of this research is on how to motivate and engage students in English learning using CLT because the focus of CLT is on active student engagement and not passive learners, as is common in traditionally structured classes (see Table 1).

**CLT**

Hymes (1966) first put forward the concept of communicative competence in the 1960s (Savignon, 2005). Hymes (1966) emphasized that communicative competence is more important than the mastery of linguistics or grammar/form. Other researchers proposed that how to use the language to interact with people verbal or in writing is more important than grasping its structure (Fotos, 2005; Savignon, 1991, 1997, 2005). Given the focus of reading and writing in the grammar-translation approach (Ham & Schueller, 2012), CLT reiterates both reading, writing, spoken communication, and listening comprehension (Savignon, 2000). Thus, in order to increase language learner's overall communicative competence, "the essence of CLT is the *engagement* of learners in communication to allow them to develop their communicative competence" (Savignon, 2005, p. 635).

Based on the development of CLT in Europe and North America in the 1970s and 1980s (Ham & Schueller, 2012; Savignon, 2005), researchers summarized that CLT encompasses the following features: (1) the learner's autonomy or choice; (2) the learner's needs in the specified context; (3) the process of communication; (4) the learners' participation in activities such as role-play, games, tasks, pair work, or group work; and (5) a friendly classroom environment for students' independence and teachers' role of facilitator (Fotos, 2005; Sato & Kleinsasser, 1999; Savignon, 2000, 2005). Accordingly, the features and essence of CLT indicate that CLT focuses on language learners' motivation and engagement in the learning process. As a result, language

learner's academic motivation and engagement play an important role in the implementation of

CLT in the language curricula class.

**The MUSIC® Model of Motivation and Student Engagement**

   **The MUSIC® Model of Motivation.** The MUSIC® Model of Motivation (abbreviated in

this paper as the MUSIC model; Jones, 2009; 2015) is a research-based model that organizes five

groups of strategies related to how teachers can motivate and engage students in learning. Jones

(2009) created this model to help teachers design their instruction to motivate their students to

engage in learning. MUSIC is an acronym for strategies related to e**M**powerment, **U**sefulness,

**S**uccess, **I**nterest and **C**aring. Jones (2009) argued that students are more motivated when they

perceive that (1) they are empowered, (2) the content is useful, (3) they believe that they can be

successful, (4) the content and activities are interesting, and (5) they feel cared for by teachers
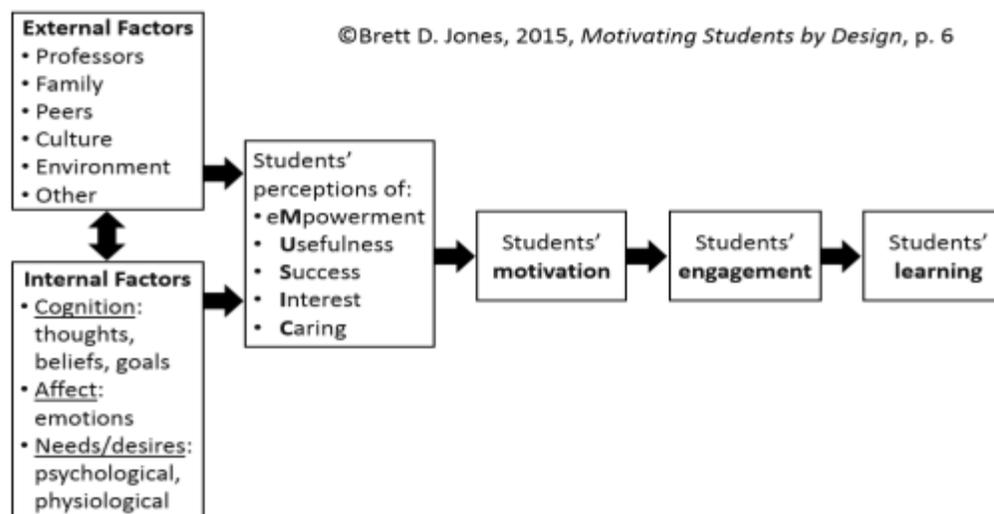
**Figure 1.** *The process by which professors can motivate students to engage in*
*learning by using the MUSIC model. From "Motivating Students by*
*Design: Practical Strategies for Professors," by B. D. Jones, 2015.*
*Copyright 2015 by Brett D. Jones. Used with permission.*

and peers in the learning environment (Jones, 2015). Using this model allows instructors to

identify the problems in their teaching practices and then redesign their instruction in ways that can motivate their students (Jones, 2009, 2015).

**Student engagement.** According to Fredricks and colleagues (2004), student engagement consists of three dimensions: behavioral (students' actual participation in school and learning), emotional (students' emotional response to teachers, peers, and the school environment), and cognitive (cognitive investment in the coursework, such as mental effort, self-regulated strategies) (Darr, 2012; Wang & Eccles, 2013; Zimmerman, 1990). Christenson and colleagues (2012) defined student engagement as the student's active participation in academic and co-curricular or school-related activities, and commitment to educational goals and learning (p. 5).

Jones (2015) notes that if instructors use some strategies in the MUSIC model, they will motivate their students, which will *then* engage them in their coursework. That is to say, the effective use of strategies in student motivation predicts student engagement (see Figure 1). Others have also identified motivation as a precursor to engagement and cited engagement as a mediator of the relationship between motivation and student achievement (Eccles & Wang, 2012). Therefore, Jones (2015) has connected the MUSIC model components to student engagement or achievement in courses in higher education.

**The Connection among CLT, the MUSIC Model, and Student Engagement**

Research has revealed that some Chinese college students realize the importance of the English for their short-term and long-term goals, but they do not have strong interest and are less motivated in the English course due to the traditional lecture structure (Jones, Li, & Lu, 2015). Due to the call for graduates with communicative competence in English (Shu, 2013; Shu& Hua, 2009), many college EFL teachers know CLT is an ideal approach for English instruction, but

they do not understand how to motivate and engage students in English learning to improve communicative competence (Wen & Ren, 2011; Zhou, 2005). Consequently, how to motivate and engage students in English learning using CLT becomes a serious topic for this research. Given the strengths and purposes of the MUSIC model, it may be possible to incorporate the model strategies into the CLT approach to motivate students to engage students in learning, with the ultimate goal of increasing students' achievement. In summary, it could be useful to examine whether the implementation of the MUSIC model in CLT classes in the college English courses actually leads to student increased academic motivation and engagement as can be hypothesized based on the MUSIC model framework.

**Purpose and Research Questions**

The primary purpose of this dissertation was to incorporate MUSIC model strategies into the CLT class to motivate students to engage in learning, with the ultimate goal of improving student achievement. My hypothesis was that the use of CLT in English classes would increase students' (a) perceptions of the MUSIC model components, (b) behavioral and cognitive engagement, and (c) achievement, as compared to students enrolled in traditionally taught English classes. A secondary purpose was to examine the relationships among students' MUSIC model perceptions and their engagement and achievement. This study addressed two primary research questions:

RQ1: Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

RQ2: To what extent do students' MUSIC model perceptions relate to their engagement and achievement?

**Outline of the Dissertation**

This dissertation includes five chapters. Chapter 1 provides the background and identified the problems that this research tried to address. Chapter 2 contains the literature review, which includes four aspects: the CLT approach, research of academic motivation in ESL/EFL teaching and learning, the MUSIC Model, and engagement. I described the CLT approach, the MUSIC model, student engagement, the relationships between CLT and the MUSIC model and student engagement, the relevant evidence that CLT was effective for college English course, and the evidence that how the MUSIC components led to student engagement and achievement. At the end of Chapter 2, I clarified the gap in the research and put forward my research questions. Chapter 3 contains my research design and methodology, including the description of the site, the description of the participants, the description of the main class activities in the CLT classes, the detailed description of the instruments, the process of data collection, and the statistical methods for data analysis. Chapter 4 presents the results of the data analysis and all the specific questions provided in the previous chapter. The fifth and final chapter includes the discussion and conclusion related to the purposes of the study.

**Chapter 2: Literature Review**

**The Rationale**

The college English as a foreign language (EFL) course has been a core and compulsory class for each and every Chinese college student since China's late 1970s economic reform (Hu, 2003). Due to the increasing global exchange and international challenges in the 21st century (Shu & Hua, 2009; Shu, 2004), China's Ministry of Education published a new college EFL course syllabus in 2004 and called for the new communicative language teaching (CLT) approach in order to improve students' communicative competence in English (Ministry of Education, 2004, 2007). In May 2010, Chinese government passed the National Medium- and Long-term Plan for Education Reform and Development to emphasize that Chinese higher education institutions should enhance international exchange and cooperation, as well as to learn foreign advanced educational theories and practices for educational reform (Shu, 2013). In a Chinese context, many researchers argue that college EFL teaching should prepare college students with communicative capabilities to meet these needs (Shu, 2012, 2013).

Although student communicative competence is the focus of college EFL instruction (Shu, 2004), many college EFL teachers are faced with serious problems in implementing the new CLT approach. Among the serious teaching problems in Chinese college EFL classes, one major problem we identified is that Chinese EFL teachers do not necessarily know how to motivate and engage students with learning (Wen & Ren, 2011; Zhou, 2005).Zhou (2005) conducted nation-wide research to examine Chinese college EFL teachers' needs for their professional development. The researcher handed out 1,200 questionnaires to college EFL teachers at 49 universities in six different regions of China, and 920 responded (77%). The

findings indicated that about 97% of the college EFL teachers agreed that they should create an active classroom environment for students' learning, and 91% agreed that student academic motivation is crucial for academic achievements. Yet, 62% of the teachers reported spending their time lecturing in their classes. In other words, most of the EFL teachers showed favorable attitudes toward CLT, but they did not know how to arrange their class effectively to implement it (Zhou, 2005).

Wen and Ren (2011) conducted a one-year professional development program among several college EFL teachers at a top public university in China and examined the ways that it improved Chinese college EFL teachers' teaching capabilities. In the beginning, the EFL teachers discussed the instructional problems in class, and both teachers and experts identified that the critical issue in instruction was motivating students to engage in their learning. This finding, in conjunction with Zhou's (2005) national survey on college EFL teachers' needs, shows that the study of student academic motivation and engagement should be a focus of current college EFL research in China.

Based on the gap between CLT and college EFL teachers' lack of implementing motivating, active learning strategies, it was necessary to conduct research to find effective motivational strategies that both motivate and engage college students in their college EFL courses. In the field of educational psychology, motivation scientist Brett Jones developed the MUSIC Model of Motivation (Jones, 2009, 2015), which includes a set of motivational strategies and that instructors can use to motivate and engage their students in classes. Therefore, my literature review included two parts: (1) What is CLT? Is it really effective and is there evidence that it leads to student engagement? (2) What is the MUSIC model? Is there evidence that this model can be used to motivate and engage students in learning?

Therefore, in my literature review, I first reviewed CLT and student engagement. Because there was motivation research in ESL/EFL teaching and learning, I reviewed them briefly. The next part was the MUSIC model and student engagement. I reviewed the definition of the MUSIC and student engagement, the evidence that the MUSIC components led to student engagement. Finally, I identified the gap in the current research in CLT and the significance of the MUSIC model for my research.

**Method**

As for the criteria of exclusion and inclusion for literature review, I located sources in the peer-reviewed journal articles from significant educational psychology journals and the distinguished ESL/EFL journals. I used EBSCOhost databases, PsycINFO, and CNKI (China's largest academic search engine) to search the relevant research articles. Although I found adequate resources related to the components of the MUSIC Model of Motivation and engagement in educational psychology, the research on the effectiveness of CLT and student motivation and engagement is fairly new. Therefore, I included some master degree theses about the implementation of CLT in China higher education. I also included some book chapters if they presented crucial point for the constructs of CLT, the MUSIC model, and student engagement.

**The CLT Approach**

Communicative language teaching (CLT) has been recognized as the signature pedagogy of language curricula in the United States (Ham & Schueller, 2012; Savignon, 2005). In order to increase a language learner's communicative competence, "the essence of CLT is the *engagement* [in] communication to allow them to develop their communicative competence" (Savignon, 2005, p. 635). In other words, CLT is said to meet learners' needs by designing various activities in order to motivate them to engage in the learning process.

From the history of CLT, it is clear that CLT focuses on student academic motivation (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2005). Originated and developed in the 1970s in Europe, CLT usually encompasses the following features: 1) the learner's autonomy or choice; 2) the learner's needs in the specified context; 3) the process of communication; 4) the learners' participation in activities such as role-play, games, tasks, pair work or group work; and 5) a friendly classroom environment for students' independence and teachers' role of facilitator (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2000, 2005). As a next steop, I needed to find evidence that CLT leads to student engagement.

**The MUSIC Model**

In the educational psychology realm of student academic motivation, many teaching strategies have been deemed effective in motivating and engaging students in learning (for examples, see Schunk, Pintrich, & Meece, 2014). However, these strategies are not always available to instructors outside the educational psychology field (Jones, 2009; Jones, Tendhar, & Paretti, 2015). Further, many instructors and educators might be overwhelmed by the jargon of educational psychology, with terms such as "self-efficacy," "self-determination," and "situational interest" (Jones, 2009). Therefore, based on the current motivation theories and constructs, Jones (2009) synthesized the teaching strategies and developed the MUSIC® Model of Motivation, which organizes these research-based instructional strategies and makes them easily understandable and practical to teachers in all subjects (Jones, 2016b).

The word "MUSIC" is an acronym for strategies related to eMpowerment, Usefulness, Success, Interest, and Caring (Jones, 2009, 2015). Jones (2009) argued that students are more motivated when they perceive that (1) they are empowered, (2) the content is useful, (3) they can be successful, (4) the content and activities are interesting, and (5) they feel cared for by teachers

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and peers in the learning environment (Jones, 2015). Using this model allows instructors to identify the problems in their teaching practices in order to redesign their instruction in ways that can motivate their students (Jones, 2009, 2015).

The MUSIC model has been used in the United States in elementary schools (Jones & Sigmon, 2016), middle and secondary schools (Parkes, Jones, & Wilkins, 2015), and postsecondary schools (Jones, 2010; Jones, Epler, Mokri, Bryant, & Paretti, 2013; Jones, Ruff, Snyder, Petrich, & Koonce, 2012; Jones & Skaggs, 2016; McGinley & Jones, 2014). It has also been used in other countries, such as in China, Colombia, and Egypt with undergraduate students (Jones, Li, & Cruz, 2017; Mohamed, Soliman, & Jones, 2013), and in Iceland with middle school students (Schram, 2015). Because the MUSIC model has been used in a variety cultures, including China, I was interested in examining the use of the model further in helping teachers in China. But, first of all in this paper, I will document evidence that the MUSIC model leads to student engagement.

**The Relationships between CLT and the MUSIC Model**

CLT pays attention to students' needs (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2005), and instructors are facilitators and students are active learners. The essence of CLT is said to be students' "engagement [in] communication" (Savignon, 2005, p. 635).  So that instructors design various activities to allow students to develop their communicative competence in the CLT class. It is assumed that variety of activities in class would provide students with more choices over the content of their assignments, and would bring more interest to the contents than the traditional lecture class, which overlap the two components of the MUSIC model: empowerment and interest (Jones, 2009, 2015). At the same time, because the purpose of activities in CLT class is to improve students' communicative competence (Savignon, 2005),

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which is crucial for their job hunting and long-term goal of communication capabilities in the workforce, we assume that students would have more sense of usefulness with respect to their English course. This point is consistent with the component of usefulness in the MUSIC model (Jones, 2009, 2015). Further, the various activities in CLT class result in interactions among peers and between teacher and students, and students would finish tasks successfully due to the peer collaboration. As a result, we can assume that students would perceive more sense of success and caring in the CLT class, which are two components of the MUSIC model (Jones, 2009, 2015). Finally, during the CLT class, instructors offer students more feedback opportunities during class through face to face interactions. For example, instructors can give direct praise to students based on their successful performance in class. Therefore, we can assume that students would perceive a sense of success and caring in the CLT class. This point is consistent with the components of success and caring in the MUSIC model as well (Jones, 2009, 2015). In summary, it is evident that there are overlaps between the activities in the CLT class and the components of the MUSIC model, and it is possible and necessary to utilize instructional strategies in the MUSIC model in the CLT class in Chinese college English course.

**The Purpose of This Research**

It is said that the essence of CLT is student engagement (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2005), but I wanted to examine the evidence that has shown that the use of CLT leads to student engagement. Given that the MUSIC model is a set of strategies about student motivation and engagement in learning (Jones, 2009, 2015), I needed to *find* the evidence to show that the MUSIC model leads to such engagement. If I can find the evidence that CLT leads to engagement and that the MUSIC model leads to engagement, I may consider how to use the MUSIC model for the college EFL course. Therefore, the purpose of this section was to

document (1) the relationships between CLT and student engagement, and (2) the relationships between the MUSIC model components and engagement.

**CLT and Student Engagement**

The college EFL course has been a compulsory course for Chinese college students since the late 1970s (Hu, 2003). From the beginning, the grammar-translation (GT) approach has been popular in the college EFL class. GT focuses on language form and students' proficiency in reading and writing. However, the national syllabus of the college EFL course called for the CLT approach (Ministry of Education, 2004, 2007) in order to improve student communicative competence. Given that Chinese college EFL teachers report that they do not know how to motivate and engage students in CLT class (Wen & Ren, 2011; Zhou, 2005), I will review the literature of CLT from three aspects: (1) the background and features of CLT, (2) the contrast between the GT and CLT approaches, and (3) the evidence of the effectiveness of CLT in Chinese college EFL classes.

**CLT in the college English course syllabus in China.** The need for CLT in Chinese higher education happened at the threshold of the 21$^{st}$ century (Ministry of Education, 2004) due to the new version of the national syllabus of college English course. The new syllabus stated that the goal of the college English course is to improve college students' communicative competence, especially in listening and speaking comprehension (Ministry of Education, 2004). At the same time, the English course should enhance students' competency of self-regulated learning ability and meet the needs of the nation's social development and international exchange. (Ministry of Education, 2004). As a result, in the national college English test (NCET), the vocabulary and structure section was cancelled, and the percentage of listening increased from 20% to 35% (Zheng & Cheng, 2008). In January 2016, the NCET took a reform in which

the former short dialogue and conversation sections were removed and three pieces of radio news and three excerpted lectures were added to the tests. The content of the revised listening section was the same type and level as those in test of English as a foreign language (TOEFL) ("the reform of listening section in CET," January 1st, 2016). These changes both in the national syllabus and the NCET demonstrated the present goal of the college English course: to improve students' communicative competence.

**The background of CLT.** The increased demand for language learning in the 1960s for the European Common Market and the new trends of applied linguistics contributed to the appearance and development of CLT (Savignon, 2000; 2005). When the European Common Market came into being in the late 1950s, more and more people from different countries need to learn another language for communication (Savignon, 2000). At that moment, the language learners realized that the traditional grammar-translation approach was not useful because it emphasized the structure/form of the language rather than how it could be used appropriately in the context of communication (Richard and Rogers, 2001). Further, adult learners needed immediate payoff of the language teaching most, so a new approach consisting of how to meet these needs and how to motivate them became the urgent issue for language instruction (Mitchell, 1994).

Communicative competence was the focus of modern applied linguistics and the new direction of language instruction (Savignon, 2005). Along with communication within the European Common Market, this new trend of modern applied, notional, and functional linguistics appeared in Europe and North American (Savignon, 2000) and included the theoretical foundation of CLT. American linguist and anthropologist Hymes put forward the concept of communicative competence (Hymes, 1966) as a reaction to Chomsky's concept of

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linguistic competence (Savignon, 2000, 2005). Similarly, British linguists Candlin and Widdowson (Richard and Rogers, 2001) held that mastery of language form and structure cannot meet students' functional goal, and that a new method, different from grammar-translation approach, was needed to improve students' communicative and functional competence. Halliday (1978), the distinguished British linguist in modern applied linguistics, also argued that the function of language was its potential and the central issue should be how to understand language in the context of situation and how they serve for communication (Savignon, 2005).

**The definition and features of CLT.** CLT is an approach that meets learners' needs by designing various activities in order to motivate them to engage in the learning process. The concept of communicative competence can be traced back to Hymes in the 1960s (Savignon, 2005). Hymes (1966) emphasized that the communicative competence is more important than the mastery of linguistics or grammar/form. So how to use the language to interact with people verbal or in writing is more important grasping its structure (Fotos, 2005; Savignon, 1991, 1997, 2005). Similarly, Larsen-Freeman and Anderson (2013) argued that communicative competence means to know when and how to say what to whom. Given the focus of reading and writing in grammar-translation approach (Ham & Schueller, 2012), CLT pays attention to both the grammar aspect of reading and writing and spoken communication and listening comprehension (Savignon, 2000). Therefore, in order to increase language learner's communicative competence, "the essence of CLT is the *engagement* of learners in communication to allow them to develop their communicative competence" (Savignon, 2005, p. 635).

Based on the development of CLT in the 1970s in Europe and in the 1980s in North America (Ham & Schueller, 2012; Savignon, 2005), CLT approach encompasses the following features: 1) the learner's autonomy or choice; 2) the learner's needs in the specified context; 3)

the process of communication; 4) the learners' participation in activities such as role-play, games, tasks, pair work or group work; and 5) a friendly classroom environment for students' independence and teachers' role of facilitator (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2000, 2005). Because CLT is an approach rather than a specific teaching method, the methods such as cooperative or collaborative learning, task-based methods, and inquiry-based methods are included in the field of CLT, and they emphasize the language learner's active participation and engagement in the learning process (Littlewood, 2007).

Therefore, the features and the various types of CLT indicate that CLT focuses on language learners' motivation, such as autonomy, learners' needs, and their engagement in the learning process. As a result, language learner's academic motivation and engagement play an important role in the implementation of CLT in class.

**The GT approach and the CLT approach.** Because the traditional grammar-translation approach has been used in Chinese college EFL classes for nearly four decades while the call for CLT first appeared a little over ten years ago, I plan to illustrate the difference between the GT approach and CLT from four points: 1) knowing and accuracy versus doing and fluency, 2) passive rote memorization versus active learning, 3) reading and writing versus comprehensive capabilities, and 4) a sage at the stage versus a facilitator leading the class.

Knowing and accuracy versus doing and fluency. The traditional GT approach can be traced back to ancient Greek and Roman times (Ham & Schueller, 2012). In this mode, teachers are the center in class lecturing the content such as grammar rules and the exercises. Students are passive listeners for the grammar rules/accuracy (Larsen-Freeman & Anderson, 2013). Further, teachers use native language for instruction, and speaking and listening the target language for communication or interaction is not included in the instruction (Kim, 2008). In contrast, CLT

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focuses on communicative competence and encourages students to use the target language frequently/fluency (Hymes, 1966; Larsen-Freeman & Anderson, 2013).

Passive rote memorization versus active learning. In the GT approach, students are taught the grammar systematically guided by fixed syllabus and prescribed textbooks (Fotos, 2005; Littlewood, 2007) and memorize the rules passively with pattern drills (Richards & Rodgers, 1986). As a result, students can be easily bored without any enjoyment in the learning process (Zhou & Niu, 2015). In contrast, in CLT, students are the centers of class, actively participating in team work or tasks, communicating with their peers and teachers in the target language; group work activities account for the majority of the class time (Ham & Schueller, 2012).

Reading and writing versus comprehensive capabilities. In the GT approach, the focus of instruction is reading and writing. All students focus on the analysis of the sentence-level texts in the prescribed textbooks, so that listening and speaking are neglected (Fotos, 2005; Harmer, 1991). In contrast, CLT allows students to deal with the language materials in various communicative activities in the target language rather than following the fixed rhythm set by teachers (Widdowson, 1990). Consequently, students in LCT improve their communicative competence in the target language through listening, speaking, reading, and writing.

A sage at the stage versus a facilitator leading the class. With GT, teachers are regarded as sages at the stage and the authority in the classroom (Larsen-Freeman & Anderson, 2013). Teachers are the sole judge of students' performance and students seldom challenge teachers by asking questions (Fotos, 2005). With CLT, teachers are not authority any longer. Rather, they are facilitators helping students construct their knowledge and fostering convenient environment for students' active learning (Larsen-Freeman & Anderson, 2013).

Summary. The GT approach focuses on the form of language, grammatical accuracy, and the reading and writing competency, and the authoritative position of teacher. CLT, on the other hand, focuses on the language learner's communicative competence and active interaction with peers and teachers. Thus, the "dumb" target language learned from the GT approach becomes the useful tool for communication learned from the CLT approach. More importantly, students in CLT become the center of class by taking part in various activities. Teachers changed from authoritative lecturers to facilitators in class. In summary, CLT helps students become active learners and proactive users of the target language and make it possible to enhance learners' communicative competence fundamentally.

Because it is crucial to motivate language learners to engage in the learning in the CLT approach, I plan to explore whether the CLT approach is effective in the Chinese college EFL class.

**The Effective Use of CLT in EFL Classes.** Since the CLT approach entered the national college EFL class syllabus by Chinese Ministry of Education in 2004 (Shu, & Hu, 2009), Chinese college EFL teachers conducted research to examine the effectiveness of this new approach (Deng & Zheng, 2008; Rao, 2002). These studies found that CLT is effective because it increased academic achievement. Moreover, students agreed that the use of CLT contributed to their enhanced sense of interest, autonomy, success, and/or caring in the English class. However, no evidence was shown that the use of CLT leads to student engagement, the essence of CLT, in their English learning.

In a study of 100 first-year college EFL students in a Chinese university, researchers investigated the impact of cooperative learning on student motivation (Ning & Hornby, 2014). The researchers used team work as the main strategy that consisted of class presentation,

structured teamwork, and team assessment. After an 18-week intervention, they found that the use of cooperative learning improved students' intrinsic motivation significantly. Different from this research, the other four studies examined both student achievement *and* their perceptions of the CLT class from components that are found in the MUSIC model. Liu (2007) examined the effectiveness of CLT among 40 first year transportation engineering students by using the strategies such as free discussion, games, oral presentation, problem-solving activities, and story construction to digest the content in the prescribed textbook. The findings indicated that students' spoken English and the test score increased significantly, and they also had a stronger sense of autonomy, usefulness, and interest, which are part of the MUSIC model components, in the CLT class.

Similarly, Li (2007) investigated the CLT among 115 first year students in a large college EFL class. The researcher divided the students into small group of seven or eight students and asked them to conduct group topic discussion with the text in the textbook. In addition, students prepared and reviewed the topic outside class through cooperation before and after class. The findings indicated that the cooperative learning resulted in the significant increase interest score and the spoken English capability. Students also said they had increased sense of interest and caring, two of the components in the MUSIC model, in the CLT class (Li, 2007).Different from Liu (2007) and Li (2007), Ren (2012) chose 247 second-year students in a Chinese medicine university. The researcher divided the students into small groups, and asked them to cooperate to finish the task related to the coursework. The findings demonstrated that there was a significant increase in students' English proficiency test. In addition, the response questionnaire showed that students had more interest and higher senses of success and caring, three of the MUSIC model components, in the CLT class (Ren, 2012).

In another study, a group of 70 first year students at a Chinese university joined the research (Li, 2012).The instructor implemented CLT strategies such as group discussion, pair presentation, and role play in the experimental groups. The one semester research revealed that students had better senses of interest and success, two components of the MUSIC model, in the Cutlass, and their academic achievement also increased significantly.

Many others also conducted research on the effective use of CLT in Chinese college EFL class (Deng & Zheng, 2008; Rao, 2002; Shi, 2010; Tian, 2007; Zhang & Head, 2010). Taken as a whole, the empirical research on the CLT approach indicated that CLT is an effective approach and leads to increased achievement and student motivation of some components of the MUSIC model, such as success, interest, and caring.

**The Gap of the Current Research.** The research in CLT in the Chinese college English course was still very young when the national college English syllabus called for its implementation in 2004 (Shu & Hua, 2009). Most of the research examined and justified the effectiveness of CLT from different perspectives such as group work activities, task-based learning, and cooperative learning strategies (Deng and Zheng, 2008; Rao, 2002; Shi, 2010; Tian, 2007; Zhang & Head, 2010). However, there were disadvantages in these studies: (1) they did not show the reliability and validity of the instrument in the research except for Ning and Hornby's research (2013); (2) they only explored some aspects of student motivation such as interest or empowerment, rather than all of the MUSIC components; and (3) not all of them provided evidence that CLT leads to student engagement in their college English course. Given the essence of CLT is student engagement (Fotos, 2005; Savignon, 2005), and student academic motivation plays a crucial role in their activities in the CLT class, it is necessary to find evidence to show that CLT *does* predict student engagement. Only when we provide such empirical

evidence of the relationship between motivation and engagement in CLT, can we support the theoretical hypothesis that implementing CLT leads to student engagement.

Because Jones (2009, 2015, 2016a) argued that if teachers use the instructional strategies in the MUSIC model, then their students will be more motivated and engaged in the learning, I plan to go to the realm of ESL/EFL learning and explore whether researchers in this realm consider the relationships between motivational strategies and student engagement and achievement.

**Motivation Research in Second/Foreign Language Learning**

Based on the motivation research in the realm of educational psychology, the research of motivation in English as a second/foreign language (ESL/EFL) learning began in the 1990s (Dörnyei, 1998, 2003; Ning & Hornby, 2014; Tremblay & Gardner, 1995). The major motivation theories such as the concept of intrinsic motivation and autonomy were mainly based on the self-efficacy, expectancy-value, and self-determination theories in educational psychology (Dörnyei, 1998; 2001a). Further, many researchers realized that both learners' motivation and the role of instructors are critical in the learning process and contribute to student academic achievement (Dörnyei, 2001b; Gardner, 1985; Noles, Clement, & Pelletier, 2001, Vandergrift, 2005). In addition, Dörnyei and Csizer (1998) created "ten commandments for motivating language learners" (p. 215) and these strategies were tested to be effective for increasing student motivation in empirical research in Taiwan, Korea, and China (Cheng & Dörnyei, 2007; Guilloteaux & Dörnyei, 2008; Xu, 2014). However, the current research in motivation in ESL/EFL seldom directly examined whether student academic motivation predict their engagement (Gardner, 1985; Dörnyei, 1998).

**Motivation research in Chinese college EFL class.** Although the academic motivation research in Chinese college EFL class was very young from 1980s (Shu & Hua, 2009), in this section, I will examine the research on this topic and whether the research examined the relationship between student motivation and engagement. I found some research, but they are not consistent with my research focus. For example, Liu (2012) examined Chinese college EFL learners' motivation and their academic performance. The findings indicated that the instrumental motivation, such as seeking for a good job or passing exams, correlated with their academic performance significantly. But there was no evidence that student motivation leads to engagement. In another study, Fang and Chen (2013) conducted research on college EFL teachers' use of motivational strategies. They asked students to evaluate teachers' instructional strategies in class and interviewed several college EFL teachers. The findings summarized the types of strategies the teachers used, but they did not examine student motivation at all and did not provide evidence that student motivation lead to engagement. Similarly, Xu (2014) conducted research to explore students' impression on teachers' motivational strategies in class. He reported that teachers' motivational strategies and student motivation are positively and significantly associated with each other and that teachers' use of the strategies led to student engagement. However, all of them did not examine student motivation directly and did not provide evidence that student motivation leads to their engagement, the essence of CLT.

**Summary.** The current ESL/EFL motivation research both inside and outside China indicated that teachers' use of motivational strategies is important for student academic motivation and achievement. However, there was no evidence that student academic motivation leads to engagement. Because ESL/EFL motivation research was derived from the present motivation research in educational psychology (Dörnyei, 1998; Gardner, 1985), I examined

studies in the field of educational psychology in order to find the evidence that student academic motivation leads to engagement. But first of all, I will give a detailed introduction to the MUSIC model and student engagement. After that, I will look for evidence in educational psychology to show that the components of the MUSIC model is related to student engagement directly. If I can find such evidence, it will be reasonable that the strategies in the MUSIC is applicable to Chinese college EFL class.

**The MUSIC Model and Student Engagement**

      **The MUSIC® Model of Motivation.** Academic motivation is a topic with a long history which covers a variety of theories. The research on academic motivation can be traced back to the 1940s when Young wrote the first chapter about motivation in the *Encyclopedia of Educational Research* (Weiner, 1990). Since then, the research on academic motivation has been conducted for nearly seven decades and has covered various topics such as appetite and aversion, autonomy, achievement, interest, utility value, self-esteem, self-efficacy, attachment, etc. (Weiner, 1990). At the same time, several major motivation theories are accepted and utilized popularly in the realm of education, and they are the self-determination theory (Deci & Ryan, 1991; Ryan & Deci, 2000), the self-efficacy theory (Bandura, 1986), the expectancy-value theory (Eccles & Wigfield, 1995; Wigfield & Eclles, 2000), the four-phase interest theory (Hidi & Renninger, 2006), and theories concerning interpersonal relationships (Deci & Ryan, 1991; Freeman, Anderman, & Jenson, 2007; Reeve, 1996). Together with many other minor motivation theories, these main motivation theories provide instructors and researchers with valuable directions for instructional design and classroom practices.

      Based on these and other academic motivation theories, Jones (2009, 2015) synthesized them and grouped the relevant teaching strategies into five components to create the MUSIC®

Model of Motivation. Jones (2009) created this model based on the current motivation research and theories in order to help teachers design their instruction to motivate their students to engage in learning. MUSIC is an acronym for strategies related to e**M**powerment, **U**sefulness, **S**uccess, **I**nterest and **C**aring. This model helps instructors identify the problems in their teaching practices and then redesign their instruction to motivate their students in their learning (Jones, 2009, 2015; Jones & Wilkins, 2013).

The component of *empowerment* of the MUSIC model refers to the extent to which students feel empowered when they have choices about some parts of their coursework (Jones, 2015). The component of empowerment in the MUSIC model is mainly based on the self-determination theory (SDT) and the need for autonomy (Deci & Ryan, 1991, Ryan & Deci, 2000).

The primary feature of the SDT is the intrinsic motivation. Deci and Ryan (1991) held that if individuals have the full sense of choice rather than coercion or compulsion, they will be more likely to spontaneously engage in an activity that interests them. At the same time, Deci and Ryan (1991) emphasized the two factors of the individuals' organismic integration: the unity in one's self and the interaction with others in a harmonious and meaningful way. Therefore, the SDT argued that autonomy, competence, and relatedness are a human's innate psychological needs. SDT emphasized the intrinsic motivation of the active agency of the true self: if an individual is intrinsically motivated, he or she will undertake the task out of interest, seek out the optimal challenge without external reward. Deci, Connell, and Ryan (1989) found that more autonomy in classrooms contribute to more enjoyment, effort, and proactive coping, among a variety of positive outcomes. Deci and the colleagues also provided evidence that autonomy supportive climate in classrooms or work-group is associated with greater intrinsic motivation,

self-worth, and satisfaction (Deci, Connell, & Ryan, 1989; Deci, Schwartz, Sheinman, & Ryan, 1981).

Based ideas within SDT, Jones (2015) put forward the first principle of the MUSIC model, and it involves the instructor providing students with choices in their coursework so they will have a sense of empowerment. Furthermore, Jones (2015) listed some *empowerment* strategies such as providing students with choices during class and within assignments or providing rationales when requiring students to study (p. 28).

The component of *usefulness* in the MUSIC model refers to the strategies that instructors use in order to help students understand why the content they are learning is useful for their short- and long-term goals (Jones, 2015). This component is based on the research of future time perspective theory and the expectancy-value theory (Eccles & Wigfield, 1995; Kauffman & Husman, 2004; Wigfield & Eccles, 2000). The future time perspective theory argues that students will be more motivated and have a positive outlook on their future if they could see the relevance of their current task or course for their future goals (Kauffman & Husman, 2004; Simons, Vansteenkiste, Lens, & Lacante, 2004). The utility value aspect of the expectancy-value theory emphasizes the usefulness of the task for an individual's future goals and argues that student values will influence their performance, effort, and persistence (Wigfield & Eccles, 2000). Evidence has shown that student values are positively associated with effort on tests and tension in pursuing a career (Cole, Bergin, & Whittaker, 2008; Jones, Paretti, Hein & Knott, 2010).

Based on the future time perspective and utility value, Jones (2015) regards the *usefulness* as the second principle of the MUSIC model. Jones (2015) argues that in order to motivate students in coursework, the instructors should help students understand why what they

are learning is useful for their short and long-term goals. The strategies regarding this principle include explaining the usefulness of the content to students' lives or helping students see firsthand the usefulness of the content by designing some activities themselves (Jones, 2015).

The *success* component of the MUSIC model means that if students believe they can succeed when they spend time and effort on a task, they will be more motivated and engaged in their coursework (Jones, 2009, 2015). This component is based, in part, on the self-efficacy theory (Bandura, 1986) and the expectancy of success aspect of the expectancy-value theory (Wigfield & Eccles, 2000). These two theories argue that an individuals' beliefs of their capabilities to be successful in a task play an important role in determining how far they will persist, how much time and effort they will afford, and what cognitive self-regulation strategies they will choose (Bandura, 1986; Wigfield & Eccles, 2000).

Self-efficacy is one's belief in one's ability to succeed in specific situations or accomplish a task (Bandura, 1986). So self-efficacy plays a major role in how one approaches goals, tasks, and challenges. In addition, in the perspective of expectancy-value theory, both task value and expectancy for success are associated with academic achievement (Schunk, Pintrich & Meece, 2008), however, when considered together, expectancy for success is often the more important predictor of achievement (Cole et al., 2008). Research has shown that individuals with high self-efficacy were more likely to believe they could master challenging problems and recover quickly from setbacks (Jones, 2009). Similarly, if students believe that they were likely to succeed in a task, they are more likely to choose the task, put forth more effort, be more persistent in the midst of difficulties, enjoy the task more, and finally achieve more (Jones, 2009).

Jones (2009) related the self-efficacy and expectancy-value theories to the *success* component in the MUSIC model. Jones (2015) also argued that it is necessary for the instructors

to help students believe that they can succeed if they put forth the effort required. Jones provided many strategies involving success such as matching the difficulty levels of the class activities and assignments with students' existing capabilities and providing students with honest and specific feedback at regular intervals (Jones, 2015).

The *interest* component of the MUSIC model involves teaching strategies that interest students in class activities and make the learning experiences enjoyable (Jones, 2015). This component is consistent with Hidi and Renninger's (2006) interest theory. Hidi and Renninger (2006) state that "the potential for interest is in the person but the content and the environment define the direction of interest and contribute to its development" (p. 112). Therefore, instructors could use some instructional strategies to support students to develop interest for particular content (Hidi & Renninger, 2006).

According to Hidi and Renninger (2006), interest, as a psychological variable, refers to "the psychological state of engaging or the predisposition to reengage with particular classes of objects, events, or ideas over time" (p. 112). They argue that interest consists of affective and cognitive components, individuals will be engaged physically, cognitively, and symbolically if they have interest in the object, and interest is a process that can be developed through one's own efforts, the others around them, or their environment (Hidi & Renninger, 2006). They divided the interest into four periods: the triggered situational interest, maintained situational interest, emerging (less-developed) personal interest, and well-developed individual interest (Hidi & Renninger 2006). The first two phases are triggered by environment stimuli and may or may not last over time (Hidi & Baird, 1986), while the last two phases refer to the relatively enduring predisposition to reengage particular content over time (Renninger, 2000). Evidence has shown that situational interest positively influences cognitive performance and levels of learning

(Alexander & Jetton, 1996; Wade & Adams, 1990) and that individual interest has positive impact on attention, persistence and effort, and level of learning (Renninger & Wozniak, 1985; Renninger & Hidi, 2002). Therefore, the sequential and distinct phases of interest make it reasonable for instructors to foster the proper environment to develop student interest in a specific content (Hidi & Renninger, 2006).

In terms of Hidi and Renninger's (2006) four-phase interest theory, Jones (2009) summarizes it as a component of interest in the MUSIC model. Jones (2015) argues that if teachers can design activities to capture students' situational interests, then students may have more interest in the content and value it more, leading to increased individual interest (Jones, 2009). One implication is that teachers can use novelty and various instructional activities to catch and hold student attention (Jones, 2015).

The component of *caring* in the MUSIC model specifies that students tend to be more engaged in their learning when they believe that the instructors or students care about their learning and about them as a person (Jones, 2015). This component is mainly derived from research in attachment, relatedness, caring, and sense of community (e.g., Deci & Ryan, 1991; Noddings, 1992). The research includes Bowlby's (1969, 1973) theory about attachment (Baumeister & Leary, 1995), Wentzel's (1997) theory about perceived pedagogical caring, and Nodding's (1992) concept of caring in schools. Bergin and Bergin (2009) and Wentzel (1997) argue that when students have close relationships with their teachers, they tend to be more active in their learning and perform better academically. Noddings (1992) argues that "each child has unique talents, abilities, and interests in need of engagement and development by caring teachers and others in schools" (p. ix). Further, Noddings (1992) argues that although education often concentrates on students' academic performance, the main aim of education should include the

moral perspective which nurtures students to be "competent, caring, loving and lovable" (p. ix). Reeve (1996) reports that teacher affection, caring, dependability, interest in students, and dedication to resources are important elements in teacher-student relationships. Deci and Ryan (1991) posit that relatedness is one of the three most important features of intrinsic motivation.

Based on the aforementioned theories of attachment, pedagogical caring, relatedness, sense of community, and moral perspective of education, Jones (2009) summarizes them into the component of caring in the MUSIC model. One implication is that teachers can demonstrate that they care for students by being approachable and by respecting students and ensuring that students in the class respect one another (Jones, 2015).

In the MUSIC Model of Academic Motivation (Jones, 2009, 2015), Jones does not add any new motivation theories but summarizes the current motivation theories into a concise model (for more details about the motivation theories, see Jones, 2016b). Therefore, the MUSIC model is easy to understand for instructors and educators who might be overwhelmed by the jargon of motivation theories in educational psychology (Jones, 2015). Further, Jones (2009, 2015) lists many strategies to implement the MUSIC model (also in www. the MUSICmodel.com) for teachers' instructional designs in order to motivate and engage students in learning. In so doing, the identified motivation and engagement strategies in educational psychology (Schunk, Meece, & Pintrich, 2014) can be available to teachers outside the education-related fields in a concise and organized framework (Jones, Tendhar, & Paretti, 2015).

As for the *features* of the MUSIC model, Jones and Wilkins (2013) hold that there are three. The first feature of the MUSIC model is that it transforms the complicated theories and research in motivation into a concise framework. There are many theories and studies on motivation in teaching and learning. A model of motivation that covers the main findings of

these theories and research studies is an invaluable tool for instructors' instructional designs in order to motivate students to engage in their learning (Jones & Wilkins, 2013).

Another feature of the MUSIC model is that the model includes detailed assessments. Instructors can use these items in surveys or interviews at any time during the class. This way, they can identify the problems through practice, strategically resolve these problems, and finally develop teaching knowledge and skills. Thus, the MUSIC model is applicable and practical for teaching practice (Jones & Wilkins, 2013).

The third feature of the MUSIC model is the consistency across the five components. Instructors usually focus on one or two facets of the MUSIC model in their classroom practice. Consequently, there can be problems that they neglect and do not realize. The MUSIC model illustrates the importance of all five key motivational components, so that when instructors use the model as a measurement in order to test their teaching quality, the data from the model will demonstrate how these five components interact in any given learning environment (Jones &Wilkins, 2013). Thus, the MUSIC model is a useful tool for instructors to recognize their teaching problems and solve them with feasible strategies (Jones, 2015).

**Student academic engagement.** When researchers discuss student learning or achievement, both motivation and engagement are sometimes included in the conversation (Reschly & Christenson, 2012) and that they are separate, yet related constructs (Appleton et al., 2008). For example, the self-determination theory (Deci & Ryan, 1991) holds that students are more likely to be engaged in their learning when their psychological needs such as autonomy, competence, and relatedness can be met in the learning environment (Eccles & Wang, 2012). Skinner and Pitzer (2012) once hypothesized that student engagement might become prominent if teachers' caring, autonomous climate, and adequate structure are provided in the classroom.

Hidi and Renninger (2006) argue that interest plays a crucial role in student academic motivation and that students tend to engage in their learning physically, cognitively, or symbolically when the instructors can support students in developing their interests for certain content. Jones (2009, 2015) insists that the instructors can redesign their instructional activities according to the strategies provided in the MUSIC model. Only then do students become more motivated and engaged in their learning. Thus, it is necessary to define student engagement and clarify its relation with motivation if we want to provide high quality intervention to enhance student achievement (Reschly & Christenson, 2012).

The content of student engagement. In the beginning, researchers had different opinions about the components of engagement (Reschly & Christenson, 2012). For example, Christenson and colleagues (2008) hold that engagement consists of four dimensions: academic, behavioral, cognitive, and affective. On the other hand, Skinner and colleagues (2008, 2009) argue that engagement is composed of two dimensions: behavioral and emotional. Similar to Appleton, Christenson, and Furlong (2008), Martin (2007) included adaptive cognition, adaptive behavior, maladaptive behavior and cognition as the four dimensions of engagement. In summary, the vast majority of engagement components include behavioral, cognitive, and affective dimensions (Christenson et al., 2012). Today, the three dimensions of engagement by Fredricks, Blumenfeld, and Paris (2004) are generally accepted by extant researchers and instructors.

According to Fredricks and colleagues (2004), the first dimension of engagement is behavioral engagement, and it refers to students' actual participation in school and learning, such as positive conduct, absence of disruptive behavior, and involvement in academic tasks (Darr, 2012; Wang & Eccles, 2013). The second dimension is emotional engagement, and it refers to students' emotional response to teachers, peers, and the school environment (Darr, 2012), and

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this dimension is the link between students and the school while demonstrating student willingness with the coursework and extracurricular activities (Darr, 2012). The third dimension is the cognitive engagement, and it refers to student cognitive investment in the coursework, including mental effort, self-regulated strategies, and willingness to exert necessary efforts for complicated conceptual understanding (Wang & Eccles, 2013; Zimmerman, 1990). Among the three dimensions, the behavioral engagement is the most important component due to the core feature of engagement (Eccles & Wang, 2013; Finn & Zimmer, 2012; Skinner & Pitzer, 2012).

Based on such research in engagement among the scholars, Christenson and colleagues (2012) define student engagement as follows:

> Student engagement refers to the student's active participation in academic and co-curricular or school-related activities, and commitment to educational goals and learning. Engaged students find learning meaningful, and are invested in their learning and future. It is a multidimensional construct that consists of behavioral (including academic), cognitive, and affective subtypes. Student engagement drives learning; requires energy and efforts; is affected by multiple co-contextual influences; and can be achieved for all learners. (p. 5)

The content of engagement in this research. Although most scholars agree with the three-dimensional constructs of student engagement (Christenson et al., 2012), the two dimensional constructs of student engagement provided by Jones (2015) are more reasonable for my research. There is some overlap between the constructs of motivation and engagement (Christenson et al., 2012), but the difference between them is clear: motivation is "the extent to which one intends to engage in an activity" (Jones, 2015, p. 3) or "any force that energizes and directs behavior" (Reeve, 2001); engagement involves individuals' participation in some aspect of the activity

behaviorally or cognitively (Jones, 2015). In short, motivation is *intent* and engagement is *action* (Jones, 2015). Further, Eccles, and Wang (2012) argue that the subtype of affective engagement makes the distinction between motivation / intent and engagement / action unclear. So they emphasize that students' overt behavioral engagement and covert mental (cognitive) engagement are the typical two dimensions of engagement (Finn & Zimmer, 2012; Skinner & Pitzer, 2012). Based on these ideas, I plan to use Jones' (2015) two dimensions—behavioral engagement and cognitive engagement—as the constructs of student engagement in my research.

Motivation and engagement in this research. Most researchers postulate that motivation is an antecedent or precursor of engagement (Christenson et al., 2012). In Jones' (2015) research in motivation and engagement, he argues that if the instructors use some strategies in the MUSIC model, they will motivate their students and *then* engage them in their coursework. That is to say, the effective use of strategies in student motivation might predict student engagement. In addition, research in student engagement demonstrated that motivation is a precursor of engagement and engagement mediates the relationship between motivation and student achievement (Eccles & Wang, 2012). Therefore, in this section, I will provide evidence that each MUSIC component leads to student engagement or achievement in the field of higher education. If I can find such evidence, I can hypothesize that the use of the strategies in the MUSIC model can predict student engagement in the college EFL course, the essence of CLT in the college English course.

**Evidence That the MUSIC Components Lead to Engagement**

The MUSIC model is a set of instructional strategies based on the current research and theories of student motivation in educational psychology (Jones, 2009, 2015). I plan to find evidence in educational psychology that indicates that the components of the MUSIC lead to

student engagement. If I find such evidence, I can say it is reasonable to use the MUSIC model in Chinese college EFL class to increase students' engagement.

**Empowerment and engagement or achievement.** The component of empowerment of the MUSIC model refers to teaching strategies that empower students to have choices concerning their learning (Jones, 2009, 2015). This component stems from the self-determination theory (SDT) (Deci & Ryan, 1991, Ryan & Deci, 2000), which clarifies the three innate human needs: autonomy, competence, and relatedness (Deci & Ryan, 1991). Deci, Connell and Ryan (1989) and Reeve (2006) found that more autonomy-supportive classrooms contribute to more enjoyment, effort, proactive coping, engagement, and positive outcomes. Jones (2016b) posits that students will be more motivated and engaged during instruction if they perceive that they are empowered. Research has shown that empowerment leads to student engagement or achievement.

In a study of a group of 136 undergraduates, researchers investigated the effect of autonomous motivation on student engagement (Jang, 2008). The findings show that the group who received a rationale from teachers showed greater identified regulation, interest-enhancing strategies, behavioral engagement, and conceptual learning (Jang, 2008). Further, the findings highlight the externally supported rationales can help students generate the autonomous motivation they need to engage constructively in and learn from uninteresting, but personally important, lessons (Jang, 2008). Different from Jang's (2008) research, three other studies (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004) examined the effect of an autonomy-supportive climate on students' engagement and test performance as well.

Vansteenkiste and colleagues (2004) conducted three studies to examine how intrinsic goal contents and autonomy-supportive contexts affected learning, performance, and persistence

among college students (600 or so) and high school students (about 200). They found that both intrinsic goals and autonomy-supportive climates had main effects on depth of processing, test performance, and persistence (Vansteenkiste et al., 2004). In another study, Vansteenkiste and colleagues (2005) examine whether autonomy can predict better learning among Chinese college students (Vansteenkiste, Zhou, WillyLens, & Soenens, 2005). The findings indicate that autonomy-supportive environment positively correlates with active voluntary behavior in class and performance. Further, students' active voluntary behavior in class explained 21% variance of student outcomes (Vansteenkiste et al., 2005). Thus, the two studies by Vansteenkiste and colleagues suggest that autonomy predicts behavioral engagement, and in turn predicts learning outcomes.

In a study of 72 pairs of preservice teachers enrolled in a teacher certification program at a large university, researchers investigate how teachers with autonomy-supportive styles motivate their students as opposed to those with a controlling style (Reeve & Jang, 2006). The findings indicate that the autonomy-supportive style instruction correlate positively with students' perceptions of autonomy. (Reeve & Jang, 2006). Further, the data reveals that students' perceived autonomy correlates positively with all three outcomes of interest: enjoyment, engagement, and performance (Reeve & Jang, 2006). Similarly, in a study of a group of college students enrolled in an organic chemistry course, researchers investigate how teachers' autonomy support affects students' self-regulation and performance (Black & Deci, 2000). Researchers found that students' perceptions of their instructors' autonomy support can predict their increased autonomous self-regulation, perceived competence, and interest/enjoyment, while decreasing anxiety throughout the semester (Black & Deci, 2000). The change in autonomous self-regulation in turn predicts their performance in the course. The findings from other research

also indicates that the autonomy-supportive environment can predict student academic engagement and achievement (Hill, 2013; Lin, McKeachie, & Kim, 2003; Niemiec, & Ryan, 2009; Zepke, & Leach, 2010). Although there are some differences among this research, all of them share similar conclusions and demonstrate that the autonomy-supportive instruction motivates students and predicts student engagement and achievement. As a result, I can hypothesize that the component of empowerment in the MUSIC model will predict student engagement the most.

**Usefulness and engagement or achievement.** The component of usefulness in the MUSIC model refers to the instructional strategies that help students understand why the content they are learning is useful for their short and long-term goals (Jones, 2015). This component derives from the future time perspective theory and the expectancy-value theory (Eccles & Wigfield, 1995; Kauffman & Husman, 2004; Wigfield & Eccles, 2000). The future time perspective theory states that students will become more motivated and have a positive outlook on their future if they understand the usefulness of the current course for their future (Kauffman & Husman, 2004; Simons, Vansteenkiste, Lens, & Lacante, 2004). The expectancy-value theory emphasizes students' utility value and how it will influence their performance, effort, and persistence (Wigfield & Eccles, 2000). Based on these theories, Jones (2015) argues that in order to motivate students in their coursework, instructors should help students understand the usefulness of the coursework for their short and long-term goals.

A plethora of research provides evidence that usefulness predicts student engagement. Johnson and Sinatra (2013) explore the relationships between task values, engagement, and conceptual change among 166 undergraduates. Their results indicate that the participants who are in utility condition rate their engagement as significantly higher than those in control

condition. Furthermore, participants in utility condition demonstrate the greatest degree of conceptual change. This research suggests that instructor emphasis on the usefulness of the task will lead to students' higher engagement and conceptual change. Similarly, Neuville, Frenay, and Bourgeois (2007) examine the relationships between motivation variables and achievement behaviors among 184 first year Belgian psychology students. The findings indicate that task value positively correlates with self-regulated strategies, and the endorsement of multiple goals have positive effects on deep-learning strategies and decision-making (Neuville et al., 2007). According to these findings, the more value the task has, students will use deeper cognitive strategies.

In another study, Cole, Bergin, and Whittaker (2008) examined whether task values (interest, usefulness, and importance) can predict student effort / behavioral engagement among 1,005 undergraduate students. Their path analysis indicate that the task value variables, usefulness and importance, can predict test-taking effort and performance for all tests. These findings suggest that student perceived usefulness and importance of a task can predict both student engagement and achievement. Further, another study explores the relationship between task value, goals, engagement, and achievement. Shell and Husman (2001) examined the relations between control beliefs and future time perspective and the academic achievement among 198 middle-class undergraduates. They found that students' future time perspectives (long-term goals) were significantly associated with their achievement, study time, and effort (behavioral engagement).In Jones and his colleagues'(2010) study within a group of first-year engineering students, they found that both expectancy-related constructs and value-related constructs can predict achievement and that expectancy-related constructs can predict achievement better than the value-related constructs (Jones, Paretti, Hein, & Knott, 2010).

Many other researchers also found that student' sense of the task value goal-orientations predicted their cognitive engagement or achievement outcomes (Beck & Davidson, 2001; Meece, Blumenfeld, & Hoyle, 1988; VanZile-Tamsen, 2001; Wigfield, & Cambria, 2010; Wolters, Shirley, & Pintrich, 1996). All the research found evidence that students' sense of task value from the short- or long-term goal perspective predicted their engagement and achievement. Therefore, I can hypothesize that the component of usefulness in the MUSIC model can predict student engagement or achievement.

**Success and engagement and achievement.** The success component of the MUSIC model means that if students believe they can succeed when they spend time and effort required for an assignment, then they will become more motivated and engaged in their coursework (Jones, 2009, 2015). This component is based, in part, on the self-efficacy theory (Bandura, 1986) and the expectancy-value theory (Wigfield & Eccles, 2000). These two theories argue that individuals' beliefs of their capabilities for success in a task play an important role in determining their persistence, time and effort, and cognitive self-regulation strategies (Bandura, 1986; Wigfield &Eccles, 2000). In order to motivate students in their learning, Jones provides many strategies involving success such as matching the difficulty levels of the class activities and assignments with students' existing capabilities and providing students with honest and specific feedback at regular intervals (Jones, 2015). The following evidence demonstrates that students' expectancy for their success can predict their engagement and achievement.

In a recent study of 191 college students, researchers examine whether identification with academics, intrinsic / extrinsic motivation, and self-efficacy would predict meaningful cognitive engagement (Walker, Greene, & Mansell, 2006). The researchers found that identification with academics, self-efficacy, and intrinsic motivation can predict student cognitive engagement

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(Walker et al., 2006). In contrast, extrinsic motivation is not predictive of their meaningful cognitive engagement (Walker et al., 2006). The other two studies by Len and colleagues share the similar results. Lent, Brown, and Larkin (1984) examine the relationship between self-efficacy beliefs and subject persistence and success in pursuing college majors among 42 college students. They found that those who had high self-efficacy beliefs usually achieve higher grades and persist longer than those who had low self-efficacy (Lent et al., 1984). In their later research, Lent, Brown, and Larkin (1986) explore the relationships between self-efficacy, performance, persistence, and vocational choice among 105 undergraduates enrolled in a career planning course on science and engineering fields. The hierarchical regression analysis indicates that self-efficacy can predict grades, persistence, and range of perceived career options in technical / scientific fields (Lent, et al., 1986). Another two studies illustrate how self-efficacy affects student achievements. In a study of 138 undergraduates enrolled in introductory psychology courses, researchers examine if academic performance could be predicted on the need for cognition and academic self-efficacy (Elias & Loomis, 2002). They found that self-efficacy beliefs correlate significantly with GPA and that self-efficacy beliefs can also predict GPA. Similarly, Zajacova, Lynch, and Espenshade (2005) conducted research to examine whether academic self-efficacy could predict academic performance among 107 college first-year students. They found that academic self-efficacy can predict three academic performance outcomes: first-year college GPA, the number of accumulated credits, and college retention after the first year (Zajacova et al., 2005).

Many other researchers also demonstrate that academic self-efficacy positively and significantly predicts academic performance, persistence, and cognitive engagement (Chemers, Hu, & Garcia, 2001; DiBenedetto & Bembenutty, 2013; Joo, Bong, & Choi, 2000; Multon,

Brown, & Lent, 1991). Therefore, I can hypothesize that the success component in the MUSIC model can predict student engagement or achievement in Chinese college EFL class.

**Interest and engagement or achievement.** The interest component of the MUSIC model refers to the strategies that interest students in class activities and make their learning experiences enjoyable (Jones, 2015). This component is consistent with Hidi and Renninger's (2006) interest theory which holds that instructors can use instructional strategies to support students by developing their interest for particular content (Hidi and Renninger, 2006). Based on Hidi and Renninger's (2006) four-phase interest theory, Jones (2009) summarizes them as one component in the MUSIC model and argues that if teachers can design activities to capture students' situational interest, then students may have more interest in the content knowledge and value it more, leading to individual interest (Jones, 2009). A growing body of research provides evidence that student interest in the coursework can predict their engagement and achievement.

Rotgans and Schmidt (2011) investigated the development of situational interest over time and the relationships between situational interest and student academic achievement among 69 polytechnic students. The researchers found that students' situational interest increase significantly when problem stimuli are presented. More importantly, researchers found that situational interest is a significant predictor of academic achievement. Another study shares the similarly results among 300 or so college students enrolled in the introductory class (Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997). Researchers examined the relationships among achievement goals, interest, and grades among these college students and found that students adopting mastery goals are more interested in the class, while students adopting performance goals achieve higher performance (Harackiewicz et al., 1997). Further, mastery goals lead to more interest in the coursework, and in turn result in positive outcomes in college

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classes (Harackiewicz et al., 1997). In a study of undergraduate students, Schiefele (1999) conducted two experiments to explore the relationships between interest and learning in the text. Both experiments indicate that students recall the interesting detail in the text better than the generalizations. Further, the researcher found that generalizations are recalled better from the generally interesting text than the uninteresting text, a finding also true for underequipped students (Schiefele, 1999).

Different from these aforementioned studies on the relationship between interest and achievement, Schraw (1997) directly examined the relationship between interest and engagement. Schraw (1997) examined the role of situational interest in literary text within 181 undergraduates enrolled in an introductory educational psychology class. He found that students are interested with the multiple aspects of literary texts and that interest is related to personal engagement variables (Schraw, 1997).

Other studies also shared similar findings (Ann Renninger, 2000; Hidi, Renninger, & Krapp, 2004; Renninger, Hidi, & Krapp, 2014; Schraw, Flowerday, & Lehman, 2001). All of these studies demonstrate that interest, especially situational interest, is positively associated with students' overall interest, achievement goals, and academic performance. As a result, I can hypothesize that the component interest in the MUSIC model can predict student engagement or achievement. However, it should be noted that different from the rich evidence for the relationship between the other MUSIC model components and engagement, there was only a few of evidence for the relationship between interest and engagement or achievement. Jones (2009) presents this phenomenon when he summarizes the instructional strategies in educational psychology. He suggests that there is more space for the research of interest and engagement in higher education for the future.

**Caring and engagement and achievement.** The component of caring in the MUSIC model refers to the strategies that help instructors or other students *care* about students' learning and about them individuals (Jones, 2009, 2015). This component stems from research in attachment, relatedness, caring, and sense of community (e.g., Bergin & Bergin, 2009; Deci & Ryan, 1991; Noddings, 1992; Wentzel, 1997). These theories hold that when students have close relationships with their teachers and peers, they tend to be more active in their learning and perform better academically. Further, Noddings (1992) emphasizes that the moral perspective of education helps students develop to be "competent, caring, loving and lovable" (p. ix). Based on these theories of caring, Jones (2009) summarizes them as the caring component in the MUSIC model and argues that students will be more motivated and engaged in their learning when they believe that the instructors or peers care about their learning and care about them as individuals (Jones, 2015). Evidence from the following research indicates that a caring environment predicts students' engagement and achievement.

Three studies found the significance of caring for effective teaching. In one study, researchers examine student perceptions of their teachers (Onwuegbuzie et al., 2007). The participants consisted of 912 college students at a mid-southern public university. The researchers found nine emergent themes and one of them was *responsive* including three items: (a) "The instructor gives me regular feedback about how well I am doing in the course"; (b) "The instructor returns exams and assignments quickly enough to benefit me"; and (c) "The instructor, when necessary, suggests specific ways I can improve my performance in this course" (Onwuegbuzie et al., 2007). This study suggests that teachers' caring is crucial for the effectiveness of their teaching. In the other study, Okpala and Ellis (2005) conducted research to examine the key components of a high-quality college teachers among a group of 218 U.S.

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college students. They found that caring for students and their learning (89.6%) rank at the top among the five most concerned components (the other four were teaching skills (83.2%), content knowledge (76.8%), dedication to teaching (75.3%), and verbal skills (75.0%). In another study, researchers examined the factors of effective teaching among 99 college teachers and 231 students (Schaeffer, Epting, Zinn, & Buskist, 2003). The findings show that both teacher and student groups agree on eight of the top 10 descriptors: approachable, creative and interesting, encouraging and caring, enthusiastic, flexible and open-minded, knowledgeable, realistic expectations and fair, and respectful. These three studies emphasize that teachers' caring is critical to students' learning experience.

Different from the aforementioned studies, another three studies examine the relationships among caring, engagement, and academic outcomes. In a study of a group of 235 college students enrolled in communication classes, the researchers found that teacher caring positively correlates with the content evaluation (Teven & McCroskey, 1997). In addition, the more caring teacher (as perceived by the students), the more affect they have toward the course and the more willingness to take the similar content course (Teven & McCroskey, 1997). Further, the data reveals that more caring received from the teacher can predict more student learning in the course (Teven & McCroskey, 1997). Similarly, Zhao and Kuh (2004) examine the relationships between participating in learning communities and student engagement in a range of educational activities of first-year and senior students. The findings indicate that participating in a learning community positively correlates to student engagement as well as student self-reported outcomes and overall satisfaction with the college. The final evidence provides a thorough relationship between caring and student outcomes (Cornelius-White, 2007). Cornelius-White (2007) conducted a meta-analysis to examine the relationships among the person-centered

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teacher variables, teacher-student relationships, and student academic outcomes among 119

studies from 1948 to 2004. The findings show that the correlation between person-centered

teacher variables and student positive outcomes is $r = .31$, and that the correlation between

teacher variables, cognitive outcomes, and affective or behavioral student outcomes is $r = .31$,

$r = .35$, respectively. In addition, the correlation between teacher-student relationships and

student outcomes positively correlates, and r = .36. This data indicates that the positive student-

teacher relationships affects students' cognitive, affective, or behavioral outcomes significantly.

Many other studies also demonstrate that teacher caring positively associates with student

academic motivation and achievement (Bangert, 2006; Chickering, & Gamson, 1987; Cox &

Orehovec, 2007; Strayhorn, 2012). It is noted that no extensive evidence shows that teacher

caring directly predicts student engagement, but the aforementioned evidence indicates the

teacher's crucial role for student motivation and engagement. In addition, other researchers have

documented caring to be an important component of a motivating and engaging classroom

environment (Jones, 2016a, 2016b). As a result, I can hypothesize that the caring component in

the MUSIC model can predict student engagement and achievement.

**The MUSIC taken as a whole and engagement and achievement.** Although a

substantial amount of evidence has shown that one of the five components in the MUSIC model

can predict student academic engagement or achievement (e.g., Reeve & Jang, 2006; Battle &

Wigfield, 2003; Harackiewicz et al., 1997; Walker et al., 2006; Zhao & Kuh, 2004), or that two

of three of the components predicted engagement and achievement (e.g., Vansteenkiste et al.,

2004; Wigfield & Cambria, 2010; Walker et al., 2006), little research has examined how the five

MUSIC components work together to predict *overall* student engagement and achievement.

Jones (2009, 2015) is the first educational scientist to include all of the MUSIC components as

independent variables to examine whether they can predict student engagement and achievement within one inventory (Jones, 2016). The following two studies are examples that Jones and his colleagues use the MUSIC model components to examine the relationships between the MUSIC components and student domain identification, career goals, academic engagement, and achievement.

Jones, Osborne, Paretti, and Matusovich (2014) used the MUSIC model and a model of domain identification to examine the relationships among students' perceptions of a course and their domain identification, motivational beliefs, course effort, and academic outcomes among 915 first-year engineering students enrolled in an introductory engineering design course. The findings indicate that three components of the MUSIC model—empowerment (from leader and team respectively), usefulness, and interest—can predict course effort. At the same time, the data reveals that the success component positively associates with course grade estimates. Thus instructors can motivate and engage their students with the coursework if they provide students with autonomy, relate the coursework to students' short and long-term goals, and use the strategies in the MUSIC model to make the course more interesting.

In another study, Jones (2010) investigated the relationships between the MUSIC model components and students' effort, instructor ratings, course ratings, and achievement in a face-to-face course (245 students) and an online course (218 students). The findings reveal that the components of the MUSIC model were significantly related to students' effort, instructor ratings, and course ratings. In all conditions, academic rating best predicts instructor rating, situational interest best predicts course rating, and perceptions of success best predicts achievement (Jones, 2010). Jones (2010) concludes that instructors should consider the components of the MUSIC model in both face-to-face and the online courses in order to maximize students' effort and

achievement, as well as instructor and course ratings. Therefore, the two studies by Jones and his colleagues illustrate that the components of the MUSIC model can predict student engagement and achievement. Consequently, the MUSIC model can be used in Chinese college EFL class because the MUSIC can predict student engagement, the essence of CLT.

**Conclusion**

From the research on the effective use of CLT in Chinese college class, I concluded that CLT was effective in increasing student academic motivation. However, there was no evidence that CLT led to student *engagement*. This was the gap in the current EFL teaching field. At the same time, from the research on the evidence that the MUSIC model components led to student increased motivation and engagement, I understood that the MUSIC model was consistent with the essence of CLT. Therefore, it was necessary to conduct the present research to examine whether the use of the strategies in the MUSIC model could lead to student engagement, the essence of CLT, in Chinese college EFL class. If I could provide such evidence from my empirical research, it would be significant that the MUSIC model was an ideal and practical set of strategies for the Chinese college EFL class in the context of CLT, the signature pedagogy of language curriculum.

# Chapter 3: Methodology

## Purpose and Research Questions

The purpose of this research was to test the effectiveness of using MUSIC model strategies in CLT in an English course at a Chinese university. My hypothesis was that the use of CLT in English classes with MUSIC strategies would increase students' (a) perceptions of the MUSIC model components, (b) behavioral and cognitive engagement, and (c) achievement, as compared to students enrolled in traditionally taught English classes. The rationale for my hypothesis is summarized in Table 2.

Table 2

*A Comparison between a CLT and Traditional Class*

|  | CLT class | Traditional class | MUSIC model strategies[a] |
|---|---|---|---|
| Activity variety | Variety of activities | Mostly lecture, vocabulary-text-exercise | empowerment, interest |
| Purpose of activities | Communication focus meets needs and goals of students | No activities for speaking and listening (no opportunities for improving English communicative competence) | usefulness |
| Peer and teacher interaction | Class activities with peer interaction | No activities with peer interaction | empowerment, success, interest, caring |
| Teacher feedback | More feedback opportunities (during class and face-to-face) | Fewer opportunities, mostly after homework or test | success, caring |

[a] These MUSIC model strategies can be used in the CLT class and are hypothesized to increase students' (a) perceptions of the MUSIC model components, (b) behavioral and cognitive engagement, and (c) achievement.

The CLT approach focuses on students' needs and instructors are facilitators and students are active learners (Fotos, 2005; Sato &Kleinsasser, 1999; Savignon, 2005). Therefore, I hypothesized that the variety of activities in class would provide students with more motivating

opportunities with respect to empowerment and interest (Jones, 2009, 2015). At the same time, because the purpose of activities in CLT class is to improve students' communicative competence (Savignon, 2005), students would be more likely to understand the usefulness of the activities in the English course (Jones, 2009, 2015). Furthermore, peer and teacher interaction in the CLT class would bring about a greater sense of empowerment, success, and caring (Jones, 2009, 2015). Finally, more teacher feedback opportunities during the CLT class may allow students to perceive a greater sense of success and caring (Jones, 2009, 2015). In summary, CLT aligns well with the components of the MUSIC model, and by intentionally incorporating MUSIC model strategies into the CLT class, students should be more engaged and achieve higher in this class than in a traditional lecture class.

Given these purposes and hypotheses, I addressed two primary research questions that can be divided into several sub-questions.

RQ1: Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

> RQ1a: Is there a difference in students' perceptions of the MUSIC model components in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

> RQ1b: Is there a difference in students' perceptions of their engagement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

> RQ1c: Is there a difference in students' achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?

RQ2: To what extent do students' MUSIC model perceptions relate to their engagement and achievement?

RQ2a: To what extent do students' MUSIC model perceptions relate to their perceptions

of engagement in traditional lecture classes and in CLT classes that incorporate

MUSIC model strategies?

RQ2b: To what extent do students' perceptions of engagement relate to their achievement

in traditional lecture classes and in CLT classes that incorporate MUSIC model

strategies?

RQ2c: To what extent do students' MUSIC model perceptions relate to their achievement

in traditional lecture classes and in CLT classes that incorporate MUSIC model

strategies?

**The Site of the Study**

The site of this study was one university in central China. This university emphasized

students' English proficiency; therefore, some courses were taught in English in the School of

Business and the School of International Education. Many English training classes were

implemented to raise the pass rate of national college English test 4 (CET 4, "2012-2016

development project," n.d.). Because the vision of this university was to foster high quality

graduates to meet the needs of society in the 21st century, it was willing to welcome the reform

of English Language Teaching pedagogy. When told about the present study, the founder of this

university welcomed it and offered his full support (a letter from the president, February, 2016)

as it was deemed important to this university's vision and growth.

**Participants**

Participants were three college English teachers (I was one of them) and their 270 first-

year students from six sections of the college English course in the School of Business (the

average number of students was 45 in each class section). Based on scores obtained from the

Office of Instruction at the participating university, I chose six classes in the School of Business with similar scores on the national college entrance exam and on the English entrance exam (i.e., there were no statistically significant differences among the two scores of the students in the six classes). One female teacher, Lucy (a pseudonym), taught students whose majors were economics and trade management; another female teacher, Jane (a pseudonym), taught students whose majors were business management; and a male teacher, John (a pseudonym), taught students whose majors were accounting.

**Procedure**

**Study design.** This research was approved by Virginia Tech's Institutional Review Board (see Appendix A). Each of the three teachers taught two classes: one for the experimental group (i.e., the CLT class) and another for the control group (i.e., the traditional class). The study lasted from late September 2016 to early January 2017 for a total of 15 weeks. Every week, there were three class meetings (90 minutes for each), two for intensive reading and one for listening. At the end of semester, all students in this research were asked to complete a paper-and-pencil questionnaire in class to assess students' perceptions about their English course.

**English course.** Both the CLT and traditional English class content covered five parts: listening, speaking, reading, writing, and translation. Both classes consisted of two sections: intensive reading and listening. Students in both classes used the different instructional syllabi based on the same English textbook entitled *New Horizon College English* (Zheng, 2013).

**CLT classes.** I incorporated strategies consistent with the MUSIC model into in the CLT classes. These strategies were mainly chosen from the book entitled *Motivating Students by Design: Practical Strategies for Professors* (Jones, 2015). The CLT classes included the following elements. First, there were free talks consisting of two or three students at the very

beginning of the class. Teachers assigned this task to students two weeks earlier according to their university passport number. These students were given one minute to discuss their name, birthplace, family members, and hobbies. The teachers were available to students when they wanted the teachers to revise their script for the next-day free talk. At the beginning of the class, the teacher put the assigned students' scripts on the big screen in the front of the class (in PowerPoint) so that all the classmates could see the words when the students were talking. At the end of each free talk, all the classmates clapped their hands to thank the speaker; the teacher summarized it and usually praised the student for the interesting points presented.

Second, everyone in the class was randomly assigned to groups of six students and the students selected a group leader by themselves. Then, before the beginning of each unit in the English textbook, the students were given an assignment along with a rubric that specified how they would be assessed on the assignment. Part of the assignment was to present their assignment to their classmates. Everyone in the group was required to speak a few sentences. The content of the assignment consisted of three parts: (1) the new vocabulary, (2) the text in each unit, and (3) the exercises after the text. Before the students' collaboration for the assignment, the teacher taught them the basic skills needed for collaboration. For example, the assignment could be divided into several parts, so that each of them was in charge of one part. After that, they could decide how to present the assignment effectively. The teachers were available to the students for their group work activities both inside and outside classrooms. For example, each of the three teachers opened an online chatroom for the CLT class and promised to answer the students' questions within 12 hours.

Third, there were other activities besides the group presentations, such as role play of the specific paragraphs in the text, and the group-based quiz on the new vocabulary for each unit.

Each week, the three teachers discussed one of the five MUSIC model components (e.g. empowerment, interest) and then they chose an activity from the book entitled *Motivating Students by Design: Practical Strategies for Professors* (Jones, 2015). In other words, all of the teachers focused on the same component of the MUSIC model during the week, but they could choose to incorporate different class activities in their own instruction.

**Traditional classes.** The traditional classes used the format of instruction that is typical in the Chinese education system for elementary to post-secondary schools. The teacher is the leader and focus of the class, and s/he controls the overall steps in the class. From the beginning to the end of the class, the teacher talks constantly and emphasizes the main points of the content. Students are passive learners and follow the teacher's guidance, take notes, and memorize the content of the course. In addition, students listen to the teacher and take a final paper-and-pen test. There is typically no interaction between teachers and students, or among students, because there are no group activities and the only exam is the paper-and-pen test at the end of the semester.

**Instruments**

**MUSIC® Model of Academic Motivation Inventory.** The College Student version of the MUSIC Model of Academic Motivation Inventory (referred to in this document as the MUSIC Inventory; Jones, 2016) consists of 26 items that are divided into five scales: a five item empowerment scale, a five item usefulness scale, a four item success scale, a six item interest scale, and a six item caring scale. Students respond to the scale items by choosing one of six options on a Likert-format scale: 1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Somewhat disagree*, 4 = *Somewhat agree*, 5 = *Agree*, and 6 = *Strongly agree*. The items in each scale are averaged to create a mean score for the scale. For example, the five empowerment items are averaged to

create a mean score for the empowerment scale. The MUSIC Inventory has been shown to produce reliable and valid scores and correlate with other measures as expected (Jones & Skaggs, 2016). For example, Jones and Skaggs (2016) reported excellent Cronbach's alpha values as an estimate of the reliability of the scales: .91 for empowerment, .96 for usefulness, .93 for success, .95 for interest, and .93 for caring. The complete inventory is available at Jones (2016), but example items include the following: "I have flexibility in what I am allowed to do in this course" (empowerment), "In general, the coursework is useful to me" (usefulness), "I am confident that I can succeed in the coursework" (success), "The coursework is interesting to me" (interest), and "The instructor cares about how well I do in this course" (caring).

The College Student version of the MUSIC Inventory (Jones, 2016) was translated into Chinese and the psychometric properties were found to be acceptable (see Jones, Li, & Cruz, 2017). The Cronbach's alpha values indicated that the reliability of the scales for the Chinese version was good to excellent (George & Mallery, 2003), with Cronbach's alpha values of .82 for empowerment, .89 for usefulness, .87 for success, .93 for interest, and .88 for caring (Jones et al., 2017). The factor loadings from the confirmatory factor analyses in the Jones et al. (2017) study ranged from .60 to .91, indicating that the Chinese items loaded well on their intended factors (Tabachnick & Fidell, 1996). Finally, the correlation coefficients in the Jones et al. (2017) study indicated a moderate correlation between the MUSIC components and engagement.

**Behavioral engagement.** To examine student behavioral engagement, I used the same 4-item measure of effort used by Jones (2010) that was based on the 5-item Effort/Importance scale that is part of the Intrinsic Motivation Inventory (Plant & Ryan, 1985). This scale assesses the amount of perceived effort that students put forth in a course. All items included a 6-point Likert-format scale (1 = *Strongly disagree*, 2 = *Disagree*, 3 = *Somewhat disagree*, 4 = *Somewhat*

*agree*, 5 = *Agree*, 6 = *Strongly agree*). An example item is: "I put a lot of effort into this course."

In Jones (2010), the reliability estimates were good (α = .84, .84, .86, .84).

**Cognitive engagement.** To examine student cognitive engagement in this research, I

used the 8-item Self-Regulated Strategy Use scale that is part of the Student Perceptions of

Classroom Knowledge-Building Scale (SPOCK; Shell & Husman, 2008; Shell et al., 2005). The

Self-Regulated Strategy Use scale assesses the extent of students' behaviors and strategies

associated with self-regulation, such as of planning, goal setting, monitoring, and evaluation of

studying and learning. An example item is: "I try to determine the best approach for studying

each assignment." Students responded on a 6-point Likert-type scale with descriptors at each

point (1= *Almost never*, 2 = *Seldom*, 3 = *Sometimes*, 4 = *Often*, 5 = *Almost always*, 6 = *Always)*.

Shell and Husman (2008) documented an acceptable reliability estimate (α = .81).

**Involvement in out-of-class activities.** As another measure students' engagement in

English learning, I created one item to measure students' involvement in out-of-class activities

on campus. It includes six options related to activities on campus: (1) a volunteer in the foreign

experts' life center, (2) a translator of the brochures for foreign experts' life in China, (3)

speeches provided by foreign experts, (4) an English song contest, (5) an English speech contest,

and (6) any other out-of-class activities (not listed above) that require listening to, reading, or

speaking in English.

**Implementation Fidelity**

To improve the fidelity of the teaching approaches across instructors, this study included

instructor meetings and class observations.

**Instructor meetings.** Every week before the class began, the three teacher participants

met once and talked about the content of both the CLT and traditional classes. Participating in

these meetings helped to ensure that all of the teachers followed the same steps and used the same teaching strategies and activities in their classes, with some differences, but they were related to the same MUSIC component.

**Class observations.** Near the beginning, the middle, and the end of the semester, each of the teacher participants observed the other teachers' classes for 20 or 30 minutes. They attended the classes to observe the classes directly. During the observation of the peer's class, the teacher took notes that included listing the main steps of the class activities and writing down their own impressions and feedback. After the class observations, the three teachers uploaded the notes to an online chatroom created especially for this study. Therefore, the three teachers discussed and cooperated with each other for the CLT approach class both online and offline besides the weekly meeting.

## Analysis

I computed descriptive statistics and Cronbach's alpha coefficients for all the scales. The criterion level for statistical significance (*p*) was set to 0.05. To address the first research question (Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), I conducted independent sample t-tests to investigate how the CLT approach affected student course perceptions, engagement, and achievement. Specifically, for RQ1a (Is there a difference in students' perceptions of the MUSIC model components in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?) I conducted an independent sample t-test about the MUSIC components between the experimental group and the control group to examine whether there was a significant difference of the perceptions of the MUSIC model components between the CLT approach and the traditional lecture class. For RQ1b (Is there a difference in students'

perceptions of their engagement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), I conducted an independent sample t-test about the items of engagement (behavioral and cognitive) to examine whether there was a significant difference of the engagement between the CLT approach and the traditional lecture class. I also computed descriptive statistics for one item that asked students to report their out-of-class activities related to the English language. For RQ1c ( Is there a difference in students' achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies"), I conducted an independent sample t-test on the students' final exam scores to examine whether there was a significant difference of final exam scores between the CLT approach and the traditional lecture class (see Table 3).

To address the second research question (To what extent do students' MUSIC model perceptions relate to their engagement and achievement?), I used the general regression to examine how the components of the MUSIC model affected student engagement and achievement. Specifically, for RQ2a (To what extent do students' MUSIC model perceptions relate to their perceptions of engagement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I used a  regression to examine the relationships between the components of the MUSIC model and student engagement. For RQ2b (To what extent do students' perceptions of engagement relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I conducted a regression to examine the relationships between engagement and achievement. For RQ2c (To what extent do students' MUSIC model perceptions relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I conducted a regression to examine the relationships between the MUSIC model components and achievement  (see Table 3).

Table 3

*Research Questions and Data Analysis Methods*

| | Research questions | Data Analysis |
|---|---|---|
| RQ1 | Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies? | |
| RQ1a | Is there a difference in students' perceptions of the MUSIC model components in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies? | An independent sample t-test to compare students' perceptions of the MUSIC components between CLT and traditional classes |
| RQ1b | Is there a difference in students' perceptions of their engagement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies? | An independent sample t-test to compare students' perceptions of engagement between CLT and traditional class; descriptive statistics related to out-of-class activities |
| RQ1c | Is there a difference in students' achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies? | An independent sample t-test to compare students' achievement between CLT and traditional class |
| RQ2 | To what extent do students' MUSIC model perceptions relate to their engagement and achievement? | |
| RQ2a | To what extent do students' MUSIC model perceptions relate to their perceptions of engagement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies? | A regression to examine the relationships between the MUSIC model components and engagement |
| RQ2b | To what extent do students' perceptions of engagement relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies? | A regression to examine the relationships between engagement and achievement |
| RQ2c | To what extent do students' MUSIC model perceptions relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies? | A regression to examine the relationships between the MUSIC model components and achievement |

# Chapter 4 Results

## Data Screening

At the end of the semester, I collected 270 questionnaires: 132 questionnaires from the experimental group classes and 138 from the control group classes. Four of the 132 questionnaires and seven of the 138 questionnaires were not included in the final sample because the items on the second page were not answered. Therefore, the final sample included 128 students in the experimental group classes (CLT) and 131 students in the control group classes (traditional) for a total of 259 student participants. Two responses were missing for items in the self-regulation scale and one response was missing for the age item. I filled in these three values with the mean value for those items.

## Internal Consistency

I computed Cronbach's alpha values to measure the internal consistency of the MUSIC model and engagement scales (see Table 4). All of the MUSIC model and engagement scales demonstrated acceptable levels of reliability, with alphas ranging from .74 to .90.

Table 4

*Reliability Estimates, Means, and Standard Deviations for the Scales*

| Variable | $\alpha$ | M | SD |
| --- | --- | --- | --- |
| eMpowerment (M) | .74 | 4.51 | 0.60 |
| Usefulness (U) | .81 | 5.22 | 0.63 |
| Success (S) | .85 | 4.27 | 0.82 |
| Interest (I) | .85 | 4.49 | 0.69 |
| Caring (C) | .82 | 5.26 | 0.50 |
| Effort (Eff) | .84 | 4.42 | 0.80 |
| Self-regulation (SR) | .90 | 3.56 | 0.84 |

Note. All items were rated on a 6-point Likert-format scale except the items in the Self-regulation (SR) scale, which were rated on a 5-point Likert-format scale. N = 259.

**Research Question 1a**

For RQ1a (Is there a difference in students' perceptions of the MUSIC model components in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), I conducted an independent $t$-test for each of the MUSIC model constructs to compare the experimental and control groups. The results showed that there was a significant difference for students' perceptions between the CLT approach and the traditional lecture class for all of the MUSIC model components except success (see Table 5).

Table 5

*Means, Standard Deviations, and T-Test Results of the MUSIC Model Components*

| Variable | M (SD) | | Mean difference | $t$ | $p$ |
|---|---|---|---|---|---|
| | CLT [a] | Traditional [b] | | | |
| Empowerment | 4.61 (0.57) | 4.41 (0.61) | 0.20 | 2.70 | **0.01** |
| Usefulness | 5.31 (0.62) | 5.14 (0.62) | 0.17 | 2.15 | **0.03** |
| Success | 4.36 (0.76) | 4.18 (0.85) | 0.18 | 1.74 | 0.08 |
| Interest | 4.70 (0.60) | 4.30 (0.72) | 0.40 | 4.82 | **0.00** |
| Caring | 5.33 (0.46) | 5.19 (0.53) | 0.14 | 2.36 | **0.02** |

Note. The items in the components of the MUSIC model were rated on a 6-point Likert-format scale. Values in bold were statistically significant at an alpha value of 0.05.
[a] $n = 128$, [b] $n = 131$

Although there was not a significant difference for students' perceptions of success at the 0.05 alpha level, the $p$ value of .08 was marginally significant and was consistent with the trend demonstrated by the other mean values. These findings indicate that, compared with the students in the traditional lecture class, the students in the CLT class perceived more control in the class, found the course to be more useful for their goals, were more interest in the class, and perceived more sense of caring from their teacher.

## Research Question 1b

For RQ1b (Is there a difference in students' perceptions of their engagement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), I conducted independent sample t-tests for behavioral engagement (i.e., effort) and cognitive engagement (i.e., self-regulation) to compare the experimental and control groups. The results shown in Table 6 revealed that there was a significant difference in effort between the CLT class and the traditional lecture class, but not a significant different in self-regulation. These findings indicate that students in CLT classes perceived that they put forth more effort than those in the lecture class ($t = 2.06$, $p < .05$). However, they did not report using more self-regulation strategies than students in the traditional lecture classes ($t = 0.52$, $p > .05$) lecture class ($t = 2.06$, $p < .05$). However, they did not report using more self-regulation strategies than students in the traditional lecture classes ($t = 0.52$, $p > .05$).

Table 6

*Means, Standard Deviations, and t-Test Results of the Engagement Components.*

| Variable | M (SD) | | Mean difference | *t* | *p* |
|---|---|---|---|---|---|
| | CLT | Traditional | | | |
| Effort | 4.52 (0.82) | 4.31 (0.78) | 0.21 | 2.06 | **0.04** |
| Self-regulation | 3.59 (0.80) | 3.54 (0.87) | 0.05 | 0.52 | 0.61 |

Note. The items of effort were rated on a 6-point Likert-format scale. The items of self-regulation were rated on a 5-point Likert-format scale. Value in bold was statistically significant at an alpha value of 0.05.

Figure 2 illustrates students' responses to the item: "(1) a volunteer in the foreign experts' life center, (2) a translator of the brochures for foreign experts' life in China, (3) speeches

provided by foreign experts, (4) an English song contest, (5) an English speech contest, and (6) any other out-of-class activities (not listed above) that require listening to, reading, or speaking in English. Figure 2 indicated that few students in the CLT and traditional lecture classes attended the out-of-class English language activities on campus.
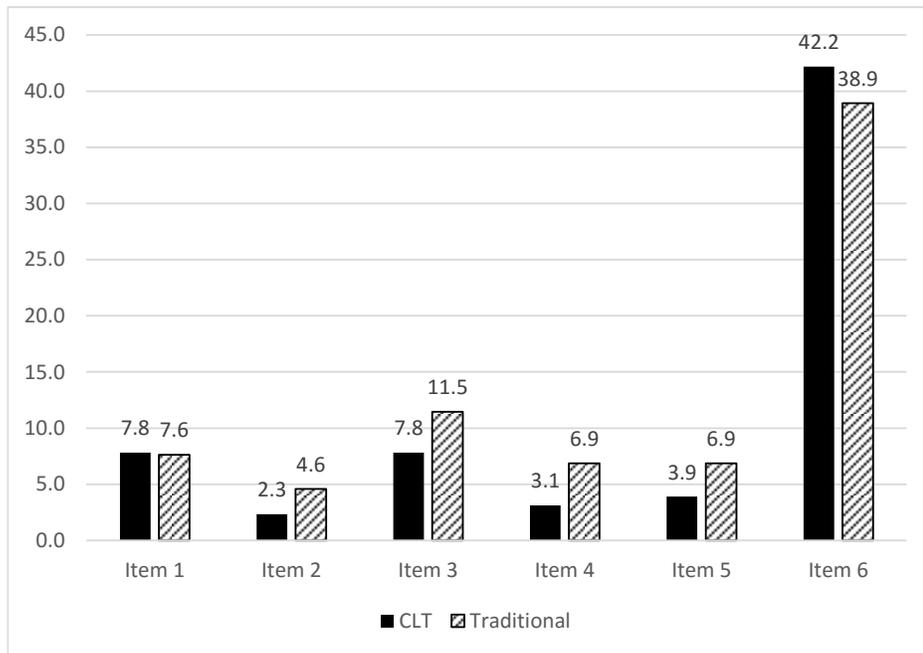


**Figure 2.** *The number of English activities in CLT class and the traditional class*

## Research Question 1c

Students in the CLT and traditional groups scored similarly on the Entrance score and the Entrance English score (see Table 7). Given that the students in the two groups were similar in English ability, I examined students' achievement scores at the end of the course. For RQ1c, (Is there a difference in students' achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), I conducted an independent sample *t*-test on the students' final exam scores to examine whether there was a significant difference of achievement between students in the CLT classes and the traditional lecture classes (see Table 8). The results in Table 8 demonstrated that there was a significant difference in the final test score between the CLT

class and the traditional lecture class ($t = 2.06$, $p < .05$). In other words, students in the CLT class achieved higher than those in the traditional lecture class.

Table 7

*Means, Standard Deviations, and t-Test Results of Entrance Exam Scores in CLT and Traditional Class.*

| | M (SD) | | Mean | | |
| --- | --- | --- | --- | --- | --- |
| Variable | CLT | Traditional | difference | *t* | *p* |
| Entrance  score | 432.84 (13.05) | 432.23 (12.40) | 0.61 | 0.39 | 0.69 |
| Entrance English score | 89.66 (12.49) | 87.74 (12.29) | 1.92 | 1.25 | 0.21 |

Note. The full score of entrance exam was 750 points. The full score of English exam was 150 points.

Table 8

*Means, Standard Deviations, and t-Test Results of Final Exam Scores in CLT and Traditional Class.*

| | M (SD) | | Mean | | |
| --- | --- | --- | --- | --- | --- |
| Variable | CLT | Traditional | difference | *t* | *p* |
| Achievement | 57.91 (0.82) | 53.96 (0.78) | 0.21 | 2.06 | **0.04** |

Note. The full score of the final test was 120 points. Value in bold was statistically significant at an alpha value of 0.05.

**Research Question 2**

Because the second research question (To what extent do students' MUSIC model perceptions relate to their engagement and achievement?) involved the relationships among the variables, I first calculated the Pearson correlation coefficients as shown in Table 9. All of the MUSIC model variables were moderately correlated with one another except that success and caring were not statistically correlated for the CLT classes. Overall, in both CLT and traditional classes, the MUSIC variables were correlated significantly with effort and self-regulation (with the exception that caring was not significantly correlated with self-regulation in either classes). Of all the variables, only success was correlated significantly with achievement. Finally, there

was a significant and positive correlation between effort and self-regulation in both the CLT class and the traditional lecture class.

Table 9

*Correlations Among the Study Variables*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1. Empowerment | | .27** | .65** | .60** | .26** | .46** | .41** | .04 |
| 2. Usefulness | .39** | | .37** | .36** | .60** | .43** | .25* | .07 |
| 3. Success | .58** | .42** | | .60** | .32** | .58** | .58** | .21* |
| 4. Interest | .58** | .57** | .56** | | .32** | .48** | .37** | .12 |
| 5. Caring | .41** | .43** | .12 | .46** | | .28** | .18 | .10 |
| 6. Effort | .38** | .46** | .54** | .50** | .12** | | .54** | .13 |
| 7. Self-regulation | .44** | .22* | .52** | .45** | .10 | .67** | | .07 |
| 8. Achievement | .13 | .17 | 24** | .10 | .03 | .20* | .11 | |

Note. The correlations below the diagonal are for the CLT class and the correlations above the diagonal are for the traditional class.

**Research Question 2a**

RQ2a (To what extent do students' MUSIC model perceptions relate to their perceptions of engagement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I used the general regression to examine the relationships between the components of the MUSIC model and student engagement in the CLT classes and the traditional lecture classes. Because the engagement variable included two sub-scales (i.e., effort and self-regulation) and there were two groups in this research (i.e., the CLT classes and the traditional lecture classes), I conducted the general regression in two major steps. First, I examined the extent to which students' perceptions of the MUSIC model components predicted their perceptions of effort and self-regulation in the CLT classes. Second, I examined the relationship between students' perceptions of the MUSIC model components and their effort and self-regulation in the traditional lecture classes.

For the effort variable in the CLT classes, usefulness, success, and interest predicted student effort positively and significantly (see Table 10). Usefulness, success, and interest explained 39% of the variance in students' self-reported effort.

Table 10

*General Regression Predicting Effort in the CLT Classes*

| Predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.39 | 122 | 15.52 | | | | | |
| eMpowerment | | | | 0.04 | 0.14 | 0.03 | 0.30 | .77 |
| Usefulness | | | | 0.31 | 0.12 | 0.23 | 2.58 | **.01** |
| Success | | | | 0.32 | 0.10 | 0.30 | 3.11 | **.00** |
| Interest | | | | 0.34 | 0.14 | 0.25 | 2.35 | **.02** |
| Caring | | | | -0.25 | 0.16 | -0.14 | -1.59 | .12 |

Note: [a] Standardized coefficient $\beta$

For the self-regulation variable in the CLT class, success and interest predicted student self-regulation positively and significantly (see Table 11). Combined, success and interest explained 34% of the variance in self-regulation.

Table 11

*General Regression Predicting Self-regulation in the CLT Classes*

| Predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.34 | 122 | 15.47 | | | | | |
| eMpowerment | | | | 0.25 | 0.14 | 0.18 | 1.79 | .08 |
| Usefulness | | | | -0.12 | 0.12 | -0.09 | -0.96 | .34 |
| Success | | | | 0.33 | 0.11 | 0.32 | 3.15 | **.00** |
| Interest | | | | 0.35 | 0.15 | 0.27 | 2.42 | **.02** |
| Caring | | | | -0.18 | 0.16 | -0.10 | -1.10 | .28 |

Note: [a] Standardized coefficient $\beta$

Next, I examined the degree to which students' perceptions of the MUSIC model components predicted their engagement in the traditional lecture class. With regard to the effort

variable in the traditional lecture classes, success and usefulness predicted student effort

positively and significantly (see Table 12). Success and usefulness explained 41% of the

variance in students' self-reported effort.

Table 12

*General Regression Predicting Effort in the Traditional Lecture Class*

| Predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.41 | 125 | 17.48 | | | | | |
| eMpowerment | | | | 0.11 | 0.12 | 0.09 | 0.93 | .36 |
| Usefulness | | | | 0.31 | 0.11 | 0.25 | 2.80 | **.01** |
| Success | | | | 0.34 | 0.09 | 0.37 | 3.76 | **.00** |
| Interest | | | | 0.14 | 0.10 | 0.13 | 1.42 | .16 |
| Caring | | | | -0.08 | 0.13 | -0.05 | -0.59 | .56 |

Note: *p*-values for the statistically significant predictor variables are bolded.
 [a] Standardized coefficient $\beta$

With regard to self-regulation in the traditional lecture classes, success predicted student

self-regulation positively and significantly (see Table 13). Success explained 34% of the

variance in the self-regulation variable.

Table 13

*General Regression Predicting Self-regulation in the Traditional Lecture Class*

| Predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.34 | 125 | 13.13 | | | | | |
| eMpowerment | | | | 0.05 | 0.15 | 0.04 | 0.36 | .72 |
| Usefulness | | | | 0.08 | 0.13 | 0.06 | 0.60 | .55 |
| Success | | | | 0.56 | 0.11 | 0.54 | 5.23 | **.00** |
| Interest | | | | 0.02 | 0.12 | 0.02 | 0.16 | .88 |
| Caring | | | | -0.06 | 0.15 | -0.04 | -0.42 | .67 |

Note: [a] Standardized coefficient $\beta$

**Research Question 2b**

To address RQ2b (To what extent do students' perceptions of engagement relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I used effort and self-regulation as the two sub-scales for engagement and students' final test score as the achievement variable. I used the general regression to examine the relationships between student engagement and achievement in the CLT classes and the traditional lecture classes. I conducted the general regression in two major steps. First, I examined the extent to which student effort predicted their achievement. Second, I examined the relationship between students' perceptions of self-regulation and their achievement.in the CLT classes and the traditional lecture classes.

For the engagement variable in the CLT class, neither effort nor self-regulation had a significant effect on student achievement (see Table 14). Similarly, for the engagement variable in the traditional lecture class, neither effort nor self-regulation had significant effect on student achievement (see Table 15).

Table 14

*General Regression Predicting Achievement in the CLT Class*

| Predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.04 | 127 | 2.57 | | | | | |
| Effort | | | | 2.16 | 1.13 | 0.23 | 1.92 | .06 |
| Self-regulation | | | | -0.45 | 1.15 | -0.05 | -0.39 | .70 |

Note: [a] Standardized coefficient $\beta$

Table 15

*General Regression Predicting Achievement in the Traditional Lecture Class*

| Predictor variable | $R^2$ | $df$ | $\Delta F$ | B | SE B | $\beta$[a] | $t$ | $p$ |
|---|---|---|---|---|---|---|---|---|
| | 0.02 | 130 | 1.10 | | | | | |
| Effort | | | | 1.52 | 1.19 | 0.13 | 1.27 | .21 |
| Self-regulation | | | | -0.05 | 1.07 | -0.00 | -0.04 | .97 |

Note: [a] Standardized coefficient $\beta$

## Research Question 2c

For RQ2c (To what extent do students' MUSIC model perceptions relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), I used the general regression to examine whether the components of the MUSIC model predicted student achievement in the CLT class and the traditional lecture class respectively. The results indicated that only success had significant effect on students' achievement and the component of success explained 7% of the variance in students' achievement in the CLT class (see Table 16). Similarly, in the lecture class, only success had significant effect on students' achievement, and success explained 6% of the variance in students' achievement (see Table 17).

Table 16

*General Regression Predicting Achievement in the CLT Class*

| Predictor variable | $R^2$ | $df$ | $\Delta F$ | B | SE B | $\beta$[a] | $t$ | $p$ |
|---|---|---|---|---|---|---|---|---|
| | 0.07 | 122 | 1.78 | | | | | |
| eMpowerment | | | | .10 | 1.65 | .01 | .06 | .95 |
| Usefulness | | | | 1.62 | 1.39 | .13 | 1.16 | .25 |
| Success | | | | 2.38 | 1.21 | .24 | 1.96 | **.05** |
| Interest | | | | -1.38 | 1.68 | -.11 | -.82 | .42 |
| Caring | | | | -0.06 | 1.86 | -.00 | -.04 | .97 |

Note: [a] Standardized coefficient $\beta$

Table 17

*General Regression Predicting Achievement in the Traditional Lecture Class*

| predictor variable | $R^2$ | df | $\Delta F$ | B | SE B | $\beta$[a] | t | p |
|---|---|---|---|---|---|---|---|---|
| | 0.06 | 125 | 1.69 | | | | | |
| eMpowerment | | | | -2.77 | 1.77 | -0.19 | -1.57 | .12 |
| Usefulness | | | | -0.77 | 1.61 | -0.05 | -0.48 | .64 |
| Success | | | | 3.08 | 1.30 | 0.29 | 2.37 | **.02** |
| Interest | | | | 0.73 | 1.45 | 0.06 | 0.50 | .62 |
| Caring | | | | 1.09 | 1.83 | 0.07 | 0.60 | .55 |

Note: [a] Standardized coefficient $\beta$

# Chapter 5: Discussion and Conclusion

## Research Question 1a

In answering the first research question (Is there a difference in students' motivation and achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), results of the independent t-tests showed that there was a significant difference in students' perceptions between CLT classes and the traditional lecture class for all of the MUSIC model components except success. Although there was not a significant difference for students' perceptions of success at the 0.05 alpha level, the *p* value of .08 was marginally significant and was consistent with the trend demonstrated by the other mean values. These findings indicate that, compared with the students in the traditional lecture class, the students in the CLT classes perceived more empowerment, found the course to be more useful for their goals, were more interested, and perceived more caring from their teacher. These findings provide evidence for the fidelity of the treatment. That is, in the CLT courses which included strategies consistent with the MUSIC model, students' perceptions of the MUSIC model components increased.

## Research Question 1b

In answering research question 1b (Is there a difference in students' perceptions of their engagement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), the results revealed that there was a significant difference in effort between the CLT class and the traditional lecture class, but not a significant difference in self-regulation. Students in CLT classes perceived that they put forth more effort than those in the lecture class ($t = 2.06$, $p < .05$). This result is consistent with the MUSIC model theory (Jones, 2015), which states that

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when instructors use some strategies related to the MUSIC model, they are more likely to motivate their students, which will then *engage* them in their coursework. In this case, the MUSIC strategies led to an increase in effort, which is a measure of behavioral engagement.

The results were different, however, for self-regulation, which I used as a measure of cognitive engagement. Students in the CLT classes did not report using more self-regulation strategies than students in the traditional lecture classes ($t = 0.52$, $p > .05$). A possible reason might be that the first year college students in this research had a relatively low score on the national college entrance exam. They may not know of effective cognitive strategies that they could use to make full use of their time and effort. This phenomenon is also found by Ji (1995) and Zhai (2010). Ji (1995) found that Chinese first year college students were diligent, but they lacked effective learning strategies. Zhai (2010) found that both first year and second year college students who were enrolled in college English class lacked the meta-cognitive strategies and that strategy training should be introduced to students. In other words, they may change their behavior by putting more effort into their English learning, but, they may not know of other effective cognitive strategies that they could use to make full use of their time and effort. Therefore, to engage students cognitively, I speculate that it may be beneficial for instructors to share study tips with their students, such as those provided in Jones (2015, p. 128). These findings lead me to consider the following future research question: To what extent can college English teachers improve students' sense of self-regulation by combining the MUSIC model and cognitive strategies?

As for student engagement in the out-of-class activities, the results revealed that few students in the CLT and traditional lecture classes attended  activities on campus. One reason might be that both groups of students had low college entrance exam scores and relatively low

English proficiency (see Table 7). Another possible reason could be that the students were in their first year and had only been on college campus for a few weeks. So, they may not have adapted to the college life. In addition, the foreign experts life center was far from their dormitory and it was not convienient for the students to go visit the foreign experts. Therefore, a question for future researchers is to use a sample of upper classmen to determine whether there is a difference in students' perceptions of engagement in the out-of-class English activites in traditional classes versus CLT classes that incorporte MUSIC model strategies among upper classmen.

**Research Question 1c**

In answering research question 1c (Is there a difference in students' achievement in traditional lecture classes versus CLT classes that incorporate MUSIC model strategies?), the result revealed that students in CLT classes achieved more than those in the traditional lecture classes (see Table 8). This finding demonstrated the effectiveness of CLT approach in Chinese college English classes. This result is consistent with the previous research in CLT classes by Chinese college English teachers (Li, 2007; Liu, 2007; Ren, 2012), who found that CLT increased student achievement and their course perceptions on some of MUSIC model components such as success and interest. However, these previous research only explored some aspect of student course perceptions such as success or interest rather than examining their overall MUSIC model components. Also, these previous research did not examine the extent to which student course perceptions relate to their engagement. Therefore, the current research provides more evidence for the effectiveness of CLT class on student achievement and deepens the exploration of the essence of CLT class, student engagement.

**Research Question 2a**

For research question 2a (To what extent do students' MUSIC model perceptions relate to their perceptions of engagement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), the correlations demonstrated that, in both CLT and traditional classes, the MUSIC variables were correlated significantly with effort and self-regulation (with the exception that caring was not significantly correlated with self-regulation in either class). These results are consistent with the previous research that caring was correlated with student motivation and engagement in class (Okpala and Ellis, 2005; Onwuegbuzie et al., 2007; Schaeffer, Epting, Zinn, & Buskist, 2003). This finding is important because it provides evidence to support one of the main tenets of the MUSIC model theory: that as students' MUSIC perceptions increase, their level of engagement also increases.

The results revealed that caring was not correlated with self-regulation; however, it was significantly and positively related to the other four MUSIC model components (except for success in the CLT classes). One possible reason was that students in this study have relatively poor English proficiency and they may not know of effective cognitive strategies that they could use to make full use of their time and effort (Romainville, 1994). I speculate that their self-regulated capabilities would not improve if the teacher was only nice and friendly without teaching students strategies on self-regulation.

In addition, other researchers have documented caring to be an important component of a motivating and engaging classroom environment (Jones, 2016a, 2016b). Therefore, caring is also a critical component for effective instructional design although it is not correlated with self-regulation.

To further analyze these relationships across types of classes (CLT vs. traditional) and engagement (effort and self-regulation), I conducted four regression analyses (see Tables 10, 11,

12, and 13). These results showed that only some of the MUSIC perception predicted engagement. Effort was predicted by usefulness, success, and interest in the CLT classes and by usefulness and success in the traditional classes. In both types of classes, the significant variables predicted about 40% of the variance in students' reported effort. Empowerment and caring did not predict effort, perhaps because the students have relatively poor English proficiency, so they are unable to be confident to fulfil the coursework even if they have more control over it. In the future, research may want to consider these types of questions regarding caring, engagement, and achievement: (1) Is there a difference in students' engagement and achievement in classes with a high level of caring versus classes with a low level of caring? (2) Why is there a difference between ESL/EFL classes and general education classes (e.g., biology, economics, etc.) in terms of caring leading to engagement and achievement?

Effort was predicted by success and interest in the CLT classes and by only success in the traditional classes. It makes sense that self-regulation was predicted by success because students recognized for their success are more confident in their abilities. So, they are more likely to have agency and independence in their coursework.

To build on these findings, it might be possible to examine how a traditional lecture class can be improved by incorporating some MUSIC model strategies to motivate and then engage students. That is, if it is possible to motivate and engage students during a lecture, as noted by Jones (2015), it would be useful to know how the current lecture classes could be improved (while still remaining as a lecture course) to increase students' motivation.

**Research Questions 2b**

The results related to research question 2b (To what extent do students' perceptions of engagement relate to their achievement in traditional lecture classes and in CLT classes that

incorporate MUSIC model strategies?), revealed that student engagement did not have significant effect on students' achievement either in the CLT classes or the traditional lecture classes. One possible reason is that, compared to general education classes, it takes longer for ESL learners to master foreign language concepts. In addition, the final English test may be too difficult for students who have only studied college English for 15 weeks. Therefore, the test cannot fully capture the progress from such a short amount of learning time. Perhaps, a better method to track student progress is to consider students' quiz performance throughout the semester. A future research question, therefore, might be: To what extent does student engagement relate to achievement in classes with a final test and quizzes versus one that only uses a final test?

**Research Question 2c**

Related to research question 2c (To what extent do students' MUSIC model perceptions relate to their achievement in traditional lecture classes and in CLT classes that incorporate MUSIC model strategies?), only the MUSIC model component of success had significant effect on students' achievement both in the traditional lecture class and the CLT class. Overall, the MUSIC component of success explained about 6% to 7% of the variance in students' achievement (see Tables 16 and 17). These findings do not provide evidence of a significant relationship between the MUSIC components and achievement. This finding is consistent with the MUSIC model theory, which specifies that students' MUSIC perceptions are mediated by engagement before they affect students' achievement (Jones, 2015). Evidence that MUSIC perceptions lead to engagement was also provided by Eccles and Wang (2012), who find that motivation could serve as a precursor to engagement and cited engagement as a meditator of the relationship between motivation and student achievement.

Similar to what I proposed for the lack of correlation between students' engagement and achievement, this finding also suggests that it is necessary for teachers and researchers to consider the special feature of ESL/EFL classes. That is, it takes a longer period of time to master a second or foreign language. So it might be possible that in ESL or EFL class, teachers had better use quiz performance throughout the semester instead of a simple high-stakes final test.

**Limitations**

The results of this study must be interpreted within the context of its limitations. First, the sample in this research was small and only three college English teachers and their 259 students within one university participated. The results may be more generalizable if more college English teachers and their students from more universities join the research. Second, only a self-report survey was used in this research, and there were no interviews with teachers or students. Interviews would provide more evidence to test the effectiveness of CLT classes that incorporated the MUSIC model strategies. Third, the out-of-class English activities instrument was provided limited data because there were only two options (yes or no) for each of the six items. I do not have evidence for the reliability and validity of this instrument. Fourth, the college English teachers handed out the self-report surveys to students near the end of the semester, but two out of three did not receive special training to learn how to obtain true student opinions about their college English course perceptions. For example, 11 of the participant students only finished half of the survey (printed on both sides); and thus, their surveys were not included in this study. Fifth, two of the three college English teachers in this study came to this university directly after they earned their master's degree in applied linguistics without receiving the necessary training programs regarding student academic motivation and engagement. They learned how to use the MUSIC model strategies just a short time before their instruction via

weekly meetings. Thus, they did not understand the theory and research concerning student motivation in the realm of educational psychology. As noted by Jones (2015), teachers may not correctly implement the strategies of the MUSIC model in their course design if they did not understand the theories behind these strategies. Therefore, it would be necessary for Chinese college English teachers to take more intensive training programs of the MUSIC model strategies in the future. Teachers with more MUSIC model strategies would provide more evidence of the effectiveness of the CLT classes that incorporate MUSIC model strategies.

**Conclusion**

The results of this research demonstrated that there was a significant difference in students' MUSIC model perceptions, effort, and achievement between the CLT classes and the traditional lecture classes. Students in CLT classes perceived more control in the class, found the course to be more useful for their goals, were more interest in the class, and perceived a greater sense of caring from their teacher (note that they did not perceive that they could be more successful than the students in the traditional class). Students in CLT classes put forth more effort and then achieved more than those in the traditional lecture classes. Therefore, this research provides evidence for the effectiveness of CLT classes as compared to traditional Chinese college English classes. This study also serves as an example of how the CLT classes can use some MUSIC model strategies to motivate students to engage in college English classes in Chinese universities.

This study also contributed to the MUSIC model theory by providing evidence that students' MUSIC perceptions were related to their behavioral and cognitive engagement. These findings indicate that college English teachers could use some strategies in the MUSIC model to motivate their students, which would *then* engage them in their coursework. Because neither of

the engagement variables predicted students' achievement, more research is needed to understand why these variables did not affect students' achievement as predicted.

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# Appendix A: Institutional Review Board (IRB) Approval Letter
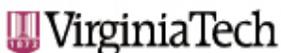
**VirginiaTech**

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Institutional Review Board
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540/231-4606 Fax 540/231-0959
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website http://www.irb.vt.edu

**MEMORANDUM**

**DATE:** October 21, 2016

**TO:** Brett D Jones, Ming Li

**FROM:** Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)

**PROTOCOL TITLE:** Students' Perceptions of English Courses 2016 Fall

**IRB NUMBER:** 16-932

Effective October 21, 2016, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

**PROTOCOL INFORMATION:**

| | |
|---|---|
| Approved As: | Expedited, under 45 CFR 46.110 category(ies) 5,7 |
| Protocol Approval Date: | October 21, 2016 |
| Protocol Expiration Date: | October 20, 2017 |
| Continuing Review Due Date*: | October 6, 2017 |

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

**FEDERALLY FUNDED RESEARCH REQUIREMENTS:**

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

*Invent the Future*

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
*An equal opportunity, affirmative action institution*

| Date* | OSP Number | Sponsor | Grant Comparison Conducted? |
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\* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.