#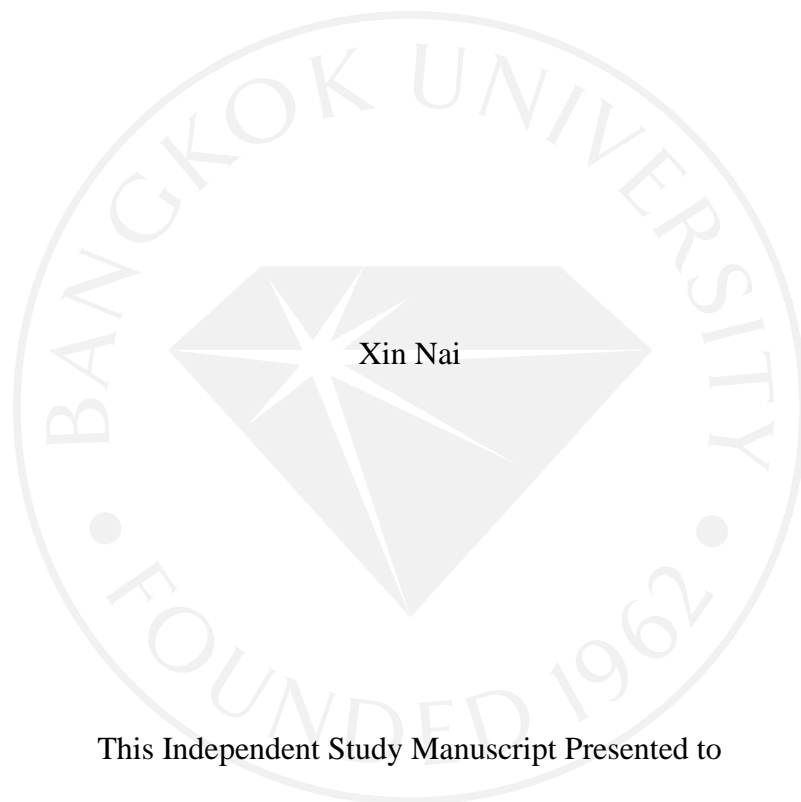 AN INVESTIGATION OF THE INFLUENCING FACTORS OF USER LEARNING MOTIVATION FOR USING THE ONLINE LEARNING PLATFORM OF THE FOREIGN LANGUAGE SCHOOL AT BAISE UNIVERSITY

AN INVESTIGATION OF THE INFLUENCING FACTORS OF USER

LEARNING MOTIVATION FOR USING THE ONLINE LEARNING

PLATFORM OF THE FOREIGN LANGUAGE SCHOOL AT

BAISE UNIVERSITY

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ABSTRACT

In the era of advanced communication and technology, the introduction of innovative education is inevitable. The emergence of online learning platforms is an upcoming trend. During this COVID19, schools across the China are using a variety of online learning platforms for teaching and learning, and many questions about online learning platforms are highlighted, so is in the Foreign Language School of Baise University. Based on this, this IS aim to study the factors that influence the motivation of students to use online learning platforms based on Attention, Relevance, Confidence, and Satisfaction (ARCS) theory and provide suggestions on how to improve students' motivation for using an online learning platform.

In the research method of this IS, the author adopts a mixed method of qualitative method and quantitative method. Based on literature review and in-depth interviews with 4 students from Baise University Foreign Language School, a questionnaire survey was developed and 619 valid answers were collected.

After using Linear Regression analysis, Pearson Correlation analysis and other methods to analyze the data, the following conclusions were drawn. In the four

dimensions of ARCS, ATTENTION has a negative impact on the motivation of students in foreign Language School of Baise University. Therefore, the dimension of "ATTENTION" should be removed when constructing an online learning platform that can stimulate the learning motivation of students in Foreign Languages School of Baise University. The other dimensions are ranked from most to least influential in order of confidence, relevance, and satisfaction. Finally, the author puts forward some strategies to stimulate the learning motivation base on confidence, relevance and satisfaction dimensions.
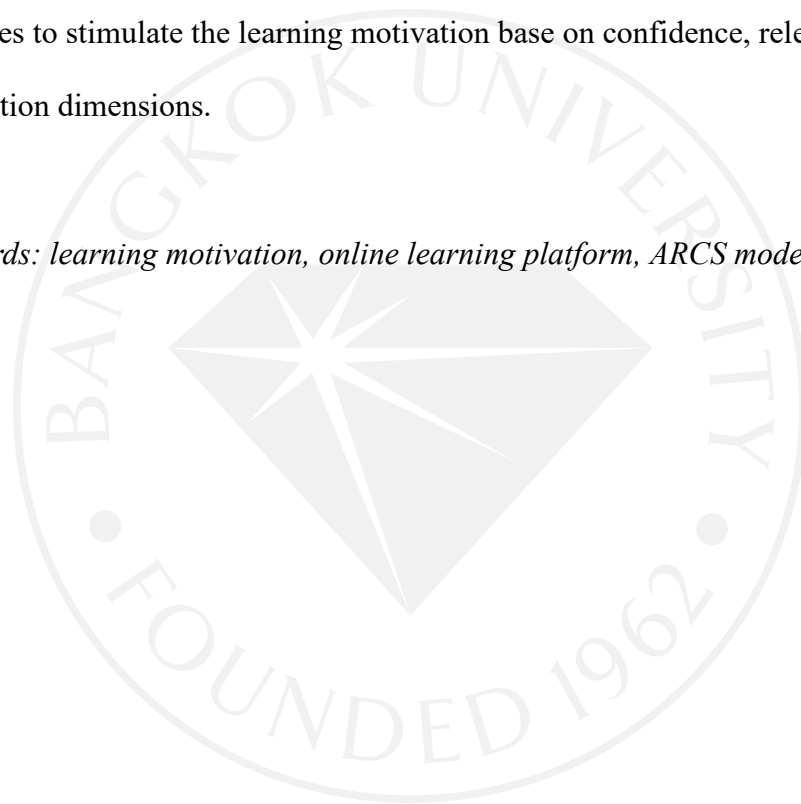
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CHAPTER 1

INTRODUCTION

1.1 Research Background

With the advent of the digital era, more and more Internet technologies have been applied to real life. Many industries have realized the transformation from offline to online and gained new development opportunities from it. The same is correct for the field of education. Especially under the influence of COVID-19, which swept the world in early 2020, many schools have chosen online teaching to continue teaching tasks. Meanwhile, various problems with online learning platforms were exposed. According to a survey report by the Education Department of Zhejiang province in March 2020, the results of 558,782 questionnaires about teaching satisfaction of online courses show that students' satisfaction with teachers' teaching attitude is the highest, reaching 98.1%, while their satisfaction with online platforms is the lowest. Shen Yilu (2020) conducted that parents' satisfaction with their children's learning effect of online teaching during the period of epidemic prevention and control was only a passing grade. 59.95% of parents were satisfied with the effect of online teaching, 22.52% were dissatisfied, and 17.53% were not clear about it. In other words, parents' overall satisfaction with the effect of online teaching during the epidemic was barely passed. Therefore, it is particularly important to build an online learning platform suitable for current development needs.

The School of Foreign Languages of Baise University has designed some online courses for a single lesson before. However, these kinds of online courses still have some problems as long development time, low utilization rate, and outdated teaching content. How to effectively utilize precious resources and advanced technology to promote students' learning efficiency has become a problem.

In online learning, students generally complete learning tasks independently without supervision, which requires a high degree of self-consciousness and autonomy in the learning process (Hauer,2014). The study of De, S. I., Morgan, & Gibson (2015) found that the stronger the learning motivation for an online learning platform, the more active the course participant will be, and the better the online learning effect will be. Therefore, it is crucial to improve learners' learning motivation and learning quality by studying the factors affecting learners' learning motivation on online learning platforms.

1.2 Research Objective

In the era of advanced communication and technology, the introduction of innovative education is inevitable. The emergence of online learning platforms is an upcoming trend. Due to the drive for online learning, this research examines the current online phoneme of Baise University in the Guangxi region of China, particularly in Foreign Language School. The researcher attends to identify the problem relative to the motivational aspect of students learning online. Upon identifying the problem, a literature review is conducted to identify the research gaps in the field.

Therefore, this research aims to achieve two objectives:

1. To study the factors that influence the motivation of students to use online learning platforms based on Attention, Relevance, Confidence, and Satisfaction (ARCS) theory.

2. To provide suggestions on how to improve students' motivation for using an online learning platform.

1.3 Scope of the Study

1. This research mainly studies the motivation of students to use an online learning platform through ARCS theory.

2. The research focuses on using the ARCS theory to study the motivation of students of Foreign Language School in Baise University to use the online learning platform, to design an online learning platform suitable for foreign language schools.

1.4 Research Question

How to design an online learning platform that can stimulate the students' motivation to use it?

Sub-Questions:

1. What are the factors that motivate students in the Foreign Language School of Baise University to use the online learning platform?

2. How to use ARCS theory to study the factors affecting learning motivation?

1.5 Significance of the Study

Academic Outcomes--- With the promotion of online learning platforms in the field of education, more and more students become users of an online learning platform. However, the problem of weak learning effect has plagued the continuous development of online learning platforms. Learning motivation is the main factor affecting learners' learning. In order to improve students' learning effect, it is necessary to stimulate students' learning motivation. At present, there are few domestic pieces of research on this aspect. Based on the ARCS model, this research studies the relevant factors affecting students' learning motivation on the online learning platform from four dimensions of attention, relevance, confidence, and satisfaction, to provide specific theoretical references for future research.

Practitioner Outcome--- This study focuses on the factors affecting the learning motivation of students in the Foreign Language School of Baise University for using an online learning platform. Based on the results of this study, a series of relevant strategies are proposed to provide for Foreign Language School in Baise University to design an online learning platform.

CHAPTER 2

LITERATURE REVIEW

The purpose of this independent study is to design an online learning platform that can stimulate the students' motivation of Foreign Language School in Baise University based on ARCS theory. In order to achieve this goal, three key areas need to be understood: what is learning motivation, what is ARCS theory, and what are the factors that influence the motivation to use online learning platforms. This paper investigates existing research from these three aspects, hoping to obtain a deeper understanding of the concepts and to recommend strategies to build an online learning platform that can stimulate the students' learning motivation in the Foreign Language School of Baise University.

2.1 Learning Motivation

2.1.1 Motivation and Learning Motivation

Learning motivation has always been one of the basic theories of educational psychology. In order to have a deeper understanding of learning motivation, it is necessary to distinguish learning motivation from learning motivation.

Motivation is defined as "some kind of internal drive which pushes someone to do things in order to achieve something" (Harmer, 2001). Dörnyei (2001) was thinking about motivation is the reason for people decide to do something, how hard they will work to achieve it, and for how long they will maintain this activity. Motivation is

regard of as a person's internal process, while behavior is performance. Therefore, the general motivation is divided into two kinds: extrinsic motivation and intrinsic motivation. Deci（1975） Point out that intrinsic motivation is simply to get pleasure and satisfaction from an activity. Therefore, when a person has an intrinsic motivation to do something, he or she will act voluntarily without material rewards or external constraints (Deci & Ryan, 1985). In contrast to intrinsic motivation, extrinsic motivation is a variety of behaviors, which are not for their benefit but as a means to achieve the end (Deci, 1975).

Based on the concept of motivation, the concept of "learning motivation" has been established. One of the fundamental principles of effective teaching is to develop students' motivation to learn (American psychological association, 1993; Bransford, Brown & Cocking, 2000.) A large number of studies have shown that there is a positive correlation between learners' motivation level and their academic performance (Fyans & Maehr, 1987; Uguroglu & Walberg, 1979; Walberg, 1984). In the traditional teaching method, teachers can use a variety of strategies and teaching skills to stimulate and maintain students' learning motivation through face-to-face communication. However, when using the online platform, there is a space and time gap between learners and teachers. In many cases, it is impossible to monitor and stimulate learners' learning motivation effectively. Under such circumstances, it is particularly important to seek new strategies to stimulate learners' learning motivation.

2.1.2 Theories of Learning Motivation

The diversity of learning motivation leads to a variety of explanations for its role.

Therefore, various motivation theories have been derived to emphasize different aspects of learning motivation.

Reinforcement theory

Behaviorist learning theorists are always associated with the concepts of stimulation, punishment, reinforcement, proximity, and demonstration when explaining the causes of behavior or learning. They believe that internal or external stimuli initiate behavior. Behaviorists emphasize the role of external motivation. The representational theory of agent behaviorism is the reinforcement theory. Modern psychologists use reinforcement not only to explain the occurrence of operational learning but also to explain the cause of motivation. In fact, according to some S-R psychologists (such as Skinner, 1953), it is not necessary to distinguish motivation from learning; motivation is no different from learned behavior. Both can be explained by reinforcement. Gordan and Amutan (2014) believe that reinforcement theory can be used for animal training, child development, and employee motivation. The theory highlights some of the characteristics that help people shape their behavior.

The reinforcement theory promotes the emergence of various reinforcement procedures and behavior shaping techniques in educational practice. It also provides valuable suggestions for teachers to stimulate students' learning motivation. Based on this theory, some reward elements can be set up on the online learning platform to stimulate students' learning motivation.

Attribution theory

The cognitivist view of motivation is the opposite. They believe that people do not just react to external events or objects; they react to the understanding of those events. Attribution theory is the representational theory of this view. Weiner (1973) proposed a theoretical framework that is very influential in the field of social psychology today. He argued that attribution theory assumes that people are trying to determine why people do what they do, that is, to explain the cause of an event or an action. There are three steps:

1. The behavior must be observed/ perceived

2. The action must be determined to be intentional

3. Internal or external forces cause the behavior

Weiner (1973) also put forward the attribution theory of success or failure. He pointed out that people often attribute their failure or success to four factors: effort, personal ability, luck, and task difficulty. Among them, effort and ability are two kinds of "internal causes" that describe the characteristics of a person and can be controlled by individuals. Difficulty and luck indicate that the "external causes" of environmental factors are beyond the individual's control. TIAN（2014）believes that learning motivation is the intrinsic motivation that causes, maintains and promotes students' learning activities. The inferences that students make about their learning results will also have an impact on their future learning. Just like what LIAO (2003) said, students actively make attributions to the results, their behaviors are more persistent, and they

are more willing to face academic challenges.

On the contrary, if they make negative attributions, they will adversely deal with them. Therefore, it can be seen that attribution is an important factor affecting learning motivation. Consequently, when building a learning platform, we should find ways to guide students to make correct attributions and mobilize their learning enthusiasm.

Hierarchy of needs theory

Now there is also a psychology called the third force, which is humanism. In explaining the role of motivation, Maslow (1943), the founders of humanistic psychology, emphasized the individual's freedom, choice, and self-development, which is represented by the hierarchy of needs theory.

Among the many theories of motivation, Maslow's hierarchy of needs theory has an extensive influence. Maslow (1943, 1954) indicated that people are motivated to achieve particular needs and that some needs take precedence over others. He divided human needs into a five-tier model (Figure 2.1), with the needs from the bottom up being physiological, safety, love and belonging, esteem, and self-actualization. The lower needs of the hierarchy must be met before the individual can take care of the higher needs. This five-tier model is often described as a pyramid (McLeod, 2020).
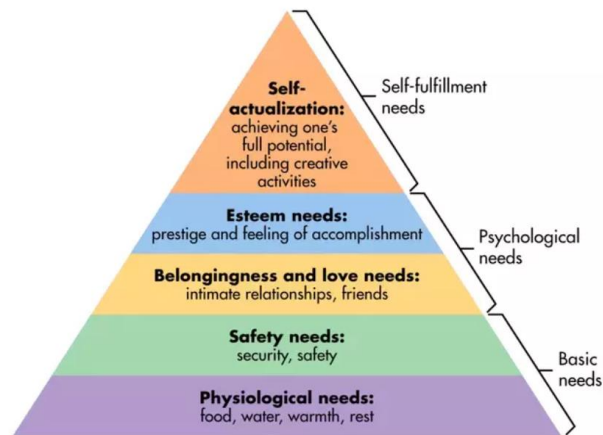
Figure 2.1: Maslow Needs a Hierarchy Mcleod (2018)

This theory combines extrinsic motivation and intrinsic motivation to consider the promotion effect of behavior, which is of scientific significance. Tang (2017) analyzed the motivation of English major students based on Maslow's hierarchy of needs theory. In his opinion, the extrinsic motivation of the English learers' motivation of contemporary college students mainly includes: obtaining a graduation certificate and degree certificate through English study, obtaining a scholarship, or gaining an advantage in job hunting. Some students learn English because of the needs of their major. Intrinsic motivation is that some students meet their self-actualization needs through English learning.

Both intrinsic motivation and extrinsic motivation stimulate students' learning motivation. Therefore, in the process of building an online learning platform, it is necessary to investigate the level of needs of the learners. Only by building the platform according to the needs can students' learning motivation be stimulated, and

they can continue to use the platform for learning.

Self-efficacy theory

Social learning theory integrates the viewpoints of behaviorism and cognition, which consider both the results of behaviors and the influence of personal beliefs. The theory of self-efficacy is the representative theory of this school.

Self-efficacy is a belief in one's abilities, specifically the ability to cope with challenges and successfully complete a task. (Akhtar, 2008). Albert Bandura (1977) proposed in his theory of social cognition and self-efficacy that self-efficacy and expectation of results are the keys to the initiation and maintenance of behaviors (Figure 2.2). Lippke's (2017) self-efficacy theory describes in more detail the factors that influence the expected sources of self-efficacy. He also emphasized the vital role of cognitive factors and mediating factors such as self-regulation and organically combined human needs, cognition, and emotion.

The traditional psychology emphasizes desire, undervalues knowledge and emotion and self-efficacy theory overcomes these. It increasingly combines people's cognition, needs, and emotion to study people's motivation, which has great value in scientific. Furthermore, in the process of learning, a good sense of self-efficacy can promote learners to study harder, complete learning tasks, and promote their enthusiasm for learning. The success of the learning task will make them gain positive influence and maintain their learning motivation at a high level. Therefore, the promotion of learners' self-efficacy in the learning process plays a significant role in

stimulating their learning motivation.
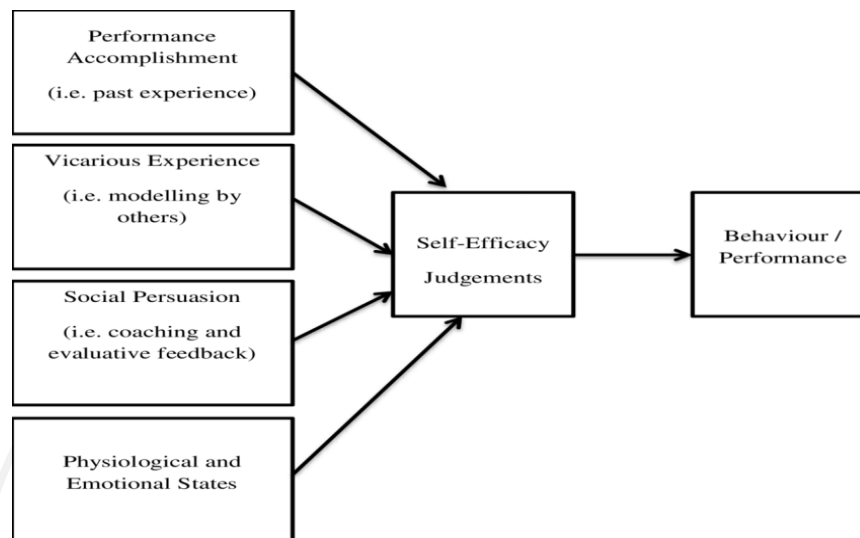
Figure 2.2: Keys to Behavioral Initiation for Self-efficacy and Outcome Expectations

Albert Bandura (1986)

2.2 ARCS Motivational Model

John Keller first proposed the ARCS model in the 1970s, and this theory has been tested by other researchers (Keller and Suzuki 2004; Small and Gluck1994). ARCS are the initials of Attention, Relevance, Confidence, and Satisfaction.

2.2.1 Four elements of the ARCS motivation model

ARCS model (Keller, 1983) identifies four basic strategies for motivating teaching: (1) Attention strategies are designed to arouse and sustain curiosity and interest. (2) Relevance strategy is to connect learners' needs, interests and motivations. (3)

Confidence strategies help students to develop positive expectations of achievement.

(4) The strategy of satisfaction is to provide external and internal reinforcement for

effort.

"These four categories represent sets of conditions that are necessary for a person

to be fully motivated, and each of these four categories has components, or

subcategories (Table 2.1), that represent specific aspects of motivation." (Keller, 2000).

Table 2.1: Subcategories of the ARCS Model (Keller, 2000)

Attention
Capture interest (Perceptual Arousal):
What can I do to capture their interest?
Stimulate inquiry (Inquiry Arousal):
How can I stimulate an attitude of inquiry?
Maintain Attention (Variability):
How can I use a variety of tactics to maintain their attention?
Relevance
Capture interest (Perceptual Arousal):
What can I do to capture their interest?
Stimulate inquiry (Inquiry Arousal):
How can I stimulate an attitude of inquiry?
Maintain Attention (Variability):
How can I use a variety of tactics to maintain their attention?

(Continued)

Table 2.1 (Continued): Subcategories of the ARCS Model (Keller, 2000)

Confidence
Success Expectations (Learning Requirements):   How can I assist in building a positive expectation for success?   Success Opportunities (Learning Activities):   How will the learning experience support or enhance the students' beliefs in their competence?   Personal Responsibility (Success Attributions):   How will the learners clearly know their success is based upon their efforts and abilities?
Satisfaction
Intrinsic Satisfaction (Self-Reinforcement):   How can I provide meaningful opportunities for learners to use their newly acquired knowledge/skill?   Rewarding Outcomes (Extrinsic Rewards):   What will provide reinforcement to the learners' successes?   Fair Treatment (Equity):   How can I assist the students in anchoring a positive feeling about their accomplishments?
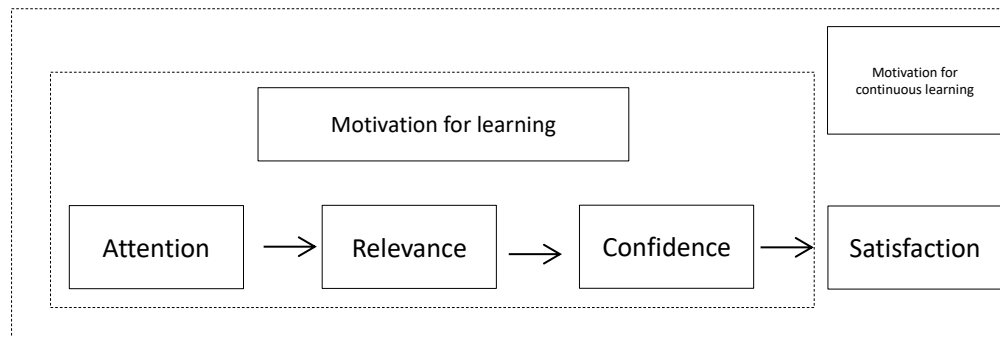
Figure 2.3: ARCS Motivation Model (Keller, 2000)

Keller (2010) further described the ARCS motivation model (Figure 2.3). It can be seen from the above theory that in order to stimulate and maintain learning motivation in the learning process, first, a lesson must attract the attention of learners. Strategies in this area can range from simple, unexpected events (for example, loud whistles) to mental stimulation problems that cause more profound curiosity (especially at the beginning of the session). Another factor is change, such as changing the teaching method, which the learners are used to, or changing the volume during the class, are excellent ways to attract the attention of the learners. Second, relevance must be established. Even if learners are intrigued, their motivation to learn can be lost if they don't perceive valuable content. Relevance refers to linking learning content to learners' goals, interests and learning styles. One traditional approach is to link the content to the learner's future job or requirements in academic. A more effective method is to combine the content with the interests and experiences relevant to the students. The third requirement for motivation is self-confidence. Students can build self-confidence by

helping them to develop positive expectations of success. Learners are more likely to build confidence by defining goals and providing examples of acceptable achievements. Another element that has to do with confidence is how one identifies the reasons for one's success or failure. If learners attribute success to their own efforts or abilities, then success in certain situations can improve one's confidence. If learners believe that success is determined by external factors such as luck and lack of challenge, then confidence in them is less likely to increase. Learners are motivated to learn if they feel that what they are learning is of interest to them, relevant to them, and difficult enough to think they are capable of doing. To maintain this motivation, however, the fourth condition of motivation - satisfaction is required. Satisfaction refers to a person's positive feelings about their own achievements and learning experiences. This means that learners will be satisfied if they receive recognition and evidence of success, which supports their psychology of being treated fairly. These rewards can be substantive or symbolic (Keller, 2000).

2.2.2 Motivation Classification and Excitation Strategy of the ARCS Model

In the ARCS motivation model, Keller not only proposed four types of learning motivation elements but also made a specific classification of each element and proposed corresponding motivation strategies. The corresponding incentive strategies will be analyzed from the four dimensions of attention, relevance, confidence, and satisfaction as follow.

Attention-Getting Strategies

Keller mentions the need to deal with human traits such as directed reflexes, curiosity and sensation-seeking in the process of acquiring and maintaining attention. (Keller, 1987a). In the beginning, these features can be used to attract learners' attention. A1-A3 (APPENDIX 1) shows how to attract learners' attention through these features, such as introducing the opposite experience to learners or raising the volume. But the real challenge is how to maintain it and not just to get attention. Therefore, it is necessary to respond to students' need for sensory stimulation (Zuckerman, 1971) and arouse their curiosity for knowledge (Berlyne,1965). The goal is to find a balance between indifference and hyperactivity. The strategies listed in categories A5 and A6 (Appendix 1) are particularly useful for sustained attention.

Relevance-producing strategies

Relevance is an influential factor that determines the learner's motivation to learn, or what the learner is willing to continue to focus on, thereby changing the learner's attention. If the learner has a good sense of the personal significance of the material, or if the learner is consciously aware of its importance, the learner will be motivated to learn it (Keller, 1987a). On the relevance level, we should pay attention to whether the learning content is related to the critical goals of a student's future life. If the learning content is closely related to students' actual life and their development and contributes to the realization of their goals in the present or future, then the learning motivation will be stimulated (R1-R3, APPENDIX 2). It is worth noting that the relevance does

not only come from the content itself but also comes from the method of teaching (R4-R5, APPENDIX 2).

Confidence-Building strategies

The confidence gap is the third major component of the model, which can affect students' perseverance and achievement (Keller, 1987b). Several factors contribute to a person's level of expectation or confidence of success. For example, confidence people tend to engage in task activities and learn happily, even if it means making mistakes. In addition, confident people are more likely to believe that they can achieve their goals through their actions (Bandura, 1977; Bandura & Schunk, 1981). By contrast, people with low self-esteem tend to focus more on themselves; They want to impress others, but they are afraid of failure (Dweck, 1986). Thus, it can be seen that building learners' confidence has a significant impact on learning motivation. Most confidence-building strategies (Appendix 3) are designed to help learners form the impression that a degree of success is possible if they work hard. Of course, it is vital to avoid creating this impression if it is false. If success is not possible with a district measurable effort, then guidance should be redesigned, or students should be given appropriate advice (Keller, 1987b).

Satisfaction-Generating strategies

Obtaining satisfaction is the last step in the motivational process, so there is a continuing motivation to learn and recommend lessons to others. APPENDIX 4

provides guidance on which strategies to use to improve satisfaction. Reinforcement theory suggests that people should be more motivated to put aside tasks and rewards and use an appropriate reinforcement schedule (S3 and S5, APPENDIX 4). Nevertheless, sometimes people will become dissatisfied when they are told what they must do and what they will get as a reward. Why is that? "Control" seems to be the key to answering this question. When students are required to do something under the control of the teacher in order to get a reward, students resent it because the teacher controls a part of the student's life. This fact is especially true when the teacher controls the behavior that the student likes for reasons of intrinsic satisfaction. Therefore, the establishment of external control will reduce the pleasure of human communication (Lepper & Greene, 1979). In learning situations, external rewards should be used appropriately to stimulate internal rewards. The challenge is how to properly use external rewards to encourage the development of internal satisfaction (S1, S2, S4, APPENDIX 4).

2.3 Factors Influencing the User's Motivation in Online Learning Platforms

Swan (2004) integrated a lot of previous research results, and used a large number of examples to show in his paper that "issues of the teaching presence, learner characteristics and interface are important to understand and improve online learning." He also points out that in these three elements, the empirical results show that course interface, teaching presentation and learners have a significant impact on the quality of learners' online learning.

Moreover, these three concepts are covered in the following papers. In his article, Michael Danchak (2000) describes an interesting interface he is studying, which determines students' learning style based on Kolb (1984) experiential learning theory and provides them with different information. His interface is called an "adaptive agent," and he found initial test results for the concept encouraging. A detailed example is provided in Danchak's (2000) study to illustrate how future interfaces can be designed to suit learners with a teaching style. Yang & Su (2017) investigates learners' willingness to participate in practical courses and the relationship between perception, behavioral intention, and actual behavior. Roxanne Hiltz, Raquel Benbunan-Fich, Ben Arbaugh, and Peter Shay (2008) offered a conceptual overview of the impact of contextual factors, including learner characteristics, interactive interfaces, and the presence of teaching in an asynchronous learning environment, provides thought-provoking directions for future research. Therefore, this IS also chooses to study the impact on the online learning platform from three aspects: interface, course design and learners.

2.3.1 Interface

User interface experience is an important part of the user experience of any software. Interface design is especially important for online learning platforms because learning efficiency and interface design are inherently intertwined (Guralnick, 2006). In online learning, the user interface is one of the psychological issues to be considered (H. L. Woo, 2009), because the user interface is the point of interaction between the user and the educational subject. Educational goals may not be achieved, even if the

content is well chosen and the user is willing to learn because the relevance between the user and the platform cannot be established successfully (H.L. Woo,2009; L.-J. ChanLin,2006). Thus, the importance of user interface in the design of an online learning platform can be seen.

An example from Jim Hewitt's *Developmental Patterns in Online Discussion* is an excellent example of the impact of interfaces on online learning (Hewitt, 2003). Hewitt studied the interaction patterns of 672 multi-information threads, which were found in an online discussion among 92 graduate students who took five asynchronous online courses (Hewitt, 2003). For example, 344 message threads are discussed in the Hewitt sample. Six possible patterns exist in four message threads (Figure 2.4). The Numbers represent the chronological order, and the indentation represents the response to the previous post. One might expect these patterns to be relatively evenly distributed across the sample. However, he found that instances of the elongated pattern (F) were nearly three times as common as any other, while instances of the truncated pattern (A) and sequences out of chronological order were rare. He found similar pattern frequencies in other threads in the sample (long and short).
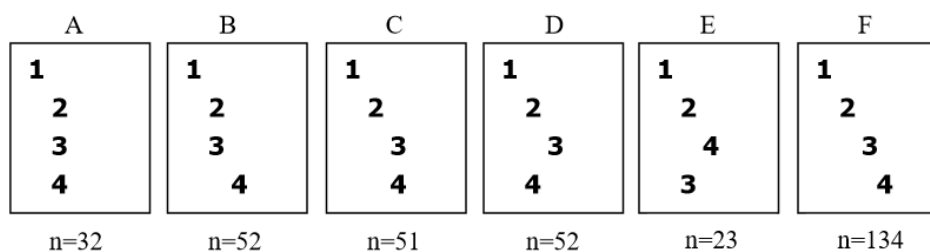
Figure 2.4: The Frequencies of Patterns of Interaction in Four Message Threads

(adapted from Hewitt, 2003)

Hewitt attributes these differences to students' habit of participating in online discussions, and he insists that this habit is encouraged when using discussion interface designs marked with unread notes. When he surveyed user logs, he found that 97.6 percent of students read messages before posting, 82 percent read only those marked as unread, and 80 percent tended to respond to messages 48 hours earlier. In the following research (Hewitt, 2003), Hewitt found that these interaction patterns could be replicated using Monte Carlo simulations, based only on typical rates of reading and publishing messages, and rules that only respond to messages marked as unread. Hewitt (2003) concluded that the interaction patterns in online discussions were influenced by interfaces. These interfaces mark messages as unread and display only one message at a time to support extended threads and discussions, which he describes as growing on the edge like a forest fire. The problem, he notes, is that potentially exciting and vital clues can be inadvertently discarded, and an unintended change of theme can take the place of a central theme, leading to incoherence and discussion, often unrelated to the course content. He suggests experimenting with different interfaces and discussion tasks to support more meaningful learning. He findings demonstrate the powerful mediating effect of discussion interface design on online course learning.

Many factors go into designing a user interface, Bahrami, Mehdi, and Mohammad (2012) believes that there are three golden rules for designing user interfaces :(1) Put the user in control; (2) reduce the memory load of users; (3) consistent interface. Therefore, we should pay attention to these three aspects when studying the factors that affect the user interface.

2.3.2 Course Content

As the increasing of the number of students using online learning platforms, understanding how they participate and interact with the course content becomes critical. Course content is a crucial part of the online learning platform. Brown and Voltz (2005) argue that "effectively designed educational materials will contribute to achieving the desired learning outcomes of students." They listed six design elements that should appear in the resource material available to students of the online course. The learning resources of these elements include scenarios or stories that motivate students to complete, activities or tasks that students must complete, appropriate communication in the learning environment, opportunities for feedback, appropriate communication in the learning environment, and consideration of the impact of resources on students' learning. The application of these six design elements produces instructional materials that contribute to the overall learning experience.

Content for online courses needs to be relevant, complete, and accurate Siragusa, Dixon, & Dixon (2007). All the information for students needs must be included to complete the course requirements successfully. Siragusa et al. (2007) outlined these resources, including comprehensive content, learning activities, assignment requirements, and support materials.

According to research conducted by Murray, Pérez, Geist, & Hedrick (2012), students perform better in a well-designed online course through a learning management system than in a similar face-to-face course. Practical and well-designed online courses promote and emphasize the interaction between students, teachers, and

content. In asynchronous online courses, the interaction between the student and the content has proven to be very important. Anderson (2003) proposed three forms of interaction (teacher to student, student to student, student to content). In his theory, he believed that as long as these three forms of interaction were at the same level, the instructional designer could substitute one kind of interaction for another with almost no loss of educational effect, so it was called the equivalence theory. In other words, as long as the content interaction can be at a high level, then deep and meaningful formal learning occurs. Students must access course resources to facilitate this high level of interaction. Research by Murray et al. (2012) confirms that students can indeed access course resources selectively. Further research into the student decision retrieval process can provide more information about the student's choice of course.

In most cases, the content and resources accessed by students provide direct support or guidance for completing course requirements and assessments. Students are less likely to participate actively in what they consider to be supplementary or secondary course material. Therefore, the meaning of curriculum design is obvious and important.

From these studies, the factors that influence students' motivation to participate in online learning platforms at the course content level are explored from various aspects. Regardless of how it is tested, it is worth acknowledging that course content has an essential impact on students' motivation to participate in online learning platforms.

2.3.3 Learner

Online learning educators have long been concerned about the effectiveness of

online learning for all online learners. The researchers studied the motivation of learners to participate in the online learning platform from various aspects. Some researchers want to find out learning motivations by studying the learning behavior of active learners in an e-learning environment. Hong (2009) studied the behaviors of some excellent online learners in South Korea. Identified behaviors include interacting with teachers, planning learning schedules, cooperative learning, applying their learning to real life, building knowledge, choosing what to learn, developing their learning strategies, and being motivated to learn. Golladay, Prybutok, and Huff (2000) trusting that successful online learners will discuss their learning with their peers, that they are motivated to learn, that they put in the appropriate time to prepare for the course, and can take advantage of the skills required for online courses. Dabbagh & Kitsantas (2004) insist that online students can build their learning philosophy, easily use online learning technologies, communicate with classmates, learn independently, and have a strong sense of belonging to a learning community.

Other scholars studied learners' participation motivation from other aspects. For example, Lee, Song & Hong, (2019) studied the decision-making process of online learning participation. They found that there are six factors influencing students' participation in online learning, which are peer collaboration, psychological motivation, problem solving, interaction with teachers, learning management and community support. First of all, psychological motivation factors refer to learners' expectations, motivation, thoughts, feelings and interests related to learning. Learning motivation and learning expectations are crucial to learners' high-level learning activities in an online

learning environment. Vonderwell and Zachariah (2005) studied the factors influencing learners' participation by participating in an online graduate course in a university in the Midwest of the United States. His findings suggest that online learner engagement and engagement patterns are influenced by content areas, technology and interface characteristics and tasks of online learning platforms, and information overload.

It is worth noting that all the factors influencing learners' participation motivation do not exist independently, but interact with each other.

2.4 Summary

The purpose of this independent study is to investigate the motivation of students in the Foreign Language School of Baise University to use the online platform through the ARCS model to design an online learning platform suitable for the School of Foreign Languages. In this proposition, what is motivation and learning motivation is the primary concern. The author integrates scholars' definitions of motivation to understand the meaning of it. The learning motivation concept is founded on motivation concepts, and the diversification of learning motivation led to the diversification of the interpretation of learning motivation. The learning motivation can be grouped into four aspects, which correspond with the four most common theories: reinforcement theory (behaviorism), attribution theory (cognitivism), the hierarchy of needs theory (humanism), and self-efficacy theory (social learning theory). No matter from which level to study motivation, it is agreed that learning motivation plays an essential role in promoting students' learning. Therefore, the exploration and study of

learning motivations are not only of great theoretical significance but also of great practical significance.

Since learning motivation is so important, how to motivate and maintain students' learning motivation has become a research focus. This research tries to contribute to the field by using the ARCS motivation model. Keller (2000) believed that four main factors affect the students learning motivation; they are attention, relevance, confidence, and satisfaction, referred to as ARCS. The main idea of this model is: in order to stimulate students' learning motivation, the first thing is to attract the attention of students to their learning task; the second is to help students understand that the learning tasks are closely related to their own experiences; the third is to make the students feel they will have the ability to finish the task, which provides them with confidence; and finally completing the learning task leads to satisfaction. Moreover, the ARCS model also includes strategies to motivate learners' motivation, and the study of these strategies can better help us understand how to maintain students' learning motivation. In an online learning environment, many factors influence students' motivation. By summarizing the previous studies, the author chooses to research three aspects: interface, course content, and learners.

Based on the previous research results and the actual situation of the School of Foreign Languages at Baise University, this study aims to build an online learning platform suitable for the School of Foreign Languages.

CHAPTER 3

METHODOLOGIES

This chapter discusses the use of explorative mixed-method. The chapter is divided into five parts:

3.1 Research design

3.2 Sample selection

3.3 Data collection

3.4 Research Instrument

3.5 Summary

3.1 Research design

The following section describes when, from whom, and under what conditions data was obtained and analyzed. Firstly, based on the literature review, this IS constructs the theoretical framework of the research and finds out the influencing factors of users' learning motivation on the online learning platform. Secondly, based on the keyword "top features of online learning platforms," the author searched for the 40 most popular features. Thirdly, these characteristics are grouped and integrated to design semi-open interview questions. Fourthly, conduct a qualitative and in-depth analysis of the interview results, design questionnaires, and distribute them to users on the Internet. Finally, after the collection of data, statistical analysis and summary are needed.

This method combining qualitative analysis with quantitative analysis is an

Explorative Mixed-Method. Figure 3.1 is the research process base on explorative

mixed-method.

Step1	•Literature review (building theoretical framwork)
Step 2	•Collect keywords about top feactures of online learning platform
Step 3	• Design semi-structured questions
Step 4	• Set the interview for 3 qualitative interviews
Step 5	• Interview in-depth analysis
Step 6	• Design questionnaire
Step 7	• Data collection
Step 8	• The data analysis
Step 9	• Discussion and Conclusion
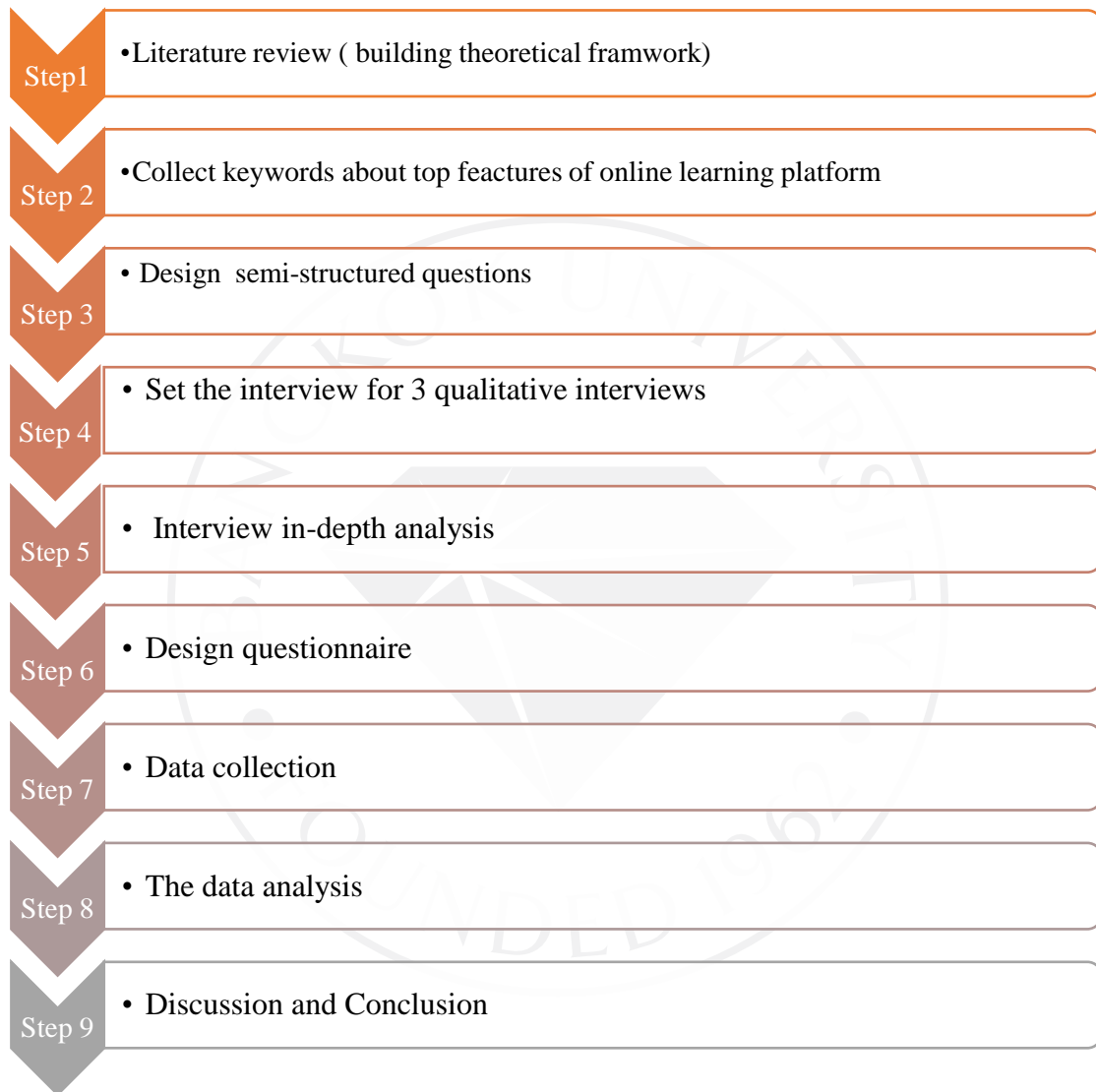
Figure 3.1: Research Process Base on Explorative Mixed-Method.

3.2 Sample Selection

This section is about how to select a sample for qualitative and quantitative data

collection.

3.2.1 Qualitative Research Sampling

The interview was conducted via an online video conference. Each respondent was interviewed separately for about 30 minutes. Four students are selected to conduct qualitative investigation. The respondents are required to be students from the School of Foreign Languages who have the experience of using the online learning platform. One surveyor will be selected for each grade and apply voluntarily. Finally, four respondents were selected and ranging in age from 19 to 21. Participant A is a freshman, 19 years old, self-study during COVID19 using an online learning platform. Participant B is a sophomore, 19 years old, with excellent academic performance and experience in using online learning platforms. Participant C is a junior student, 20 years old, who has experience of paying for an online learning platform. Participant D is a senior, 21 years old, with experience of actively participating in oral English learning courses on online platforms. The interviews were conducted over two days, April 30, and May 1. Table 3.1 summarizes the interviews conducted at Baise University.

Table 3.1: Detail Information of Participants in the Interviews

Participants	Grade	Age	Date of interview	Duration of interview
Participants A	Freshman	19	April 30	30 minutes
Participants B	Sophomore	19	April 30	30 minutes
Participants C	Junior	20	April 30	30 minutes
Participants D	Senior	21	May 1	30 minutes

3.2.2 Quantitative Research Sampling

The author used the questionnaire star to issue the questionnaire, and all the questionnaires were completed online. The questionnaire was issued on May 13 and terminated on May 15. A total of 674 valid questionnaires were collected within two days. The second question of the questionnaire is about the major. There are four options, English, Thai, Vietnamese and others. At present, Foreign Language School in Baise University only offers three majors: English, Thai and Vietnamese, so students who choose these three majors must be students from foreign language school. A total of 674 questionnaires were collected, 55 of which were removed from the "other" option, and the remaining 619 were all from foreign language schools. The analysis of the questionnaire survey in this IS is based on these 619 questionnaires.

The formula R=k/(N-1) can calculate the effect of sample size on the result, the estimate of R that get from regression is dependent on the number of predictors, k, and the sample size, N. according to this formula, the closer to get 0(small effect), the better it is. The sample of this IS is 619, according to the formula R=4/(619-1), R=0.006.

Figure 3.2 (Field, 2013) shows the sample size required to test the overall significance of the model at high power. Correspond to benchmarks in Cohen (1988), $R^2=0.02$ in the level of small, $R^2=0.13$, in the level of medium, and $R^2=0.26$ in the level of large. We can see form the figure that in the level of small, 4 independent variables need at least 590 samples and this IS used 619 samples, which meets this requirement.
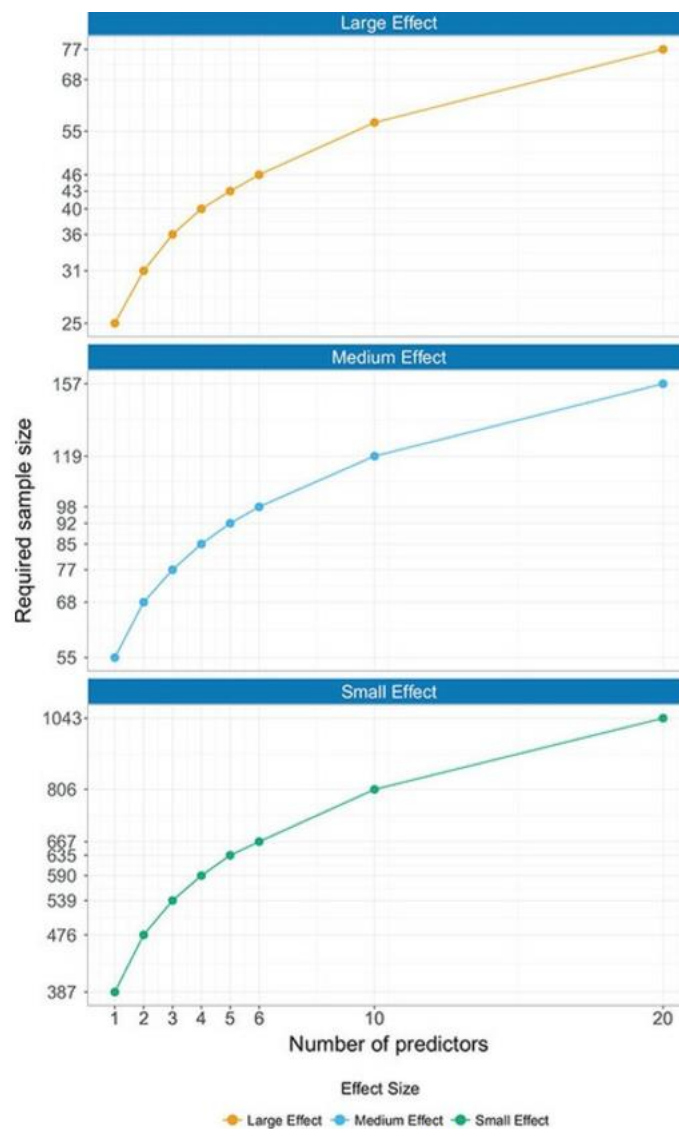
Figure 3.2: The Sample Size Required to Test the Overall Significance of the Model at

High Power

3.3 Data collection

3.3.1 Keywords collection

Through the literature review, it is known that three aspects influence learners'

motivation to use online learning platforms: interface, course content, and learners. The

three aspects cover a wide range and need to find out more specific influencing factors. The phrase "top feature of online learning" was used as a search term, to identify a total of 40 features of online learning, and then connected to these three factors (The phrase "top feature of online learning platform" was used as a search term, to identify a total of 40 features of online learning, and then connected to these three factors (APPENDIX 5).).

3.3.2 Conceptual Framework

Based on the ARCS theory, the author puts the items under each factor into four dimensions for analysis, in an attempt to integrate the research framework.

1. Interface

From the perspective of four ARCS dimensions, the factors influencing the learning motivation at the interface level are as follows:

Attention: Simple interface design for users to quickly find what they want to know.

Relevance: The use of familiar indicators or icons for the online learning interface.

Confidence: The user feels it is easy to master the operation mode of the interface.

2. Course content

From the perspective of four ARCS dimensions, the influencing factors of learning motivation at the level of the course content are as follows:

Attention: The organization and presentation of course content. Whether the course content is organized in a clear hierarchy, whether the teaching key points and difficulties are clear, and whether students can find enough learning materials from the course setting of the platform. Whether the course content is interesting to attract

students' attention.

Relevance: The learning content can be used to help students to solve the practical problems. The learning content is forward-looking and useful for the future development of learners.

Confidence: Whether the difficulty of the course content is reasonable, too easy will make students lose interest, too difficult will reduce the students' learning confidence, and sense of self-efficacy.

Satisfaction: Whether the learning of online platform courses will make students has a sense of achievement in mastering knowledge and stimulates their interest in learning.

3. Learner

From the perspective of four ARCS dimensions, the influencing factors of learners' learning motivation are as follows:

Attention: The communication mode between students and students, students, and teachers is directly and energetically.

Confidence: Students can improve their learning efficiency by receiving feedback from the teacher.

Satisfaction: The mode of communication and feedback meet the need of students when they cannot communicate with their classmates and teachers face to face.

To sum up, the author sorted out all the factors that may affect the learning motivation from the three aspects of the interface, course content, and learner. It is found, that in the dimension of attention, the way of organizing and presenting the

course content, the communication, and interaction among students and teachers, and whether the instruction of the operation interface is explicit, have a direct impact on the learning motivation. In the relevance dimension, the familiarity of the indication on the interface and whether the learning content has practical guiding significance have an impact on the learning motivation. In the dimension of confidence, the influence of learning motivation is reflected in the degree of user's control of the interface, whether the difficulty of the course conforms to the situation of students and whether the teacher's feedback can help students improve their efficiency. In the dimension of satisfaction, the learners' learning sense of achievement and whether they can meet the needs of communication affects their learning motivation. Therefore, the author makes the following hypothesis:

Attention: The organization of course contents, communication, and interaction within students and teachers, the design of interface affects learners' learning motivation.

Relevance: The value of the course content and the familiarity with the operation mode of the platform affect learners' learning motivation.

Confidence: The degree of user control, the difficulty of the course, and the teacher's feedback affect the learner's learning motivation.

Satisfaction: The sense of learning achievement and the need for communication affect learners' learning motivation.

Finally, the author summarizes the influencing factors into the following aspects, as shown in the table (3.2)

Table 3.2: Integration of the Influencing Factors

Influence factors	Description of influencing factors
The organization of course contents	Whether the course content is organized in a clear hierarchy, whether the teaching key points and difficulties are clear, and whether students can find enough learning materials from the course setting of the platform. Whether the course content is lively and interesting to attract students' attention.
Design of interface	Whether the interface is simple to use. And the user can find out what they want to find in easy way.
The value of the course content	Whether the learning content can be used to help students to solve the practical problems.
Personalized design for platform	Whether the platform can provide some simple personalized design to meet the personalized needs of students.
Degree of user control	Whether the operation of the platform is easily controlled by the customer.
The difficulty of the course	The course content has a certain degree of difficulty gradient and level.
Feedback of teacher	The feedback of teachers can help students to improve their learning efficiency.
Sense of learning achievement	Learning through online platforms can make students feel a sense of achievement.

3.3.3 Qualitative Analysis

Based on the research on the influence factors of learners' learning motivation in literature review and the collection of keywords about the top features of the online learning platform, the author designed eight semi-open interview questions and interviewed three students from the School of Foreign Languages, Baise University, in

order to understand their motivation to use the online learning platform further. The three students all have experience using online learning platforms.

Coding is based on the keywords identification and categorization into five categories encompassing each several components related to 'The attitudes of students towards using an online learning platform' according to their response (Figure 3.3).
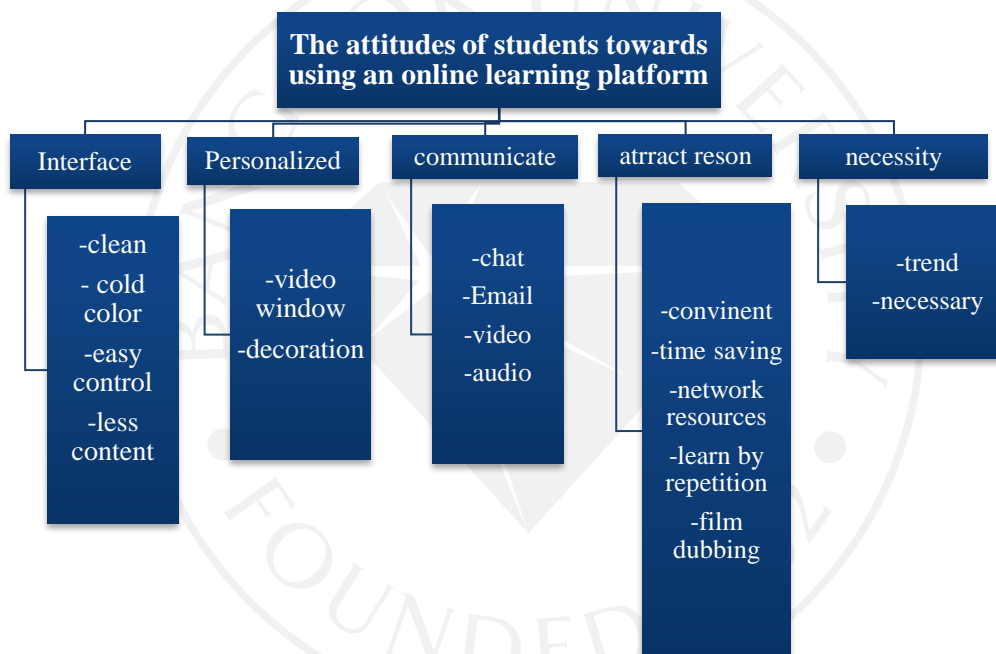
Figure 3.3: Categories and Components of 'The Attitudes of Students towards Using an Online Learning Platform' Identified in the Qualitative Analysis

From the interview, the respondents' answers are basically in line with the factors influencing the use of online learning platforms in the literature review. Among them, the personalized design of the operating platform is a possible influencing factor after the interview. Two of the three students interviewed proposed that if the online learning

platform can add some personalized options, such as personalized video window or personalized video background design, it will increase their motivation to use the platform. After sorting out these factors, the author presented all the influencing factors to the interviewees and confirmed them one by one. Finally, the results of the interview were analyzed to form a frame diagram of the influence of online platform users' learning motivation (Figure 3.4)
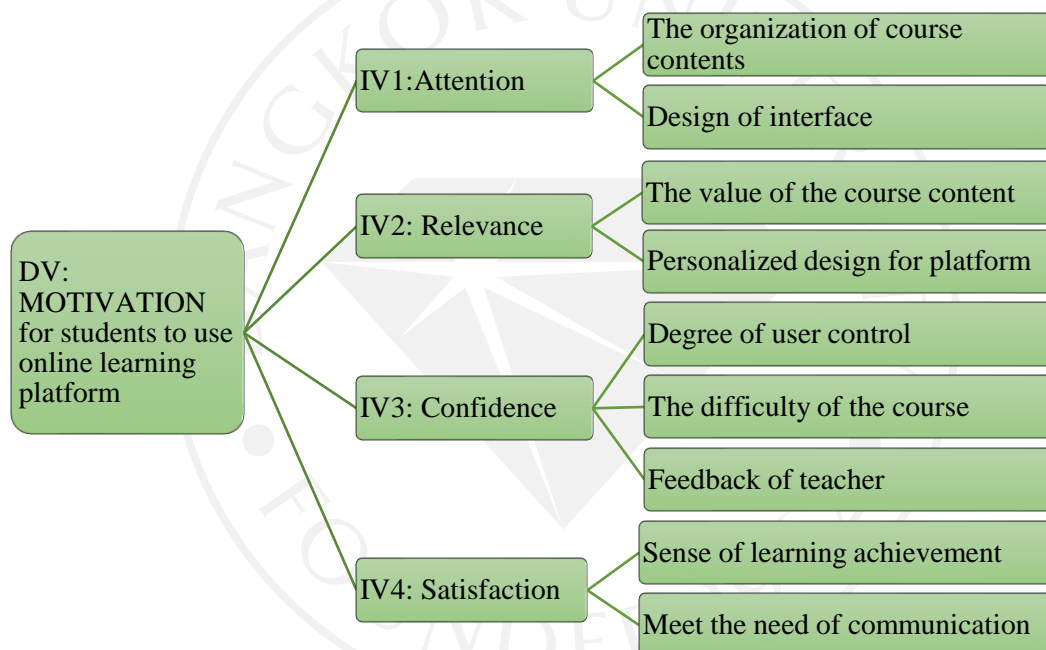
Figure 3.4: Conceptual Model of the Influence of Online Platform Users' Learning
          Motivation

The interview was conducted from April 27th to 30th, 2020. Each person was interviewed for about 20-30 minutes and was recorded. All of their videos were recorded. APPENDIX 1 provides the keywords extracted from the responses of the interviews.

3.3.4 Quantitative Analysis

The design of the questionnaire is based on the research framework mentioned above, combining a review of relevant theories and current research with in-depth interviews. Methods such as descriptive statistics, reliability analysis, Pearson correlation analysis and Linear regression analysis will be used to analyze the collected data.

The questionnaire of this study consists of three parts:

1. Questionnaire title

The title of the questionnaire is "Questionnaire on factors influencing learning motivation of online learning platform."

2. Introduction to the questionnaire

The introduction mainly includes the purpose of the investigation, the instructions for filling out the questionnaire.

3. Questions of questionnaire

The first part is the necessary information of the respondents, mainly including gender, age, major, grade, computer service years, whether to pay for the courses and scores ranking.

The second part is a survey on the factors influencing the learning motivation of learners of using an online learning platform. The items are in the form of a six-point scale, indicating from 1 to 6 strongly disagree, disagree, somewhat disagree, somewhat agree, agree, and strongly agree. The questions are set from the following nine factors: the organization of course contents, design of the interface, the value of the course

content, personalized design for the platform, degree of user control, the difficulty of the course, feedback of teacher, sense of learning achievement, meet the need of communication. APPENDIX 1 provides more details about the questionnaire.

3.4 Research Instrument

1 The questionnaire survey was conducted using China's online questionnaire survey tool, Wenjuanxing (Questionnaire link: https://www.wjx.cn/jq/77181847.aspx).

2 This independent study was a statistical analysis of quantitative studies only. The Statistical Package for Social Studies (SPSS) was used for the analysis.

3.5 Summary

This chapter discusses the research methods of this IS in detail. Discussion includes research design, sample selection, data collection, framework construction, measuring instruments, data collection, and data analysis techniques. The results of these analyses are listed in chapter 4.

CHAPTER 4

DATA ANALYSIS

This chapter presents the data collected from 619 respondents in Foreign Language School of Baise University. And this chapter focuses on the result findings of the 619 sets of questionnaires. There are four sections in the chapter:

4.1 Demographic information

4.2 Analysis of reliability

4.3 Pearson correlation analysis of ARCS

4.4 Linear regression analysis of ARCS

4.5 Summary

4.1 Demographic information

This section including two points: basic information for demographic and correlation analysis of demographic and learning motivation.

Methods of descriptive statistics and Pearson correlation analysis will be used in the section.

4.1.1 Basic Information for Demographic

The researchers used descriptive statistics to analyze the characteristics of demographic respondents. The following table highlights the classification of the data based on gender, major, age, grade, years of computer experience, paid or free, and scores ranking.

Table 4.1 and Figure 4.1 present the data of respondents' gender. Of the 619 respondents, 66 are male and 553 are female. According to the analysis of the gender above, female students account for the majority of 619 respondents, accounting for 89.3%. This is determined by the nature of foreign languages school. In language majors, the proportion of female students is much higher than that of male students.

Table 4.1: Number and Percentage of Respondents by Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	66	10.7	10.7	10.7
	Female	553	89.3	89.3	100.0
	Total	619	100.0	100.0	
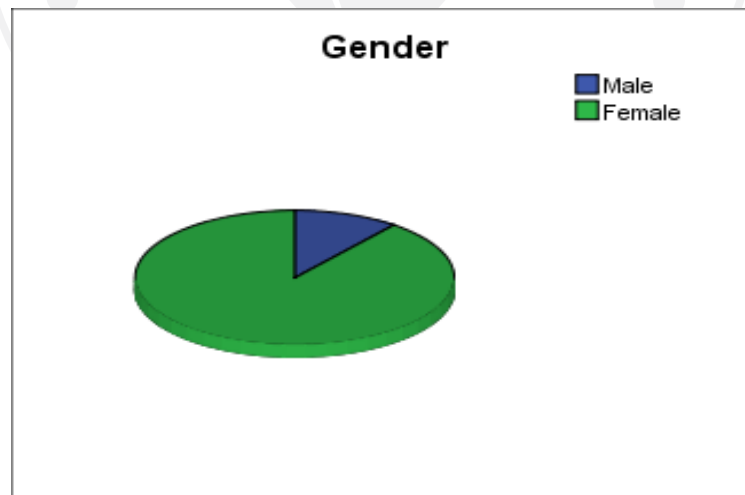
Figure 4.1: Gender Distribution Chart

Table 4.2 and figure 4.2 present the respondents' major data. According to the data collected, 77.7% of the respondents are English major. Thai accounts for 13.2% and Vietnamese only 9%. In the school of Foreign Languages, Baise University, there are only one Vietnamese class and one Thai class in each grade, and there are about 7 English classes. Therefore, the recovered English major students account for 77.7% of the respondents.

Table 4.2: Major Distribution of Respondents

Major

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	English	481	77.7	77.7	77.7
	Thai	82	13.2	13.2	91.0
	Vietnamese	56	9.0	9.0	100.0
	Total	619	100.0	100.0	
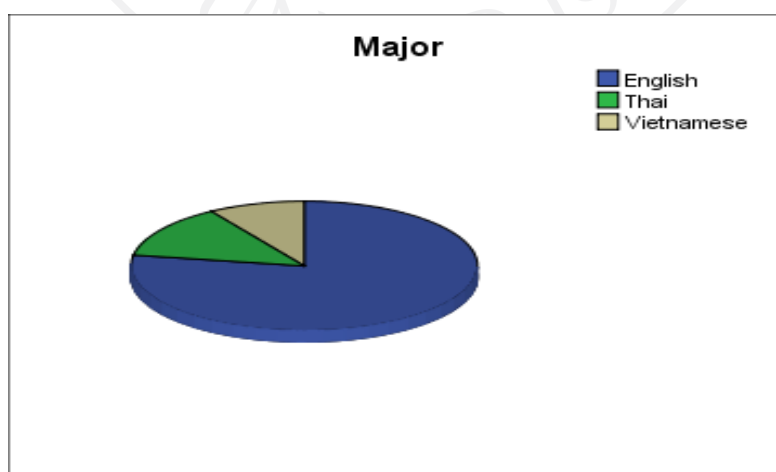
Figure 4.2: Major Distribution Chart

Table 4.3 and Figure 4.3 present the respondents' age data. According to the data collected, 78.4% of the respondents are in the age group of 19 to 21 years old. Those less than 18 years old attributed to 2.7% while and 22 years of age or older group is 18.9%. The age of Chinese college students is generally between 18 and 22 years old. The age characteristics of the students in the School of Foreign Languages of Baise University are in line with this trend, with 78.4% of the students between 19 and 21 years old.

Table 4.3: Age Distribution of Respondents

|					Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Under the age of 18	17	2.7	2.7	2.7
	19-21years old	485	78.4	78.4	81.1
	22 years of age or older	117	18.9	18.9	100.0
	Total	619	100.0	100.0	
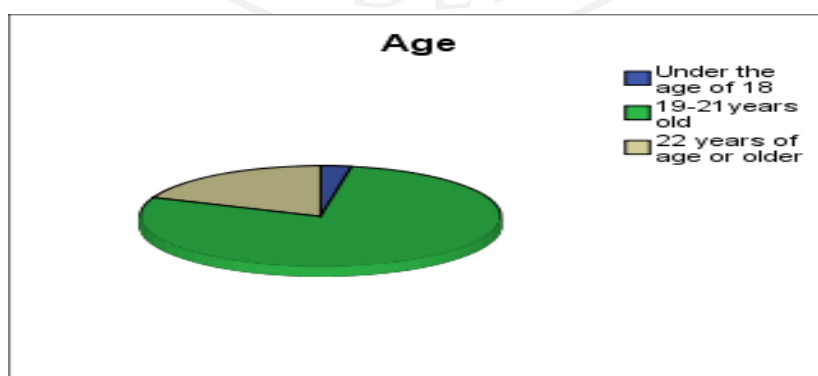
Figure 4.3: Age Distribution Chart

Table 4.4 and Figure 4.4 present the respondents' grade data. According to the data collected, 40.1% of the respondents are freshman. Sophomores and juniors accounted for 26.8 % and 25.7%, respectively. Seniors accounted for the smallest percentage, just 7.4 %. Senior students pay less attention to online learning platforms because they are facing employment and graduation thesis preparation. Freshmen have a strong thirst for knowledge, so they participate in the questionnaire positively.

Table 4.4: Grade Distribution of Respondents

Grade					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Freshman	248	40.1	40.1	40.1
	Sophomore	166	26.8	26.8	66.9
	Junior	159	25.7	25.7	92.6
	Senior	46	7.4	7.4	100.0
	Total	619	100.0	100.0	
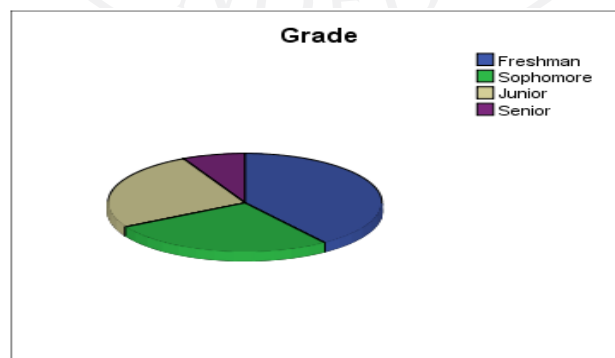
Figure 4.4: Grade Distribution Chart

Table 4.5 and Figure 4.5 present the results of the survey by the years of computer using experience of the respondents. For the purposes of this study, the researchers divided the computer experience into "1 year", "1-5 years", and "more than 5 years". The majority of respondents (47.7% or 295) had computer experience within 1 year."1-5 years" accounted for 35.1 percent, while "more than 5 years" accounted for 17.3 percent. It can be seen that most students in the School of Foreign Languages have 0 to 5 years of computer experience.

Table 4.5: Years of Computer Experience Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Within 1 year	295	47.7	47.7	47.7
	1-5 years	217	35.1	35.1	82.7
	More than 5 years	107	17.3	17.3	100.0
	Total	619	100.0	100.0	
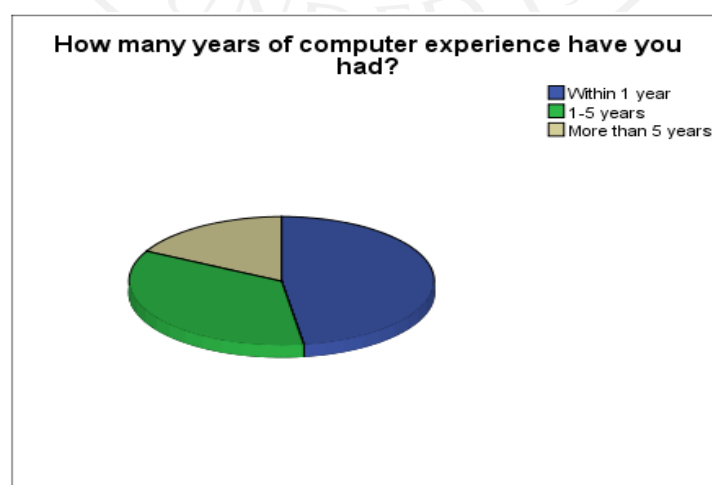
Figure 4.5: Years of Computer Experience Distribution Chart

Table 4.6 and figure 4.6 present the data of respondents who took online courses for free or for payment. It can be seen from the data collection that the vast majority (96%) of respondents are using the online learning platform for free, and only 4% are using it for payment.

The competition among online learning platforms has become increasingly fierce, so many of them offer free auditions or trial courses. Therefore, most students have the experience of using online learning platforms for free. And during COVID-19, schools in China require online instruction, so students have experience with online learning platforms.

Table 4.6: Paid or Free for Using Online Learning Platform

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pay	25	4.0	4.0	4.0
	Free	594	96.0	96.0	100.0
	Total	619	100.0	100.0	
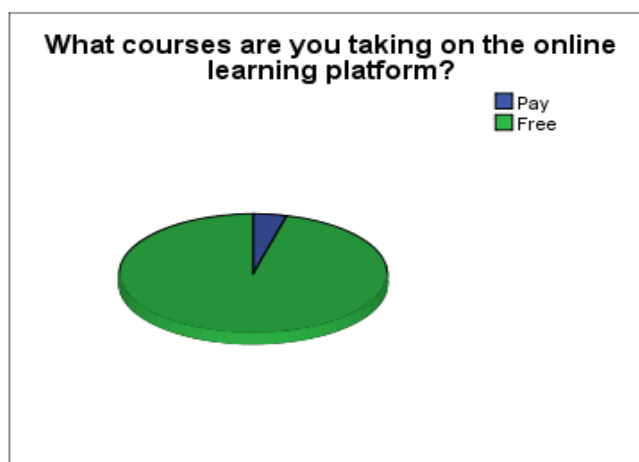
Figure 4.6: Paid or Free for Using Online Learning Platform Distribution Chart

Table 4.7 and figure 4.7 present the data of scores ranking for the respondents.

There are three categories of scores ranking, including 'top', 'medium' and 'bottom'.

More than half of respondents (64%) consider their scores ranking in 'medium'. The

group of 'top' and 'bottom' accounts for 17.8% and 18.3% respectively. It is the norm

for a group to have a minority of top students and lower achievers, and a majority of

middle achievers. The survey results of foreign language school students are consistent

with this norm.

Table 4.7: Scores Ranking Distribution of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Top	110	17.8	17.8	17.8
	Medium	396	64.0	64.0	81.7
	Bottom	113	18.3	18.3	100.0
	Total	619	100.0	100.0	
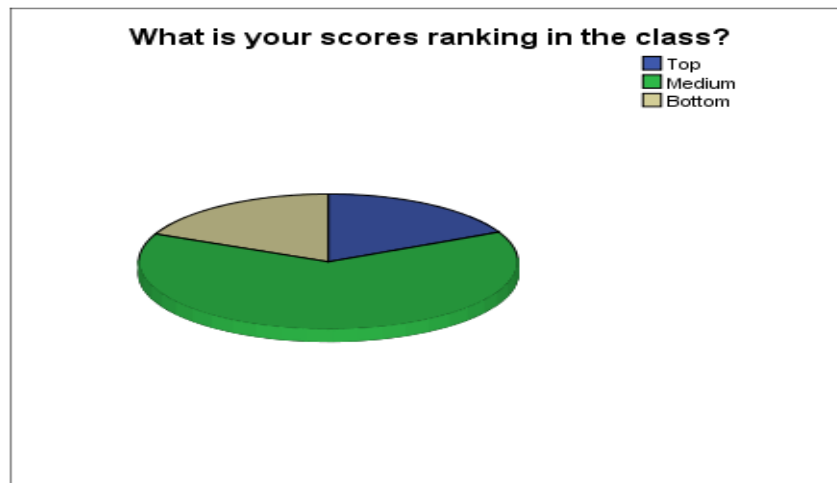
Figure 4.7: Scores Ranking Distribution Chart

4.1.2 Correlation analysis of demographic and learning motivation

In order to further analyze the correlation between demographic and learning

motivation, this study tested the correlation between genders, major, age, grade, years

of computer experience, paid or free, scores ranking and level of learning motivation.

As shown in table 4.8.

Table 4.8: Correlation Analysis of Demographic and Learning Motivation

	Pearson	Sig.(2-tail)
Gender	.208**	.000
Major	-.035	.386
Age	-.001	.975
Grade	-.036	.370
Years of computer experience	-.047	.243
Paid or free	-.032	.432
Scores ranking	-.021	.597

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.8 shows that there are not significant correlation between the demographic factors, including major (sig=0.386＞0.05), age(sig=0.975＞0.05), grade (sig=0.370＞0.05), years of computer experience (sig=0.243＞0.05), paid or free (sig=0.432＞0.05), scores ranking (sig=0.597＞0.05), and learning motivation. The data show that there is a significant relationship between gender and learning motivation. It is worth noting that in foreign language schools; the ratio of boys to girls is generally quite different, which is due to the natural nature of the school. The rate of females choosing to study languages is much higher than that of males. Therefore, this point will not be used as a reference point.

4.2 Analysis of Reliability

The reliability of the questionnaire mainly reflects the consistency or stability of the questionnaire. Cronbach's alpha is mainly tested in the reliability analysis. When the coefficient of beam is greater than 0.8, the reliability is good, and when the coefficient of beam is less than 0.5, the reliability is not ideal.

To facilitate the analysis, the author recoded the questions of 30 questionnaires, as shown in Table 4.9.

Table 4.9: Re-coded the 30 Questions in Four Dimension

Dimension	Influence factors	Questionnaire No.	Re-coded
Attention	The organization of course contents	4,5,6,19	ACC1,ACC2,ACC3,ACC4
	Design of interface	1,2	ADI1,ADI2
Relevance	The value of the course content	17,18	RCC1,RCC2
	Personalized design for platform	9,26,30	RPD1,RPD2,RPD3
Confidence	Degree of user control	3,28	CDC1,CDC2
	The difficulty of the course	20,21,22,23	CDL1,CDL2,CDL3,CDL4
	Feedback of teacher	12,24,25	CFT1,CFT2,CFT3
Satisfaction	Sense of learning achievement	15,16,27,29	SLA1,SLA2,SLA3,SLA4
	Meet the need of communication	7,8,10,11,13,14	SCOM1,SCOM2,SCOM3, SCOM4,SCOM5,SCOM6

Table 4.10: Reliability Analysis of Questionnaire

Dimension	Attention	Relevance	Confidence	Satisfaction
No. of item	6	5	9	10
Cronbach's alpha	.923	.906	.947	.939

As shown in table 4.10, the α of the questionnaire in the four dimensions are 0.923 (Attention), 0.906(Relevance), 0.947(Confidence) and 0.939(Satisfaction). The α values of the four dimensions are all above 0.9, indicating that the questionnaire has a strong credibility.

4.3 Pearson Correlation Analysis of ARCS

Pearson correlation analysis is used in this part to analyze the correlation between each dimension and learning motivation. As can be seen from table 4.19, the P values of each dimension are less than 0.01, indicating that each dimension has a highly significant positive correlation with learning motivation. And for the Pearson's value among the four dimensions, it can be seen that confidence dimension has the greatest influence on learning motivation, which means that the more confidence learners can gain from using the online learning platform, the more their motivation to use the online learning platform will be enhanced. The relevance dimension follows, which means that the more relevant the content that online learning platforms provide to learners is to their reality, the more motivated they are to learn.

Table 4.11: Correlation of Four Dimensions（ARCS）on Learning Motivation

	Pearson	Sig.(2-tail)
Attention	.599**	.000
Relevance	.707**	.000
Confidence	.718**	.000
Satisfaction	.698**	.000

**. Correlation is significant at the 0.01 level (2-tailed).

4.4 Linear Regression Analysis of ARCS

Multiple linear regression analysis will be used to analyze the relationship between the four dimensions of ARCS and the dependent variable-learning motivation.

It can be seen from model summary table (Table 4.12) that the R^2 value is 0.539, which means the independent variables explain 53.9% of the variability of dependent variable, learning motivation.

Table 4.12: Model Summary 1 for Linear Regression Analysis of ARCS

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.734[a]	.539	.536	.735

a. Predictors: (Constant), Satisfaction, Attention, Relevance, Confidence

b. Dependent Variable: DV

The F-ratio in the ANOVA table (Table 4.13) tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F_{(4, 614)} = 179.637$, $p < 0.05$, that means the regression model is a good fit of the data.

Table 4.13: Anova Table 1 for Linear Regression Analysis of ARCS

		ANOVA[a]				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	388.586	4	97.146	179.637	.000[b]
	Residual	332.048	614	.541		
	Total	720.633	618			
a. Dependent Variable: DV						
b. Predictors: (Constant), Satisfaction, Attention, Relevance, Confidence						

The general from the equation to predict dependent variable (learning motivation) from attention, relevance, confidence and satisfaction, is: predicted DV=0.194-(0.118 x attention) + (0.361 x relevance) + (0.444 x confidence) + (0.267 x satisfaction). This is obtained from the Coefficients table (Table 4.14). The p values for ARCS are 0.75 for attention($p > 0.05$) ,0.00 for relevance ($p < 0.05$), 0.00 for confidence ($p < 0.05$) and 0.01 for satisfaction (($p < 0.05$). This shows that relevance, confidence and satisfaction are positively correlated with DV, while attention and DV are negatively correlated.

Table 4.14: Coefficients Table 1 for Linear Regression Analysis of ARCS

		Coefficients[a]							
		Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	.194	.173		1.121	.263			
	Attention	-.118	.066	-.096	-1.784	.075	.599	-.072	-.049
	Relevance	.361	.094	.281	3.851	.000	.707	.154	.105
	Confidence	.444	.118	.344	3.750	.000	.718	.150	.103
	Satisfaction	.267	.083	.216	3.206	.001	.698	.128	.088
a. Dependent Variable: DV									

The above analysis finds that in the ARCS model, ATTENTION and DV are negatively correlated. In order to further verify the accuracy of the model, the author removed the independent variable "ATTENTION" and conducted another analysis as follow.

A multiple linear regression was calculated to predict learning motivation based on their relevance, confidence and satisfaction. A significant regression equation was found ($F(3,615) = 237.611, p < 0.05$) (Table 4.16), with R^2 of 0.537 (Table 4.15). Participants' predicted DV (learning motivation) = 0.125 + (0.333 x relevance) + (0.366 x confidence) + (0.265 x satisfaction) (Table 4.17).

Table 4.15: Model Summary 2 for Linear Regression Analysis of ARCS

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733[a]	.537	.535	.737

a. Predictors: (Constant), Satisfaction, Relevance, Confidence

b. Dependent Variable: DV

Table 4.16: Anova Table 2 for Linear Regression Analysis of ARCS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	386.865	3	128.955	237.611	.000[b]
	Residual	333.769	615	.543		
	Total	720.633	618			

a. Dependent Variable: DV

b. Predictors: (Constant), Satisfaction, Relevance, Confidence

Table 4.17: Coefficients Table 2 for Linear Regression Analysis of ARCS

		Coefficients[a]							
		Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	.125	.169		.741	.459			
	Relevance	.333	.093	.259	3.600	.000	.707	.144	.099
	Confidence	.366	.110	.283	3.319	.001	.718	.133	.091
	Satisfaction	.265	.083	.215	3.183	.002	.698	.127	.087
a. Dependent Variable: DV									

It can be seen that The R^2 value before the removal of ATTENTION is 0.539 (Table 4.12), and the R^2 value after the removal of ATTENTION is 0.537. The independent variable of ATTENTION has no obvious influence on the model. According to the two analyses, the degree of influence of the remaining three independent variables on the dependent variables is ranked as Confidence, Relevance and Satisfaction successively from large to small.

4.5 Summary

This chapter adopts the method of questionnaire survey to analyze the results of 619 respondents by using SPSS program. It provides a detailed overview of the information gathered in this study. This information allowed the researchers to get a general idea of the motivations of students in the Foreign Language School of Baise University for using the online learning platform.

Data presentation includes demographic data; data for reliability; data for Pearson correlation analysis and data for Linear regression analysis of ARCS.

CHAPTER 5

CONCLUSION & DISCUSSION

This chapter mainly summarizes the findings and insights of this study and proposes suggestions on how to motivate learners' learning motivation based on the research results. Finally, the limitation of the research and the prospect of future research are illustrated.

5.1 Summary and Findings

5.2 Strategies for stimulating learning motivation

5.3 Limitations of the study

5.4 Recommendation for Further Research

5.1 Summary and Findings

5.1.1 Summary

In this study, the author explored the influencing factors of learning motivation in an online learning platform base on the ARCS motivation model (Keller, 1983).The research conducted a thorough literature review on ARCS and learning motivations. The quantitative data collection instrument was built after conducting a series of four in-depth interviews with students form the Foreign Language School of Baise University in China. The author collected a total of 619 questionnaires and analyzed the questionnaire results by using Kronbach's alpha method, Pearson correlation analysis and Linear regression analysis through SPSS, and finally summarizes the four ARCS

components that influence students' learning motivation for online learning platforms. The main conclusions of this independent study include the following aspects:

1. The following conclusions can be drawn from demographic information in 4.1, chapter 4. Research has proved that there is no significant correlation between the age, major, grade, Internet age, and other individual characteristic factors of online learning platform learners and learning motivation.

2. Cronbach's Alpha was used to test the reliability of the questionnaire in 4.2, Chapter 4. The results are shown in Table 4.10 that the α values of the four dimensions (attention, relevance, confidence and satisfaction) are all above 0.9, indicating that the questionnaire has a strong reliability.

3. In Chapter 4.3, the author USES Pearson correlation analysis to detect the relationship between the four independent variables (Attention, Relevance, Confidence and Satisfaction) and dependent variables (learning motivation). As shown in table 4.11, P value of the four independent variables is less than 0.01, indicating that every dimension of ARCS has significant correlation with dependent variables with learning motivation. This is consistent with the findings in the literature review that every dimension in the ARCS model has an impact on learning motivation.

4. Linear regression analysis was used to further study the relationship between dependent variables and independent variables in 4.4, chapter 4. The analysis results show that in the four dimensions, there is a negative correlation between attention and dependent variables, while the other three dimensions are all positively correlated (Table 4.14). In order to optimize the model, the author removed the negative

correlation of attention and conducted a linear analysis of the remaining relevance, confidence and satisfaction. The results showed that there was little change in the value of R^2 of the model. The value of R^2 before the removal of attention was 0.539 (Table 4.12), and the value of R^2 after the removal of attention was 0.537 (Table 4.15). This indicated that the dimension of attention had little influence on the test model of The School of Foreign Languages of Baise University. Since there is a negative correlation between dimension attention and learning motivation, it is suggested that School of Foreign Languages in Baise University should focus on the other three dimensions instead of ATTENTION when building an online learning platform. The three dimensions are ranked according to the depth of their impact: confidence, relevance, and satisfaction. The following part provides some strategies on how to improve learners' learning motivation from these three aspects.

5.1.2 Findings

The first research objective of this IS is to study the factors influencing the students' use of online platform based on ARCS theory. To achieve this research objective, the author uses explorative mix-method and studies this problem through 9 steps (Figure 3.1). The answer to the "research question" was found in the process. Through literature review and in-depth interview, the influencing factors of students' use of online learning platform in Foreign Language School of Baise University were found out. Then the research framework was set based on ARCS theory and the questionnaire was designed. And then SPSS was used to analyze the collected data. Finally, the results show that the positive motivation of the students in Foreign

Languages School of Baise University to use the online learning platform is only three of the dimensions in ARCS (Figure 5.1). Using this research result, an online learning platform can be designed to motivate the students in the foreign language school of Baise University.

In the process of constructing the basic framework of factors influencing the learning motivation of the online learning platform, the author found that personalized design is rarely mentioned in the literature, which was also discovered after in-depth interviews with students. This factor involves adding some personalized designs to the online learning platform, which will enable students to customize the graphical user interface (GUI) and tools for their accounts. For example, students can choose their video background during video-conference teaching, change the color of the control interface and maybe even decorate their video. This part of the content does not involve teaching content, but surprisingly, as shown in table 4.9. Among the respondents, 78.4% are in the stage of 19-21 years old (table 4.3). These young people need to demonstrate their uniqueness, which, if it can be satisfied, will become the motivation. Thus, if an online learning platform can use elements that meet students' individual needs; it can significantly promote students' motivation to use the platform.
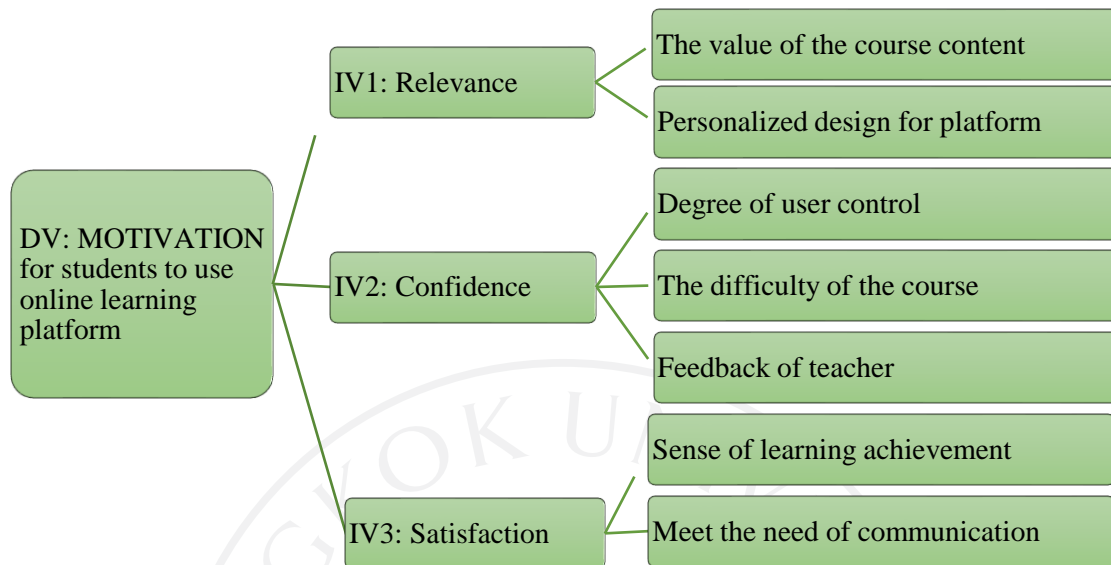
Figure 5.1: Final Conceptual Model of the Influence of Online Platform Users'

Learning Motivation

5.2 Strategies for Stimulating Learning Motivation

The purpose of this independent study is to study the factors that influence the students' learning motivation of the online learning platform in the Foreign Language School of Baise University. Based on which, some strategies to stimulate their learning motivation are put forward, and suggestions for the construction of the online learning platform are provided. Through the data analysis in chapter 4, it is suggested to remove the attention that is negatively related to learning motivation. Next, the corresponding motivation strategies for learning motivation will be proposed from the three dimensions of confidence, relevance and satisfaction.

5.2.1 Strategies for Stimulating Learning Motivation in Confidence Dimension

Confidence dimension has the greatest influence on learning motivation (Table

4.17). One factor in the confidence dimension is the course difficulty (Table 4.9). Here are some strategies to address this

1. Setting reasonable goals

The rationality of learning objectives on the online learning platform is an essential factor affecting learners' motivation. Therefore, in the design of the course objectives of the online learning platform, the difficulty should be reasonable and gradually in-depth, and the clearly stated and encouraging learning objectives should be integrated with the course content.

2. Setting challenging learning tasks

The learning task is an integral part of the course design of the online learning platform. If the learning task is too complicated, and learners find it challenging to complete, their confidence in learning will be discouraged. If the learning task is too easy and not challenging at all, students will lose interest in their studies, and motivation declines. Therefore, the setting of learning tasks should be challenging, yet attainable to stimulating learners' learning motivation. In the design of learning tasks such as course assignments, learning materials, and discussion topics, students' knowledge base should be fully considered, and learning tasks with moderate difficulty or specific challenges should be set to stimulate learners' learning motivation to the greatest extent.

5.2.2 Strategies for Stimulating Learning Motivation in Relevance Dimension

The influence of relevance dimensions on learning motivation ranks the second (Table 4.17). This dimension contains two factors (Table 4.9): the value of course

content and personalized design for platform.

1. The value of course content

The course content of the online learning platform needs to be able to answer learners' real-life problems and be related to real life. Therefore, it is necessary to provide application examples of course content rather than a pure indoctrination of knowledge. The relationship between knowledge content and real-life should be considered when designing courses for an online learning platform. The closer the learning content is to reality, the more motivated the learner is. For example, the teacher can combine specific examples to explain the knowledge or setting learning tasks with the real application situation when teaching course online. In this way, learners can feel that curriculum knowledge can be applied to real life. Besides, multimedia technology and virtual reality technology can be used to create a simulated situation, so that learners can explore and solve practical problems by mobilizing all their senses and existing experience. In the simulation of such a real situation, learners can feel that the knowledge content is closely related to their real-life, to stimulate their enthusiasm and initiative for learning.

2. Increase personalized design to meet the individual needs of learners

According to the previous research, some personalized design of online learning platform can enhance students' motivation. Therefore, when designing the online learning platform, multiple options can be set in some functions so that students can make choices according to their interests and hobbies. For example, in the visual window of video teaching, students can set the background of the window by

themselves; Or add some decorations in the visual window. These small functions can meet the needs of students' personalities display and motivate them to use the platform.

5.2.3 Strategies for stimulating learning motivation in satisfaction dimension

Satisfaction dimension is positively correlated with learning motivation (Table 4.17). Sense of Learning achievement can help learners improve their satisfaction (Table 4.9). The reward mode of online learning platforms can combine virtual rewards and actual rewards. During the period of online learning, the online learning platform can set up a learning level reward mode to motivate the learning activists by setting learning level badges, points, etc. Login frequency, job completion degree and discussion participation can be used as the measurement standards of rewards.

Besides, virtual reward, platforms can also provide a certain amount of actual rewards. For example, some universities in China set up scholarship courses on online learning platforms, which provide some scholarships for excellent learners. Compared with courses without scholarships, the scholarship courses are quite different in terms of the activity of discussion and the degree of completion. Therefore, combining the two reward modes can effectively stimulate learners' learning motivation to some extent.

5.3 Limitations of the study

1. There are various factors influencing learners' learning motivation. Although the author screened the influencing factors through a literature review, theoretical analysis, and in-depth interviews, it was inevitable that some influencing factors would be

omitted.

2. This study provides some strategies to stimulate learning motivation. Still, it has not carried out further practical verification of these strategies, so it is difficult to understand the effectiveness of strategies in practical application.

3. Besides learning motivation, needs of learner also affect learners' use of online learning platform. This IS only studies learners' learning motivation, but does not study the impact of learners' needs on the use of online learning platforms.

4. Not only students but also teachers and faculty use the online learning platform. This IS has only studied the motivation of using online learning platforms from the perspective of students.

5. The research results of this IS are only for Foreign Language School in Baise University. Other universities have limitations in trying to generalize the findings.

5.4 Recommendation for Further Research

Based on the ARCS model, this research studied the factors affecting the learning motivation of online learning platform users. On this basis, the author believes that further exploration can be made from the following aspects.

1. There are many other theories and ways to explore learning motivation. This independent study only explores the influencing factors of learning motivation from the perspective of the ARCS motivation model. In future studies, the influencing factors of learning motivation can be explored more profoundly and comprehensively from different perspectives.

2. The author mainly explored the influencing factors from three aspects: interface design, course content, and learners, but did not conduct further research on other aspects. Future studies can investigate the influencing factors at different levels to understanding the other influencing factors of learning motivation.

3. Investigate learners' needs for an online learning platform (see comment above).

4. Understanding the faculty side of needs and motivations to use the online platform (see comment above).

5. Generalize the study by obtaining more cases (see comment above).

There is a growing demand for online learning platforms. Especially during the COVID-19, in order to ensure teaching, schools across the country have used a variety of online learning platforms for teaching and learning. While people have accepted this learning method, they have also found many problems with existing online learning platforms. Therefore, the research content of this IS has reference significance for the optimization of an online platform, especially for the Foreign Languages School in Baise University.

BIBLIOGRAPHY

Akhtar, M. (2008). What is self-efficacy? Bandura's 4 sources of efficacy beliefs.

   Positive Psychology UK. Retrieved from

   http://positivepsychology.org.uk/self-efficacy-definition-bandura-meaning/

American Psychological Association. (1993). Learner-centered psychological

   principles: Guidelines for school redesign and reform. Washington, DC: APA

   and the MidContinent Regional Educational Laboratory

Anderson, T. (2003). Getting the mix right again: An updated and theoretical

   rationale for interaction. International Review of Research in Open and Distance

   Learning, *4*(2).

Bahrami, Mehdi, and Mohammad Bahrami. "A Review of Software Architecture for

   Collaborative Software's." Advanced Materials Research 433 (2012): 2372-2376.

Bandura, A. (1977). Self efficacy: Toward a unifying theory of behavioral change.

   Psychological Review, 84, 191-215.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change.

   Psychological Review, *84*(2), 191

Bandura, A., & Schunk, D.H. (1981). Cultivating competence, self-efficacy, and

intrinsic interest through proximal self-motivation. *Journal of Personality and

Social Psychology*, 41,586-598

Berlyne, D. E. (1965). Motivational problems raised by exploratory and epistemic

behavior. In S. Koch (Ed.), Psychology: A study of a science (5). New York:

McGraw-Hill

Bransford, J., Brown, A. L., & Cocking, R. R. (2000). How people learn: Brain,

mind, experience, and school (Expanded ed.). Washington, DC: National

Academy Press

Brown, A., & Voltz, B. (2005). Elements of effective e-learning design. The

International Review of Research in Open and Distance Learning, *6*(1)

CrossRef, Instructional-design theories and models: An overview of their current

status (pp.383–484). Hillsdale, NJ: Lawrence Erlbaum.

Dabbagh, N., & Kitsantas, A. (2004). Supporting self-regulation in student-centered

web-based learning environments. *International Journal on E-learning*, *3*(1),

40-47.

De Freitas, S. I., Morgan, J., & Gibson, D. (2015). Will MOOCs transform learning

and teaching in higher education? Engagement and course retention in online

learning provision. *British Journal of Educational Technology*, *46*(3), 455-471.

Deci, E.L. (1975). Intrinsic motivation. New York: Plenum Press.

Deci, E.L., & Ryan, R.M. (1985). Intrinsic motivation and self-determination in

human behavior. New York: Plenum.

DÖRNYEI, Zoltan. (2001). Motivational Strategies in the Language Classroom.

Cambridge: Cambridge University Press.

Fyans, L. J., Jr., & Maehr, M. L. (1987). Sources of student achievement: Student

motivation, school context and family background. Paper presented at the

American Psychological Association, New York.

Golladay, R.M.; Prybutok, V.R.; Huff, R.A. Critical success factors for the online

learner. J. *Comp. Inform. Syst. 2000*, 40, 69–71.

Gordan, M., & Amutan, K. I. (2014). A Review of BF Skinner's 'Reinforcement

Theory of Motivation. *International Journal of Research in Education

Methodology*, *5*(3), 680-688.

Guralnick, D. A. (2006). User interface design for effective, engaging e-learning. *In*

    Proceedings of the International Conference on E-learning (pp. 22-23).

H. L. Woo, "Designing multimedia learning environments using animated

    pedagogical agents: factors and issues," *Computer Assisted Learning*, no. 25, pp.

    203-218, 2009.

Harmer, J. (2001). *The Practice of English Language Teaching*. Essex:

    Longman Press.

Hauer, K. E., ten Cate, O., Boscardin, C., Irby, D. M., Iobst, W., & O'Sullivan, P. S.

    (2014). Understanding trust as an essential element of trainee supervision an learning

    in the workplace. *Advances in Health Sciences Education,* 19(3),435-456.

Hewitt, J. How habitual online practices affect the development of asynchronous

    discussion threads. *Journal of Educational Computing Research*, 28, 1, 31-45,

    2003.

Hewitt, J. Towards an understanding of how threads die in asynchronous computer

    conferences. Chicago: Paper presented at the annual meeting of the American

    Educational Research Association, 2003.

Hong, S. Developing competency model of learners in distance universities. J. Educ.

   Technol. 2009, 25, 157–186.

Keller, J. M. (1987a). Strategies for stimulating the motivation to learn.

   Performance+ Instruction, *26*(8), 1-7.

Keller, J. M. (1987b). Development and use of the ARCS model of instructional

   design. *Journal of instructional development*, *10*(3), 2

Keller, J. M. (2000). How to integrate learner motivation planning into lesson

   planning: The ARCS model approach. VII Semanario, Santiago, Cuba, 1-13.

Keller, J. M. (2010). Motivational design for learning and performance: The ARCS

   model approach. New York, Springer

Keller, J.M. (1983). Motivation design of instruction. In C.M. Reigeluth (Ed.),

Kelly, A. (2004). Design research in education: yes, but is it methodological? *The*

   Journal of the Learning Sciences

Kolb, D. Experiential Learning. Experience as a Source of Learning Development.

   London: Prentice Hall International, 1984.

L.-J. ChanLin, "Learning from Designing a Project Website among Sixth Graders,"

in Proceedings of the Sixth International Conference on Advanced Learning

Technologies (ICALT'06), 2006.

Lee, J., Song, H. D., & Hong, A. J. (2019). Exploring factors, and indicators for

measuring students' sustainable engagement in e-learning. Sustainability, *11*(4),

985.

Lepper, M.R., & Greene, D. (1979). The hidden costs of reward. Morristown, N.J.:

Lawrence Erlbaum Associates.

Lippke S. (2017) Self-Efficacy Theory. In: Zeigler-Hill V., Shackelford T. (eds)

Encyclopedia of Personality and Individual Differences. Springer, Cham

McLeod, S. A. (2020, March 20). Maslow's hierarchy of needs. Simply Psychology.

https://www.simplypsychology.org/maslow.html

Murray, M. C., Pérez, J., Geist, D., & Hedrick, A. (2012). Student interaction with

online course content: Build it and they might come. Journal of Information

Technology Education: Research, *11*(1), 125-140.

Siragusa, L., Dixon, K. C., & Dixon, R. (2007). Designing quality e-learning environments in higher education. ICT: Providing choices for learners and learning. Proceedings ascilite Singapore 2007

Small, R. V., & Gluck, M. (1994). The relationship of motivational conditions to effective instructional attributes: a magnitude scaling approach. *Educational Technology*, *34*(8), 33–40.

Swan, K. (2004). Learning online: A review of current research on issues of interface, teaching presence and learner characteristics. Elements of quality online education, into the mainstream, 5, 63-79.

Uguroglu, M. E., & Walberg, H. J. (1979). Motivation and achievement: A quantitative synthesis. *American Educational Research Journal*, *16*(4), 375-389.

Vonderwell, S., & Zachariah, S. (2005). Factors that influence participation in online learning. *Journal of Research on Technology in education*, *38*(2), 213-230.

Walberg, H. J. (1984). Improving the productivity of America's schools. *Educational Leadership*, *41*(8), 19-27

Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. *Review of educational research*, *42*(2), 203-215.

Yang, H. H., & Su, C. H. (2017). Learner behaviour in a MOOC practice-oriented

    course: in empirical study integrating TAM and TPB. International Review of

    Research in Open and Distributed Learning: IRRODL, *18*(5), 35-63.

Zuckerman, M. (1971). Dimensions of sensation seeking. Journal of Consulting and

    Clinical Psychology, 36, 45 – 52
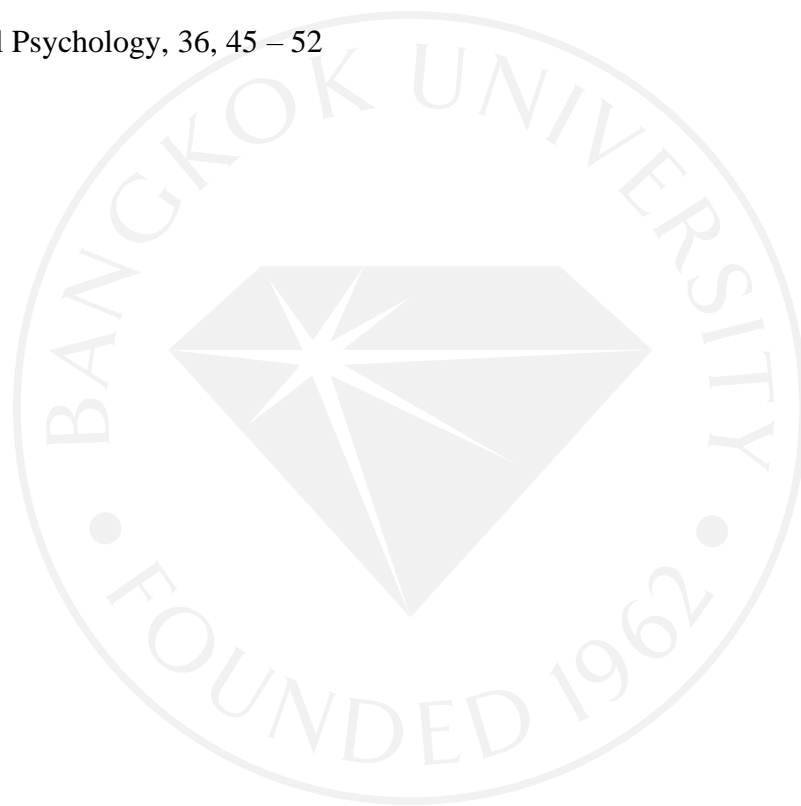
APPENDIX

APPENDIX A

Interview outline

Four students will be interviewed in this section. The students, from the school of foreign languages at Baise University, ranged in age from 19 to 22, and from sophomore to senior. These students have at least three years of computer experience and some exposure to online learning platform.

Interview on understand the attitudes of students towards using an online learning platform

To fully understand users' understand the attitudes of students towards using an online learning platform, we organized these interview questions. Thank you.

Name: Gender：

Age：   Grade：

Variables	Questions	Recording Answer	Facial expression and body languages
1	Could you Please tell me something about your experience with using the online learning platform?		
2	Could you describe how a good online learning interface would look like?		

3	What features do you think an online learning platform should have that would appeal to you to use it?		
4	How do you like to communicate with teachers on the Internet?		
5	Could you tell me what function (like the content of class can be gamified, or you can videotape yourself etc.,) have been particularly interesting in your experience using an online learning platform?		
6	What do you think are the advantages of the online learning platform?		
7	What do you think are the disadvantages of the online learning platform?		
8	Is there anything else you would like to talk about the online learning platform?		

APPENDIX B

Questionnaire on factors influencing learning motivation of online learning platform

Dear readers,

Thank you very much for taking time out of your busy schedule to fill in this questionnaire. This questionnaire aims to investigate the influencing factors of learners' learning motivation on online learning platforms. Your careful answer is very important to me; I hope to get your support and help. This questionnaire does not involve personal privacy. It is only used for academic research. Please try your best to fill in according to the actual situation. Thank you very much for your participation!

Part I: Basic

Information Answer

instructions:

The questions for this part is the single topic selection, please code "✔" on the most appropriate answer, thank you!

1. What's your gender?

(1) Male   (   )   (2) Female   (   ) 2.What's your major?

(1) English   (   )   (2) Thai (   )

(3) Vietnamese (   )   (4) other   (   )

3. How old are you?

(1) Under the age of 18 (   )   (2) 19-21years old (   )

(3) 22 years of age or older (   )

4. What grade are you in?

(1) Freshman (   )   (2) Sophomore (   )

(3) Junior   (   )   (4) Senior   (   )

5. How many years of computer experience have you had?

(1) within 1 year (   )   (2) 1—5 years (   )   （3）More than 5 years (   )

6. What courses are you taking on the online learning platform?

(1) Pay (   )   (2) Free (   )

7. What is your grade ranking in the class?

(1) Top (   )   (2) Medium (   )   (3) Bottom (   )

The second part

The questionnaire of influencing factors of learning motivation

Instructions: This part is the single topic selection, please code " ✔" on the most appropriate answer.1 is strongly disagree, 2 is disagree, 3 is somewhat disagree, 4 is somewhat agree, 5 is agree, 6 is strongly agree. You can only fill in one answer per question. Thank you very much!

No.	Questions	1	2	3	4	5	6
1	I think the interface of online learning platform should be easy to operate.						
2	I can quickly find materials on the online learning platform if the interface is well arranged.						

3	I can obtain needed materials if the online learning platform is easy navigate.						
4	If the online learning platform has abundant learning resources (video, text, etc.), it will make me feel motivated to use it.						
5	I think the online learning platform can provide learners with a variety of learning resources with good presentation.						
6	In my opinion, online learning platform can provide learners with various learning resources with good interaction.						
7	When using the online learning platform for learning, I am willing to communicate with my classmates.						
8	I like to communicate with teachers on the online learning platform.						
9	I think it's important to be able to use online learning on multiple platforms, such as computers and smartphones.						

10	When using the online learning platform for learning, I like to be able to communicate with teachers by video.						
11	When I use the online learning platform to study, I like to communicate with teachers by email.						
12	I think in the process of learning with online learning platform, my questions can often get reply from teacher.						
13	I think the online learning platform is very convenient for me to exchange ideas with my classmates.						
14	I like to discuss with my classmates on the online learning platform.						
15	I think the course materials provided by the online learning platform can help me improve the learning effect.						

16	I can master some knowledge and skills through online learning platform courses.						
17	When courses provide valuable and interesting knowledge or resources, they encourage me to use the online learning platform.						
18	The online learning platform provides some application examples of the course content.						
19	After reading the introduction of the course information (such as the course objectives, the course syllabus, etc.), I had a clear idea of what I could learn from the course.						
20	I think the difficulty of courses on online learning platform is appropriate.						
21	I think the difficulty of courses on online learning platform is progressive.						
22	When using the online learning platform, I am confident that I can achieve the learning objectives set by the course.						

23	When the learning task in the course is challenging, it will stimulate my learning enthusiasm.						
24	I think it's important to be able to evaluate a teacher's classroom when using an online learning platform.						
25	If I can get the evaluation from the teacher after finishing the whole course, it will make me feel that my hard work is valuable.						
26	In the course learning, the platform sets some rewards for excellent students, which will stimulate my learning enthusiasm.						
27	After class, the online learning system will display and record my scores of this course, which will give me a sense of achievement.						
28	I think an online learning system that easy for me to master will increase my interest in using it.						

29	If learning through an online learning platform can improves my skills, it will motivate me to continue using the platform.						
30	I think the online learning system would be interesting to me if it could have some personalized Settings for individuals (such as choose the background of a video).						
31	If Baise University launches such an online learning system I will use it						

APPENDIX C

Attention strategies

Attention strategies
A1: Incongruity, Conflict A1.1 Introduce a fact that seems to contradict the learner's experience. A1.2 Present an example that does not seem to exemplify a given concept. A1.3 Introduce two equally plausible facts or principles, only one of which can be true. A1.4 Play devil's advocate. *A2: Concreteness* A2.1 Show visual representations of any important object or set of ideas or relationships. A2.2 Give examples of every instructional important concept or principle. A2.3 Use content-related anecdotes, case studies, biographies, etc. *A3: Variability* A3.1 Vary the tone of your voice and use body movement, pauses, and props during delivery. A3.2 Vary the format of instruction (information presentation, practice, testing, etc.) according to the attention span of the audience. A3.3 Vary the medium of instruction (platform delivery, film, video, print, etc.) A3.4 Break up print materials by the use of white space, visuals, tables, different typefaces, etc. A3.5 Change the style of presentation (humorous-serious, fast-slow,   loud-soft

active-passive, etc.).

A3.6 Shift between student-instructor interaction and student-student interaction.

A4: Humor

A4.1 Where appropriate, uses plays on words during redundant information presentation.

A4.2 Use humorous Introductions.

A4.3 Use humorous analogies to explain and summarize.

A5: Inquiry

A5.1 Use creativity techniques to have learners create unusual analogies and associations

to the content.

A5.2 Build in problem-solving activities at regular intervals.

A5.3 Allow learners to select topics, projects, and assignments that appeal to their

curiosity and need to explore.

A6: Participation

A6.1 Use games, role plays, or simulations that require learner participation.

APPENDIX D

Relevance Strategies

Relevance
Strategies
R1: Experience
R1.1 State explicitly how the instruction builds on the learner's existing skills.
R1.2 Use analogies familiar to the learner from experience.
R1.3 Find out what the learners' interests are and relate them to the instruction.
R2: Present Worth
R2.1 State explicitly the present intrinsic value of learning the content, as distinct from its value as a link to future goals.
R3: Future Usefulness
R3.1 State explicitly how the instruction relates to future activities of the learner.
R3.2 Ask learners to relate the instruction to their own future goals (future wheel).
R4: Need Matching
R4.1 To enhance achievement striving behavior, provide opportunities to achieve standards of excellence under conditions of moderate risk.
R4.2 To make instruction responsive to the power motive, provide opportunities for responsibility, authority, and interpersonal influence.
R4.3 To satisfy the need for affiliation, establish trust, and provide opportunities for no-risk, cooperative interaction.
R5: Modeling
R5.1 Bring in alumni of the course as enthusiastic guest lecturers.

R5.2 In a self-paced course, use those who finish first as deputy tutors. R5.3

Model enthusiasm for the subject taught.

R6: Choice

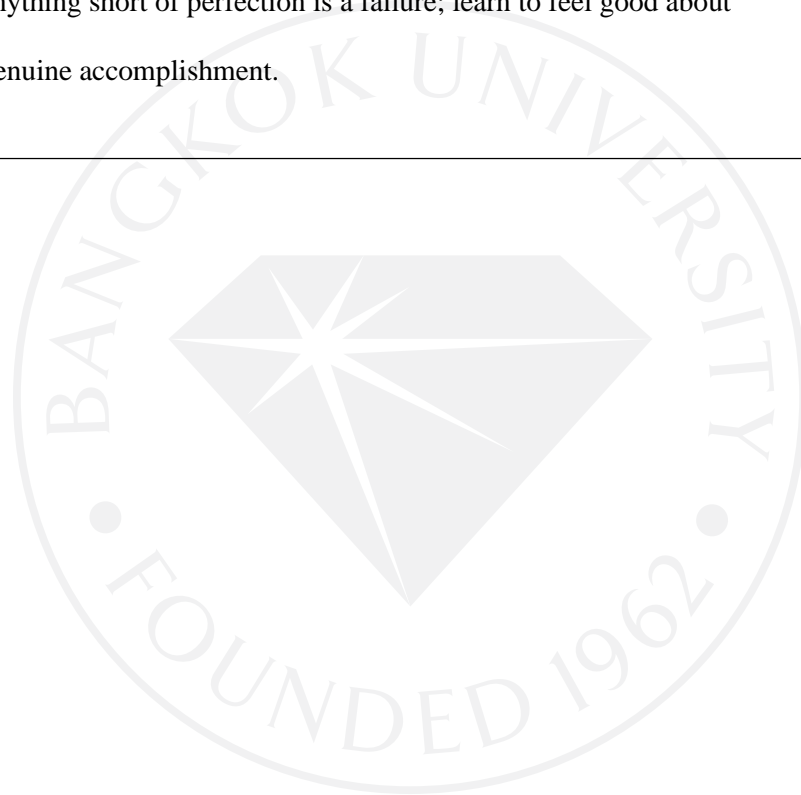R6.1 Provide meaningful alternative methods for accomplishing

APPENDIX E

Confidence Strategies

Confidence
Strategies

C1: Learning Requirements

C1.1 Incorporate clearly stated, appealing learning goals into instructional

materials.

C1.2 Provide self-evaluation tools that are based on clearly stated goals.

C1.3 Explain the criteria for evaluation of performance.

C2: Difficulty

C2.1 Organize materials on an increasing level of difficulty; that is, structure the

learning material to provide a "conquerable" challenge.

C3: Expectations

C3.1 Include statements about the likelihood of success with given amounts of

effort and ability.

C3.2 Teach students how to develop a plan of work that will result in goal

accomplishment.

C3.3 Help students set realistic goals.

C4: Attributions

C4.1 Attribute student success to effort rather than luck or ease of task when

appropriate (i.e., when you know it is true!).

C4.2 Encourage student efforts to verbalize appropriate attributions for both

successes and failures.

C5: Self-Confidence

C5.1 Allow students the opportunity to become increasingly independent in learning

and practicing a skill.

C5.2 Have students learn new skills under low-risk conditions, but practice

performance of wen-learned tasks under realistic conditions.

C5.3 Help students understand that the pursuit of excellence does not mean that

anything short of perfection is a failure; learn to feel good about

genuine accomplishment.

APPENDIX F

Satisfaction Strategies

Satisfaction
Strategies

Strategies

S1: Natural Consequences

SI.1 Allow a student to use a newly acquired skill in a realistic setting as soon as possible.

S1.2 Verbally reinforce a student's intrinsic pride in accomplishing a difficult task.

S1.3 Allow a student who masters a task to help others who have not yet done so~

S2: Unexpected Rewards

S2.1 Reward intrinsically interesting task performance with unexpected, non-contingent rewards.

S2.2 Reward tedious tasks with extrinsic, anticipated rewards.

S3: Positive Outcomes

S3.1 Give verbal praise for successful progress or accomplishment.

S3.2 Give personal attention to students.

S3.3 Provide informative, helpful feedback when it is immediately useful. S3.4 Provide motivating feedback (praise) immediately following task performance.

S4: Negative Influences

S4.1 Avoid the use of threats as a means of obtaining task performance.

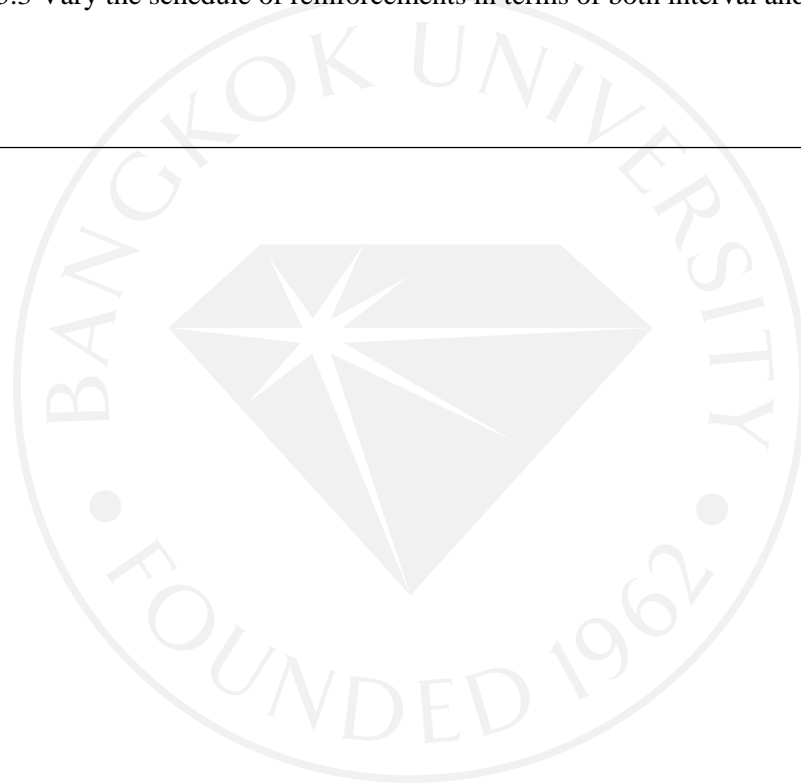S4.2 Avoid surveillance (as opposed to positive attention)

S4.3 Avoid external performance evaluations whenever it is possible to help the

student evaluate his or her work.

S5: Scheduling

S5.1 Provide frequent reinforcements when a student is learning a new task. S5.2

Provide intermittent reinforcement as a student becomes more competent at a task.

S5.3 Vary the schedule of reinforcements in terms of both interval and quantity.

APPENDIX G

Key features for online learning platform

Variables	Items	References
Interface	1.Reduce user's memory load 2.User control 3.Interface consistent	Behnam Faghih, Mohammad Reza Azadehfar and S.D.Katebi (2013). User Interface Design for E-Learning Software.
Course content	1.Essential course information 2.Learning material 3.Gamification for the learning contents 4.Blended learning (offline learning)	Chen, C.-C., Huang, C., Gribbins, M., & Swan, K. (2018). Gamify online courses with tools built into your learning management system (LMS) to enhance self-determined and active learning. Rod Sims, Graeme Dobbs & Tim Hand (2010). Enhancing Quality in Online Learning: Scaffolding Planning and Design Through Proactive Evaluation. Retrieved from http://doi.org/10.1080/0158791022000009169 Guest Contributor(2018). The 10 essential features of an ideal online learning delivery platform. Retrieved from https://www.yourtrainingedge.com/the-10-essential-features-of-an-ideal-online-learning-delivery-platform/

		Olga Okhrimenko (2019). Top 5 Features that make an eLearning Platform Interactive. Retrieved from http://WWW.muvi.com/blogs/5-features-of-interactive-e-learning-platform.html.
Learner	1.Messaging 2.Online discussion 3.Feedback	Nimritta P. (2016). 7 Must Have LMS Features: #1-Communication Channels. Retrieved from https://www.lambdasolutions.net/blog/must-have-lms-features-communication-channels# Rod Sims, Graeme Dobbs & Tim Hand (2010). Enhancing Quality in Online Learning: Scaffolding Planning and Design Through Proactive Evaluation. Retrieved from https://doi.org/10.1080/0158791022000009169

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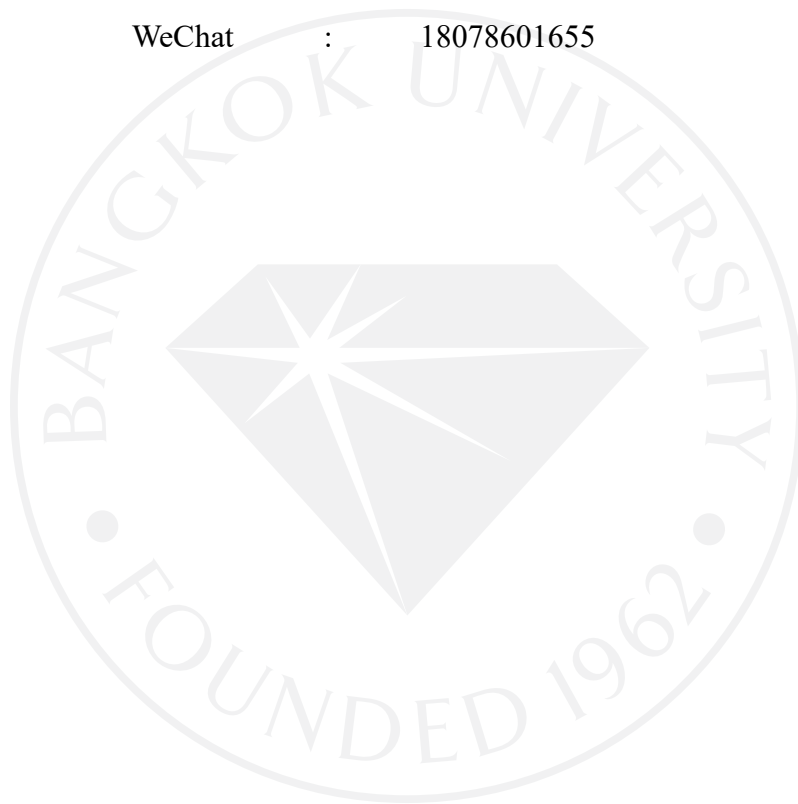
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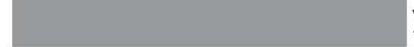
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