Exploring Chinese College Students' Motivations to Participate in Cross-Border E-Commerce Skill Training

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This paper examines college students' motivations to participate in cross-border e-commerce skill training. The study conducted a semi-structured interview with participants of cross-border e-commerce workshops at Huaihua University using the ARCS motivation model. According to the findings, relevance and attention motivational components significantly attract students to the cross-border e-commerce skill training program. In contrast, confidence and satisfaction motivational components act as supportive motivators to persuade students to participate in the training program. Students' knowledge of cross-border e-commerce platforms impacts their interest and attention to cross-border e-commerce workshops and their confidence and satisfaction with their learning process. It is recommended that the design of the university's cross-border e-commerce skill training program should be optimized. Doing so is expected to maximize students' motivations to participate in cross-border e-commerce skill training by promoting knowledge of cross-border e-commerce platforms to students of different levels.

Keywords: cross-border e-commerce, ARCS motivation model, skill training

INTRODUCTION

In recent years, the development of the digital economy has driven the growth of cross-border e-commerce. With the emergence of global platforms such as Amazon, Alibaba, and eBay, cross-border e-commerce has become an increasingly important part of the worldwide economy. Since 2015 is considered the first year of the Chinese e-commerce industry, cross-border e-commerce trade has become essential for the Chinese government to stabilize foreign trade and promote consumption. Chinese customs revealed that China's import and export scale of cross-border e-commerce increased nearly tenfold in five years, and its share in foreign trade rose from less than 1% in 2015 to 4.9% in 2021. Despite the pandemic, the import and export scale of cross-border e-commerce surged from 1.62 trillion yuan in 2020 to 211 billion yuan in 2022, representing a growth of 30.2%. The robust growth has led to a shortage rise of cross-border e-

commerce professionals, from 4.5 million in 2018 to 16 million in 2022 (Jun et al., 2021; Overseas Media, 2022). The enormous talent supply-demand gap is because some fresh graduates are not qualified for cross-border e-commerce positions as they lack the professional skills enterprises require.

Most enterprises face a mismatch of talent supply and enterprise demand. In China, universities play a major role in producing cross-border e-commerce talent. Many universities pioneered joint efforts to train students' cross-border e-commerce skills. Such programs are often not compulsory for all cross-border e-commerce-related majors in colleges but are participated by students voluntarily. It's a great challenge to design and implement the program or courses if there is little understanding of students' participation motivations. As such, this paper examines Chinese college students' motivations to participate in cross-border e-commerce skill training based on the ARCS motivational model. Researchers focused on the discussion about the cross-border e-commerce talents training strategies (Jun et al. 2021) and the exploration of the cooperative training model for high-quality college cross-border e-commerce professionals with enterprises and governments (Jiao et al., 2019; Li, 2018; Cheng et al., 2019; Luo, 2023).

THEORETICAL FRAMEWORK AND METHODOLOGY

Keller defines motivation as "what people desire, choose to do, and commit to doing" and claims that studying motivation answers the question of "why we do the things we do" (Keller, 2009). Motivation helps teachers explore how to help students understand better and plays an essential role in learning (Pintrich & De Groot, 2003). Motivation is a critical factor in the student's effort in the related activity, a continuation of the related activity, willingness to learn, and learning by feeling connected to the related activity (Di Serio et al., 2013). Highly motivated students can become better interrogators (Martens et al., 2004), allowing them to grow. As a result, student motivation changes are reflected in their behavior. It is also claimed that more motivated students may not achieve better learning outcomes (Martens et al., 2004). On the other hand, studies show that motivation significantly impacts academic achievement (Sarier, 2016; Fong et al.,2017).
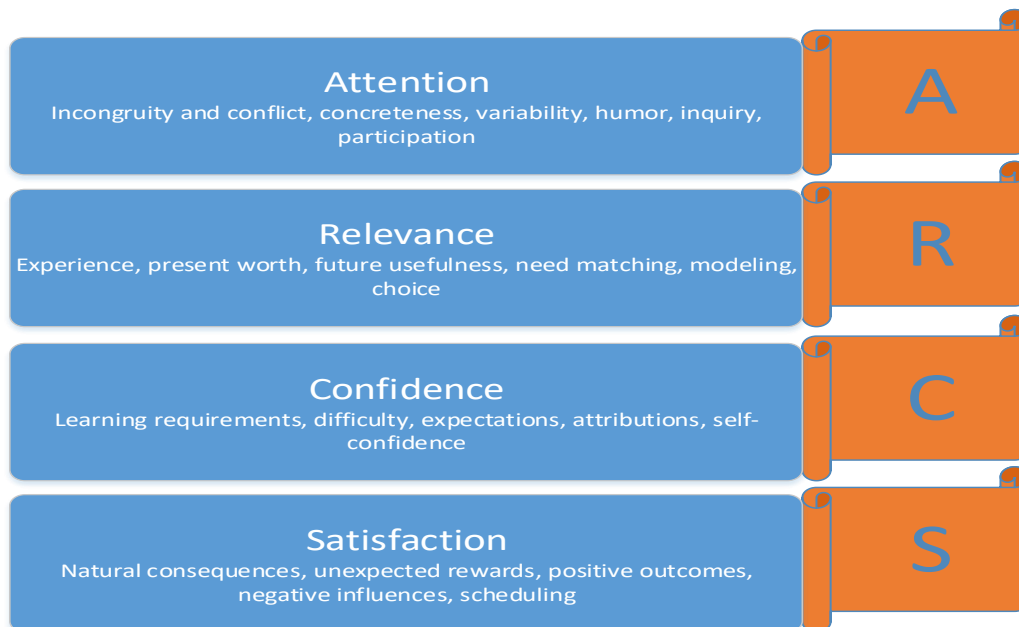
Motivation as a vital factor affecting students' academic success has drawn wide attention from researchers in educational psychology (Wigfield & Eccles, 2000) and educational studies (Keller, 1987; 2010). Among various motivational models, the ARCS motivational model is widely known for its motivating feature in technology-based learning environments (Goksu & Bolat, 2020). First introduced to educational studies in 1984 by Keller, this model aims to find more effective and systematic ways to understand the main effects on learning motivation following the problem-solving approach (Keller, 1987). According to Keller (1987), ARCS motivational model consists of attention, relevance, confidence, and satisfaction. The relevance means meeting the learner's personal needs/goals to affect a positive attitude; confidence is concerned with helping learners believe/feel that they will succeed and control their success; and satisfaction implies reinforcing accomplishment with rewards (internal and external). Attention is capturing learners' interest and stimulating their curiosity to learn. The ARCS model's components and strategies are further shown in Figure 1.

The ARCS model has been widely applied in the research of online learning such as MOOCs (Zheng et al., 2015; Shapiro et al., 2017; Li & Moore, 2018; Huang, 2014), some scientific and technological courses in different disciplines (Shellnut et al., 1999; Daugherty, 2019; Chang et al., 2016; Karampa & Paraskeva, 2018) and even introductory theoretical courses (Hou & Wu, 2012; Feng & Tuan, 2015). The fact that the ARCS model was created to increase student motivation is a compelling reason for researchers to conduct experimental research on this model (Li & Keller, 2018). Since the cross-border e-commerce skill training program is mainly an information technology-based course, Zhou and He (2020) designed the cross-border e-commerce course based on the ARCS model. They quantified its effects, indicating that the ARCS model could be an applicable theoretical framework for guiding and analyzing students' motivations for participating in cross-border e-commerce skill training programs.

This study chooses the semi-structured interview to explore college students' motivations for joining the optional cross-border e-commerce skill training program. The college and enterprise cooperatively organized the program, and it became a popular cross-border e-commerce skill training model in Chinese

universities. Their adaptability and versatility make semi-structured interviews famous for gathering qualitative data (Kallio et al., 2016). This technique typically begins with an interview protocol that includes open-ended questions for each participant. It allows for exploration and provides space to follow topical trajectories as the conversation progresses. It is a common type of exploratory interview used to explore students' motivations (e.g., Ghenghesh, 2010; Li et al., 2019). The interview guide in this study was designed under the guidance of components and strategies of the ARCS model shown in figure 1, consisting of some open-ended and possible follow-up questions concerning college students' motivations for attending the cross-border e-commerce skill training program.

FIGURE 1
COMPONENT AND STRATEGIES OF ARCS MODEL

Attention
Incongruity and conflict, concreteness, variability, humor, inquiry, participation

A

Relevance
Experience, present worth, future usefulness, need matching, modeling, choice

R

Confidence
Learning requirements, difficulty, expectations, attributions, self-confidence

C

Satisfaction
Natural consequences, unexpected rewards, positive outcomes, negative influences, scheduling

S

Keller, 1987a

The interview was conducted at Huaihua University in Huaihua City, an essential international inland port city in central China's Hunan Province. The rapid development of cross-border e-commerce in the inland port city has increased the demand for cross-border e-commerce talents. The university has partnered with enterprises since 2019 to enhance students' professional skills by opening workshops for senior students in cross-border e-commerce-related majors, such as international economics and trade, business English, and international logistics. It aimed to produce qualified cross-border e-commerce professionals for enterprises. The workshop focuses on training students' skills in running cross-border e-commerce shops involving the management of cross-border e-commerce platforms, online marketing and promotion, market survey and product selection etc. However, less than 15% of senior students enrolled in these workshops yearly, indicating that the training program was not as popular as expected. It is a typical problem in cross-border e-commerce skill training in many colleges in China, reflecting students' insufficient motivation to learn cross-border e-commerce skills (Jiao et al., 2019). Therefore, the semi-structured interview targeted the students who have participated in the cross-border e-commerce workshops and explored what motivated them to attend the workshops to offer implications for promoting the effects of the cross-border e-commerce skill training program. With the help of head teachers, 50 students were selected as interviewees, and 39 of them were interviewed when saturation was achieved, including ten graduates who are now working in the cross-border e-commerce sector. The interviews were mainly recorded with digital voice recorders and finally converted into texts for coding and analysis.

RESULTS

The converted interview was coded under the guidance of components and strategies of the ARCS model, as shown in Table 1. The four main motivation components were taken as the principal codes, while the strategies of each motivation category were labeled as sub-codes. From the comparison of figure 1 and table 1, we identified 17 strategies from the 23 in four components for this study. The structure characteristics of coding results are further presented below.

TABLE 1
CODING RESULTS OF THE SEMI-STRUCTURED INTERVIEW

Main Codes	Sub-codes	Frequency	Total frequency and percentage by component
Attention	Incongruity and conflict	28	99 (29%)
	Concreteness	26	
	Humor	5	
	Inquiry	9	
	Participation	31	
Relevance	Experience	30	109 (32%)
	Present worth	15	
	Future usefulness	32	
	Need matching	32	
Confidence	Learning requirements	15	70 (20%)
	Difficulty	15	
	Expectations	22	
	Self-confidence	18	
	Positive outcomes	28	
Satisfaction	Negative influences	18	66 (19%)
	Unexpected rewards	5	
	Scheduling	15	
Total			344 (100%)

Mostly Motivated by Relevance

The relevance component integrates college students' experiences, goals and perceived importance of the learning process with cross-border e-commerce professional skills. According to Table 1, among the four motivation components, relevance hit the highest frequency of 109, representing the highest percentage of 32%. It indicated that relevance and its strategies were highlighted by interviewees when they chose to attend the cross-border e-commerce skill training program. Experience, future usefulness and need matching are the main attention sub-categories. More than 20 interviewees shared their online shopping experiences through some cross-border e-commerce platforms such as Kaola, Tmall Global and YMatou and so on. These online shopping experiences broadened students' horizons and increased their interest in taking cross-border e-commerce jobs after graduation. The cross-border e-commerce skill training program could help them understand what cross-border e-commerce staff should do and how to do it, significantly benefiting their career plan. But the lowest frequency of 15 for present worth under the relevance category revealed that students paid the slightest attention to what present value the program could create for them, such as credits or honors. As a student of international logistics major said:

> "I usually buy cosmetics for my mom and sisters from cross-border e-commerce platforms.
> They are delighted with the prices and quality of the products I bought from them. They
> even encouraged me to look for a job in cross-border e-commerce companies. I think it

could be a good choice. But I don't know how to sell through these platforms. Then I decided to attend this program…Compared with credits or other rewards, I think the experience or skills I could obtain from this program could be more important."

Attention Playing a Critical Role

The attention component means something that stimulates students' curiosity. The interview identified five attention sub-categories that motivate students to join the cross-border e-commerce skill training program. Table 1 shows that the frequency of the attention component reached 99, only secondary to that of the relevant category, indicating the vital role of attention strategies in attracting students' participation in the cross-border e-commerce skill training program. Among the five attention strategies, participation, the contradiction and conflict between traditional classroom learning and real cross-border e-commerce work and concreteness were stressed by the interviewees. At the same time, the humor of instructors and inquiry seemed less critical. The instructors were from the briefing of the cross-border e-commerce skill training program or other channels. Interviewees expressed that they were told about the gap between cross-border e-commerce theoretical learning. They also learned that the demands of enterprises through the introduction of the enterprise.

Consequently, they felt worried due to their lack of qualifications and skills for cross-border e-commerce positions. Pressed by these worries, the concrete cross-border e-commerce skill training objectives and syllabus could attract their curiosity in joining the program featuring students' practical involvement and participation in cross-border e-commerce activities. They thought inquiry about the cross-border e-commerce and humor of instructors could be more valuable in classroom learning than such professional skill training. An international economics and trade major stated:

"I had some theoretical knowledge of cross-border e-commerce. But I felt frustrated when asked how to deal with details such as analyzing cross-border performance and developing insights on the driving factors behind the figures or monitoring operational key performance indicators. With so many practical problems to solve, I attended the program…"

The Role of Confidence and Satisfaction

The components of confidence and satisfaction witnessed a similar frequency, though far less than the relevance and attention components. The equal frequency revealed that these two motivation components could equally push college students to the cross-border e-commerce workshops if they became interested and found the matching needs and values in the training program. The confidence component strengthens students' belief that they can fulfill the training tasks in the cross-border e-commerce workshops. In contrast, the satisfaction component allows participants to evaluate feedback due to the training process. The interview identified four confidence sub-categories and five satisfaction sub-categories. If they perceived that their expectations for the cross-border e-commerce program could be realized, most respondents agreed that they tended to participate in the e-commerce workshops among four confidence items. The result includes narrowing the gap between classroom learning and enterprise demand, seeking new cross-border e-commerce knowledge and adding value for the future career. Self-confidence is another major motivation force under the confidence component that facilitates students' involvement in the training program. The interviewees revealed that their self-confidence in participating in the program mainly relies on their knowledge of cross-border e-commerce. The more they understood the basic rules and operation of some typical cross-border e-commerce platforms, the more confident they felt in developing professional cross-border e-commerce skills. The respondents also noted that the learning requirements and difficulties could affect their confidence in participation decisions. They would give up their participation if they felt the learning requirements were too strict or loose and the difficulties too high. A business English major participant said:

"I once helped my mom run a Taobao shop though it's a domestic online shop. I hope to expand my mom's business overseas after graduation. My experience running Taobao would be a good foundation for me to learn in this program. The only problem might be data analysis, but I'm sure I could make some improvements with the help of my instructor."

Satisfaction is the achievement-related motivation force that ensures the continued participation of students and the popularity of cross-border e-commerce skill training programs. Among the four identified satisfaction sub-categories, positive outcomes were mentioned and expected by most interviewees. These positive outcomes were mainly related to students' career goals, academic difficulties and problems they overcame, new cross-border e-commerce skills and knowledge they mastered, and teamwork experience. The ten respondents either work in cross-border e-commerce companies or have started businesses in this sector. They confirmed that their experience and skills from the cross-border e-commerce workshop helped them earn more job opportunities, speed up promotion and enhance entrepreneurship competence. Other students focused on the difficulties and problems they could remove from the learning process under the guidance of enterprise instructors. However, some negative influences were also noted, such as time and energy costs, pressure and risks from tasks in the real cross-border e-commerce accounts and fierce competition. Some participants complained that they had to spend most of their energy completing workshop tasks and could spare little time for other academic goals. Almost all participants felt too much stress, especially those who won the stiff competition and could maintain the existing accounts of cross-border e-commerce platforms. Significantly few respondents expressed dissatisfaction with the scheduling, which could hardly balance the training at the workshop and other learning or career goals. Unexpected rewards were not considered as the satisfaction focus.

"I attended the workshop in my senior year in 2019 and am now promoted to manager in a cross-border e-commerce company. It was stressful when I led a team in the workshop, but it was a valuable experience for my career. … It's true that I gave up other goals as the schedule was very tight. For example, I once wanted to participate in the civil servant exam…."

DISCUSSION AND CONCLUSION

Under the guidance of the ARCS motivation model, the results of the semi-structured interview suggest that relevance and attention motivation components play a dominant role in attracting students to the cross-border e-commerce skill training program. In contrast, confidence and satisfaction components serve as the supportive motivation force to convince students to participate in the training program. The total frequency of 61% in relevance and attention components reflected that participants of the cross-border e-commerce skill training program were primarily motivated by the match between students' cross-border e-commerce-related experience and their future career goal orientations. Students' goal-oriented and problem-removing motivations align with the ARCS model's distinctive feature of the problem-solving approach (Goksu & Bolat, 2020). It is between their intention to reduce the theoretical learning–real work gap and the factual content of the training program.

The findings of career goal orientation and problem-solving-led motivations could explain why a small proportion of senior students only participated in the cross-border e-commerce workshop at Huaihua University. This study suggested that students' knowledge of cross-border e-commerce should be a decisive factor affecting whether students could become interested in the cross-border e-commerce skill training program and what they expect to learn. Our findings align with what He et al. (2019) found. At Huaihua University, cross-border e-commerce-related first- and second-year students usually have a preliminary understanding of international trade and cross-border e-commerce, as well as the development of cross-border e-commerce. They know very little about cross-border e-commerce platform operations. Naturally, first- and second-year students have few motivations to participate in the career goal and professional

problem-solving targeted workshop. These students might be more interested in the essential operation of cross-border platforms.

The study also found that the intention to work or start a business in cross-border e-commerce can stimulate students' demands for specific training related to cross-border e-commerce work and business models. With few opportunities to learn cross-border e-commerce platform operations, these students might retain little interest in participating in the cross-border e-commerce work-oriented training program in their junior and senior years. As a result, the cross-border e-commerce workshop at Huaihua University has only attracted a relatively small number of participants from the senior students, most of whom had some personal experience in the cross-border e-commerce business. Besides, cross-border e-commerce might be only one of the senior students' future career goals. Inevitably, most of them are not motivated to participate in the workshop during their senior year as they think it's time-consuming and can hardly spare energy for other career goals.

According to Keller (2009), the continuity of students' attention and interest must be ensured with the proper confidence and satisfaction levels. Motivation will change accordingly if the level of confidence and success is too low or too high. Students should overcome long-held fears that impede their understanding of lessons or achievements and not overlook important details in their learning activities. Finally, students should be satisfied with both the learning process and the results to maintain their desire to learn. This study proved that students' continued participation lies in their confidence that their different expectations for cross-border e-commerce skill training could be realized in the workshops within their capabilities and with the help of instructors. Besides, this study reported more positive outcomes than negative influences, indicating participants could enjoy their sense of achievement in the program. However, if not adequately dealt with, the negative impacts would reduce students' motivation levels, such as time and energy costs, pressure and risks from tasks in the real cross-border e-commerce accounts and fierce competition.

Attracting and arousing students' interest (Keller, 2009) are the first two steps to stimulating students' motivation to participate in the cross-border e-commerce program. Therefore, to increase students' interest in cross-border e-commerce training, the basic knowledge of some well-known e-commerce platforms should be promoted among first- and second-year students through various channels and activities. These promotion activities could be part of the cross-border e-commerce skill training program, providing more opportunities for laypeople to understand and experience the magical world of cross-border e-commerce. These promotion activities combined with in-depth cross-border e-commerce course learning in the classroom, the junior students in cross-border e-commerce and its related majors could organize to train their cross-border e-commerce skills on some simulation cross-border e-commerce platforms. More and more senior students with solid knowledge and experience in cross-border e-commerce could be motivated to attend the workshops. It is so because most of them could better understand their cross-border e-commerce career goal and the gap between their theoretical learning and real work. Besides, once the students had sufficient knowledge of cross-border e-commerce platforms, they would have more confidence in and reasonable expectations for the cross-border e-commerce skill training program and feel more relaxed when facing advanced tasks. Students' proficiency in the essential operation of simulation cross-border e-commerce platforms will make them more flexible when facing advanced workshop tasks.

This paper has examined college students' motivations to participate in cross-border e-commerce skill training programs. Under the guidance of the ARCS motivation model, the study conducted a semi-structured interview with participants of cross-border e-commerce workshops at Huaihua University. The results show that relevance and attention motivational components attract students to the cross-border e-commerce skill training program. In contrast, confidence and satisfaction are supportive motivators to convince students to participate in the training program. Analyzing motivation strategies under the four motivation components reveals that career goal orientation and problem-solving are the distinctive features of students' motivations represented by experience, future usefulness, need matching, conflict, paradox and conflict under the relevance and attention components. Students' knowledge of cross-border e-commerce platforms is the decisive factor affecting students' interest and attention to the cross-border e-commerce workshops as well as their confidence and satisfaction with their learning process. These findings explained the limited popularity of the cross-border e-commerce workshop at Huaihua University. It's concluded that

the design of cross-border e-commerce should be optimized by providing more opportunities for students of different levels to obtain knowledge of typical cross-border e-commerce platforms. It must be through a series of promotion activities and simulation operations of these platforms during the first three years so that more students could have strong motivations to attend the cross-border e-commerce workshop in the senior year.

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