International Journal of Research Studies in Language Learning
2024 Volume 10 Number 1, 57-65

Self-regulated smart learning environment, classroom engagement and intercultural communicative competence of EFL students in China

Su, Dongxia ✉
Graduate School, Lyceum of the Philippines University - Batangas, Philippines (295889206@qq.com)

ISSN: 2243-7754
Online ISSN: 2243-7762

Received: 30 January 2024 **Revised**: 28 February 2024 **Accepted**: 16 March 2024 OPEN ACCESS
Available Online: 15 April 2024 **DOI**: 10.5861/ijrsll.2024.006

Abstract

Intercultural communication competency has become one of the essential abilities that Chinese international people should possess. Numerous research studies have been done to improve the communicative abilities of Chinese students. However, there is still a research gap in this field, which is worth studying. The study used the descriptive research design to explore the Chinese college students' self-regulated smart learning environment, classroom engagement, intercultural communicative competence, and their relationship among the cited three variables in language learning. Participants from the Anhui Institute of International Business, totaling 385, were asked to complete the questionnaires. The results reflected that males, international trade majors, and sophomores have better assessments on self-regulated smart learning environment. They are more engaged in classrooms and have good cross-cultural awareness, high recognition, and a correct attitude toward cross-cultural communication ability. However, the majority of participants lack sufficient cross-cultural skills and communication abilities. Results also revealed strong relationships among intercultural communicative competence, classroom engagement, and self-regulated smart learning environments. Moreover, students place high emphasis on service quality in a self-regulated smart learning environment. Hence, a sound system, relevant information, and service quality form the cornerstone of successful learning in a smart learning environment. A language learning program was proposed as an output to increase Chinese EFL learners' international communicative skills.

Keywords: intercultural communicative competence, self-regulated learning, smart learning environment, classroom engagement, EFL students in China

Self-regulated smart learning environment, classroom engagement and intercultural communicative competence of EFL students in China

1. Introduction

With the rapid development of technology, cultural exchanges, and the need for new situations, online classes are becoming increasingly common. In the new self-regulated smart learning environment, improving students' classroom participation and intercultural communication skills has become an urgent problem many colleges and universities must solve. Byram (2020) explained the significance of intercultural communication and suggested that the cornerstone of "intercultural citizenship" (ICit) is intercultural communicative competence (ICC). In addition to highlighting the value of intercultural competency, Jackson (2019) offers students a framework for developing their skills that will improve their comprehension of the complexity of language and intercultural communication in a variety of international contexts.

The above proponents and statements indicate that this research is necessary. Research on "intercultural communication skills" is relatively limited, and intercultural communication skills are not equivalent to foreign language ability among Chinese students. Although the smart learning environment provides essential support for achieving high learning engagement, in the actual teaching process, students' classroom engagement has not increased significantly as expected. Therefore, the questionnaire survey method was used to collect data based on relevant theories in this research. After description and analysis, the study proposed a language learning program to promote students' classroom engagement and intercultural communicative skills under a self-regulated smart learning environment.

Objectives of the study - This study aimed to examine the connections between EFL students' international communicative competency, classroom engagement, and self-regulated smart learning environments in China. Specifically, the paper sought to describe the demographic profile of the respondents as to sex, major and year level; to determine respondents' experience in self-regulated smart learning environment according to behaviour factor, personal factor, system quality, information quality and service quality; to identify classroom engagement in terms of skills engagement, participation/interaction engagement, emotional engagement and performance engagement; to assess the respondents' intercultural communicative competence as to attitudes, knowledge, awareness and skills; to test the significant differences of the respondents' responses on self-regulated smart learning environment, classroom engagement and intercultural communicative competence when grouped according to sex, major and year level; to test the relationships among self-regulated smart learning environment, classroom engagement and intercultural communicative competence; to propose a language learning program based on the findings of the study.

2. Methods

Research Design - Through the use of a descriptive research design that incorporates findings interpretation, the study sought to identify the main relationships between the self-regulating smart learning environment, classroom engagement, and intercultural communication ability. The researcher attempted to collect data from the participants by utilizing survey questionnaires.

Participants of the study - The study involved first- and second-year students from the Anhui Institute of International Business in the central Chinese province of Anhui, majoring in science and liberal arts. The target institution has around 20,000 first- and second-year students. The Raosoft online sample size calculation yielded a total of 385 respondents. As a result, the intended respondents received a total of 385 questionnaires.

Data Gathering Instrument - Information gathering used adopted and modified questionnaire. The first part

of the questionnaire contains the respondents' profiles, including their sex, major, and year level. The second part was the Self-regulated Smart Learning Environment Questionnaire, developed in 2022 based on students' experiences in a smart learning environment by Muhammad Zeeshan Shakir and Yusufu Gambo. The third part was the classroom engagement questionnaire based on the Measure of Traditional Classroom classroom engagement by Handelsman, Briggs, Sullivan, and Towler (2005). It was derived from The Online Classroom Engagement Scale (OSE) by Dixson (2015). Beliefs about Intercultural Communicative Competence (BICCI), created by Duisembekova (2021), was the source of inspiration for the fourth part of the questionnaire on intercultural communicative competence. There are 73 items in total. A 4-point Likert scale with the options of strongly disagree, disagree, agree, and strongly agree was used to display the replies.

Data Analysis **-** All valid survey data points were tallied, coded and statistically analyzed to address the research questions. The Statistical Package for Social Science (SPSS) was utilized to perform statistical analysis on the data. Quantitative data analysis was done for this investigation. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were computed to summarize the sample's background data and the student's answers to questions about intercultural communicative competence, classroom engagement, and self-regulated smart learning environments. ANOVA, or analysis of variance, was employed to examine the primary differences in learners' self-regulated smart learning environment learning experience, classroom engagement, and intercultural communicative competence. Pearson correlations analysis was used to examine the relationships between the self-regulated smart learning environment, classroom engagement, and intercultural communicative competence. To ascertain the statistical significance of the sex differences, the self-regulated-sample T-test was employed using a self-regulated smart learning environment, classroom engagement, and intercultural communicative competence.

Ethical Considerations - Personal information about respondents, other than their sex, major, and year level, was not revealed in this study for ethical and confidentiality reasons. Researchers made sure participants had read and comprehended all instructions and study protocols during the course of the trial. The researcher ensured that the respondents voluntarily answer the questionnaires. Furthermore, before the statistics, an ethical assessment is conducted to guarantee the students' rights, and ethical authorization is obtained from the research center at the University of the Lyceum in the Philippines.

3. Results and Discussion

Table 1

Summary Table on Self-regulated Smart Learning Environment

Indicators	Weighted Mean	Verbal Interpretation	Rank
1.Behavior Factor	3.10	Agree	2.5
2.Personal Factor	3.09	Agree	4.5
3.System Quality	3.09	Agree	4.5
4.Information Quality	3.10	Agree	2.5
5.Service Quality	3.13	Agree	1
Composite Mean	3.10	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 1 is a summary table of self-regulated smart learning environment. The composite mean is 3.10, suggesting that the respondents generally agree on the indicators. All five factors influence respondents' learning efficiency and impact the improvement of the respondents' intercultural communicative competence and learning process. Service quality got the first rank with a weighted mean of 3.13. It indicates that the respondents are significantly satisfied with the service quality under the smart learning circumstances. Bhattacharjee (2014) defines the continued use intention of online English course platform users as follows: after users first use the platform to learn, they will choose the platform again when they have other course learning needs.

The table also suggests that besides the external factors like system quality, the students focus on their intrinsic learning motivation, namely behavior factors, and pay great attention to information quality—the more benefits

and improvements users experience, the stronger the perceived usefulness and satisfaction. (Wu & Chen, 2016). The respondents' learning process and improvement of language communication skills are affected by both internal factors like behavior factor and personal factors and external factors such as system quality, information quality as well and service quality of the online platform service. Therefore, actions from various parties are needed to improve students' English competency.

Table 2

Summary Table on Classroom Engagement

Indicators	Weighted Mean	Verbal Interpretation	Rank
Skill Engagement	3.13	Agree	1.5
Emotional Engagement	3.13	Agree	1.5
Interaction/Participation Engagement	3.12	Agree	3
Performance Engagement	3.10	Agree	4
Composite Mean	3.12	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 2 is a summary table on classroom engagement. The composite mean is 3.12, indicating an agreement among the respondents about the importance of classroom engagement. Each of the four variables significantly affects the respondents' learning effect and the learning process of their intercultural communicative competence. The student engagement theory can explain most of the empirical data from earlier studies on how the environment affects students' development, which draws on various psychological, emotional, skill, performance, participation and interaction, and traditional learning theories. As a result, studying student engagement theory can benefit researchers looking into student development and teachers, MOOC recorders, administrators, and designers of online courses in creating more productive learning environments (Heilporn et al., 2021).

Table 3

Summary Table on Intercultural Communicative Competence

Indicators	Weighted Mean	Verbal Interpretation	Rank
Attitudes	3.22	Agree	1
Knowledge	3.12	Agree	4
Awareness	3.19	Agree	2
Skills	3.13	Agree	3
Composite Mean	3.17	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 - 1.49 = Strongly Disagree

Table 3 is a summary table of respondents' evaluation of intercultural communicative competence. The composite mean value is 3.17, which suggests that the respondents generally agree the depictions of the four indicators in the table. With a mean value of 3.22, "attitudes" had the highest value of all the items mentioned. This indicates that students view cross-cultural communication positively, are more conscious of cultural variety, and understand the value of cross-cultural competency. Byram (2020) integrated cultural identification and understanding in his conceptual definition of intercultural communicative competence and strongly emphasized language. He proposed an intercultural communication competency model with five components: knowledge, skills, attitudes, and other elements. He highlighted elements like social context and nonverbal communication to define intercultural communicative competency clearly.

Following "attitude" closely, "awareness" got a weighted mean value of 3.19. This indicates that the students are aware of both their own culture and the cultures of other nations. Chen (2014) stated that an effective interculturalist possesses both cultural self-knowledge and cultural awareness to decrease the ambiguity and uncertainty inherent in cross-cultural contact. Studies on the importance of developing cultural awareness have been published in the literature on multiple occasions (Adler et al., 2018). "Skills" received a lower value of 3.13 compared to the other items, and "Knowledge" received the lowest value of 3.12 out of the four indicators. Compared with attitude and awareness, students still need to gain the information and abilities necessary to navigate other cultures. According to the research, there are three primary causes behind the outcome.

Table 4

Relationship Between Self-regulated Smart Learning Environment and Classroom Engagement

Behavior Factor	r-value	p-value	Interpretation
Skill Engagement	.759**	0.000	Highly Significant
Emotional Engagement	.681**	0.000	Highly Significant
Interaction/Participation Engagement	.677**	0.000	Highly Significant
Performance Engagement	.643**	0.000	Highly Significant
Personal Factor			
Skill Engagement	.706**	0.000	Highly Significant
Emotional Engagement	.676**	0.000	Highly Significant
Interaction/Participation Engagement	.679**	0.000	Highly Significant
Performance Engagement	.627**	0.000	Highly Significant
System Quality			
Skill Engagement	.755**	0.000	Highly Significant
Emotional Engagement	.712**	0.000	Highly Significant
Interaction/Participation Engagement	.735**	0.000	Highly Significant
Performance Engagement	.616**	0.000	Highly Significant
Information Quality			
Skill Engagement	.773**	0.000	Highly Significant
Emotional Engagement	.760**	0.000	Highly Significant
Interaction/Participation Engagement	.751**	0.000	Highly Significant
Performance Engagement	.658**	0.000	Highly Significant
Service Quality			
Skill Engagement	.778**	0.000	Highly Significant
Emotional Engagement	.757**	0.000	Highly Significant
Interaction/Participation Engagement	.721**	0.000	Highly Significant
Performance Engagement	.669**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 4 illustrates that a self-regulated smart learning environment and student involvement are highly significant. The calculated r-values show a strong direct association, and the resulting p-values were below the alpha level. The data indicates a significant correlation between the two variables and demonstrates that the quality of the SRL environment impacts student involvement in the classroom. Students will be more satisfied with the use of the smart teaching environment and will participate in class more actively if the system, information, and service quality are all greater. Manganello et al. (2019) assessed the efficacy of the self-regulated web-based learning platform. The study's findings showed that students were engaged in and actively learning. They also suggested web-based SRL platforms could aid students' skill development and active learning. The evaluation results were helpful, but the study needed a theoretical model to offer a perspective on interpreting the data.

Table 5 illustrates the highly significant correlation between intercultural communication competency and a self-regulated smart learning environment. The computed r-values show a strong direct correlation, and the resulting p-values were below the alpha threshold. This shows that there was a strong correlation between the two and that the quality of the SRL environment had an impact on students' competence. Students' excitement for learning, their ability to communicate across cultural boundaries, and the system's quality and information are all positively connected with how happy they are with the smart learning environment.

Peng (2021) investigated college students' online self-regulation about blended learning using survey tools from the Effectiveness of Learning English (EOLE) and Online Self-Regulated English Learning (OSEL). The findings also highlight how vital goal-setting, environment structuring, and learner self-evaluation are to the success of English language instruction. The results showed that these variables might be used to interpret how well language learners picked up the language. In order to find out how SRL strategies-focused online pre-graduate courses affected students' academic success and self-regulation, Alkhasawnh and Alqahtani (2019) conducted a study. The results illustrated that the online course and SRL treatments significantly impact students' academic performance and self-regulation.

Table 5

Relationship Between Self-regulated Smart Learning Environment and Intercultural Communicative Competence

Behavior Factor	r-value	p-value	Interpretation
Attitudes	.519**	0.000	Highly Significant
Knowledge	.674**	0.000	Highly Significant
Awareness	.580**	0.000	Highly Significant
Skills	.629**	0.000	Highly Significant
Personal Factor			
Attitudes	.505**	0.000	Highly Significant
Knowledge	.677**	0.000	Highly Significant
Awareness	.588**	0.000	Highly Significant
Skills	.651**	0.000	Highly Significant
System Quality			Highly Significant
Attitudes	.559**	0.000	Highly Significant
Knowledge	.703**	0.000	Highly Significant
Awareness	.623**	0.000	Highly Significant
Skills	.703**	0.000	Highly Significant
Information Quality			
Attitudes	.606**	0.000	Highly Significant
Knowledge	.727**	0.000	Highly Significant
Awareness	.639**	0.000	Highly Significant
Skills	.688**	0.000	Highly Significant
Service Quality			
Attitudes	.629**	0.000	Highly Significant
Knowledge	.713**	0.000	Highly Significant
Awareness	.645**	0.000	Highly Significant
Skills	.677**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

Table 6

Relationship Between Classroom Engagement and Intercultural Communicative Competence

Skill Engagement	r-value	p-value	Interpretation
Attitudes	.619**	0.000	Highly Significant
Knowledge	.752**	0.000	Highly Significant
Awareness	.680**	0.000	Highly Significant
Skills	.729**	0.000	Highly Significant
Emotional Engagement			
Attitudes	.635**	0.000	Highly Significant
Knowledge	.791**	0.000	Highly Significant
Awareness	.696**	0.000	Highly Significant
Skills	.740**	0.000	Highly Significant
Interaction/Participation Engagement			
Attitudes	.642**	0.000	Highly Significant
Knowledge	.810**	0.000	Highly Significant
Awareness	.720**	0.000	Highly Significant
Skills	.770**	0.000	Highly Significant
Performance Engagement			
Attitudes	.607**	0.000	Highly Significant
Knowledge	.738**	0.000	Highly Significant
Awareness	.654**	0.000	Highly Significant
Skills	.681**	0.000	Highly Significant

Legend: Significant at p-value < 0.01

The relationship between intercultural communication competence and classroom participation is seen in Table 6. The calculated r-values show a high degree of direct connection, and the p-values that were obtained were below the alpha threshold. This indicates that a strong association exists and suggests that students' competence increases with their level of engagement. Scholars Akbari et al. (2016) examined the relationship between student involvement and English language learning in a college English course in 2016. They found a strong, positive relationship with each other through their investigation. In general, students' English values will rise with increased engagement. Liu (2023) also proposed that intercultural communication and student engagement are highly correlated. The study found that the interactive communicative nature of teaching activities and evaluation, the diversity of new media, and process monitoring are the three dimensions of solutions to the problem of English

intercultural competency training in the self-regulated intelligent learning environment.

Table 7

Proposed Language Learning Program to Enhance Self-regulated Smart Learning Environment, Students Engagement, and Intercultural Communicative Competence for Chinese EFL Students

Key Result Area	Objectives	Strategies/ Activities	Success Indicator	Persons Involved
Self-regulated smart learning environment 1.1 system quality 1.2 personal factor	To improve system quality of smart learning environment. To improve students' personal factors such as self-regulation self-efficiency and so on to achieve personal language communication goal in the self- regulated smart learning environment	- School-enterprise cooperation and facilitate smart learning systems in school computers. -Schools take actions to build more friendly, interactive and high-quality learning platforms to promote effective learning. -Test system performance in advance; -Improve the quality of platform course information and enhance the stability, timeliness and responsiveness of the operating system. -Conduct regular system maintenance and upgrading on training classrooms. Track and investigate system service quality regularly. Publish questionnaires on the service of the system to students on a regular basis. Learning self-efficiency and confidence training courses" -Arrange rich and colorful training courses in school professional training classrooms. -Teachers strengthen guidance and monitoring of students to assist students in better online learning. -Conduct case study to learn from successful learning examples.	90% of students are satisfied with the upgrading of the school's practical training system. 90% of the service information can be collected from the questionnaire. 90% of students can improve their language skills and build learning confidence in a smart learning environment;	English teachers; College and university authorities; Students; System developers. English teachers; College and university authorities; Students; System developers. English teachers; College and university authorities; Students; System developers.
2. Classroom engagement 2.1 performance engagement	To guide students to be brave enough to engage in class activities and interaction. To improve teachers' online course design ability, so as to improve students' performance engagement	English communication ability improvement Forum Invite professional English teachers or lecturers to give pertinent instruction about the strategies on English communication to promote students' performance engagement. Offer rich resources, such as instructional videos or learning materials to help students achieve their learning goals. -Teachers set up group cooperation activities in class. Such as role plays, discussion sessions, speeches, oral interpretation and so on to establish emotional bounds and t improve class performance; Round-table-style small classroom teaching Teachers use the latest teaching methods to conduct round-table discussion teaching. Incorporate classroom activities such as English songs, short videos, and English drama imitation shows Teacher digital competency training Conduct offline teacher digital information competency training every semester.	90 percent of students are engaged in the forums and get much knowledge from the forums; 90 percent of students like the new teaching method and be more engaged in small classes. 90 percent of teachers get much points from the training and competitions and be more competent in smart learning and teaching environment.	English teachers; Students; Lecturers. English teachers; Students; English teachers; Students; Lecturers.

		-Conduct online teacher training, so teachers understand the latest technology and teaching methods. -Teachers' online competition		
3. intercultural communicative competence 3.1 knowledge	To guide students to be brave enough to speak and communicate to peers, teachers, or foreigners; to improve intercultural knowledge To improve the communicative knowledge of students with the guidance of relevant activities.	"English Corner -Set up an English corner with a weekly or monthly English speaking opportunities, such as story telling, personal experience sharing, overseas travelling sharing and friends making on a regular basis. -Provide a supportive and encouraging environment, help students to share their stories in English, practice their communicative skills, as well as make them feel proud of their progress. Students' English speech contest Organize a contest every term and invite professional English teachers including foreign judges to give suggestions to students and help students overcome stage fright. Cross cultural knowledge prize competition: Organize two cross-cultural knowledge competitions every semester to increase students' cross-cultural knowledge storage and improve their cross-cultural communication skills. -Set awards for excellent students. Volunteer service projects: Select students with good cross-cultural knowledge and oral English to participate in large-scale volunteer service projects (such as China International Import Expo, Canton Fair, World Expo, etc.) to stimulate students' interest in learning language and cultural knowledge.	90 percent of students are willing to communicate with others and make progress in the process of sharing and speaking. 90 percent of students think that their speaking ability has improved through the contest. 90 percent of students are excited to answer questions and accumulate some intercultural knowledge.	English teachers; Students; international students. School leaders; English teachers; Students; international students. English teachers; Students; international students.

4. Conclusions and Recommendations

The findings revealed seven points. First, there were more female students than male students. The distribution of respondents among the five majors is about equal, with a slightly higher number of marketing and international trade majors than the other three majors. Second, all five indicators—behavior factor, personal factor, system quality, information quality, and service quality—were accepted by the respondents. Students place the highest emphasis on service quality in a self-regulated smart learning environment besides personal factors. Thus, sound systems, information, and service quality form the cornerstone of a successful smart learning environment. Third, interaction/participation engagement and performance engagement in the smart learning environment were comparatively weaker than those of skills and emotional engagement. Fourth, participants had excellent cross-cultural awareness, high recognition, and a correct attitude toward cross-cultural communication ability. However, the majority of participants lack sufficient cross-cultural skills and communication abilities. Fifth, males, international trade majors, and sophomores have better assessments of self-regulated smart learning environments. They are more engaged in classrooms and have higher recognition and evaluation of intercultural communicative competence. Sixth, self-regulated smart learning environment, classroom engagement, and intercultural communicative competence were all highly correlated. This implies that the better the self-regulated smart learning environment, the more the students are engaged in the classroom and the more competent the students are. Last, a language learning program was proposed to improve the students' classroom engagement under the self-regulated

smart learning environment, thus improving Chinese EFL learners' intercultural communicative competence.

Some recommendations are proposed. First, online course designers may design relevant and interesting materials or courses to stimulate students' critical thinking. Encourage students to consider their multicultural communication skills while giving the teacher vital information. This could make students more self-conscious learners. Second, teachers may take intercultural communication knowledge into account when designing lectures or compiling teaching materials in addition to providing students with methodical guidance on improving their communication skills. Third, learners may improve their communicative capability by self-regulating their learning strategies, learning process, self-reflection, self-monitoring, and cooperating actively with teachers and peers. Fourth, future researchers may increase the number and variety of respondents by looking into more students from various majors and institutions to compare the differences in terms of major and sex in the self-regulated smart learning environment, classroom participation, and intercultural communicative competence. Last, a proposed language learning program may be implemented to enhance the system quality of a self-regulated smart learning environment, students' performance engagement, and intercultural communicative knowledge for Chinese EFL students.

5. References

Adler, N. J., & Aycan, Z. (2018). Cross-cultural interaction: What we know and what we need to know. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 307-333.

Alkhasawnh, S., & Alqahtani, M. A. M. (2019). Fostering students' SRL through using a learning management system to enhance academic outcomes at the University of Bisha. *TEM Journal*, 8(2), 662.

Akbari, E., Naderi, A., Simons, R. J., & Pilot, A. (2016). Student engagement and foreign language learning through online social networks. *Asian-Pacific Journal of Second and Foreign Language Education*, 1, 1-22.

Byram, M. (2020). Teaching and assessing intercultural communicative competence: Revisited. Multilingual Matters.

Bhattacherjee, A., & Park, S. C. (2014). Why end-users move to the cloud: a migration-theoretic analysis. European Journal of Information Systems, 23(3), 357-372.

Chen, G. Q. (2014) *Problems and countermeasures in cross-cultural teaching of college English*. (Doctoral dissertation, Shanghai International Studies University).

Heilporn, G., Lakhal, S., & Bélisle, M. (2021). An examination of teachers' strategies to foster student engagement in blended learning in higher education. International Journal of Educational Technology in Higher Education, 18, 1-25.

Jackson, J. (2019). Introducing language and intercultural communication. Routledge.

Liu, H. (2023). Research on Cultivating English Cross cultural Communication Abilities among College Students in the New Media *Environment Journal of Qiqihar University (Philosophy and Social Sciences Edition)* (10), 165-168 10.13971/j.cnki.cn23-1435/c.2023.10.021

Manganello, F., Falsetti, C., & Leo, T. (2019). Self-regulated learning for web-enhanced control engineering education. *J. of Educational Technology & Society*, 22(1), 44-58.

Peng, Y. (2021, January). Research on online self-regulation of college students in English blended learning. *In 2020 3rd International Seminar on Education Research and Social Science (ISERSS 2020)* (pp. 390-394). Atlantis Press.

Wu, B., & Chen, X. (2016). Continuance intention to use moocs: integrating the technology acceptance model (tam) and task technology fit (ttf) model. Computers in Human Behavior, 67(FEB.), 221-232.