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The Factors Impacting Junior College Students' Satisfaction and Continuance Intention to Use MOOC Platform in Chengdu, China

Zhang Ting*

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Abstract

Purpose: This article aimed to research factors impacting Junior college students' satisfaction and continuance intention to use Massive Open Online Course platforms in Chengdu, China. The conceptual framework presented cause-and-effect relationships between subjective norms, perceived usefulness, learning engagement, facilitating conditions, hedonic motivation, satisfaction, and continuance intention. **Research design, data, and methodology:** Descriptive and quantitative methods (n=450) were used to analyze the factors impacting Junior College Students' satisfaction and continuance intention in Chengdu, China. This study selected purposive sampling in the first stage, stratification random sampling, and convenience sampling were used in the second and third stages. Questionnaires are distributed online. Confirmatory factor analysis (CFA) and structural equation model (SEM) were used for data analysis, including model fitting analysis, reliability and validity testing, hypothesis testing, etc. **Results:** The results showed that subjective norms, Perceived usefulness, learning engagement, facilitating conditions, and hedonic motivation had a significant impact on satisfaction. Satisfaction had a significant impact on continuance intention. **Conclusions:** The study suggested that to make the National Training Programme more effective, policymakers and programmed operators could increase their investment in the factors that affect teacher performance and loyalty in the NTP and optimize the proportion of investment.

Keywords: Satisfaction, Continuance Intention, MOOC Platform, Continuance Intention, Subjective Norms

JEL Classification Code: E44, F31, F37, G15

1. Introduction

In 2019, the Ministry of Education of China issued the "Key Points of Education Informatization and Network Security in 2019", proposing to promote "Internet add education," accelerate the upgrading of education informatization, promote education modernization, and adhere to high-quality education development. The construction of online courses in China takes course teaching as the main body and has built and put into use high-quality courses, open courses, high-quality resource-sharing courses, Massive Open Online Course (MOOCs), and other courses at all levels with an increasing number. The application of

online education in practice has also become the online education industry, as represented by MOOC. The representative MOOC platforms have been in place since the start of MOOCs in China in 2013. As a new type of course, MOOCs have become an important resource for the education industry. At the same time, relying on the MOOC platform, the education industry has achieved remarkable results in promoting international exchanges, educational equity, and learning reform. Various teaching methods and teaching models have emerged in the classroom, such as cross-school and cross-regional online teaching, online and offline mixed teaching, large-scale online courses and small-scale customized teaching, flipped classrooms, and so on.

* Zhang Ting, Sichuan Water Conservancy Vocational College, China.
 Email: 416868831@qq.com

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The MOOCs were online courses that allowed many learners to take courses online (Cheng, 2022). In learning, students could interact and collaborate extensively with teachers and other learners through the network (Fianu et al., 2020). With the support of network technology, MOOCs could provide various materials, such as pre-recorded videos, audio, PPT, e-books, etc., and teachers could evaluate students' work automatically. The student evaluation feature in MOOCs also allows students to rate each other (Sun et al., 2020). Learners increasingly preferred MOOCs as a distance learning method. This way of learning was flexible, and the cost of knowledge acquisition was low (Singh & Sharma, 2021). MOOCs are widely used in education worldwide and are promoted by different disciplines (Jung & Lee, 2018). In addition to providing communication tools between teachers and students, the MOOC platform could also conduct online exams and online assignments, improve students' interaction, collaboration, and social skills, and give teachers feedback to keep up with students' learning. Due to the characteristics of sharing, convenience, and efficiency, MOOC has been widely adopted, becoming a learning method to improve education quality and reduce education costs (Yang & Lee, 2021).

There were many benefits to using MOOCs for teachers and students, and MOOCs were widely used in education, but many things still needed to be solved. The first problem was the imbalance of educational resources and the unequal quality of education. Van de Oudeweetering and Agirdag (2018) found that in empirical research, compared with the disadvantaged groups, the specifically socially advantaged groups were the main beneficiaries of MOOCs and occupied most MOOC learners. Therefore, Rizvi et al. (2019) proposed that the level of community development, the level of MOOC development in the learner's locality, and the previous education level received by the learner were the key factors that affect the effectiveness of MOOC learning. Continuous use was the ultimate success factor of e-learning. Many educational institutions used MOOCs to motivate students to study; when the number of students enrolled was compared with the number of courses completed, the percentage of completed courses was low (Cheng, 2023). Davis et al. (2017) found that the enrollment of MOOCs was high, but course completion rates were very low, usually between 5% and 10%. The high dropout rate and low completion rate of MOOCs indicated that there were also problems in the teaching method or student orientation of MOOCs. Kizilcec et al. (2013) studied the learning style and learning mode of learners, and they believed that all types of students except the completers were likely to interrupt or even withdraw from the course learning. Therefore, the low completion rate of MOOCs and the high dropout rate of MOOCs needed researchers to study many aspects. Although various technologies, especially online support, supported

the development of MOOCs, courses' effectiveness must be improved to motivate students to take courses. Solutions included improving student support, assessing students' true performance in the course, and eliminating behaviors such as cheating (Hew & Cheung, 2014).

The research on MOOCs in China's theoretical and practical circles mainly focuses on the platform construction of MOOCs, the learning mode of MOOCs, the learning quality of MOOCs, and the value of MOOCs. Most scholars focus on undergraduate students' satisfaction and willingness to continue using MOOCs, but there are few studies on junior college students. Due to the differences between students at different learning levels in their satisfaction with MOOCs and their willingness to continuously use MOOCs, this study chooses junior college students as the research group to conduct a questionnaire survey and research the factors impacting junior college students' satisfaction and continuance intention to use the MOOC platform. The purpose of this study is to maintain the number of MOOC users, effectively control the excessive course withdrawal rate, improve the course completion rate of students, effectively utilize courses, increase the enthusiasm of users to continue to use MOOC, and ultimately improve the learning effect of students and promote the overall development of the MOOC industry.

2. Literature Review

2.1 Continuance Intention

Teo (2009) proposed that subjective norms refer to a person's perception that most people who are important to him or her think he should or should not perform the behavior in question. Important others were people whose opinions we considered important when making decisions. Fishbein and Ajzen (1975) defined subjective norms as when a person feels pressure to perform a particular behavior. That person was motivated to comply with those pressures. Smith and McSweeney (2007) argued that subjective norms were the degree to which a person perceived the importance of significant others, believing that they should perform that behavior, such as normative beliefs, and were weighted by the motivations of those referents, such as compliance motivations. Chen and Li (2010) showed that subjective norms, attitudes, and perceived behavior control were the contents of technical preparation theory. Bassiouni et al. (2019) found that subjective norms, descriptive norms, social pressure, and image are important social determinants of behavior.

2.2 Subjective Norms

Research by Bataineh et al. (2015) showed that subjective norms were the most powerful factor influencing user satisfaction, and subjective norms had a significant positive impact on user's satisfaction and continuance intention to use Facebook. Chen et al. (2018) believed that users would usually follow the opinions of classmates, friends, or teachers in regard to the use of MOOCs. If peers gave positive reviews of MOOCs, learners would have higher satisfaction when using MOOCs and would, therefore, be more willing to continue using MOOCs. In other words, subjective norms were the key factors affecting satisfaction. In the study, Hsu and Chiu (2004) believed that considering the background of Internet applications, external and internal influences should be considered when analyzing the possible impact of subjective norms on satisfaction. Users' perceptions of external and internal influence positively correlated with e-service usage satisfaction. The research of Ariffin et al. (2021) showed that subjective norms were important variables in determining satisfaction. The empirical results showed that subjective norms positively and significantly impacted user's-user satisfaction. In the study of Roca et al. (2006), they hypothesized that the willingness to continue using e-learning was determined by satisfaction, and subjective norms were one of the factors that affected satisfaction. The results also demonstrated that subjective norms positively and significantly impacted satisfaction.

H1: Subjective norms have a significant impact on satisfaction.

2.3 Perceived Usefulness

Research by Masrani et al. (2023) showed that perceived usefulness is one of the unique factors that could be used to determine system performance and satisfaction. To be sure, users believed that using a system would improve their learning or job performance and increase their satisfaction. Daneji et al. (2019) proposed that perceived usefulness is more specific in the context of information systems. If users believe that using MOOCs is very useful, they will be more satisfied with it and might choose to continue using the MOOC. Lu et al. (2019) thought audiences eager to learn were drawn to MOOCs. Therefore, they believed that perceived usefulness was one of the most important experiences for users. The extrinsic motivation of MOOC users could be perceived as useful satisfaction. Perceived usefulness was the perception of the quality of MOOCs, which was related to satisfaction. Hadji and Degoulet (2016) considered that perceived usefulness represented the user's belief that using the system would improve their performance, which was determined by the use experience

and positively affected satisfaction and continuance intention. Perceived usefulness could play a role in assessing the usefulness of a system. Yang and Lee (2021) researched that the perceived usefulness of an information system was the user's expectation of the system, which would affect the user's adoption behavior. If useful, the user confirmed his expectations and perceived usefulness was formed. Students perceived usefulness increased their learning performance and satisfaction.

H2: Perceived usefulness has a significant impact on satisfaction.

2.4 Learning Engagement

Cheng (2022) showed that the more engaged learners were in the course, the more likely they were to stick with the online course. Using an e-learning system by learners could stimulate the degree of in-depth learning of students and improve students' satisfaction with the system. Students' immersion in the mobile learning system positively impacted their satisfaction with the system. Jain et al. (2023) showed that using technology tools, such as pre-recorded video lessons, could positively impact the satisfaction of learners who collaborated while receiving guidance and support from online course instructors. Hu and Hui (2012) found that learning engagement and effectiveness mediate the impacts of technology-mediated learning on learning satisfaction. Students' willingness to actively participate in their learning could allow them to acquire focused knowledge or skills better. This engagement was usually positively correlated with emotional engagement, such as satisfaction and interest in learning. Muzammil et al. (2020) pointed out that student participation was very important to their success in an online learning environment. Because learning engagement could build knowledge and promote students' cognitive development. Therefore, participation in learning was a learning process crucial to student satisfaction. Al-Rahmi et al. (2015) pointed out that learning engagement was the process by which students actively participated in their learning. Students as a group enriched the learning experience and shaped the perception of social networks. There was a significant relationship between learning engagement and satisfaction.

H3: Learning engagement has a significant impact on satisfaction.

2.5 Facilitating Conditions

Research by Teo and Wong (2013) showed that facilitators were factors in the external environment when a person performed a job. Students who felt supported using the website to check their online learning progress showed positive course satisfaction. Su and Tong (2021) believed that facilitating conditions enhanced the elderly's sense of social media self-efficacy and technology awareness cultivated the elderly's social awareness, and provided them with more opportunities to use technology. Facilitating conditions could significantly enhance satisfaction. Chan et al. (2010) showed that facilitating conditions were considered important, representing a key aspect of user evaluation of the technology use that contributes to user satisfaction. With sufficient resources, individuals had fewer reasons not to participate in a certain activity and were likelier to develop a positive attitude. Therefore, facilitating conditions had a positive impact on user satisfaction. Wang et al. (2021) proposed that facilitating conditions was a dimension of understanding resources and support in the environment. To understand the effectiveness of student learning, conditions were promoted to be consistent with social and cognitive existence. Convenience was also an important factor in predicting technical satisfaction. Wijaya and Solikhatin (2021) believed that the facilitating condition was the level of trust that individuals had in the company to support the existing system using infrastructure and support facilities and the availability of resources. Convenience was the factor that affected students' satisfaction with Zoom.

H4: Facilitating conditions has a significant impact on satisfaction.

2.6 Hedonic Motivation

Research by Shah and Khanna (2023) showed that the hedonic motivation of MOOCs was the user's cognitive and experiential pleasure, joy, and excitement. For MOOCs, users could experience hedonic value by using learning resources on the MOOC platform. Lee et al. (2021) found that hedonic motivation was important for users to feel satisfied with technical products or services. The fun of requesting the device would increase the user's satisfaction with the hedonic benefits obtained by using the device. Hedonic motivation has also been an important factor in user satisfaction and adoption of technology products or services in other contexts. Alalwan et al. (2018) also confirmed that hedonic motivation was the sense of pleasure, fun, and pleasure that users got from using new products, services, and applications. These feelings were intrinsic motivations. If users feel intrinsically motivated to use these products, they will be satisfied with their experience. Jia et al. (2022) believed that hedonic motivation was positively correlated

with carelessness, positive emotions, vitality, and satisfaction. Kim et al. (2013) believed that hedonic motivation was key to adopting value-driven systems. User motivation and participation tendencies affected the satisfaction of value-driven systems.

H5: Hedonic motivation has a significant impact on satisfaction.

2.7 Satisfaction

Masrani et al. (2023) pointed out that higher satisfaction made customers more likely to buy and use the same product or service more often. Customers' continuance intention to buy was positively affected by their satisfaction. Learner satisfaction or improving customer satisfaction was a key problem to solve. Marandu et al. (2023) thought that satisfaction was associated with continuance intention, as the prior concern would be to enhance the usefulness of the online learning system to promote continuance intention. Improving the effectiveness of online learning systems could promote learners' continuance intention of learning. Franque et al. (2021) studied people's urges and desires and found they were expected to be satisfied. Therefore, when their wishes were met, it would promote satisfaction and the willingness to continue using the information system, and satisfaction would impact the willingness to continue using the information system. Yang and Lee (2021) believed that users' satisfaction with information systems was a prerequisite for the continuance intention. Larsen et al. (2009) pointed out that the user's satisfaction with the information system inspired the strong will for the continuous development of the information system and the user's continuance intention.

H6: Satisfaction has a significant impact on continuance intention.

3. Research Methods and Materials

3.1 Research Framework

In this paper, the conceptual framework mainly involved the following theoretical basis: Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003). The Technology Acceptance Model (TAM) was developed by Davis (1986), and the Theory of Planned Behaviour (TPB) was proposed by Hsu and Chiu (2004). Based on the theoretical framework, a conceptual framework was proposed and described in Figure 1.



Figure 1: Research Conceptual Framework

H1: Subjective norms have a significant impact on satisfaction.

H2: Perceived usefulness has a significant impact on satisfaction.

H3: Learning engagement has a significant impact on satisfaction.

H4: Facilitating conditions has a significant impact on satisfaction.

H5: Hedonic motivation has a significant impact on satisfaction.

H6: Satisfaction has a significant impact on continuance intention.

3.2 Research Methodology

This study adopted the method of questionnaire survey and quantitative analysis. Through the analysis of the survey data of junior college students, the factors impacting junior college students' satisfaction and continuance intention in Chengdu, China, were discussed. The first part was the screening questions, the second part was factored on impacting users' satisfaction with the MOOC platform, and a five-point Likert scale was used to measure variables. The third part was demographic information and data statistics. Before issuing a large-scale questionnaire, this study adopted the IOC research method recommended by experts and conducted a pilot test on 30 respondents. The IOC results were passed at over 0.6. For pilot test, Cronbach's alpha score has resulted for over 0.7.

3.3 Population and Sample Size

After the questionnaire in this paper passed the validity and reliability tests, the researchers sent the questionnaire to the target population and received 450 data. In order to analyze the data, AMOS software, and SPSS software were used for statistical tests. The researcher used CFA to evaluate measurement models to understand the extent to which measurement items reflected potential variables. To evaluate

and validate the fit of the measurement model and determine whether the model accurately reflects the observed data, the paper used confirmatory factor analysis (CFA) in order to determine whether the structural model was applicable and the causal relationship between variables and to evaluate the structural model, the structural equation model was adopted in this paper.

3.4 Sampling Technique

This study adopted the method of purposive sampling, stratified random sampling and convenience sampling. The researchers conducted a sample survey at the Sichuan Water Conservancy Vocational College. The students were from the four majors in the college. Table 1 showed the sample size of this study.

Table 1: Sample Units and Sample Size

Four Main Subjects	Population Size	Proportional Sample Size
Big data and financial management students	328	125
Engineering measurement technology students	236	90
Power system automation technology students	370	141
Engineering technology students	246	94
Total	1180	450

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Among the people who participated in the questionnaire survey of this study, from the perspective of gender, the proportion of male and female subjects were 46.4% and 53.6%, respectively, indicating that there was not a big difference in the proportion of male and female. Regarding sample age, 51.8% were 18 to 20, and 48.2% were 21 to 23. There was little difference in the use of MOOC platforms between the two age groups. Regarding the time spent using MOOC platforms, 29.1% have been using them for less than 6 months, 39.6% have been using them for 6 months to 1 year, and 31.3% have been using them for more than 1 year and less than 2 years. The possible reason was that after entering the university, first-year students usually start to study various professional courses in the second semester, and the period between the end of the second academic year was the most professional courses, so the number of people who used the MOOC platforms between six months and one year was the largest. The data from this feedback helped research the factors impacting junior college students' satisfaction and intention to use the MOOC platform in Chengdu, China.

Table 2: Demographic Profile

Demographic and General Data (N=450)		Frequency	Percentage
Gender	Male	209	46.4%
	Female	241	53.6%
Age	18-20 years old	233	51.8%
	21-23 years old	217	48.2%
MOOC Experience	Less than 6 months	131	29.1%
	6 months - one year	178	39.6%
	one year - two years	141	31.3%

4.2 Confirmatory Factor Analysis (CFA)

The researcher used CFA to evaluate measurement models to understand the extent to which measurement items reflected potential variables. CFA results showed that all variable items were significant, factor loading values were greater than 0.5, and p values were less than 0.05. The Composite Reliability (CR) was greater than the cut-off points of 0.7, and the Average Variance Extracted (AVE) was higher than the cut-off point of 0.4. The paper evaluated the discriminant validity by calculating the square root of AVE.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variable	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Subjective Norms (SN)	Bataineh et al. (2015)	3	0.823	0.737-0.851	0.825	0.612
Perceived Usefulness (PU)	Masrani et al. (2023)	4	0.764	0.598-0.702	0.765	0.450
Learning Engagement (LET)	Cheng (2022)	4	0.789	0.522-0.803	0.799	0.505
Facilitating Conditions (FC)	Teo and Wong (2013)	4	0.744	0.570-0.729	0.743	0.421
Hedonic Motivation (HM)	Shah and Khanna (2023)	3	0.780	0.750-0.759	0.783	0.547
Satisfaction (SA)	Marandu et al. (2023)	3	0.808	0.647-0.848	0.817	0.601
Continuance Intention (CI)	Teo (2009)	3	0.778	0.702-0.791	0.780	0.543

Furthermore, Table 4 presents a range of goodness-of-fit indices, including CMIN/DF, GFI, AGFI, NFI, CFI, TLI, and RMSEA. Notably, all these indices exceeded the acceptable standard range by a significant margin. This indicates robust evidence of the measurement model's strong goodness of fit.

	SN	PU	LET	FC	HM	SA	CI
FC	0.295	0.171	0.236	0.649			
HM	0.271	0.093	0.235	0.528	0.740		
SA	0.311	0.239	0.336	0.415	0.417	0.775	
CI	0.184	0.097	0.133	0.278	0.257	0.288	0.737

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.00 (Awang, 2012)	2.299
GFI	≥ 0.85 (Cheng, 2022)	0.908
AGFI	≥ 0.80 (Cheng, 2022)	0.881
NFI	≥ 0.80 (Alalwan, 2020)	0.870
CFI	≥ 0.80 (Alalwan, 2020)	0.921
TLI	≥ 0.80 (Alalwan, 2020)	0.906
RMSEA	< 0.08 (Taylor & Todd, 1995)	0.054
Model Summary		Acceptable Model Fit

Remark: CMIN/DF = the ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normed fit index, CFI = comparative fit index, TLI = Tucker-Lewis index and RMSEA = root mean square error of approximation.

The results showed that the value of discriminant validity was greater than all the factor correlations, and the discriminant validity was supportive. This study used a goodness of fit index to evaluate model fit.

Table 5: Discriminant Validity

	SN	PU	LET	FC	HM	SA	CI
SN	0.782						
PU	0.105	0.671					
LET	0.178	0.147	0.711				

4.3 Structural Equation Model (SEM)

Awang (2012) suggested that the value of CMIN/DF should be less than 5.00, and Cheng (2022) believed that GFI should be greater than or equal to 0.85 and AGFI should be greater than or equal to 0.80. Alalwan (2020) believes that NFI, CFI, and TLI should be greater than or equal to 0.80. Taylor and Todd (1995) believed that RMSEA was less than 0.08. The researchers used SPSS software and AMOS to calculate the indicators of the SEM model and obtained a good result of the fitting index. CMIN/df = 3.231, GFI = 0.865, AGFI = 0.836, NFI = 0.805, CFI = 0.855, TLI = 0.838, RMSEA = 0.07. These values are listed in Table 6.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.00 (Awang, 2012)	3.231
GFI	≥ 0.85 (Cheng, 2022)	0.865
AGFI	≥ 0.80 (Cheng, 2022)	0.836
NFI	≥ 0.80 (Alalwan, 2020)	0.805

Fit Index	Acceptable Criteria	Statistical Values
CFI	≥ 0.80 (Alalwan, 2020)	0.855
TLI	≥ 0.80 (Alalwan, 2020)	0.838
RMSEA	< 0.08 (Taylor & Todd, 1995)	0.070
Model Summary		Acceptable Model Fit

Remark: CMIN/DF = the ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normed fit index, CFI = comparative fit index, TLI = Tucker-Lewis index and RMSEA = root mean square error of approximation.

4.4 Research Hypothesis Testing Result

Table 7 shows the significant results of the model. The results showed that all of this study's hypotheses were valid. Subjective norms influence satisfaction ($\beta=0.187$), perceived usefulness influences satisfaction ($\beta=0.209$), learning engagement influences satisfaction ($\beta=0.245$), facilitating conditions affect satisfaction ($\beta=0.277$), hedonic motivation affects satisfaction ($\beta=0.283$), and satisfaction influences continuance intention ($\beta=0.334$).

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: SN \rightarrow SA	0.187	3.561*	Supported
H2: PU \rightarrow SA	0.209	3.749*	Supported
H3: LET \rightarrow SA	0.245	4.575*	Supported
H4: FC \rightarrow SA	0.277	4.665*	Supported
H5: HM \rightarrow SA	0.283	5.065*	Supported
H6: SA \rightarrow CI	0.334	5.462*	Supported

Note: * $p < 0.05$

Source: Created by the author

The results of Table 7 showed that the assumption of H1 indicated that subjective norms were the factor that affected satisfaction with a standardized path coefficient of 0.187. Hypothesis H2 showed that perceived usefulness was a factor affecting satisfaction, with a standardized path coefficient of 0.209. The hypothesis of H3 showed that learning engagement affected satisfaction, and its standardized path coefficient was 0.245. The hypothesis of H4 showed that facilitating conditions influenced satisfaction, and the standardized path coefficient was 0.277. The hypothesis of H5 showed that hedonic motivation was a factor affecting satisfaction, and its standardized path coefficient was 0.283. The hypothesis of H6 showed that satisfaction affected continuance intention, and its standardized path coefficient was 0.334.

5. Conclusion and Recommendation

5.1 Conclusion

This paper studied the factors impacting junior college students' satisfaction and intention to use MOOC platforms in Chengdu, China. Firstly, this paper analyzed the factors that affected junior college students' satisfaction and continuance intention. These factors included five variables: subjective norms, perceived usefulness, learning engagement, facilitating conditions, and hedonic motivation. Together with satisfaction and continuance intention, seven variables were studied in this paper. Secondly, based on previous researchers' theoretical framework and research literature, this paper analyzed the relationship between these seven variables. Then, this paper discussed the factors and mechanisms that impact junior college students' satisfaction and continuance intention to use the MOOC platform.

The target population of this study was the students who have used the MOOC platform or were using the MOOC platform at Sichuan Water Conservancy Vocational College in Chengdu, China. Considering the purpose of this study, based on the questionnaire designed by previous scholars and combined with quantitative analysis methods, the author designed and developed the questionnaire for this study and implemented data collection. The researchers sent 450 questionnaires to students of four subjects who had used or were currently using a MOOC platform. The author used descriptive statistics when analyzing the respondents' demographic and other basic information. When using inferential statistics to analyze the data, the factor structure of the random relationship between variables was determined using the structural equation model (SEM), and the hypothesis of the relationship between variables was analyzed.

After the analysis, the research found that subjective norms, perceived usefulness, learning engagement, facilitating conditions, and hedonic motivation had a significant impact on satisfaction, and satisfaction had a significant impact on continuance intention. At the same time, the research draws the following conclusions. First, when students are influenced and stressed by people around them, they work harder to overcome difficulties in learning and improve their satisfaction with the course during the continuous learning process. Second, if students perceived that the rich and varied learning resources and interesting learning content provided by the MOOCs made them feel useful in learning, improve their learning interest, solve the problems encountered in learning, and improve their learning efficiency. Students would think that this learning mode was useful. Third, learners had a positive attitude

towards the course and would actively participate in discussions, questions, and answers. Interaction with teachers and classmates could enhance learning immersion, help solve learning questions, and improve learning efficiency. Fourth, when students used the MOOC platform to learn, they had a certain knowledge base, relevant skills, complete software and hardware facilities required for learning, and a smooth learning network environment; they would think that it was easy to learn new courses under such promoting conditions, and they would also think that using this platform to learn could save time, energy, and improve learning efficiency. To improve students' satisfaction. Fifth, the diversified forms of MOOC platforms, such as platform design, content form, interaction mode, question-answering method and discussion, chapter test, and final test, made students more likely to feel the pleasure of learning so that students believed that learning was not only the exploration of knowledge but also a kind of entertainment so that learning motivation and interest would be enhanced.

Satisfaction was a comprehensive evaluation of MOOC learning by learners, including course content, instructional design, interactive communication, and technical support. From the above conclusions, satisfaction was an important indicator to measure the continuance intention to use the MOOC platform, and higher satisfaction meant that students were more likely to continue to use the MOOC platform.

5.2 Recommendation

Empirical analysis of this study showed that exogenous variable subjective norms, perceived usefulness, learning engagement, facilitating conditions, and hedonic motivation would significantly affect satisfaction. Satisfaction had a significant positive effect on continuance intention. In order to improve user satisfaction effectively, strengthen users' continuance intention of the platform, and maintain the long-term development of MOOCs, this paper put forward the following suggestions based on the research results.

Firstly, MOOC platforms should focus on improving their products' usefulness and content quality. Teachers could determine the teaching objectives according to the learning content and characteristics of learners, enrich the teaching content, such as voice, video, case, and other content, improve the quality of the course, create teaching situations, strengthen interaction, such as participating in the discussion board, answering and feedback learners' questions in time, and improve the interaction between teachers and students.

The second was to enhance the practicality of MOOC platform functions and enhance learners' participation. The current MOOC platform users have a high dropout rate and a low frequency of use. From the functional point of view, in addition to satisfying learners' basic content browsing, homework submission, communication, and posting

functions, the platform should further maintain a high level of communication and learning activities, establish an efficient learning community, enhance learners' participation, and improve students' learning enthusiasm. To provide learners with more personalized and practical courses to meet the individual needs of learners. At the same time, MOOCs could be promoted through online platforms, WeChat, QQ, public accounts, and other social platforms to expand the scope of learners.

The third aspect was to improve the construction of the campus network and create a good learning environment. As the main place for students to study, the college should build an information technology environment actively, provide network services for students, improve the mobile network-related infrastructure construction, and realize the full coverage of the network on the campus to improve students' learning efficiency. At the same time, the college should provide students with network security, do a good job of network monitoring, and create a safe MOOC learning network environment for students.

5.3 Limitation and Further Study

Due to the researcher's limited time and objective conditions, this study still had certain limitations and deficiencies, which needed to be improved in subsequent studies. In constructing learners' continuous learning behavior model, there might also be some more important variables that were not included in the model. Since the development of this research tool was based on the analysis of survey data of college students, there could be no guarantee of the general applicability of the tool and whether the development tool could be provided to groups other than college students. In future studies, more variables could be included in the model for analysis to verify their impact on student satisfaction and continuous use intention. It was also necessary to sample many learners from different backgrounds, collect data for analysis, and enhance the universality of the research.

References

- Alalwan, A. A. (2020). Mobile food ordering apps: An empirical study of the factors affecting customer e-satisfaction and continued intention to reuse. *International Journal of Information Management*, 50, 28-44. <https://doi.org/10.1016/j.ijinfomgt.2019.04.008>
- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness, and trust. *Technology in Society*, 55, 100-110. <https://doi.org/10.1016/j.techsoc.2018.06.007>

- Al-Rahmi, W. M., Othman, M. S., & Yusuf, L. M. (2015). Effect of engagement and collaborative learning on satisfaction through the use of social media on Malaysian higher education. *Research Journal of Applied Sciences, Engineering and Technology*, 9(12), 1132-1142.
- Ariffin, S. K., Abd Rahman, M. F. R., Muhammad, A. M., & Zhang, Q. (2021). Understanding the consumer's intention to use e-wallet services. *Spanish Journal of Marketing-ESIC*, 25(3), 446-461. <https://doi.org/10.1108/sjme-07-2021-0138>
- Awang, Z. (2012). *A Handbook on SEM: Structural Equation Modeling* (4th ed). Universiti Teknologi MARA (UiTM) Press.
- Bassiouni, D. H., Hackley, C., & Meshreki, H. (2019). The integration of video games in family-life dynamics: An adapted technology acceptance model of family intention to consume video games. *Information Technology and People*, 32(6), 1376-1396. <https://doi.org/10.1108/itp-11-2017-0375>
- Bataineh, A. Q., Al-Abdallah, G. M., & Alkharabsheh, A. M. (2015). Determinants of continuance intention to use social networking sites (SNSs): Studying the case of Facebook. *International Journal of Marketing Studies*, 7(4), 121-135. <https://doi.org/10.5539/ijms.v7n4p121>
- Chan, F. K. Y., Thong, J. Y. L., Venkatesh, V., Brown, S. A., Hu, P. J. H., & Tam, K. Y. (2010). Modeling citizen satisfaction with mandatory adoption of an e-government technology. *Journal of the Association for Information Systems*, 11(10), 510-549.
- Chen, C.-C., Lee, C.-H., & Hsiao, K.-L. (2018). Comparing the determinants of non-MOOC and MOOC continuance intention in Taiwan: Effects of interactivity and openness. *Library Hi Tech*, 36(4), 705-719. <https://doi.org/10.1108/lht-11-2016-0129>
- Chen, S. C., & Li, S. H. (2010). Consumer adoption of e-service: Integrating technology readiness with the theory of planned behavior. *African Journal of Business Management*, 4(16), 3556-3563.
- Cheng, Y. M. (2022). Which quality determinants cause MOOCs continuance intention? A hybrid extending the expectation-confirmation model with learning engagement and information systems success. *Library Hi Tech*, 2(3), 1-10.
- Cheng, Y. M. (2023). Can media richness and interaction act as stimulants to medical professionals' learning persistence in MOOCs via fostering learning engagement? *Interactive Technology and Smart Education*, 4(2), 30-89. <https://doi.org/10.1108/ITSE-09-2022-0116>
- Daneji, A. A., Ayub, A. F. M., & Khambari, M. N. M. (2019). The effects of perceived usefulness, confirmation, and satisfaction on continuance intention in using massive open online courses (MOOCs). *Knowledge Management & E-Learning*, 11(2), 201-214.
- Davis, D., Jivret, I., Kizilcec, R. F., Chen, G., Hauff, C., & Houben, G. J. (2017). Follow the successful crowd: Raising MOOC completion rates through social comparison at scale. In *Proceedings of the Seventh International Learning Analytics & Knowledge Conference*, 454-463.
- Davis, F. D. (1986). *A technology acceptance model for empirically testing new end-user information systems: Theory and results* [Doctoral dissertation]. MIT Sloan School of Management.
- Fianu, E., Blewett, C., & Ampong, G. O. (2020). Toward the development of a model of student usage of MOOCs. *Education + Training*, 62(5), 521-541. <https://doi.org/10.1108/et-11-2019-0262>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research* (1st ed.). Addison-Wesley.
- Franque, F. B., Oliveira, T., Tam, C., & Santini, F. D. O. (2021). A meta-analysis of the quantitative studies in continuance intention to use an information system. *Internet Research*, 31(1), 123-158. <https://doi.org/10.1108/intr-03-2019-0103>
- Hadji, B., & Degoulet, P. (2016). Information system end-user satisfaction and continuance intention: A unified modeling approach. *Journal of Biomedical Informatics*, 61, 185-193. <https://doi.org/10.1016/j.jbi.2016.03.021>
- Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges. *Educational Research Review*, 12, 45-58. <https://doi.org/10.1016/j.edurev.2014.05.001>
- Hsu, M. H., & Chiu, C. M. (2004). Predicting electronic service continuance with a decomposed theory of planned behavior. *Behaviour & Information Technology*, 23(5), 359-373. <https://doi.org/10.1080/01449290410001669969>
- Hu, P. J. H., & Hui, W. (2012). Examining the role of learning engagement in technology-mediated learning and its effects on learning effectiveness and satisfaction. *Decision Support Systems*, 53, 782-792. <https://doi.org/10.1016/j.dss.2012.05.014>
- Jain, A., Sharma, P., & Meher, J. R. (2023). Effects of online platforms on learner's satisfaction: A serial mediation analysis with instructor presence and student engagement. *The International Journal of Information and Learning Technology*, 40(5), 453-466. <https://doi.org/10.1108/ijilt-02-2023-0017>
- Jia, N., Li, W., Zhang, L., & Kong, F. (2022). Beneficial effects of hedonic and eudaimonic motivations on subjective well-being in adolescents: A two-wave cross-lagged analysis. *The Journal of Positive Psychology*, 17(5), 701-707. <https://doi.org/10.1080/17439760.2021.1913641>
- Jung, Y., & Lee, J. (2018). Learning engagement and persistence in massive open online courses (MOOCs). *Computers & Education*, 122, 9-22. <https://doi.org/10.1016/j.compedu.2018.02.013>
- Kim, Y. H., Kim, D. J., & Wachter, K. (2013). A study of mobile user engagement (MoEN): Engagement motivations, perceived value, satisfaction, and continued engagement intention. *Decision Support Systems*, 56, 361-370. <https://doi.org/10.1016/j.dss.2013.07.002>
- Kizilcec, R. F., Piech, C., & Schneider, E. (2013). Deconstructing disengagement: Analyzing learner subpopulations in massive open online courses. *Proceedings of the Third International Conference on Learning Analytics and Knowledge*, 170-179.
- Larsen, T. J., Sørøbø, A. M., & Sørøbø, Ø. (2009). The role of task-technology fit as users' motivation to continue information system use. *Computers in Human Behavior*, 25(3), 778-784. <https://doi.org/10.1016/j.chb.2009.02.006>

- Lee, K. Y., Sheehan, L., Lee, K., & Chang, Y. (2021). The continuation and recommendation intention of artificial intelligence-based voice assistant systems (AIVAS): The influence of personal traits. *Internet Research*, 31(5), 1899-1939. <https://doi.org/10.1108/intr-06-2020-0327>
- Lu, Y., Wang, B., & Lu, Y. (2019). Understanding key drivers of MOOC satisfaction and continuance intention to use. *Journal of Electronic Commerce Research*, 20(2), 1-10.
- Marandu, E. E., Mathew, I. R., Sivotwa, T. D., Machera, R. P., & Jaiyeoba, O. (2023). Predicting students' intention to continue online learning post-COVID-19 pandemic: Extension of the unified theory of acceptance and usage technology. *Journal of Applied Research in Higher Education*, 15(3), 681-697. <https://doi.org/10.1108/jarhe-02-2022-0061>
- Masrani, S. A., Mohd Amin, M. R., Sivakumaran, V. M., & Piaralal, S. K. (2023). Important factors in measuring learners' satisfaction and continuance intention in open and distance learning (ODL) institutions. *Higher Education, Skills and Work-Based Learning*, 13(3), 587-608. <https://doi.org/10.1108/heswbl-12-2022-0274>
- Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020). Investigating student satisfaction in online learning: The role of student interaction and engagement in distance learning universities. *Turkish Online Journal of Distance Education*, 21, 88-96. <https://doi.org/10.17718/tojde.770928>
- Rizvi, S., Rienties, B., & Khoja, S. A. (2019). The role of demographics in online learning: A decision tree-based approach. *Computers & Education*, 137, 32-47. <https://doi.org/10.1016/j.compedu.2019.04.001>
- Roca, J. C., Chiu, C. M., & Martínez, F. J. (2006). Understanding e-learning continuance intention: An extension of the Technology Acceptance Model. *International Journal of Human-Computer Studies*, 64(8), 683-696. <https://doi.org/10.1016/j.ijhcs.2006.01.003>
- Shah, J., & Khanna, M. (2023). Determining the post-adoptive intention of millennials for MOOCs: An information systems perspective. *Information Discovery and Delivery*, 52(2), 243-260. <https://doi.org/10.1108/idd-11-2022-0109>
- Singh, A., & Sharma, A. (2021). Acceptance of MOOCs as an alternative for internship for management students during COVID-19 pandemic: An Indian perspective. *International Journal of Educational Management*, 35(6), 1231-1244. <https://doi.org/10.1108/ijem-03-2021-0085>
- Smith, J. R., & McSweeney, A. (2007). Charitable giving: The effectiveness of a revised theory of planned behavior model in predicting donating intentions and behavior. *Journal of Community and Applied Social Psychology*, 17(5), 363-386. <https://doi.org/10.1002/casp.906>
- Su, J., & Tong, X. (2021). Catching silver consumers in China: An integrated model of Chinese older adults' use of social networking technology. *Asia Pacific Journal of Marketing and Logistics*, 33(9), 1903-1917. <https://doi.org/10.1108/apjml-05-2020-0352>
- Sun, Y., Guo, Y., & Zhao, Y. (2020). Understanding the determinants of learner engagement in MOOCs: An adaptive structuration perspective. *Computers & Education*, 157, 1-37.
- Taylor, S., & Todd, P. A. (1995). Assessing IT Usage: The Role of Prior Experience. *MIS Quarterly*, 19, 561-570. <https://doi.org/10.2307/249633>
- Teo, T. (2009). The impact of subjective norm and facilitating conditions on pre-service teachers' attitude toward computer use: A structural equation modeling of an extended technology acceptance model. *Educational Computing Research*, 40(1), 89-109. <https://doi.org/10.2190/ec.40.1.d>
- Teo, T., & Wong, S. L. (2013). Modeling key drivers of e-learning satisfaction among student teachers. *Educational Computing Research*, 48(1), 71-95. <https://doi.org/10.2190/ec.48.1.d>
- Van de Oudeweetering, K., & Agirdag, O. (2018). MOOCs as accelerators of social mobility? A systematic review. *Journal of Educational Technology & Society*, 21(1), 1-11.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478. <https://doi.org/10.2307/30036540>
- Wang, J., Yang, Y., Li, H., & van Aalst, J. (2021). Continuing to teach in a time of crisis: The Chinese rural educational system's response and student satisfaction and social and cognitive presence. *British Journal of Educational Technology*, 52(4), 1494-1512. <https://doi.org/10.1111/bjjet.13129>
- Wijaya, F., & Solikhatin, S. A. (2021). Analysis of end-user satisfaction of Zoom application for online lectures. *2021 3rd East Indonesia Conference on Computer and Information Technology*, 348-353.
- Yang, Q., & Lee, Y. C. (2021). The critical factors of student performance in MOOCs for sustainable education: A case of Chinese universities. *Sustainability*, 13(14), 8089. <https://doi.org/10.3390/su13148089>