

The Factors Affecting Students' Satisfaction with Online Course at Guangxi Logistics Vocational and Technical College

Songa Li^{1,*}, Sirikorn Tosati²

¹Bansomdejchaopraya Rajabhat University, Thailand

²Bansomdejchaopraya Rajabhat University, Thailand

Abstract. The purposes of this research are 1) to identify the factors that influence students' satisfaction with online courses at Guangxi Logistics Vocational and Technical College and 2) to provide guidelines for the development of online courses at the college based on the factors affecting students' satisfaction. The population for this research primarily consists of 1600 university students enrolled at Guangxi Logistics Vocational and Technical College in China. The sample group, following Krejcie and Morgan (1970), comprised 310 students who were selected based on their participation in online courses and completion of an online survey. The research instruments used in this study include an online survey questionnaire that assessed students' satisfaction levels across four dimensions: Course Content, Teaching Quality, Learning Experience, and Evaluation Mechanism. The statistics used to analyze the data were descriptive statistics, including mean values (M) and regression Analysis. The results of this research contribute to achieving the objectives as follows: 1. Factors influencing students' satisfaction with online courses: The study found that Teaching Quality received the highest average value (M) and ranked first, indicating that students were highly satisfied with the quality of teaching in online courses. Course Content ranked second, suggesting that it largely meets the professional development needs of students. The Learning Experience dimension ranked third, highlighting the importance of optimizing platform management and technical aspects to enhance students' overall learning experience. The Evaluation Mechanism dimension ranked fourth, indicating that students were less satisfied with the current evaluation mechanism and desired a more scientifically designed and personalized evaluation system. 2. Guidelines for the development of online courses: Based on the factors identified, the research provides valuable guidelines for the development of online courses at Guangxi Logistics Vocational and Technical College. These guidelines emphasize the importance of maintaining high teaching quality, addressing the professional development needs of students through course content, optimizing the platform management and technical aspects to enhance the learning experience, and implementing a scientifically designed and personalized evaluation system to improve student satisfaction.

1 INTRODUCTION

Online learning has experienced significant growth worldwide, with China witnessing a remarkable surge in the number of online learners. This shift has been particularly pronounced in higher education institutions, prompted by the outbreak of the New Crown Pneumonia epidemic. As of February 2022, China boasted over 50,000 online courses, with nearly 800 million course selections and more than 300 million mobile credits earned by students, making it the global leader in online learning participation (Roy Rumpa; AlAbsy Mujeeb Saif Mohsen, 2022).[1] The market size of online education in China is projected to reach 607.54 billion yuan in 2022 (China Business Industry Research Institute). The appeal of online learning lies in its scalability, comprehensive course offerings, and ability to transcend time and space barriers. In Guangxi alone, over 9.8

million university students have embraced online learning, and this trend continues to gain momentum each year. The online learning platform provides students with a wider selection of courses and access to a wealth of teaching resources, facilitating convenient and flexible learning experiences. Notably, during the peak of the pandemic, online learning allowed teaching and learning activities to continue seamlessly, ensuring continuity in education. However, the development of e-learning faces various challenges, including high registration rates but low completion rates on online platforms (Hou, Wenling, 2020).[2] Learners' limited engagement and high dropout rates are often attributed to low satisfaction and a lack of willingness to continue learning online (Zhuang Huizi, 2022). [3] Existing studies indicate that students perceive online courses as lacking experiential satisfaction, inadequately meeting their professional and individual needs, and suffering from untimely updates (Zhao

* Corresponding author: 76638689@qq.com

Chengling, 2017). [4]In addition, the current e-learning platforms lack effective incentive mechanisms and have imperfect evaluation systems (Li Wei et al., 2018). Furthermore, challenges in evaluating students' online learning levels, such as low accuracy and long evaluation times, can negatively impact their motivation (Kunzhe Liu et al., 2023).[5] These concerns highlight the importance of addressing students' satisfaction with online courses. Therefore, this thesis aims to identify the factors influencing student satisfaction with online courses at Guangxi Logistics Vocational and Technical College. The research findings will provide valuable insights and guidelines for the college's online course development, enhancing the quality of the platform system, diversifying course content, promoting student engagement, and ultimately improving student satisfaction with online courses.

2 THEORIES AND RELATED RESEARCH

2.1 Online Learning Theory:

Online learning theory encompasses various perspectives on the nature and characteristics of learning conducted through the internet. Wang and Qiao (2009) emphasize the utilization of networks in online learning, highlighting its importance as an interactive learning environment.[6] He (2002) defines online learning as a transformative method that utilizes information technology to create innovative learning environments. [7]Rourke, Anderson, Garrison, and others (1999) approach online learning from a constructivist standpoint, emphasizing learner-instructor and learner-content interactions.[8] Sridharan, Deng, and Corbitt (2010) underscore the systematic nature of online learning, encompassing teaching, content, methods, platforms, and resource management.

2.2 Blended Learning Theory:

Blended learning combines the advantages of online learning and face-to-face teaching. According to Horn , blended learning integrates offline and online learning, providing emotional support and interaction in face-to-face teaching while leveraging online platforms for personalized feedback and learning pathways. Li Fengqing defines blended learning as maximizing learning effectiveness by selecting appropriate media technologies, instructional resources, and learning environments to achieve optimal learning outcomes.[9]

2.3 Constructivism Theory:

Constructivism emphasizes the active role of learners in constructing knowledge through interactions with the environment. Piaget's work, as cited by Shen , focuses on cognitive development through environmental interactions. Sternberg and Katz, as cited in Yang & Jia , emphasize individual agency in knowledge construction. Vygotsky's socio-cultural perspective, as cited by Shen ,

highlights the Zone of Proximal Development, emphasizing the role of social and historical contexts in learning.[10]

2.4 Research on online courses and satisfaction

Numerous studies have been conducted by experts and scholars to explore online courses and students' satisfaction, leading to the advancement of theoretical knowledge in the field. Xu Ke proposes a satisfaction model for online courses based on customer satisfaction theory, associationist learning theory, and behaviorist learning theory. Yang Lingsuggests enhancing teaching content by incorporating new developments in the discipline and promoting heuristic teaching and classroom interaction. Chen Xiaoranhighlights the challenges of high student attrition rates and low teacher evaluations despite high awareness and satisfaction levels. Zhang Luyin identifies the need for improved diversity, collaboration, interactivity, and learning resources in online courses. Yang Ping emphasizes the impact of diverse and collaborative learning activities on student satisfaction, advocating for targeted online courses and a sense of online learning community. Bai Yongguo underscores the importance of learners' willingness to continue learning for the sustainability of online learning spaces. Su Weihua et al. emphasize the integration of online self-learning, traditional classroom teaching, and classroom experiments to develop diverse teaching models and improve students' willingness to learn online. Xiaojun Zhang and Xiaoji Yang propose an effectiveness model and fusion clustering approach to evaluate online learning outcomes. Wang Ruishu highlights the significant role of online learning systems in maximizing students' learning effectiveness, and Rafique Rumana provides strategies to attract and enhance the satisfaction of online learners based on a user survey. These studies contribute to the understanding of factors influencing students' satisfaction with online courses and provide insights for improving the quality and effectiveness of online learning experiences.[11]

3 RESEARCH METHODOLOGY

3.1 The Population / Sample Group

3.1.1 The Population

The study population consists of 1600 university students enrolled at Guangxi Logistics Vocational and Technical College in China.

3.1.2 The Sample Group

Following the guidelines of Krejcie and Morgan , the sample for this study included 310 students from Guangxi Logistics Vocational College in China. These students were selected based on their participation in online courses and completion of an online survey. A

total of 300 valid questionnaires were obtained, resulting in an effective response rate of 96.8%.

3.2 Research Instruments

The research instrument used in this study was a questionnaire designed to assess the satisfaction level of online courses at Guangxi Logistics Vocational and Technical College. The questionnaire consisted of two parts. Part 1 collected personal information of respondents, including gender, year of study, and experience of online study. Part 2 measured the satisfaction level using a five-point Likert scale ranging from "extremely dissatisfied" to "extremely satisfied."

3.3 Constructing Process

The construction process of the questionnaire involved an extensive literature review, consultation of published research, integration of measurement items, and feedback from experts. Dimensions and specific items were formulated based on gathered information, and four measurement indicators were identified: course content, teaching quality, learning experience, and evaluation mechanism. Respondents' agreement was measured using a 5-point Likert scale, ranging from 1 (low) to 5 (high).

3.4 Data Collection

The study utilized the online platform Questionnaire Star (<https://www.wjx.cn/>) to compile the questionnaire.

A total of 310 questionnaires were distributed to students of Guangxi Logistics Vocational Technology College through various online channels, including Questionnaire Star, WeChat, Friend Circle, Weibo, and QQ.

Out of the 310 questionnaires distributed, 300 valid responses were collected, resulting in an effective rate of 96.8%. The data collection was done through simple random sampling.

The questionnaires were collected by administrative staff for statistical analysis.

3.5 Data Analysis

In this research, the data analysis focused on the satisfaction level of online courses for students at

Guangxi Logistics Vocational and Technical College. The following methods were employed:

Personal information of respondents, including gender, year of study, and online study experience, was analyzed using percentages.

The satisfaction level in four aspects, namely Learning Satisfaction, Course Content, Teaching Quality, and Learning Experience, was analyzed using average values, frequencies, and percentages. The interpretation of average values was based on Rensis Likert's scale, ranging from the highest level of satisfaction to the lowest level.

4 RESEARCH RESULTS

Table 1 The Average Value (M) and ranking of the satisfaction level of online courses for students at Guangxi Logistics Vocational and Technical College in four dimensions

	Four Dimensions	M	Level	Rank
1.	Course Content	3.71	Satisfied	2
2.	Teaching Quality	4.18	Satisfied	1
3.	Learning Experience	3.70	Satisfied	3
4.	Evaluation Mechanism	3.64	Satisfied	4
	Overall	3.81	Satisfied	

Table 1 presents the average values (M) and ranking of the satisfaction level of online courses for students at Guangxi Logistics Vocational and Technical College in four dimensions. The table includes the dimensions of Course Content, Teaching Quality, Learning Experience, and Evaluation Mechanism, along with their respective average values ranging from 3.64 to 4.18. Overall, students expressed satisfaction with the online courses, as indicated by an overall average satisfaction level of 3.81. The dimension of Teaching Quality received the highest average value and rank, indicating it was rated most positively by the students. The dimensions of Course Content, Learning Experience, and Evaluation Mechanism were also rated favorably, albeit with slightly lower average values. The table provides a summary of students' perceptions of the satisfaction levels across the four dimensions, highlighting the strengths and areas of satisfaction in the online courses at Guangxi Logistics Vocational and Technical College.

Table 2 Results of regression analysis of the relationship between the dependent variable "satisfaction level" and the independent variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Colliner Statistics VIF
	B	Std. Error	b			
Constant	0.258	0.096		1.543	.010	
Course Content	0.249	0.045	0.474	4.629	.000	1.022
Teaching Quality	0.359	0.062	0.432	0.387	.000	1.009
Learning	0.374	0.052	0.533	4.964	.000	1.023

Experience						
Evaluation Mechanism	0.279	0.038	0.472	5.26	.000	1.01
	R ²				0.624	
	F				136.534	
	p				0.001	
Dependent variable: Satisfaction degree						
$L = 0.258 + 0.249 * TQ + 0.059 * EM + 0.374 * CC + 0.279 * LE$						

Table 2 presents the results of a regression analysis examining the relationship between the dependent variable "Satisfaction degree" and the independent variables: Course Content, Teaching Quality, Learning Experience, and Evaluation Mechanism. The analysis shows that all four independent variables have statistically significant coefficients ($p < 0.001$) and positively contribute to predicting the satisfaction degree. The regression equation suggests that Teaching Quality, Evaluation Mechanism, Course Content, and Learning Experience have respective coefficients of 0.249, 0.059, 0.374, and 0.279. Together, these variables explain 62.4% of the variance in the satisfaction degree. The regression model is a good fit for the data, as indicated by the significant F-value of 136.534.

5 CONCLUSION

In conclusion, this study investigated the satisfaction levels of students at Guangxi Logistics Vocational and Technical College regarding online courses, focusing on Course Content, Teaching Quality, Learning Experience, and Evaluation Mechanism. The findings revealed that Teaching Quality received the highest average value, indicating high satisfaction among students. Course Content ranked second, meeting the professional development needs of students. The Learning Experience dimension ranked third, emphasizing the importance of optimizing platform management and technical aspects. The Evaluation Mechanism dimension ranked fourth, suggesting the need for a more scientifically designed and personalized evaluation system. Overall, students' satisfaction with online courses at Guangxi Logistics Vocational and Technical College was deemed satisfactory. The factors of course content, teaching quality, learning experience, and evaluation mechanism were found to have a significant positive influence on student satisfaction.

To enhance students' satisfaction with online courses, several actions are recommended. Curriculum designers and educators should optimize course content to align with students' professional needs. Teachers should enhance teaching quality by adopting student-oriented approaches and innovative teaching methods. Platform developers and administrators should improve the online learning platform's technical aspects and provide a personalized interface. Educational institutions and policymakers should innovate the learning assessment mechanism, focusing on student-centered assessment practices. By implementing these recommendations, Guangxi Logistics Vocational and Technical College can

improve students' satisfaction with online courses, enhance their learning experience, and promote effective teaching and assessment practices.

References

- Roy Rumpa and AlAbsy Mujeeb Saif Mohsen.(2022). Impact of Critical Factors on the Effectiveness of Online Learning. *Frontiers in Educational Research*, Volume 14, Issue 21, PP 14073-14073
- Hou Wenling. Factors influencing MOOC completion rate among college students [D]. Jiangxi University of Finance and Economics, 2020.DOI:10.27175/d.cnki.gjxcu. 2020.001702.
- Zhuang will purple. The influencing factors of online learning continuous willingness and their promotion strategies [D]. And Jilin University, 2021.DOI:10.27162/d.cnki.gjlin. 2021.004366.
- Zhao Chenglin, Zhao Wenjun, Yang Hairu, Jiang Zhihui. Study on the influencing factors of continuous learning in online open courses under the credit system [J].
- Li Wei. *Modern Long Distance Education*, 2018(02):72-82.DOI:10.13927/j.cnki.yuan. 2018.0020.
- Kunzhe Liu and Xiqiang Ge and Jiefeng Wang. (2023). Evaluation model of college students' online learning level difference based on support vector machine. *International Journal of Continuing Engineering Education and Life-Long Learning*, 33(1), pp. 23-36.
- Zhao Chengling, Zhou Fengling, Jiang Zhihui, Liang Yunzhen (2017), Research on the influencing factors of online learning space use intention from the perspective of TAM and SDT. *Modern Distance Education*, No. 173 (05): 3-11
- Wang, N., & Qiao, A. (2009). Exploration of the Essence and Theoretical Basis of Online Learning Activities. *Chinese Distance Education*, (01), 36-40+78.
- Shu-Sheng,(2007), 5 Liaw Investigating students' perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system *Computers & Education*, 1(2).
- Rourke, L., Anderson, T., Garrison, D. R., et al. (1999). Assessing social presence in asynchronous

text-based computer conferencing. *Journal of Distance Education*, 14(2).

11. Shen, Y. (2008). A Comparative Analysis of Cognitive Constructivism and Social Constructivism in Learning Theories. *Modern Educational Technology*, 18(S1), 21-23.