

# THE INFLUENCE OF PERCEIVED QUALITY ON ONLINE TEACHING SATISFACTION

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## ARTICLE HISTORY

Received: 27 October 2023   Revised: 15 November 2023   Published: 27 November 2023

## ABSTRACT

At present, in the era of knowledge economy, knowledge shows explosive growth and changes people's lifestyles and production methods. Only by constantly adapting to this environment and constantly carrying out learning and creation can we lay the foundation for students' sustainable development in the future. As the main users of online teaching platform, college students' perceived satisfaction directly determines the teaching quality. This paper discusses the factors of perceived quality and its influence on satisfaction from the perspective of social students' experience of online teaching, such as laid-off workers, migrant workers, new professional farmers and previous students. Based on expectation theory, this paper summarizes the main research results of the influence of perceived quality on online teaching satisfaction through a comprehensive review of relevant literature and empirical evidence. The results show that the perceived quality has a significant positive correlation with online teaching satisfaction, and the four observation variables of perceived quality, such as reliability, responsiveness, assurance and tangibility, all have a significant positive impact on online teaching satisfaction. The implementer of online teaching should strengthen the promotion and improvement of teaching quality and improve their satisfaction, so as to achieve the sustainable development of online teaching.

**Keywords:** Perceived Quality, Online Teaching, Satisfaction

**CITATION INFORMATION:** Wang, Q., Somjai, S., & Somjai, A. (2023). The Influence of Perceived Quality on Online Teaching Satisfaction. *Procedia of Multidisciplinary Research*, 1(11), 14.

## INTRODUCTION

With the gradual implementation of the policy of expanding enrollment in higher vocational colleges in China, the student source of higher vocational colleges is gradually showing the trend of diversified development, it has been difficult to meet the current teaching needs and to complete the basic task of professional training after the expansion of enrollment (Liang & Beibei, 2022). In order to improve teaching efficiency, higher vocational colleges generally choose to combine the actual situation of students, using ZOOM platform or Google MEET live broadcast and other remote online platforms to gradually carry out online teaching, to meet the social students can not work, family and other circumstances can not be concentrated on school learning, which is currently the necessary means of teaching higher vocational colleges (Xu et al., 2023). However, it is under the influence of enrollment expansion that students' continuous use of online teaching has become a concern and challenge (Huang Xiaoxia et al., 2023), therefore, how to improve the online teaching, to promote students willing to use online teaching, to meet the needs of every student, is the main content of the current higher vocational teaching reform.

The high-quality development of online teaching plays an important role in supporting the overall high-quality development of vocational education. The high-quality development of online teaching ultimately falls on students' satisfaction with quality. Based on this understanding, focusing on the high-quality development of online teaching, demonstrating the behavior mode of online teaching, promoting the internal mechanism of high-quality development of vocational education, and based on the demands of the times for the high-quality development of vocational education, a feasible path is proposed, which has important theoretical deepening and practical guiding significance.

## REVIEW OF RELATED LITERATURE

### Expectation Confirmation Theory

Expectation Confirmation Theory (ECT) was first developed by Oliver to study customer behavior and is widely used to evaluate customer satisfaction and post-purchase behavior in marketing and organizational behavior science (Oliver, 1980). It mainly refers to the comparison of pre-purchase expectations and post-purchase performance to judge whether consumers are satisfied with the product or service, and satisfaction becomes the reference for consumers to purchase or use again next time.

YIN Meng put forward the theory of expectation confirmation as the research framework, and analyzed the influence of students' expectation confirmation on online course quality perception from the perspective of online course quality perception, as well as its role in the realization and satisfaction of college students' online learning value (YIN Meng, 2023). The research results will provide theoretical support for online learning platform, curriculum design and teaching activities, and then improve students' satisfaction with online teaching and their behavior of using online teaching (Babin, 1994; Hui, J., 1991; YIN Meng, 2023). This study uses the expectation confirmation theory model to study online teaching, which can help us understand the interaction and experience between students and educators in a virtual learning environment. Before participating in an online course, students will have some expectations about the course, including course content, teaching quality, learning resources, and other aspects. After starting an online course, students may develop a sense of acceptance or usage decision due to their satisfaction with online learning.

### Perceptual Quality Definition and Observation Variables

#### 1) Perceived Quality Definition

The concept of "perceived quality" was first put forward by foreign scholar Levitt (1972), who thought that perceived quality reflected whether there was a gap between service and preset standards. Grönroos proposed that service quality consists of technical quality and functional

quality (Grönroos, 1984). Lehtinen divided service quality into material quality, interactive quality and company quality (Lehtinen & Lehtinen, 1982). The service quality proposed by Edvardsson (1989) includes technical quality, integration quality, functional quality and output quality (Edvardsson, 1989). Gummesson (1991) divided service quality into four elements: design quality, production quality, process quality and output quality (Gummesson, 1991). Olsen (1991) thought that service quality includes design quality, production quality and process quality (Olsen, 1991). Perceived quality is a process guided by expectation and experience, and all aspects are assembled into a concept map to describe the relationship between conceptual levels involved in evaluating quality. He Xiaofeng put forward that the quality of online teaching is restricted by many factors, such as teachers' level, teaching resources, network environment, curriculum platform, etc (He et al., 2022). Students who are the direct audience have the most say in this, and their perceived satisfaction directly reflects the teaching effect. Yi xiaoming pointed out that the perceived quality of products is based on attribute quality, which is transformed into cognitive knowledge in an appropriate way, and cannot exist completely without attribute quality (Yi & Liang, 2022).

## 2) Observation variables of perceived quality

Parasuraman, Zeithaml and Chowdhary and Prakash established a service quality measurement standard (SERVQUAL) based on the data of some services (Chowdhary & Prakash, 2005; Parasuraman, A., 1985; Parasuraman, A. Zeithaml, 1988), and SERVQUAL aims to measure the service quality perceived by customers (Oliver, 1993). The dimensions reflecting the service attributes used by consumers in evaluating the service quality provided by service enterprises are determined, including reliability, responsiveness, assurance, empathy and tangibility. This study uses SERVQUAL to explore how students' perceived quality of online teaching affects their satisfaction.

**Table 1** Perceived quality observation variables:

Perceived Quality	Tangibility	Reliability	Responsiveness	Assurance	Empathy
(Camilleri, 2021)	√	√	√	√	√
(Fick & Brent Ritchie, 1991)	√	√	√	√	√
(Camilleri, 2021; Sumi & G, 2021)	√	√	√	√	√
(Sumi & G, 2021)	√	√	√	√	√
(Keelson, 2022)	√	√	√	√	√
(Liu et al., 2021)	√	√	√	√	√
(LEE & SEON, 2020)	√	√	√	√	√
(He et al., 2022)		√	√	√	
(Li & Zhu, 2018)	√	√	√	√	
(Fan & Du, 2006)		√	√		
(Lai et al., 2007)	√	√	√	√	√
(Baradaran & Ghorbani, 2020)		√			
(Istijanto, 2021)	√				
(Ge, 2019)	√	√	√	√	
(Al-Fraihat et al., 2020)	√	√	√	√	
(Chocarro et al., 2023)	√	√			
(Istijanto, 2021)	√	√	√	√	
(Xueping, 2019)	√	√		√	
(Ahmad & Guzmán, 2021)	√	√	√	√	√
(Yi & Liang, 2022)		√		√	
total	16	19	15	17	9

To sum up, the observation variables of online teaching perceived quality are selected from four observation dimensions: reliability, responsiveness, assurance and tangibility according to the most frequent occurrence of documents.

## Definition and Observation Variables of Online Teaching Satisfaction

### 1) Definition of online teaching satisfaction

Zhu Liancai pointed out that satisfaction with online teaching refers to the main basis for students as learning subjects to determine whether the teaching effect has been achieved (Zhu, 2020). College students' online learning satisfaction refers to the subjective judgment of college students on the relative relationship between actual perception and pre-expectation of online learning after completing course learning online (Y. Cheng, 2022). Online teaching satisfaction refers to the impact of teachers, students, technology, environment and other factors on the online teaching satisfaction of colleges and universities. High-line online teaching satisfaction refers to the impact of teachers, students, technology, environment and other factors on the online teaching satisfaction of colleges and universities. Teacher satisfaction in this study was defined as the perception that teaching in an online environment was 'effective and professionally beneficial (Wasilik & Oksana, 2009).

### 2) Observation variables of online teaching satisfaction

Some key determinants of student satisfaction include the role of the teacher (Ladyshevsky, 2013), teacher-student interaction (Ladyshevsky, 2013), course content (Gou Feifei, 2020), the role of technology (Barrera-Verdugo et al., 2022a), learner motivation (Artino, 2007), learner efficacy (Vidal, 2020), self-regulated learning (Artino, 2007), and learning environment (Dinh & Nguyen, 2020). When reviewing literature on student satisfaction in online teaching over the past decade, divided the various determining factors of student satisfaction in e-learning into four dimensions: communication dynamics (such as interaction and information quality), e-learning environment factors (such as course structure and content), organizational factors (such as technical support and service quality), and personality and situational factors (autonomy, self-efficacy and motivation).

**Table 2** Satisfaction observed variables

Satisfaction	Course content	Evaluation method	technical environment support	Teacher-student interaction	Self-efficacy	learning motivation	E-learning challenge	Teacher's role	Self-regulation	Social presence
(Ge, 2019)					✓					
(Liu & Cui, 2020)	✓		✓					✓		
(Gou Feifei, 2020)	✓		✓							
(Zhou & Yao, 2023)	✓	✓	✓	✓						
(Vidal, 2020)					✓					
(Barrera-Verdugo et al., 2022b)			✓	✓						
(X. Cheng, 2022)	✓									
(Gong & You, 2021)	✓		✓	✓						
(Yin, 2022)			✓	✓	✓					
(Artino, 2007)		✓	✓						✓	
(Liaw, 2008)	✓									
(Artino, 2007)						✓				
(Dinh & Nguyen, 2020)	✓		✓				✓			
(Baker, 2010)				✓						
(S et al., 2021)				✓		✓	✓			
(Lim et al., 2021)	✓				✓	2	1	1	1	1
total	7	2	7	8	2	2	1	1	1	1

In this study, based on previous literature, we divided the different determinants of student satisfaction into three headings: course content, technical environment support, and teacher-student interaction.

## Perceived Quality and Student Satisfaction

Pham explores the relationship between perceived quality attributes of e-learning, overall e-learning service quality, e-learning student satisfaction, and e-learning student loyalty in the context of the emerging country of Vietnam (Pham et al., 2019). The overall quality of e-learning services is positively correlated with the satisfaction of e-learning students. Wong proposes that student satisfaction in higher education depends not only on perceived qualities such as interactions, but also on how they are interacted. Interaction is an important predictor of satisfaction (Wong, 2023). When examining the impact of service quality on student satisfaction in international programs at higher education institutions across five different dimensions, it was concluded that the most important dimension of perceived service quality affecting student satisfaction was responsiveness, followed by empathy and facilities (Sandmaung, 2019). The study highlights important aspects of service quality that will increase student satisfaction if higher education institutions improve them. Perceived quality significantly affects user satisfaction (Rajabalee, 2021; Shahzad, A., 2021).

## DISCUSSION & CONCLUSION

### Discussion

The perceived quality of the online learning platform and the accessibility of technology significantly impact student satisfaction. Technical issues, ease of use, and the availability of support influence the overall learning experience (Al Lily et al., 2020). Students' perceptions of the quality, relevance, and engagement level of course content play a crucial role in determining satisfaction with online teaching. Well-designed, interactive, and interesting materials enhance the overall learning experience (Means et al., 2013). The effectiveness of teaching methods, including synchronous and asynchronous elements, as well as the level of interactivity, significantly influences students' satisfaction. Opportunities for active participation and engagement contribute to a positive learning experience (Joksimović et al., 2015). Students' satisfaction with assessment methods and the quality and timeliness of feedback are critical factors. Effective evaluation practices contribute to a sense of progress and achievement, influencing overall satisfaction (Cho & Kim, 2013). Students were highly satisfied with the online teaching resources, teacher resources, and online teaching gains of epidemiology. The qualities that students lack in online learning are mainly self-discipline and teacher-student interaction (Yanna et al., 2022).

### Conclusion

Large scale online teaching is both a challenge and an opportunity for higher education. Through research on satisfaction with online teaching, it has laid the foundation for creating first-class online courses; by perceiving the impact of quality on online satisfaction, it can promote the improvement of online teaching quality, while also improving teaching design and effectiveness with a student-centered approach. In addition, consider which courses are suitable for online teaching mode for education managers. Taking this opportunity, colleges and universities will strengthen the in-depth cooperation with the curriculum platform, make full use of the analysis data of learning satisfaction, establish the linkage mechanism of teaching quality assurance, and actively adapt to the needs of the new knowledge concept and ontology in the "Internet plus" era, which will strongly promote the "classroom revolution" and "quality revolution", and realize the overall optimization and reform of education and teaching in the classroom environment and network environment.

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**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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