# The role of E-service quality in shaping online meeting platforms: a case study from higher education sector

Role of E-service quality

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#### Abstract

Purpose – In this study, we have collected the response from 200 private university lecturers in Kurdistan Region of Iraq. In order to test the hypotheses, we have proposed structural equations modeling (SEM).

Design/methodology/approach – The purpose of this paper is to elaborate the direct and indirect effects of e-service quality on perceived value, satisfaction and willingness to pay for online meeting platforms in the education sector. This study also explores the effect of e-service quality on users' perception and satisfaction. Findings – The results reveal that e-service quality directly affects the perceived value and satisfaction but has no direct effect on the willingness to pay. Secondly, perceived value and satisfaction mediated the relationships between service quality and willingness to pay. However, it is observed that perceived value has a more significant impact on the willingness to pay compared to satisfaction. It is further reported that perceived value is one of the antecedents of satisfaction. The study also explores the direct relationship between perceived value and willingness to pay, and introduces satisfaction as a mediating variable between perceived value and willingness to pay.

Research limitations/implications – The sample is geographically limited as only online faculty and staff working at private universities participated in the study. This study has implications for administrators of higher educational institutions and companies providing IT solutions for online meetings. From a managerial standpoint, this study provides and IT companies a broad theoretical basis that designing a successful online meeting platform should specifically emphasize e-service quality, perceived value and customer satisfaction. Originality/value – There is no study that evaluated the links among e-service quality, value, satisfaction, and willingness to pay for the online meeting platform services. Therefore, this study is useful for the private university administration and online meeting platform developers and investors.

**Keywords** e-service quality, Perceived value, Satisfaction, Willingness to pay, Higher education, Private universities, COVID19, e-learning

Paper type Research paper

#### 1. Introduction

Globalization has entirely transformed the way of operating businesses. The barriers to enter a new market or communicate and interact with businesses and customers across the world, have diminished, which in turn have increased the level of competition worldwide. Information technology has been one of the key driving forces behind globalization. Information technology is now considered as a key component of global business strategy by all businesses. The companies are trying to find new methods to reach the customers and offer them added value products and services. Moreover, consumers are embracing technology faster than before due to rapid changes in the global landscape. Information technology has



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become ingrained in all fields, such as business, government, economic and social. The intense competition among rival firms led them to innovate and improvise the channels through which they provide services to the customers. Many businesses serve their customers electronically, also known as e-service during and/or after sale. As a result, the businesses must improve e-quality of their services in the best possible way to survive the present cut-throat competition in every industry. However, it is interesting to note that the dependence of service-based businesses on their website applications is much greater than that of their manufacturing counterparts. It is an integral part of their services, as well as a determinant of perceived e-service quality, perceived by the consumers. Consumers' perception of e-service quality becomes a part of the overall assessment of all the services provided by the businesses (Alzoubi et al., 2019). One of the most critical challenges in the absence of human interaction is to deliver high service quality online, as it needs to become the primary competitive business strategy in service-oriented businesses (Kim and Kim, 2020).

The COVID-19 pandemic has forced organizations to find new solutions and change the way they conduct their businesses (Carnevale and Hatak, 2020). Moreover, with the changes in the habits of people around the world due to social distancing and lockdowns, many people are working from home, which resulted in an increased use of online meeting platforms (Sheth, 2020). These changes in creating value for the consumers, obtaining their satisfaction and encouraging their willingness to pay for services, required businesses to adopt new strategies. Since the outbreak of the COVID19 pandemic, the use of online meeting platforms has experienced very rapid growth, and its market is expected to reach \$50 billion by 2026 (Vena, 2020). Services-oriented businesses, including the education industry, underwent the most drastic strategical and operational changes during this unprecedented pandemic. Most higher education institutions closed their door for months and eventually shifted towards the e-learning system. Top universities such as Harvard, Oxford and Cambridge also suspended most of their regular classes and shifted to e-learning where possible, to curb the spread of COVID-19. With the advancement of technology, educational institutes are coming out of traditional teaching methods and now focusing on Internet platforms as a service-provider medium to cater the requirements of on-campus/off-campus students as well as the staff (Kim-Soon et al., 2014). During the recent Covid-19 pandemic, China launches the "School's Out, But Class's On" policy and it has empowered more than 270 million students and approximately 20,000 teachers to use the online teaching system in China only (Cheng, 2020).

The entire Iraq and especially the Kurdistan region applies same precautionary measures taken by the government and businesses to limit the spread of COVID19. The government immediately shut all educational institutions with the outbreak of the disease in the region earlier this year. To cope with the outbreak, the universities developed IT solutions to the problem and shifted towards remote learning systems. Besides using their own well-developed learning management system (LMS), most universities in Kurdistan are using popular online platforms for online classes such as Microsoft Teams, Zoom and Skype. Freeversions of online meeting platforms, with compromised quality, are also readily available. Due to lack of a financial support from the university management, most lecturers are opting to use free version of online platforms, which could compromise the quality of service/education and frustrate the students as well as the teachers.

The e-learning system is here to stay until a cure or vaccination for COVID19 is developed. In the meanwhile, it is very important for the policy-makers in the education industry to review the pros and cons associated with using free and paid versions of the online platform. The first step towards this direction is to see: How do the main users, that is academic staff, perceive the e-service quality of these online meeting platforms? Are they satisfied with the service quality of the online teaching platforms? Do they need to upgrade to a better version of online meeting software? Are they willing to pay for such up-gradation to improve the quality of education?

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Currently, most universities attempt to understand the strategic and financial implications of student quality perceptions. Student retention and program completion are considered as the main determinants of the success of an educational program. However, most researchers have only been concerned about appropriate levels of student satisfaction in the e-learning system because it can have an impact on student motivation and in turn on student success and completion rates (Bolliger and Wasilik, 2009). Similarly, universities are also aggressively considering quality control and global assessment of quality and performance in the online environment from the students' standpoint (Abdullah, 2006). Although the main objective of higher education institutions is to impart knowledge, the fact cannot be denied that after all they are businesses. Private universities, as discussed herein, are businesses focused mainly on their customers, that is students, to retain them, generate income and offer differentiated services. The purpose here is not to criticize the customerorientation of higher educational institutions, but to highlight the unfortunate fact that another important pillar of service quality in e-learning is being ignored by the universities, that is faculty satisfaction. According to Boettcher (2004), an online lecturer spends approximately 10 hours to design and develop one hour of online lecture, exclusive of time spend on faculty training and development. Therefore, the academic staff plays a crucial role in the development, implementation, and maintenance of online courses and programs by taking care of non-financial costs associated with them such as time and effort. It is equally essential to take into account faculty satisfaction as it along with student satisfaction, is one of the five pillars of service quality in e-learning (Sloan Consortium, 2002), which is one of the main objectives of this study.

Now that the dependency of universities on e-services has increased manifolds, it is important to know the following: are the users of online platforms, mainly the academic staff or the teachers, satisfied with the e-service quality of the online meeting services or not? Are they satisfied with the free version of meeting platforms, or are they willing to pay more to upgrade the services?

To explore the above-mentioned issue, it is vital to have ample knowledge of the determinants of willingness to pay for online meeting services such as perceived value, service quality, and satisfaction, which would greatly impact the strategies of an educational institution. To design effective strategies to enhance faculty or consumer satisfaction, and willingness to pay, it is imperative to understand the role of consumer perceived value and its relationships with satisfaction and e-service quality and willingness to pay. In addition, there is a lack of studies on online meeting platforms in general and its relation to the consumers in the Kurdistan region of Iraq in particular, which should be addressed.

The purpose of this paper is to fill this gap and elaborate the impact of e-service quality on perceived value, satisfaction and willingness to pay for online meeting platforms in the education sector. Thus, the present study aims to extend the prior research by integrating e-service quality, perceived value, consumer satisfaction and willingness to pay into a coherent model and by assessing the interrelationships among them in the context of e-learning and online meeting platforms. This study also explores the effect of e-service quality on users' perception and satisfaction. It is necessary to understand different aspects that are related to this promising industry, especially during the COVID19 pandemic. This research will help decision-makers in the education industry in deciding whether to invest in upgraded versions of online meeting platforms or not. It is the very first study to examine the e-service quality of online meeting platforms from the perspective of the academic staff, in the Kurdistan region of Iraq.

The paper proceeds as follows. Section two provides a review of the previous literature and provides a theoretical framework for the research. Section three describes the hypotheses developed in the study. In section four, the methodology used in this research article, is discussed. In section five, the findings of the study are described. The results of the study are discussed in section six, followed by the conclusion and managerial implications in section

seven. Section eight describes the limitations of this study and provides suggestions for future studies in this area of research.

#### 2. Literature review

Computer technology has brought new changes to traditional business models by introducing the concepts of web-based business transactions and is still exploring new ways. Chaffey (2009) classifies the common web-based business into e-commerce and e-business. He defines e-commerce as a transaction-based system encompassing only buying and selling activities through the web and e-business as a broad medium facilitating all business stakeholders through relationship management. Zeithaml *et al.* (2002) argue that the inefficiencies of traditional e-commerce business, in terms of lack of guidance regarding completing transactions, accessibility and delivery issues shifted attention to e-service quality.

## 2.1 E-service quality

Parasuraman et al. (1985) develop the SERVQUAL model comprising five dimensions, tangibles, reliability, responsiveness, assurance and empathy to measure. This model measures the role of e-service quality in creating the perceived value of customers. The SERVQUAL model has been extensively used to measure service quality for the online environment. Later Loiacono (2001) formulated a new scale WEBQUAL measuring 12 dimensions named business, design, flow, informational fit to task, innovativeness, integrated communication, interaction, intuitiveness, response time, substitutability, trust, visual appeal. Barnes and Vidgen (2001) argue that the WebQual model is constructed on the communication theory highlighting the relationship between customer and e-commerce. You and Dinthu (2001) develop a model measuring e-service quality, SITEQUAL, using website layout and hardware. As the online businesses have a different setup than a traditional business, hence, SERVQUAL lacks the dimensions which are essential for measuring online service quality. Parasuraman et al. (2005) present a model measuring the e-service quality dimensions, consisting of system availability, contact, compensation, efficiency, fulfillment, privacy and responsiveness. Then Rowley (2006) identifies various dimensions of e-service quality including website features. accessibility, security, responsiveness, reliability, information, communication, delivery, personalization. Zeithaml et al. (2002) defines e-service quality as the measure to which a website enables to offer services catering to customer needs not only during the shopping process but also during the post-shopping process. Santos (2003) defines e-service quality as the degree to which customers' expectations are fulfilled by the online service provider. The definition states that not only grabbing customer attention is important but retaining the customer for a long period is also important. Hence, a business has to concentrate on every phase, that is starting from navigating the service to the post-completion of the service. Hence, e-service quality covers all the services including information, agreement, fulfillment and postsales services (Xu et al., 2017). The literature reports many studies measuring the electronic service quality using E-ServQual. Some of them are reported in Table 1.

Deriving from the literature, some researchers already studied the e-service quality in higher educations. For example, Kim-Soon *et al.* (2014) studied the e-service quality at a university in Malaysia. They have found relations between quality of e-service supporting learning, research and communication with the frequency of use of e-service from tools and sources for learning and research, administration, coordination and evaluation. Another study was conducted by Nasution *et al.* (2019) at higher education field in Indonesia. The authors have tested the impact of e-service quality on the e-satisfaction of the students. Their findings have revealed that e-service quality has significantly affected the e-satisfaction of the online payment method using students. Dalbehera (2020) have studied the effects of E-service quality dimensions such as efficiency, system availability, fulfillment and privacy on user's perceived value, e-service quality and e-loyalty that influence the digital library

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Field	Internet shopping websites Virtual market place E-service users	E-retail market University students University students Remanufactured Products Higher Education Environments Airline and hotel reservation websites
Privacy/ security	777	777 77
Fulfillment/ Availability Reliability	77	77 77
Availabilit		7 7 77
Efficiency/ Responsiveness	7	777 77
Scale	SITEQUAL E-ServQual eTailQ	E-ServQual ServQual E-ServQual E-ServQual E-ServQual
Article	Yoo and Donthu (2001) Santos (2003) Wolfinbarger and Gilly	Parasuraman <i>et al.</i> (2005) Jiewanto <i>et al.</i> (2012) Al-Shamayleh <i>et al.</i> (2015) Xu <i>et al.</i> (2017) Atabaru <i>et al.</i> (2017) Loiacono (2001)

Table 1.
The summary of service quality scales used in literature

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services. They have found out that e-service quality played an important role on the e-loyalty of the students in digital library services. Lastly, a new assessment model was developed by Baradaran and Ghorbani (2020) to evaluate the e-service quality of online learning. The authors have developed 13 latent variables including reliable infrastructure, benefits and financial support, government support, perception and knowledge, educational facilities, quality of holding classes, entrance conditions, meeting the needs of students, process of education, planning and flexibility of courses, professors' opinion and information exchange.

Especially during the COVID 19 pandemic period, there were various papers published to assess the service quality of t online education at different higher education institutions. Shahzad  $et\ al.\ (2020)$  have tested the impact of service quality, system quality and information quality on the user satisfaction, system use, and e-learning portal success. The results have suggested that system quality had a significant impact on user satisfaction, and in return, it would increase the success of e-learning portals.

Adnan and Anwar (2020) have elaborated the perceptions of the students about online education during the COVID 19 pandemic. They have suggested that online learning cannot produce desired results in underdeveloped countries like Pakistan, where a vast majority of students are unable to access the Internet due to technical as well as monetary issues. Besides, Wargadinata et al. (2020) suggested that online learning using the WhatsApp Group to be the most effective in the early COVID-19 pandemic. WhatsApp is easy, simple and does not require a large data quota package. Through WhatsApp accounts, learning took place optimally because students and lecturers could communicate and share PowerPoint files, Microsoft Word files, JPGs, Voice Notes, Videos and other learning resource links.

In the current study, we have used the E-service quality assessment model of Parasuraman *et al.* (2005) which contains four latent variables such as efficiency, fulfillment, availability and privacy for measuring the impact of those variables on the perceived value, satisfaction and willingness to pay for the online meeting platforms at higher education institutions.

#### 2.2 Perceived value

The concept of perceived value engraves its roots out of equity theory, a ratio of the outcome of a consumer to the outcome of the service provider (Oliver and DeSarbo, 1988). Equity theory makes a comparison of the benefits and sacrifices which a customer gets out of service. Perceived costs refer to the sacrifices, monetary, and non-monetary (time, stress). Perceived value is gaining attention as today's economy is getting more service-oriented rather than production-oriented (Wang and Teo, 2020). Hence, customer perceived value is the trade-off between the overall benefits and sacrifices allied to a particular service (Jiang *et al.*, 2016).

Equity theory seems to be relevant in the e-service field as service providers need to build long-term relationships with their clients. Clients consider themselves to be equitably treated when they find a trade-off between their benefits-sacrifices and that provided by the company. Additionally, the clients also compare the benefits-sacrifices ratio of the service provider with its competitors.

With the advancement of technology, online communication has emerged more efficient as compared to traditional medium as it captures more market share (Momen *et al.*, 2019) and communication success for any organization (Besseah *et al.*, 2017). Rather than following the university websites, students Higher Education sector in particular develop their perception and follows universities' blogs for their queries (Momen *et al.*, 2019).

#### 2.3 Satisfaction

Zhang et al. (2020) define "Customer satisfaction" as to how a firm responds to the fulfillment of a customer expectations. Customer–Service quality relationship is based on the

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"Expectancy-Disconfirmation" theory proposed by Oliver (1980). The theory posits that customer satisfaction out of service quality is based on his comparison of expected services and actual services. Hence, customer satisfaction occurs if actual service quality exceeds the perceived expectations of a customer. Atabaru et al. (2017) define satisfaction as a measure of how well customers' requirements are catered. Hence, satisfaction/dissatisfaction of a customer is the response of his single or prolonged experiences with a service provider (Rust and Oliver, 1994). A higher level of satisfaction would result in a more loyal customer base, thus positively affecting the profitability of an enterprise. Customer satisfaction also increases the profitability of an enterprise by "word of mouth" (Mooradian and Olver, 1997). The reputation of online companies gets destroyed if the customer fails to get the required information, on-time delivery, efficient handling of queries.

There are a number of studies that measure satisfaction of higher education institutions. Khan and Yildiz (2020) have studied the student satisfaction at universities in the Kurdistan region of Iraq. Their findings have revealed that career opportunities and a friendly atmosphere are the main two elements that foster the reputation of the universities. Budur et al. (2018) have studied the main influencers of students' university selection. They have suggested that scientific activities and campus facilities have affected the reputation of the university, and consequently, reputation influenced positive word of mouth of students. When it is thought that advice plays an important role in university selection, these results are very important for the practitioners to increase their market share in the region. Demir and Guven (2017a) argue that ISO 9001 quality management system certification significantly affects the students satisfaction.

# 2.4 Willingness to pay

Homburg *et al.* (2005) define willingness to pay as the readiness of the customer to pay the maximum amount to avail a product or service. It is the likelihood that a customer will make a purchase based on his needs, experience and perceptions. Willingness to pay is a predictor of-customers' behavior (Wu *et al.*, 2011) and shows customers' interest to purchase a particular product or service (Ariffin *et al.*, 2018). Ariffin *et al.* (2018) define this phenomenon as customers' interest to purchase particular products/service. It is important to measure willingness to pay as customers' actions are normally predicted through their perceptions or intentions (Hsu *et al.*, 2017).

The theoretical groundwork of this study is laid on theories of utility theory, transaction cost and market signal theory. Transaction utility theory (Thaler, 1985) proposes that perceived value has a positive impact on customers' willingness to purchase (WTP). Once the preferences are set, customers become decisive about online purchasing mode. Williamson (1989) argues that Transaction theory defines the cost of participating in a market. For online customers, transaction costs include searching costs, bargaining costs and enforcement costs. Transaction costs vary depending upon the type of transaction (Wang *et al.*, 2008). Then market signal theory encompasses the signals sent by one party to another party (Kelly, 1998). These signals vary in the case of the online environment. Based on these factors proposed by these theories, customers make decisions regarding willingness to pay for a particular product.

#### 3. Hypothesis development

3.1 Relation between E-service quality and perceived value

Several evaluation criteria have been identified by the researchers while evaluating the e-service Quality and its effectiveness. A vast strand of literature is available measuring e-service quality by customer's acceptance of new technology using the Technology

Acceptance Model (TAM) by Davis (1989). Others study the effect of e-service Quality on the Behavioral intentions of the customers (Zeitmaal et al., 2002; Parasuraman et al., 2005). Following the outcome of these theories, this research paper investigates the relationship between e-service quality, perceived value, customer satisfaction and willingness to pay for the online meeting platforms. Jiang et al. (2016) investigate the relationship between e-service quality dimension and the perceived value of a customer. The e-quality service dimensions include care, reliability, product portfolio, ease of use, and security. Among the five dimensions, ease of use is the most significant driver, followed by care, product portfolio and then reliability and security. Kuo et al. (2009) argue that the perceived value of students comprised benefits, money, quality and social values. Hence, students make a comparison of costs incurred and benefits received while evaluating an online platform available to them. Cobelli et al. (2019) find a positive relationship when measuring the e-service quality of a career-counsellor service on the perceived value of the students. Pearson et al. (2012) also report a significant influence of e-service quality on perceived value. Kim-Soon et al. (2014) argue that the high perceived value of students is an essential item for sustainable long-term relationships between student and university. Alzoubi et al. (2019) find a significant effect of e-service quality on perceived value for private university students of Jordan. The abovementioned studies propose that e-service quality is probably affecting the perceived value of the users of the services, which in this case are academic staff, and thus leading to the following research hypothesis:

H1. E-service quality significantly affects the perceived value of online meeting platform users.

#### 3.2 Relation between E-service quality and satisfaction

A vast literature is available, exploring the relationship between e-services quality and customer satisfaction (Blut et al., 2015; Rod et al., 2009; Wolfinbarger and Gilly, 2003). Chang et al. (2009) conclude that e-service quality positively affects customer satisfaction and hence generates customer loyalty towards the products or services. Sanayei and Jokar (2013) declare e-services quality as a competitive advantage and find a significant impact of e-service quality on customers' satisfaction. Analyzing 520 respondents, Amin (2016) reports that e-service quality has a significant relationship with customer satisfaction. Ataburo et al. (2017) find out that firms providing high-quality e-services tend to satisfy their clients, which ultimately leads to influence their purchase decision and re-purchasing intentions. A positive relationship between e-service quality and customer satisfaction is also reported by Dhingra et al. (2020) for Indian customers. Al-Shamayleh et al. (2015) measure different dimensions of e-service quality and find that all e-service quality dimensions have a significant effect on satisfaction for Jordanian university participants. Ali (2019) finds that except for ease of use, all other e-service quality dimensions have a positive effect on the satisfaction of students of Bahrain University.

*H2.* E-service quality significantly affects the satisfaction of online meeting platform users.

#### 3.3 Relation between E-service quality and willingness to pay

Some studies (Passikoff, 1997; Grant, 1998) argue that with an increase in customer satisfaction, no change in the company's financial performance is recorded. Hence, customer satisfaction merely cannot affect the profitability of a firm, but the willingness to pay for that service is the key factor that strengthens the financial stability of a firm. Paiz *et al.* (2020) report that e-service quality has a strong impact on willingness to pay. Willingness to pay is the outcome of satisfaction. Service Quality being the antecedent of satisfaction (Cronin and

Taylor, 1992; Mekoth *et al.*, 2020), this study will test the following relationship between eservice quality and willingness to pay.

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H3. E-service quality significantly affects willingness to pay of online meeting platform users.

# 3.4 Relation between perceived value and satisfaction

With an increase in online competition and ease of comparisons, customer perceived value is considered to be a key element for retaining customer affiliation and loyalty (Yang *et al.*, 2004). Defining e-service quality as a multidimensional context, Cristobal *et al.* (2007) conclude a direct and profound effect of perceived quality on customer satisfaction.

The perceived value-satisfaction relationship is based on the Expectancy-Disconfirmation model which states that the client makes a comparison of cognitive states before and after an event (purchase) occurs. Any increase or decrease in cost or benefit recorded after purchase brings change to the perceived value, resulting in an increase or decrease in customer satisfaction level (Omar et al., 2011). With the rise in online competition and ease of comparisons, customer perceived value is considered to be an important element for retaining customer affiliation and loyalty (Yang et al., 2004). Defining e-service quality as a multidimensional context, Cristobal et al. (2007) conclude a direct and profound effect of perceived quality on customer satisfaction. Petrick and Backman (2001) find out that perceived value is an antecedent of customer satisfaction. Hence, customer satisfaction can be defined in terms of perceived value (Demirgünescedil, 2015). For an online user, perceived benefits refer to how easily users can access the information related to services (Ayuni, 2019) and perceived costs including effort, money and time put in by the users (Kim and Stoel, 2004). Customer perception of deriving more benefits than costs would result in a more satisfied customer (Vijay et al., 2019). Based on the literature above, we propose that customer satisfaction is the consequence of perceived value and come up with the following hypothesis:

H4. Perceived value significantly affects the Satisfaction of online meeting platform users.

## 3.5 Relation between satisfaction and willingness to pay

Customer satisfaction has a strong influence on the customers' willingness to pay for acquiring a product or service (Dhingra et al., 2020; Mekoth et al., 2020). Keeping in mind the importance of customer satisfaction, the next question is whether this increase in customer satisfaction strengthens the financial performance of the company or not (Andreson et al., 1994). It is presumed that increased customer satisfaction would result in a more financially sound company but some studies present the opposite results. Kotler and Armstrong (2010) argue that satisfaction strongly affects the future buying behavior of a customer. Willingness to pay is a major result of a satisfied customer during the purchasing process (Hausman, 2000; Chen et al., 2010). Researchers confirm that satisfied and loyal customers are willing to pay to avoid the additional search and effort costs (Reichheld and Sasser 1990; Sambandam and Lord, 1995). Saha et al. (2020) confirm a strong relationship between customer satisfaction and willingness to pay. Alavi et al. (2016) state that customer satisfaction strongly influences their willingness to pay to state that satisfaction is a predictor of willingness to pay of the customer. It is therefore argued that customer satisfaction alone cannot guarantee the profitability of the company, rather it is the willingness to pay for the services based on their satisfaction level. Homburg et al. (2005) report a strong relationship between customer satisfaction and willingness to pay, which means that more satisfied customers are keener to make payment as compared to those who are less satisfied. The literature discussed above helps us in formulating the following hypothesis:

*H5.* Satisfaction significantly affects willingness to pay for online meeting platform users.

3.6 Relation between perceived value and willingness to pay

Transaction utility theory (Thaler 1985) proposes that perceived value has a positive impact on customers' willingness to purchase (WTP). This phenomenon is getting the attention of researchers as it is a predictor of consumer behavior (Chen and Dubinsky 2003), source of competitive edge (Lindgreen and Wynstra, 2005) and relationship building (Payne et al., 2001).

Customers are willing to pay once they established the perceived value (Grewal et al., 1998). Other researchers (Wang and Chen, 2016; Peng et al., 2019) also find a significant effect of perceived value on willingness to pay. Zhao et al. (2018) confirm that perceived value is an essential antecedent of user intention while analyzing online Question and Answer services. Hence, the study hypothesizes that the high perceived value of users enhances the willingness to pay. This finding is also supported by Zhao et al. (2020) by confirming that perceived value is the most important factor affecting the willingness to pay of trilateral social Question and Answers platforms. Previous research on online QandA service has also found that perceived value is a major contributor to users' usage intention (Zhao et al., 2018).

H6. Perceived value significantly affects willingness to pay for online meeting platform users.

#### 3.7 Satisfaction as mediator

A customer with a high perceived value is headed towards the willingness to pay more and does not look for alternatives (Muturi et al., 2014). Perceived value helps companies not only in gaining competitive advantage but also an antecedent of customer satisfaction (Milfelner et al., 2011). A satisfied customer responds positively resulting in positive intentions, one such intention reported by the literature is the willingness to pay more for a particular product (Cronin and Taylor, 1992) and will lead to higher profitability for the firm (Lin, 2003). Cotes-Torres et al. (2012) investigate the relationship between customer satisfaction and WTP and report a nonlinear relationship between the two. Hence, perceived value is a key predecessor of customer satisfaction and generates better financial returns as customers are willing to pay more (Korda and Snoi, 2010). The literature presents many supporting evidence investigating the relationship of perceived value and willingness to pay more with customer satisfaction as an intervening variable. Demir et al. (2015) suggest that customer satisfaction plays a mediating role between perceived value and willingness to pay. The study argues that perceived value not only generates customer satisfaction but also more willingness to pay. Wahyuningsih (2005) also supports the mediating role of customer satisfaction between perceived value and willingness to pay.

*Hm1*. Satisfaction mediates the relationship between perceived value and willingness to pay of online meeting platform users.

Customer satisfaction helps the firms to achieve not only high revenues but also a competitive advantage over the competitors (Lewin, 2009). Parasuraman *et al.* (1985) state that service quality is positively related to customer satisfaction. Customer satisfaction has a positive and significant effect on generating purchase intentions (Paulo *et al.*, 2019). Many studies report that service quality has a significant relationship with willingness to pay while taking customer satisfaction as a mediating variable (Zeithaml *et al.*, 1996; Trivedi and Yadav, 2018). Khatoon *et al.* (2020) conclude that customer satisfaction strongly mediates the relationship between e-service quality of the banking sector and willingness to pay. They argue that

technology advancement creates more customer awareness and in turn, a flawless and sound service quality is demanded by the customers. The above discussion leads us to propose the E-service quality following hypothesis:

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Hm2. Satisfaction mediates the relationship between e-service quality and willingness to pay for online meeting platform users.

#### 3.8 Perceived value as mediator

A web-based environment is being considered as the most important information source by the web users (Kim et al., 2011). Hence service provider companies consider service quality and customer satisfaction as primary goals to maintain their existence in an evergrowing competitive market (Wan and Cheng, 2011). Parasuraman et al. (2005) argue while assessing the e-service quality, the customer not only considers his experience during the interactions but also evaluates the post-interaction services provided. Perceived value is considered to be the most critical factor in determining consumer's willingness to purchase (Fang et al., 2016) where perceived value is the tradeoff between the overall benefits and sacrifices associated with a particular service (Jiang et al., 2016). Spears and Singh (2004) state that a customer's readiness to buy a product is defined as the willingness to pay. Sirohi et al. (1998) that willingness to buy can be measured through intention to repurchase, readiness to continue purchase in the future, and referring to a friend. Analyzing perceived value one can determine the customer's preferences or willingness to purchase (Chen and Lin, 2019). Keeping the above relationships in focus, this study proposes the following hypothesis:

Hm3. Perceived value mediates relationship between e-service quality and willingness to pay for online meeting platform users.

E-Service Quality refers to an online-based service that makes sure the effective and efficient shopping process starting from buying a product or service to its delivery phase (Zeithaml et al., 2002). Web-based institutions need to offer superior quality services (Sohn and Tadisina, 2008). Blut et al. (2015) conclude that e-service quality is one of the main elements connecting different attributes to customer satisfaction and repurchase intentions. The literature provides evidence of e-service quality significantly affecting the perceived value of customers (Pearson et al. (2012); Cobelli et al., 2019). Perceived value is a customer's comparison of benefits and costs, while customer satisfaction is the customer's comparison of expected value and actual value that he received. Hence, these two concepts appear to be different but they complement each other (Korda and Snoj, 2010). Many researchers confirm that perceived value is an antecedent of customer satisfaction (Petrick and Backman, 2001; Cristobal et al., 2007). Moreover, the link between e-service quality and customer satisfaction is analyzed using perceived value as a mediating variable (Lu et al., 2020). Based on the above literature, the study is proposing the following hypothesis:

Hm4. Perceived value mediates the relationship between e-service quality and satisfaction of online meeting platform users.

Based on the aforementioned hypotheses, the research framework and structural model was developed as follows: Figure 1.

## 4. Methodology

4.1 Survey and sample characteristics

In this study, we have collected the response from 200 private university lecturers in the Kurdistan Region of Iraq. There are two ways online platforms can be purchased; either the

lecturers purchase an online meeting platform for themselves (receiving funds from the administration) in some private universities or the university administration purchase online meeting platforms after obtaining the feedbacks of academic and administrative staff. Therefore, in both cases, their ideas were important for the purchasing of those online meeting platforms.

Data was collected through questionnaires by conducting an online survey. The survey questionnaire was sent by e-mail to 1000 private university lecturers between March–April, 2020. The response rate was 20%, among whom, 68% were Kurds, 11% were Arabs, 7% were Indians, 3% were Turkmen, 6% were Turkish and 8% were from the other nationalities. Based on the results, 33% of the respondents were female and 67% were male. Among total respondents, 9% were administrative staff, 72% were academic staff and 19% had both academic and administrative roles. 80% of the participants were using ZOOM, 8% were using Google Hangout, 10% were using Google meet and 2% were using other online meeting platforms. It was observed that 64% of the participants had a "less than one year" of experience with online meeting platforms, 18% had "one to three years", and the remaining 18% "more than three years" of experience with online meeting platforms. See Table 2 for further details.

Data was collected by sending emails to the private university lecturers during the online academic period. E-mails addresses of the lecturers were found from the Google Scholar accounts of private universities. Only 200 out of 1000 e-mail were answered properly. As a result, 20% of the population has responded to our emails. Therefore, with 5% margin of error and 95% confidence interval, 198 respondents would be sufficient. Hence, the data collected for this study is sufficient to continue with further analysis. Harman's single factor test was proposed to prevent common method variance problem. The test result indicates there is no common variance problem because the explained variance of the first dimension is 41%, which is far below the threshold of 50%.

#### 4.2 Measurements

In the survey (Table A1), there are four dimensions related to the model; e-service quality, perceived value, customer satisfaction and willingness to pay. E-service quality comprises 20 questions which are adopted from the study of Parasuraman et al. (2005). Secondly, the value

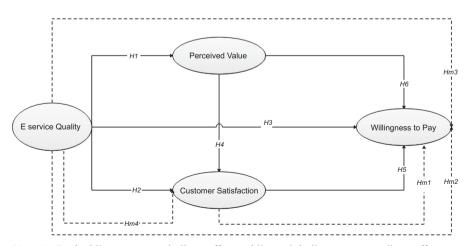


Figure 1. Framework of the study

Note(s): Dashed lines represent indirect effects while straight lines represent direct effects

Tittle	Category	Percentage ( $N = 200$ )	Role of E-service quality
Gender	Male	33	is service quality
	Female	67	
Nationality	Kurdish	68	
·	Arabic	11	
	Turkish	6	
	Turkmen	3	
	Indian	7	
	Other	8	
Position	Administrative	9	
	Academic	80	
	Both	19	
Used Platform	Zoom	80	
	Google hangout	8	
	Google meet	10	
	Other	2	
Experience with online platforms	Less than one year	64	Table 2.
-	Between one and three years	18	Demographic
	More than three years	18	distribution

dimension consists of four questions and the customer satisfaction latent variable contains three questions that are adopted from the study of Chang *et al.* (2009). Lastly, the willingness to pay factor comprises three questions and has been adopted from the study of Demir and Mukhlis (2017b). A 7-scale Likert scale is used to answer the questions, where 1 represents strongly disagree and 7 strongly agree. Respondents were informed about the scale.

## 4.3 Data analysis and hypothesis testing

To test the aforementioned hypotheses, IBM SPSS and IBM AMOS software were utilized. First of all, we have conducted validity and reliability analysis. Exploratory factor analysis is proposed for the first validity test. Secondly, we have calculated Cronbach's Alpha for each dimension for testing the reliability. IBM SPSS software is used to perform these actions. After the validity and reliability tests, we have proposed structural equation modeling (SEM) for testing the hypotheses.

## 5. Research findings

## 5.1 Validity and reliability

The internal reliability of each dimension and the questionnaire is calculated using Cronbach's Alpha. The threshold of the Cronbach's Alpha level is 0.7 (Budur, 2018). The results revealed that the minimum value of Cronbach's Alpha was 0.818 and the maximum value was 0.944. Hence, internal reliability is achieved. Secondly, exploratory factor analysis is employed to reduce the dimensions that may have reflected the number of latent variables. First of all, the Kaiser-Meyer-Olkin value is observed. The results show that the value is 0.941, which is well above the 0.5 threshold. Second, Barlett's test of sphericity is significant at p < 0.01. Then, the Eigenvalues of each dimension are checked. Eigenvalue of each variable must exceed value one so that the cluster of the questions can be considered as a dimension. Based on the results, there are four dimensions that have exceeded the concerning value. These include e-service quality, perceived value, satisfaction and willingness to pay. Those dimensions have explained the overall variance as 0.65, which is well above the 0.5 threshold. Lastly, factor loadings for each item under the concerning dimension is noted above 0.5.

According to these results, initial validity and reliability has been achieved. For further details, check Table 3.

After the exploratory factor analysis, we have employed confirmatory factor analysis (CFA) for validating the questionnaire. Confirmatory factor analysis has been conducted using IBM AMOS 23. Mainly, comparative fit and absolute fit values are used as model indicators. Comparative fit values are evaluated observing comparative fit index (CFI) and incremental fit index (IFI) while absolute fit values have been evaluated via checking chisquare, root mean squared error of approximation (RMSEA) and goodness of fit (GFI).  $X^2$ /df was 2.389, which is below the threshold value of 5 (Marsh and Hocevar, 1988). Comparative fit indices represent how fit the hypothesized model is. CFI and IFI values are 0.905 and 0.902, respectively. The values hold sufficient fitness for the study (Olobatuyi, 2006). RMSEA value shows the discrepancy between the covariance matrix of the hypothesized model and the population. Based on the results of this study, the RMSEA value is 0.079, which shows a good fit (Byrne, 2013). Lastly, the goodness of fit (GFI) value is 0.85, which is sufficient for the goodness of fit value (Torlak *et al.*, 2019).

Lastly, we have conducted discriminant and convergent validity. Convergent validity is to test whether the latent variables are strongly correlated with each other while discriminant validity measures whether there is sufficient distance among each latent variable (Khine, 2013). Testing the convergent validity, Fornell and Larcker (1981) suggest composite reliability (C.R.) value be above 0.7 and average variance extracted above 0.5. Given in Table 4, the composite reliability of the latent variables is between 0.832 and 0.948, whereas, average variance extracted (AVE) is between 0.625 and 0.822. Hence, convergent validity has been achieved. Testing the discriminant validity, the square root of average variance extracted of any construct must be higher than the correlation of that dimension to any other latent variable. Based on the results, it can be concluded that there is sufficient distance between each variable, and discriminant validity has been achieved.

#### 5.2 Hybothesis testing

We have employed structural equation modeling to run the hypothesized model. Firstly, we have tested the direct effects of independent variables on the dependent ones. Secondly, we have evaluated the results of mediating effects. Table 5 shows the results of the hypotheses in detail. Based on the observations, e-service quality has a significant impact on the perceived value ( $\beta = 0.783$ , t = 11.472, p < 0.01) as well as on customer satisfaction ( $\beta = 0.638$ , t = 8.129, p < 0.01). However, no significant impact of e-service quality has been found on the willingness to pay ( $\beta = 0.88$ , t = 0.654, p > 0.05). Thus, H1 and H2 are accepted while H3 is rejected.

As given in Table 5, perceived value has a significant impact on the customer satisfaction ( $\beta = 0.291$ , t = 3.799, p < 0.01) and willingness to pay ( $\beta = 0.561$ , t = 4.531, p < 0.01). Therefore, H4 and H6 are accepted. Lastly, among the direct influencers, customer satisfaction ( $\beta = 0.281$ , t = 2.026, p < 0.05) has a significant impact on the willingness to pay. Hence, H5 has been accepted.

# 5.3 Mediating effects

In Table 6, there are the results of the mediating analysis. We have used a bootstrapping analysis of IBM AMOS for testing the mediation analysis.

As shown in Table 6, the first mediating hypothesis was to investigate the indirect effect of perceived value on the willingness to pay over the satisfaction. The result shows that perceived value has only a direct impact on the willingness to pay but no indirect effect on it. Therefore, Hml was rejected.

Constructs and items	Mean	S.D.	Factor loadings	Correlation	Role of E-service quality
E-Service quality dimension (efficiency, system availability, fulfilln	ient, and	privacy)			
The online meeting tool is very user friendly and I can easily find	5.18	1.57	0.611	0.727	
the commands that I look for	4.00	1.05	0.596	0.596	
It is easy to pay for the full version whenever needed This online meeting platform is well designed	4.09 5.35	1.95 1.45	0.586 0.701	0.526 0.702	
It is easy to prepare an online meeting on this platform	5.53	1.52	0.763	0.702	
The online meeting platform starts the meeting very quickly	5.45	1.52	0.763	0.83	
It is easy to record meetings	5.66	1.47	0.616	0.754	
It is easy to share recorded meetings through the links the	5.16	1.6	0.612	0.632	
platform creates automatically	0.10	1.0	0.012	0.002	
This platform allows me to organize meetings any time (7/24)	5.79	1.45	0.685	0.836	
This platform does not crash or freeze in the middle of the	5.03	1.61	0.5	0.712	
meetings					
The platform warns me about the time spent and/or left for the	4.93	1.85	0.558	0.579	
current meeting					
It allows me to organize a new session immediately after the	5.33	1.53	0.647	0.721	
current session ends					
The online meeting platform allows me to start the organized	5.52	1.48	0.592	0.739	
meeting at a flexible time					
It automatically makes the meeting link available for all the	5.21	1.61	0.624	0.629	
participants					
There is no limitation on the number of meetings I can organize	5.13	1.59	0.72	0.528	
daily					
There are no hidden fees on top of the prices they announced on	5.17	1.45	0.672	0.642	
their website					
The link it creates for the meeting works well without any errors	5.34	1.44	0.684	0.779	
It protects all the information about my online meetings (such as	5.17	1.45	0.595	0.705	
date, time, participants, and the meeting content)					
It does not share my personal / account information with the	4.83	1.53	0.774	0.611	
third parties					
This online meeting platform protects my credit card and/or	4.6	1.52	0.55	0.616	
payment information					
I am sure the meeting records are safe and cannot be reached by	4.47	1.64	0.721	0.504	
the third parties					
Perceived value					
Online meetings I organize on this platform are very good value	4.85	1.58	0.532	0.761	
for money	4.00	1.50	0.552	0.701	
One gets what they pay for this online meeting platform	4.71	1.57	0.532	0.800	
Online meetings on this platform are worth the money paid	4.79	1.69	0.664	0.836	
Compared to alternatives, this platform charges fairly for online	4.76	1.52	0.581	0.738	
meetings	1.10	1.02	0.001	0.100	
incetting.					
Willingness to pay					
I am ready to pay for this online meeting platform	4.09	1.84	0.739	0.796	
I am thinking about purchasing the full (paid) version of this	3.75	1.93	0.829	0.637	
online meeting platform					
If I need to pay for an online meeting platform, it would be this	4.69	1.7	0.502	0.594	
one rather than other alternatives					
Satisfaction					
I am satisfied with my decision to organize meetings on this	5.31	1.51	0.567	0.860	
platform	0.01	1.01	0.001	0.000	Table 3.
r ··· ·					Exploratory factor
				(continued)	analysis

JARHE	Constructs and items				Mean	S.D.	Factor loadings	Correlation
	If I need to organize an or			e this	5.34	1.58	0.691	0.851
	online meeting platform without hesitation I Recommend this online meeting platform to my colleagues and friends if they need one			5.54	1.56	0.669	0.864	
	Eigen values				Extrac	cted varia	α	
	E-Servqual Perceived Value Willingness to Pay Satisfaction	1	15.067 2.063 1.449 1.202			21.89 16.779 14.497 12.773		0.944 0.903 0.818 0.931
Table 3.	Note(s): The Kaiser–Mey square = 4,810.684 DF : Varimax with Kaiser norm	= 435, signific						
		CR	AVE	1		2	3	4
Table 4. Convergent and discriminant validity	Willingness to pay Perceived value E-Servqual Customer Satisfaction	0.832 0.904 0.948 0.931	0.625 0.703 0.822 0.817	0.791 0.720 0.574 0.625		0.839 0.772 0.785	0.82 0.77	
	Hypothesized path		Coeffic	ient	t value	Sign	ificant	Result
<b>Table 5.</b> Results of the hypotheses	Perceived Value ← E-Serv Customer Satisfaction ← I Willingness to Pay ← E-S Customer Satisfaction ← I Willingness to Pay ← Cus Willingness to Pay ← Per X²/df = 2.247 RMSEA = 0.079 CFI = 0.916 IFI = 0.917 GFI = 0.854	E-Servqual Servqual Perceived Valu stomer Satisfac	0.28 0.56 SMC pe SMC cu	8 8 1 1 1 erceivedval	11.472 8.129 0.654 3.799 2.026 4.531 ue = 610 tisfaction = 500 pay = 500	= 78%	0.01 0.05 0.01 0.05	Supported Supported Not Supported Supported Supported Supported
		E-Servqual	Perceived valu	ie C	ustomer	satisfact	ion Wi	illingness to pay
Table 6.	Perceived Value Customer Satisfaction Willingness to Pay	- 0.255*** 0.779***	- 0.084 <sup>p&gt;0.05</sup>			_ _ _		
Results of bootstrapping	Note(s): Critical t-value: **highly significant	1.96, p < 0.05 a	and 2.58, $p < 0.0$	1 (two-ta	ailed). p	> 0.05: no	ot significa	ınt. *Significant;

Role of E-service quality

The results have shown that e-service quality does not have a direct significant impact on the willingness to pay. Therefore, we have tested the indirect effect of e-service quality on the willingness to pay. The results revealed that e-service quality had an indirect significant effect on the willingness to pay. There are two mediators between e-service quality and willingness to pay; perceived value and customer satisfaction. The results reveal that both of them significantly mediate the relation. Thus, Hm2 and Hm3 are accepted. Besides, due to the impact of perceived value stronger on the willingness to pay, we concluded that perceived value is a stronger mediator between e-service quality and willingness to pay.

E-service quality does have a significant indirect impact on customer satisfaction if the perceived value is taken as a mediating variable. Hence, Hm4 is accepted. While comparing the direct and indirect effects of e-service quality on customer satisfaction, it was noticed that the direct effect of e-service quality on the customer satisfaction was stronger as compared to the relationship these two variables in presence of perceived value as a mediating variable. This strong relationship might be attributable to the fact that e-service quality is fulfilling the expectations of the customers. Once the expectations of the customers are fulfilled, they are satisfied. On the other hand, perceived value requires making a comparison between what the customer pays in exchange of what they receive as service. This exchange perception might enhance the willingness to pay for a particular online platform, however, perceived value is the main driver of satisfaction.

Figure 2 shows the results of the hypotheses and Table 7 shows the summary of the analyses results for better understanding.

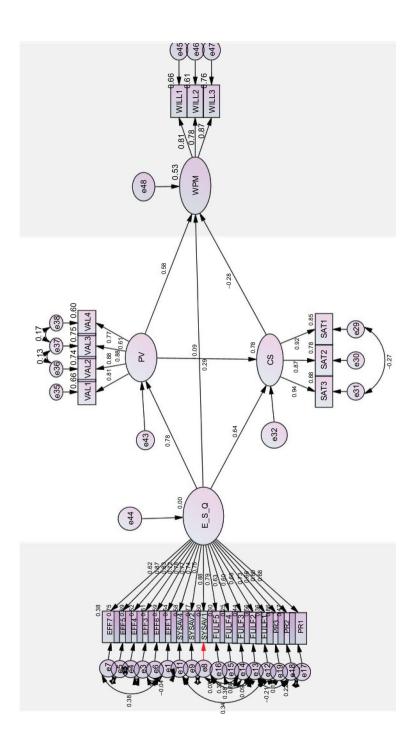
## 6. Results and discussion

Online teaching is comprised of complex tasks that require investment in effective and efficient IT solutions. As online teaching has become a norm after the COVID-19 pandemic hit the world, we should be concerned about the satisfaction of the teachers with e-learning and online meeting platforms. One of the strongest trends defining business strategy in today's era is service quality (Cronin and Taylor, 1992; Parasuraman *et al.*, 1985).

The results of this study indicate an extremely strong indirect linkage between e-service quality and willingness to pay if mediated by users' perceived value and satisfaction. However, the direct linkage between e-service quality and willingness to pay was non-significant. This study substantiates the proposed mediation model indicating the strength of the service quality-perceived value-willingness to pay and service quality-satisfaction-willingness to pay linkages, already well-established in research. As mentioned before, faculty satisfaction is considered as one of the five pillars of service quality of education (Sloan Consortium, 2002). Hence, it is crucial to continuously assess this factor to guarantee quality online educational experiences for both teachers and students. These results should be of concern to administrators of higher educational institutions because according to Hartman *et al.* (2000), the success of online programs or positive student outcomes is considerably correlated with the extent of faculty satisfaction.

There are three primary results of this study. First, this study establishes the effect of e-service quality on customer satisfaction (P rasuraman *et al.*, 1985), which is consistent with the literature. The results of the study also confirm that two variables, that is customer satisfaction and perceived value are important in the measurement of willingness to pay. Not surprisingly, e-service quality has no direct influence on the willingness to pay for online meeting platforms. The reason might be because perceived value measures the expectations of the customers. Customers compare what they pay with what they receive in return. The findings of this study confirm that result of this exchange indicates whether they would pay for the online meeting platform or not. In this case, service quality seems to be the direct driver of the perceived value and satisfaction, and not the willingness to pay. Moreover, the

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**Figure 2.** Results of the hypotheses

results confirm that the perceived value is the direct driver of the willingness to pay. Therefore, it can be concluded that perceived value is related to the willingness to pay while eservice quality is related to the customer satisfaction for online meeting platform services.

Role of E-service quality

Second, the most important factor influencing the willingness to pay of online faculty is perceived value, which is consistent with the results of (Fang *et al.*, 2016). Moreover, perceived value has a significant association with satisfaction and willingness to pay. These results conform to the theory of experiential consumer behavior (Chang *et al.*, 2009). Last but not the least, the most important finding of the study is that both perceived value as well as customer satisfaction, acts as a mediator in the relationship between e-service quality and willingness to pay.

## 7. Conclusion and managerial implications

This study extends the support to previous literature which consistently points out the relationship between e-service quality, customer satisfaction, perceived value, and willingness to pay. This, nevertheless, is the first study in this region, studying the variables in the context of e-learning. It has implications for administrators of higher educational institutions and companies providing IT solutions for online meetings.

In the times of the COVID-19 pandemic, online education is the need of the hour. However, it is a strenuous transformation for the major stakeholders including the teachers, the students, the administration and the parents as well. The two most important components of e-learning education are (1) Teachers and (2)e-learning infrastructure. To ensure a quality online education system, it is important to know how satisfied the teachers are with the quality of e-learning solutions. Therefore, the major objective of this study was to identify how e-service quality of the online teaching platforms affects the teachers' willingness to pay, satisfaction and perceived value directly and/or indirectly.

This study finds no significance direct relationship between e-service quality and willingness to pay. Hence, it can be concluded that merely e-service quality of online platforms may not be enough to persuade academic staff to upgrade the online meeting platforms or to sign up for the paid service, as to increase the willingness to pay, perceived value and satisfaction should be high, as both of them are strong mediators between e-service quality and willingness to pay. These findings are consistent with the literature that points out that satisfied users with a high perceived value of the current version of the online meeting platform, will also be willing to pay more, to upgrade to the paid-version and if e-learning continues in the future. Currently, most private universities attempt to understand the strategic and financial implications of student quality perceptions only, because students are the main stakeholders of the e-learning process. However, they should also consider faculty satisfaction as a vital factor contributing to the financial and strategic success of the university because faculty satisfaction is one of the five pillars of quality (Sloan Consortium, 2002). Therefore, it should be continuously assessed to assure quality online educational experiences for faculty as well as the students. Our findings also support the notion that high

Hypothesized path	Direct effect	Indirect effect
E-Servqual → Perceived Value	0.783***	_
E-Servgual → Customer Satisfaction	0.638***	0.255***
E-Servqual → Willingness to Pay	$0.088^{p>0.05}$	0.779***
Perceived Value → Customer Satisfaction	0.291***	_
Customer Satisfaction → Willingness to Pay	0.281*	_
Perceived Value → Willingness to Pay	0.561***	$0.084^{p>0.05}$
Note(s): *** significant at $h < 0.01$ : * significant at	b < 0.05: $b > 0.05$ : not significant	

**Table 7.** Summary of the results

e-service quality of the e-learning platforms will increase customer satisfaction, or in this case, faculty satisfaction. These findings will help the universities improve faculty satisfaction, which ensures a successful educational program, as according to literature, faculty satisfaction is highly correlated with success of e-learning programs and positive student's outcome (Hartman *et al.*, 2000).

Another managerial implications of the current study was the items of the service quality. Due to the items of the online meeting platforms' service quality explains 78% of the customer satisfaction and 61% of the perceived values, this study suggests that the managers should evaluate the service quality of the online platforms from the efficiency, system availability, fulfillment and privacy points of view.

From a managerial standpoint, this study provides a broad theoretical basis that designing a successful online meeting platform, IT companies should specifically emphasize e-service quality, perceived value and customer satisfaction. Moreover, our study has confirmed that user satisfaction has a direct and positive relationship with their willingness to pay. The study found that satisfied customers are more likely to purchase the paid version of online meeting software. The most interesting issue we discovered was the mediating effect of users' perceived value on the relationship, between satisfaction and willingness to pay. When both satisfaction and perceived value are high, online meeting platform owners will have more customers with a high willingness to pay. From the result of the mediating effect of perceived value and satisfaction, the study argue that when these companies offer acceptable e-service quality and emphasize improving satisfaction and perceived value (by increasing product quality or lowering price), they gain higher willingness to pay than offering higher e-service quality but having low satisfaction and low perceived value.

It is also very important to assess the e-service quality of online education and meeting platforms from the students' standpoint, as they are one of the major stakeholders of the whole e-learning experience. By improving the e-service quality, the universities can foster positive change to enhance the learning experience for online students.

#### 8. Limitations and suggestions for future studies

Some of the limitations of the study are pointed out in this section. First, the sample is geographically limited as only online faculty and staff working at private universities participated in the study. Second, though the sample was relatively large, however, the response rate (20%) was relatively low. Third, no public university lecturers participated in the study. Public universities in Kurdistan serve many urban as well as rural areas and a large number of students from all financial backgrounds, and are relatively large. On the other hand, private universities usually serve the urban and financially stronger students, and are relatively smaller in size. Therefore, the results found in this study should be generalized with caution. These limitations could make the results particularly dependent on contextual factors.

One suggestion for future researchers is to include all public educational institutions in Kurdistan with a larger population of online faculty and to conduct another multi-institutional research study on the topic, highlighting the relationship of e-service quality with the willingness to pay in the public sector. To increase the validity of the findings of this study, both cross-sectional and longitudinal studies could be carried out.

Moreover, further research on the topic could be conducted by adding more questions to the subscales, in order to increase reliability. It is also suggested to conduct this research in different industries for small and medium business settings. In general, the big companies and multinationals invest heavily in IT solutions and usually have their own personalized meeting platforms or alternatively they use the premium versions of the commercial software such as Skype, Zoom, Microsoft team. During COVID19 crisis, the small and medium enterprises (SMEs) have also resorted to online meeting solutions, however, it will be interesting to see if they are using the premium versions of meeting platform or are lagging behind on this front like most private universities in Kurdistan Region of Iraq. Therefore, the impact of e-service quality of both premium and unpaid versions of online meeting platforms on satisfaction, perceived value and willingness to pay should be explored from the perspective of SME owners and employees. We also recommend that a similar investigation should be carried out in the Kurdistan Region of Iraq from the students' perspective, as the students are the most important stakeholders in the e-learning educational setting.

# Role of E-service quality

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# JARHE Appendix

Constructs and items							
<i>E-Service quality Dimension (efficiency, system availability, fulfillment, and privacy)</i> The online meeting tool is very user friendly and I can easily find the commands that I look for	1	2	3	4	5	6	7
It is easy to pay for the full version whenever needed	1	2	3	4	5	6	7
This online meeting platform is well designed	1	2	3	4	5	6	7
It is easy to prepare an online meeting on this platform	1	2	3	4	5	6	7
The online meeting platform starts the meeting very quickly	1	2	3	4	5	6	7
It is easy to record meetings	1	2	3	4	5	6	7
It is easy to share recorded meetings through the links the platform creates automatically	1	2	3	4	5	6	7
This platform allows me to organize meetings any time (7/24)	1	2	3	4	5	6	7
This platform does not crash or freeze in the middle of the meetings	1	2	3	4	5	6	7
The platform warns me about the time spent and/or left for the current meeting	1	2	3	4	5	6	7
It allows me to organize a new session immediately after the current session ends	1	2	3	4	5	6	7
The online meeting platform allows me to start the organized meeting at a flexible time	1	2	3	4	5	6	7
It automatically makes the meeting link available for all the participants	1	2	3	4	5	6	7
There is no limitation on the number of meetings I can organize daily	1	2	3	4	5	6	7
There are no hidden fees on top of the prices they announced on their website	1	2	3	4	5	6	7
The link it creates for the meeting works well without any errors	1	2	3	4	5	6	7
It protects all the information about my online meetings (such as date, time, participants, and the meeting content)	1	2	3	4	5	6	7
It does not share my personal / account information with the third parties	1	2	3	4	5	6	7
This online meeting platform protects my credit card and/or payment information I am sure the meeting records are safe and cannot be reached by the third parties	1 1	2	3	4	5 5	6 6	7 7
Perceived Value							
Online meetings I organize on this platform are very good value for money	1	2	3	4	5	6	7
One gets what they pay for this online meeting platform	1	2	3	4	5	6	7
Online meetings on this platform are worth the money paid	1	$\frac{2}{2}$	3	4	5 5	6	7 7
Compared to alternatives, this platform charges fairly for online meetings	1	2	3	4	5	6	7
Willingness to Pay I am ready to pay for this online meeting platform	1	2	3	4	5	6	7
I am thinking about purchasing the full (paid) version of this online meeting platform	1	2	3	4	5	6	7
If I need to pay for an online meeting platform, it would be this one rather than other	1	2	3	4	5	6	7
alternatives	•	_	Ü	•		Ü	•
Satisfaction							
I am satisfied with my decision to organize meetings on this platform	1	2	3	4	5	6	7
If I need to organize an online meeting again, I would use this online meeting platform	1	2	3	4	5	6	7
without hesitation				,	_		_
I recommend this online meeting platform to my colleagues and friends if they need	1	2	3	4	5	6	7
one							

# **Table A1.** Survey questionnaire

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