EXAMINING THE ROLE OF E-SERVICE QUALITY IN ED-TECH PLATFORMS: A CRITICAL REVIEW

Dr. Anand Thakur (First Author)
Associate Professor & Dean, School of Management, Head, Department of Financial Administration, Central University of Punjab, Bathinda (India).
athakur0891@gmail.com

Ms. Ishita Bansal (Second Author)
Research Scholar, Central University of Punjab, Bathinda (India)
bansalishita794@gmail.com

Ms. Archita Singla (Third Author)
Student, Masters of Commerce, Central University of Punjab, Bathinda (India)
archita.singla771@gmail.com

ABSTRACT

With the increasing demand for personalized learning, edtech platforms are witnessing a continuous growth in the country. From 2012 to 2019, the number of hybrid and distance learners at traditional universities increased by merely 36 percent, but the pandemic rapidly expedited that growth by whooping 92 percent. This study aims to critically review the literature of e-service quality attributes of online learning platforms and identify the emerging attributes of e-service quality in ed-tech platforms. For the purpose of this study, an exploratory research was performed by reviewing published research articles from databases like EBSCO, JSTOR, WOS, SCOPUS etc. Findings from the study revealed the significance of system quality, the user interface design, ease of use, information quality, perceived usefulness in determining the usage intention and actual use of the e-learning platforms. Furthermore, emerging service attributes namely: e-educators' aptitude, e-learning material quality, operational excellence,visuals and aesthetics, learning autonomy, peer to peer communication, personalization and customization, and novelty in e-pedagogy are identified. The study will have relevant contribution in the literature of ed-tech platforms service quality.

Keywords: Ed-tech Platforms, E-Service Quality, Online Learning, Mobile Learning Applications.

INTRODUCTION

In a society where digital technology has become pervasive, online learning has gained an immense popularity. Online learning fulfills the modern learner's requirement of personalized learning and the need of continuous upskilling. During the pandemic, online learning became the only viable option, with students taking up online classes in large numbers. From making use of postal services to reach remote students with the use of artificial intelligence and the numerous technologies available for the dissemination of information, the advancements in distance and online learning over the years have been remarkable (Moore et al., 2011). Several ed-tech companies are providing online education in India like Byju's, Unacademy, Udemy, Coursera, etc. A total of 936 million app downloads were seen in the first quarter of 2020 (Statista, 2021). E-learning is described as deploying information and communication technology in the realms of education. It makes use of digital materials like recorded videos, presentations, e-journals, e-books, online quizzes, etc. Ed-tech platforms offer a wide variety of features - flexibility in learning; wide availability of courses; the possibility to interact with various learners, thus increasing interaction and collaboration; learning can take place in one's own pace and also useful for learners living in remote areas (Efiloglu Kurt,2019 and Isaac et al.,2019). From students of lower kindergarten using mobiles to learn through game plays, professionals taking up online courses for learning new skills and getting a pay raise, to adults watching videos on YouTube to learn different skills, the use of online learning is increasing everywhere.

As there is no physical interaction in the delivery of online services, delivering high-quality service becomes all the more important (Demir et al.,2020). E-Service Quality is "Consumer's overall evaluation and judgment of excellence and quality of e-service offerings in the virtual marketplace" (Santos, 2003). Different studies have found that designing and providing sound e-service quality increases the satisfaction level of consumers, which further helps in advancing their intention to use and loyalty (Gurau,2003). Various electronic service quality measuring scales have been used by researchers to check the influence of e- service quality on consumers of different service domains including hotel, transportation, e-commerce, and banking by focusing on the

reliability, efficiency, timely responsiveness, design, innovation, convenience, ease of using a service, quality of the website and security aspects.

Need and Significance of Study

The learning ecosystem is being continuously redefined. Edtech industry in the Indian economy is rapidly expanding and is expected to grow at a CAGR of approximately 30% to cover the market size of USD 10.4 billion by 2025 (Jhingan et al., 2021).The pandemic further proved to be a boon for the edtech industry as people had to stay indoors and engage in online learning. This study aims to crtically review the literature of e-service quality in context of ed-tech platforms and, tries to identify emerging attributes of service quality of ed-tech platforms.

REVIEW OF LITERATURE

Recently, many new models of technology adoption by customers are applied to gauge e-service quality in context of online learning. Lutfi et al. (2022) in their study covered the elements of performance expectancy (PE), effort expectancy (EE), facilitating conditions (FC), and social influence (SI) along with information, system and service quality. Iranmanesh et al. (2022) conducted a study by employing trust among members, social usefulness of the app, information and system quality. Menon (2022) identified following gratifications - educational assistance, entertainment, novelty, social impact, convenience, activity and engagement for the purpose of his study. Various research efforts expanded the IS Success Model by adding new attributes, Gharaibeh et al. (2020) employed trust factor, Aldholay et al. (2019) assimilated attributes of compatibility and transformational leadership (TL) and Alksasbeh et al. (2019) used networking quality along with the IS Success model dimensions. Camilleri & Camilleri (2019) deployed the attributes of perceived usefulness, ease of use, enjoyment, and normative pressures. Wang et al. (2018) checked the influence of information quality, information technology (IT) and information environment in the context of online learning.

2.2 *Impact of E-service Quality on Aspects of Consumer Behaviour*

Almaiah et al. (2022) aimed to identify the role of quality measurements in increasing the use of mobile learning applications (MLAs) during the pandemic. Effect of quality factors – information, service and system quality was first studied on the perceived ease of use and usefulness. Results showed quality factors significantly impacted perceived ease of use and usefulness, m-learning usage intention and actual use. Hurtado et al. (2021) conducted a study with the primary objective of measuring the quality of online teaching of subjects, initially designed for offline training. The study checked the impact of system characteristics on the constructs of effectiveness of online education and relation with teachers & evaluation; the latter variables were then studied to check their impact on online learning satisfaction. Considering the findings, the author concluded that five essential attributes of online teaching namely: interaction between the students, concentration level of students, the system for assessing online tests, system 's usefulness and the variety in assessment tests are significant for the enhancement of virtual instruction service quality.

Demir et al. (2020) explained the effect of e-service quality on satisfaction, perceived value and readiness to pay for online meeting platforms in the educational domain. Results showed that e-service quality directly affected perceived value and satisfaction, but it was not directly related to the readiness to pay. Perceived value and satisfaction acted as mediating variables between service quality and readiness to pay. Also, it was found that perceived value had a more critical effect on readiness to pay when compared with satisfaction. Camilleri & Camilleri (2019) came up with a conceptual model using TAM, UTAUT and Theory of Planned Behavior (TPB) to check the intrinsic and extrinsic motivations of the primary school students towards learning by employing gameplay through their mobiles. The four hypothesized relationships, i.e., the influence of perceived usefulness, perceived ease of use, enjoyment, and normative pressures on behavioral intention & actual use were investigated using the multivariate regression analysis. Results of which indicated that perceived usefulness of m-learning and behavioral intention to use it were strongly related with each other, but no substantial connection could be seen between perceived ease of use and student's enjoyment in using MLAs at school. Also, perceived ease of use showed a positive effect on perceived usefulness. Arguelles et al. (2013) presented a model to check the perception of service quality in the virtual learning environment. The scale consisted of 24 attributes divided into four areas: teaching, support services, administrative or facilitative services, and user interface. Dimensions of teaching quality had the highest impact, followed by administrative services, user interface and support services, respectively.

DISCUSSION & IMPLICATIONS

Above literature illustrates that researchers have identified various attributes to measure service quality in ed-tech platforms. Ed-tech platforms are past their embryonic stage, now these systems are constantly diversifying

with the technological advancement. In this scenario, new e-service quality measuring attributes are emerging which are discussed in the following paragraphs.

1. **E-Educators' Aptitude** – The ed-tech platform educators' aptitude and the teaching methodologies adopted by them severely impact the understanding level of students. Effective use of animations, videos, power point presentations and artificial intelligence by the teacher help in better learning and retention of the topics by increasing the engagement level among students. New education policy 2020, requires teachers to possess skills of effectively using different pedagogical tools. Technology backed online learning has the proficiencies to ease the work of educators with its state of art user interface. Educators can get feedback on their teaching and constantly monitor their career progress. Moreover, highly popular educators are awarded with promotional referral codes in the form of incentives. Thus, advanced technology of ed-tech platforms favors both educators and students by motivating educators to provide quality learning content.

2. **E-learning Material Quality -** Along with educator proficiency, providing effective study content that is legible to understand, precise and updated regularly with the emerging requirements of the job recruiters is of utmost importance. Learning content that provides useful insights by integrating learning from different fields will make learning more useful and improve the learning performance of students. Content should also trigger analytical thinking among learners by providing thought provoking exercises. It is one of the key factors that affects the intention to adopt e – learning system.

3. **Operational Excellence -** Robustness and smooth operation of the system, compatibility of an app with different operating systems will make students more attentive and learning more effective. Learning system that keeps on adding new features is expected to have a higher chance of acceptance. As systems would be used by students who might not possess sufficient level of technical skill, necessary assistance should be available. A learning app must be free from frequent errors. Another issue that needs to highlighted here is privacy and security of applications from harmful internet security threats. Designing apps and learning platforms that are pleasurable to use, easy to navigate, encourage creativity andincrease self-confidence will be highly beneficial for learners.

4. **Visuals and Aesthetics** - Use of interactive graphics in website design will motivate students to make use of a site whenever they face a query. Proper arrangement of the all the icons and interactivity of the system in terms of visuals added to it will help increase productivity of students by enhancing their span of attention. App layout must facilitate an engaging learning environment. Proper color arrangement is another significant aspect. Also, e-learning platforms that encourage students to think creatively will have a higher chance of adoption.

5. **Learning Autonomy** - Increased independence and flexibility in learning through e-systems may also impact learner's satisfaction level as they are free to choose from a variety of content, courses and educators. Presently, in learning applications, there are features of storage and recording that promotes autonomy and flexibility. Moreover, learners have registered accounts on the platform where they can check their pending assignments, submit them as per their convenience and regularly monitor their performance in tests and exams.

6. **Peer to Peer Communication** - Use of an e-learning system by peer group has boosted the motivation to adopt it. Positive experience of a friend may positively influence one's attitude and trust. Comfort level of the present teachers with online learning has also encouraged students to make use of this technology. Moreover edtech platforms are fully connected with other social media handles and there are learning communities where students can share their achievements and experiences. Thus, peer to peer communication feature is massively enhancing the present scope of education.

7. **Personalization and Customization** - Lack of direct contact with the distant teachers always remains an area of concern in the online environment. Therefore, learning apps are providing the facilities that provide personalized learning. Usage of tailor made approaches, giving adequate importance to the suggestion of students, solving their queries and providing personalized feedback by employing assessment tests is promoting personalized learning. Apps offer course suggestions to students as per their individual interest and past performance. Moreover there are discussion forums where students can express their opinions and have discussions with fellow learners and educators about the different concepts.

8. **Novelty in E-pedagogy**- Integration of learning with storytelling through animations, online role plays and use of game plays in teaching and evaluating the performance of students of lower classes will make learning more enjoyable. Providing practical training by using artificial intelligence and robotics will help students experience a phenomenon and retain it for a longer time. Learners' philosophies are changing dynamically due to new educational policies and competition being faced by them in the current job market. Therefore, novelty in educational pedagogies of online educators can enhance their all-round development.

CONCLUSION

Educators from all regions and age groups need to be tech-savvy so that they can reap the benefits of the latest technologies and employ effective teaching pedagogies. Also, e-learning system developers can encourage self-regulated learning by embedding features of personalized planning and goal setting into the system. Conscious and collaborative efforts from all the stakeholders like teachers, students, parents, government, educational institutions and online educational platforms will help in making India a knowledge economy in the coming years. Future research can be done to check the impact of the suggested attributes along with the other quality features on the satisfaction level of students.

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