

E-S-QUAL: Factors Influencing Student's sudden online education during COVID-19

Jeffery Ho Vui Shing¹, Krishnaveni Sritharan²

^{1,2} (Business and Finance Department, Sunway College Johor Bahru, Malaysia)

Abstract:

Background: During Covid-19 the nation implemented movement restrictions and physical segregation to curb the virus' spread. Students were affected, as physical classes were closed abrupt and online education was rolled out. This study aimsto explore factors influencing students' online learning satisfaction and retention in acollege in Johor Bahru using a qualitative research design.

Method:The study utilised a semi-structured interview and questionnaire from E-S-Qual with a focus group discussion consisting of 12 students. Focus group (1) consisted of six participants from the bachelor's degree programme while focus group (2) involved six participants from the diploma programmes. The data collected were subjected to content analysis.

Results: The participants agreed that the online learning environment was satisfactory. The majority of participants highlighted system availability, privacy, efficiency and fulfilment as factors that contributed to a favourable online learning experience. Respondents to the survey that acknowledged unhappiness were those who found online learning to be difficult and may intend to discontinue their studies.

Conclusion: The results of the finding can assist in the development of initiatives by policymakers to improve the e-service quality, degree of satisfaction and retention rate. The study proposes the E-S-Qual framework for assessing the education e-service quality.Based on the experiences of the students the institutions' policymakerscan improvethethe online education quality, student satisfaction and retention rate.

Key Word: E-S-QUAL, Satisfaction, Retention, Online Education

Date of Submission: 26-09-2022

Date of Acceptance: 11-10-2022

I. INTRODUCTION

In 2020, the World Health Organisation (WHO) declared Covid-19 as a pandemic; governments ordered movement restrictions and physical distancing to reduce transmission of Covid-19 (Sohrabiet al., 2020). It impacted 94% of the world's student population; with approximately 1.6 billion learners (United Nations Education, 2020). The temporarily closed physical institutions (Daniel, 2020) had an impact on the educational landscape in embracing the modern approach to teaching and learning (Mishra et al., 2020). During the sudden online education, educators are forced to deliver courses online (Hussein et al., 2020) by using synchronous learning that conducts at a specific time via a specific medium (Crawford et al., 2020). However, some institutions allowed students to learn at their own pace as classes are offered in an asynchronous where recorded lectures were uploaded to a specific platform (Hodges et al., 2020).

With regards to this exposition, this study aims to explore the relationship between student satisfaction in the relationships and student retention during the era of sudden online education. Additionally, this study aims to ascertain the factors thatinfluence students' online learning satisfaction and retention in a college in Johor Bahru. These objectives would be achieved by addressing the following research questions (RQs):

RQ1: What is the effect on satisfaction for students in an era of sudden online education?

RQ2: How does student satisfaction impact retentionin an era of sudden online education?

II. RESEARCH HYPOTHESIS AND MODEL

In an iterative process, Parasuraman et al. (2005) created the 4-dimensional E-S-QUAL scale by examining the coefficient alpha and item-to-total correlations by dimension, deleting items, exploring dimensionality through exploratory factor analysis and reassigning items and restricting dimensions as needed. Chaudhary and Dey (2020) found that student perceived service quality had a direct effect on student satisfaction. Concisely, this study defines students' satisfaction based on the experiences of students and perceived performance in an era of sudden online education.

Efficiency (Parasuraman et al., 2005, p.220) define as 'the ease and speed of accessing and using the site'. In other words, it means the ability of students to get to the platforms, find their desired resources and

information associated with them and check out with minimal effort (San et al. 2020). Thus, this study developed the following propositions:

P1: Efficiency positively influences student satisfaction.

Fulfilment refers to 'the extent to which the site's promise about order delivery and item availability are fulfilled' (Parasuraman et al. 2005, p.220). The accuracy of service promises is important as it might impact students' satisfaction. Such as having relevant resources and delivering the services in the promised time is important (Dalbehera, 2020). Thus, this study developed the following proposition:

P2: Fulfilment positively influences student satisfaction.

Parasuraman et al. (2005, p.220) define system availability as 'the correct technical functioning of the site'. The technical function of the site denotes the extent to which it is available and properly functioning (Leonard 2019). Thus, this study developed the following proposition:

P3: System availability positively influences student satisfaction.

Privacy (Parasuraman et al. 2005, p.220) is 'the degree to which the site is safe and protects customer's information'. Privacy can indeed directly affect the satisfaction and trust of students. Thus, assurance that learning behaviour data and personal information are secured is essential (Demir et al. 2020). Thus, this study developed the following proposition:

P4: Privacy positively influences student satisfaction

From an online education perspective, Cochran et al. (2014, p.42) concluded that the "strongest factor in determining the potential of withdrawal from an online class is the academic experience, that students are less likely to withdraw from online courses". This is endorsed by Boddy (2020) that the best retention efforts are those that attempt to give students the feeling that they have a relationship with the institution. Thus, this study developed the following proposition:

P5: Student satisfaction positively influence retention.

III. METHODOLOGY OF RESEARCH

The study was conducted among the respondents in a college in Johor Bahru that are providing both degree and diploma programs.

Participants: A convenience sample of 12 local and international students (6 female and 6 male) were recruited to participate in this study. The participants' ages ranged from 19 years to 25 years with the various education level of undergraduate (diploma or bachelor's degree). All students who participated in this study were required to have attended a minimum of one semester of physical (face-to-face) education and one semester of sudden online education at the point of the interview.

Instrument: Field research was conducted by utilising a semi-structured questionnaire of the E-S-QUAL model and replicating the work of the model's developer Zeithaml et al. (2002)

Procedure: 12 participants were engaged in 2 focus group sessions. Focus group (1) consisted of six participants from the bachelor's degree programme while focus group (2) involved six participants from the diploma programme. Both focus group sessions were conducted by the same moderator and with the same semi-structured questions. The focus groups were conducted online. The duration of the focus groups was approximately an hour per session. Later, both recordings were transcribed.

Data analysis: Data obtained from the recording were transcribed precisely in Microsoft Word using Express Scribe and Windows Media Player. All quotes were encoded initial meaning units were noted directly from the transcripts, and the similar meaning units were grouped into themes. This approach has been used in previous qualitative studies (Brinia et al., 2020; Ho & Lee, 2020).

IV. RESULTS

One of the participants described sudden online education as "changes of learning mode from face to face (physical) class to online class" and the majority of the interviewee defined sudden online education as learning in a virtual environment. Microsoft Team and Zoom are the common online platforms for synchronous classes. Researchers found that the identified variables are consistent with E-S-Qual proposed by Zeithaml et al. (2002).

a) Efficiency

The majority of the participants highlighted that, they are satisfied as the current online platform (Moodle and Franchise University Collaborate) is easily accessible and all the activities such as submission of assignments, tutorials, tests and examinations can be completed quickly. From the interviews and focus groups, all the participants agreed that efficiency increased their satisfaction.

However, the minority of the interviewee highlighted the minor issue of efficiency during the examination of the learning management systems (LMS). As some experienced speed of accessing the LMS was lagging due to huge numbers of students attempting examination at the same time. Participants continued to explain

the issue of efficiency during examination had been solved when they are in their second semester of sudden online education. In terms of online classes, the platforms of Microsoft Team are highly recommended compared with Zoom as participants explained Microsoft Team is easy to use as their can easily record the class, which allows participants to review it when needed.

In brief, all participants agreed that current online platforms are easy, and the speed of accessing and using the site (LMS, online synchronous class, e-library) enlightened their satisfaction level, especially in the second semester of sudden online education.

b) Fulfilment

Being able to receive what is promised in the specific time and availability of resources on the site impact students' satisfaction especially in an era of sudden online education as students are not encouraged back to institutions to find books from the physical library. One of the participants experienced the resources of the class syllabus are not ready in LMS which led to low satisfaction with the course and lecturer. Furthermore, some participants are not able to find journals via institutions' online libraries while they are doing their assignments which caused dissatisfaction and some interviewee found out that pass examination papers were not updated regularly which led to dissatisfaction. However, the majority of the participants agreed that lecturers and coordinators are the key factors to ensure the LMS are full of resources especially when students required them.

Besides, participants commented that current online platforms are considered as having the correct technical functioning of the site as students can practice presentation before the actual presentation date via Microsoft Team among their group members and are able to receive instant responses from lecturers via the LMS, especially during examination and tutorial. In short, having relevant resources and delivering the services in the promised time is important as it directly impacts students' satisfaction levels.

c) System availability

The majority of the participants expressed that the system must be available whenever needed especially when students did their assignments and submitted their assessments.

Only a minority experienced system unavailability when they log in to the learning management system; however, most of the participants agreed that notice was given in advance when any upgrade and maintenance of the site is ongoing. In other words, participants agreed that the technical function of the site, particularly the extent to which it is available and properly functioning impacts their satisfaction level.

d) Privacy

All the participants have faith that institutions do not share their personal information with third parties. However, one of the participants mentioned, that it might share within the institutions' corporate group. Moreover, participants agreed that all the online platforms consider safe platforms, unfortunately, Zoom was not their preference as this online platform had negative broadcasts. In short, participants agreed privacy can indeed directly affect the satisfaction and trust of students; thus, assurance learning behaviour data and personal information are secured is one of the important dimensions to measure their satisfaction.

e) Retention

All the participants concurred that student satisfaction did have an impact on student retention during the era of sudden online education. Participants in the interview claimed that if their satisfaction is unfulfilled, they may enrol in an alternative institution or even give up their studies and start working. Besides, some pointed out, options for postponing their study until the end of the pandemic and students' unable to focus during an online class led to dissatisfaction which led to the intention to quit the study. Several students also suggested the possibility of postponing their studies until the virus was over. The student's failure to focus during an online course led to their dissatisfaction, which coaxed them to decide to discontinue studying. Although none of the participants considered switching to other programmes or institutions, they were all able to adjust to the rapid shift to online education and were happy with the new learning environment. Additionally, because they were happy with the current level of e-service quality offered, they all decided to continue using the online platforms of the current institutions.

Overall, all participants are satisfied with the online platforms used in a college in Johor Bahru in an era of sudden online education. With the above findings, Proposition 1: Efficiency has a positive influence on student satisfaction, Proposition 2: Fulfilment has a positive influence on student satisfaction, Proposition 3: Privacy has a positive influence on student satisfaction, Proposition 4: System availability has a positive

influence on student satisfaction and Proposition 5: Student satisfaction positively influence retention. All five propositions in this study are accepted.

V. CONCLUSION

The results of this study indicate a strong direct linkage between E-service quality (E-S-Qual) and student satisfaction as well as student retention, especially in an era of sudden online education. To answer RQ1, the effect of e-service quality on customer satisfaction from students' perspectives is consistent with the literature established (Parasuraman et al., 2005). The results of the study also confirm that E-service quality (E-S-Qual) and student satisfaction are important in the measurement of student retention. Secondly, all dimensions of E-service quality (E-S-Qual) are equally important, which is consistent with the results of Atabaro et al. (2017) and San et al. (2020). Finally, in answering RQ2, retention and student satisfaction are closely related. Furthermore, the study's five propositions were all accepted.

VI. LIMITATIONS AND FUTURE RESEARCH

The study has several limitations. First, the qualitative approach does not allow generalizing data. The sample size was relatively small and only involved one institution in Johor Bahru. Also, the study was based on the participant's perceptions and it is assumed that they were accurate. Moreover, future research could focus on student groups such as primary and secondary school learners, working adult learners, and research scholars (research-based) in validating these results quantitatively. The factors studied in this study, clearly illustrate the relationship between e-service quality, satisfaction, and student retention. This can be used in a future study with a wider scope and border geographical area. This study has provided some insights into the education industry, especially in an era of sudden online education in Malaysia.

REFERENCES

- [1]. Atabaro, H., Muntaka, A.S. and Quansah, E.K. (2017). Linkages among e-service quality, satisfaction, and usage of e-services within higher educational environments. *International Journal of Business and Social Research*. 7(3), 10-26.
- [2]. Boddy, C. (2020). Lonely, homesick and struggling: undergraduate students and intention to quit university. *Quality Assurance in Education*, Vol. 28 No. 4, pp. 239-253. <https://doi.org.proxy.library.nyu.edu/10.1108/QAE-05-2020-0056>.
- [3]. Brinia, V., Poullou, V. and Panagiotopoulou, A.R. (2020). The philosophy of quality in education: a qualitative approach. *Quality Assurance in Education*. 28(1), 66-77.
- [4]. Chaudhary, S., & Dey, A. K. (2020). Influence of student-perceived service quality on sustainability practices of university and student satisfaction. *Quality Assurance in Education*, 29(1), 29–40. <http://doi.org/10.1108/QAE-10-2019-0107>
- [5]. Cochran, J. D., Campbell, S. M., Baker, H. M., & Leeds, E. M. (2014). The role of student characteristics in predicting retention in online courses. *Research in Higher Education*, 55(1), 27–48
- [6]. Chaudhary, S. and Dey, A.K., 2020. Influence of student-perceived service quality on sustainability practices of university and student satisfaction. *Quality Assurance in Education*.
- [7]. Crawford, J., Butler-Henderson, K., Rudolph, J., & Glowatz, M. (2020). COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Teaching and Learning*. 3(1), 9-28.
- [8]. Dalbehera, S. (2020). Measuring Service Quality in Digital Library Services by the Research Scholars of SOA University of Odisha Using ES-QUAL Model. In *International Perspectives on Improving Student Engagement: Advances in Library Practices in Higher Education* (pp. 111-126). Emerald Publishing Limited
- [9]. Daniel, S.J., (2020). Education and the COVID-19 pandemic. *Prospects*, 49(1), 91-96.
- [10]. Demir, Ahmet, Lubna M., and Bayad J. A. (2020), "The role of E-service quality in shaping online meeting platforms: a case study from higher education sector." *Journal of Applied Research in Higher Education* (2020).
- [11]. Ho, J.V.S. and Lee K.L. (2020), Balancing Religion and Profit in a Christian Church of Malaysia. *Journal of Business and Management*. 22(10), 9-16.
- [12]. Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. Available at: <https://er.educause.edu/> (accessed 20 December 2021).
- [13]. Hussein, E., Daoud, S., Alrabaiah, H. and Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review*. 119, 105699.
- [14]. Leonnard, S. E. (2018), "Perceived Service Quality, Perceived Value for Money, Satisfaction and Repurchase Intention: An Evaluation on Private University Services", *International Journal of Commerce and Finance*, Vol. 4, No. 1, pp. 40-51.
- [15]. Mishra, L., Gupta, T. and Shree, A. (2020). Online teaching-learning in higher education during lockdown period of Covid-19 pandemic. *International Journal of Educational Research Open*. 1, 100102.
- [16]. Parasuraman, A., Zeithaml, V.A. and Malhotra, A. (2005). ES-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of service research*. 7(3), 213-233.
- [17]. San, W.H., Von, W.Y. and Qureshi, M.I. (2020). The Impact of E-Service Quality on Customer Satisfaction in Malaysia. *Journal of Marketing and Information Systems*. 3(1), 46-62.
- [18]. Sohrabi, C., Alsafi, Z., O'Neill, N., Khan, M., Kerwan, A., Al-Jabir, A., Iosifidis, C. and Agha, R. (2020). World Health Organization declares global emergency: A review of the 2019 novel coronavirus (COVID-19). *International Journal of Surgery*.
- [19]. United Nations Education, Scientific and Culture Organization (2020). "Education: From disruption to recovery", available at: <https://en.unesco.org/covid19/educationresponse> (accessed 20 December 2020).
- [20]. Zeithaml, V.A., Parasuraman, A. and Malhotra, A. (2002), "Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge", *Journal of the Academy of Marketing Science*. 30(4), 362-375.