

Exploring e-service quality through students' experience of Massive Open Online Courses (MOOC)

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Abstract

This article identifies the primary dimensions and sub-dimensions of e-learning service quality for Massive Open Online Courses (MOOC). Sixteen undergraduate students who have experience learning through MOOCs are interviewed. All participants have completed at least three MOOC courses through the OpenLearning platform. The interviews reveal four primary dimensions and seven subdimensions: physical environment quality (convenience, platform appearance, and security), interaction quality (student-instructor interaction and student-student interaction), learning quality (teaching material and assessment), and lastly, the learning outcome quality. Instructors and MOOC platforms could target the findings to motivate students to finish MOOCs. The study also highlights MOOCs' weaknesses that instructors and OpenLearning need to note in order to improve their MOOCs.

Keywords:

e-Service Quality, e-Learning Service Quality, Higher Education, MOOC, Online Learning, Student Experience

1 Introduction

Students worldwide can now learn online and attend institutions that were previously out of reach, thanks to e-learning and virtual classes (Kharod, 2021). Instead of the traditional face-to-face classes, students are linked to their respective virtual classrooms, regardless of time zone and location, allowing students to access the course material everywhere (Business Matters, 2020; University of Illinois, 2020). The e-learning services segment is witnessing a high demand for curriculum design and development, training delivery, and analytics services to ensure digital learning systems function seamlessly (Wadhvani & Gankar, 2020). Therefore, the primary purpose of MOOC is to offer a free online course for everybody without university entry requirements. More than 900 universities worldwide have confirmed or launched 13,500 MOOCs by the end of 2019 (Shah, 2019). Based on MOOC popularity, the Ministry of Higher Education proposed online learning as an essential component in teaching and learning in Malaysian higher education. The former Ministry selected OpenLearning as Malaysia's National MOOC platform, allowing everyone to create, sign up, and participate in any course from any location (Dhiman, 2015; Sahyoun, 2014). Even with full government support, MOOC have still not been fully utilized by enrolled students. Many argue that this phenomenon is probably due to the low student engagement in the lessons and the lack of motivational factors for them to complete the courses (G2 Collective Inc, 2011).

Consequently, the lack of interaction between the students and the facilitator and in-depth discussion affects the students' motivation, excitement, and sense of being part of a learning community (Littlefield, 2017; Swain, 2015). Previous studies focused more on the types and comparison of MOOCs, MOOC platforms, and factors that affect student engagement and learning experience in MOOCs rather than the e-service quality of MOOCs (Chen et al., 2017; Smith et al., 2017; Zhu et al., 2017). However, a lack of research focuses on how undergraduate students use MOOCs as their learning experience. Therefore, using MOOC in Malaysia as a context, this paper aims to explore the MOOC e-learning service quality experienced by undergraduate students.

2 Literature Review

2.1 OpenLearning Platform

e-learning is education delivered on a digital device (such as a desktop computer, tablet, or smartphone) to support learning (Clark & Mayer, 2016). Moreover, through e-learning, interaction still occurs between students and the teacher without meeting face-to-face in the classroom (Janice, 2017). One of the e-learning systems is MOOC which was developed by George Siemens and Stephen Downes in 2008. MOOCs are designed and developed by instructors who later become the courses' facilitators.

The OpenLearning platform was developed by OpenLearning Limited (OLL), an Australian company that provides a social online learning platform for MOOCs, short courses, and online degrees (Swan, 2015). The main goal of OpenLearning was to

increase access to quality education (Jacobs, 2019). When OpenLearning came to Malaysia, it worked with Taylor's University to create the first pilot MOOC subjects in Entrepreneurship and Achieve Success With Emotional Intelligence (Al-Atabi, 2013; Jacobs, 2019; Wilshire, 2017). Moreover, the OpenLearning platform was chosen to promote education access in the university environment and help the Malaysian community get an education without borders (Azhan et al., 2016).

2.2 e-Service Quality

Higher education service quality is the gap between students' expectations and experiences with higher education services (Stodnick & Rogers, 2008). Service quality is also known as customer judgment and evaluation regarding the quality of e-service delivery on a website (Santos, 2003). Besides, e-service differs from traditional service based on interactive information movement between service providers and customers (Li & Suomi, 2009). SERVQUAL has been a popular measurement scale in different traditional service environments to evaluate service quality and the direct interactions between customers and employees of service providers. With advances in technologies, internet coverage, speeds, and the growth of e-commerce and e-services, SERVQUAL is unsuitable for evaluating and measuring e-service quality characterized by interactions between customers and websites of service providers (Pham et al., 2019). Some scholars have already researched e-service quality in higher education in the literature. However, their studies do not rely on the e-learning approach of using MOOCs. Pham et al. (2019) focused on overall e-learning service quality, the relationship between overall e-learning service quality and e-learning student satisfaction, and e-learning student loyalty. In the meantime, Zhu et al. (2017) study focused on video content in MOOCs in elementary schools, while Chen et al. (2017) study examines the emotions derived from different types of commonly used videos in MOOCs. Meanwhile, the study by Smith et al. (2017) focuses on comparing the two ways of developing and delivering MOOCs.

2.3 Student Experience

Student experience refers to the student's emotional and rational responses (Clemes et al., 2008). Findings from Annamdevula and Bellamkonda (2016) in the higher education context show that service quality has a positive outcome on experience, which is a possible consequence of student motivation. Clemes et al. (2008) and Clemes et al. (2013) also find that there is a positive relationship between service quality and student experience in higher education which leads to positive future attendance and the perceptions of the price (tuition fees) being paid.

3 Methodology

A qualitative approach was used in this paper to discover a fundamental research interest and the connection between them. Thus, this paper used a purposive sampling technique since the method allows respondents to be selected based on the study purpose (Muhammad et al., 2018; Ramayah et al., 2011; Silverman, 2013).

The sample population involves students who have already completed three MOOC courses through the OpenLearning platform. Respondents were recruited from public universities. Therefore, respondents were invited from the Faculty of Hotel and Tourism Management (FHTM), Puncak Alam Campus, Selangor, Universiti Teknologi MARA (UiTM), Malaysia, as the faculty has over 20 MOOC subjects. The faculty lecturers develop all the MOOC subjects. An invitation to participate in this study was emailed before the face-to-face interview was initiated.

The survey was divided into a few questions. The first part is on the OpenLearning platform. The second part of the survey concentrated on the student learning experience through MOOC. The interviews were conducted in English, each taking about thirty to forty minutes. The informants were asked semi-structured questions about their learning experience in using MOOCs. During the interview process, all answers were audio-recorded. Thematic analysis was used to examine all the responses. Thematic analysis was used to record and codify the qualitative data collected and make coding the data easier. The transcripts were written by hand, with the coding method and the generation and determination of themes to address the research goal due to the limited data collected. The coding was completed entirely by hand. After the analyzed codes, the students' MOOC experiences were identified and grouped into themes. The final step in data analysis was writing the result per the research questions.

4 Finding

The researcher interviewed 16 informants (eight undergraduate students of semester five and eight undergraduate students of semester six) from the FHTM, UiTM. Of the sixteen informants, six were males, and 10 were females. All the informants were aged between 22 to 25 years old.

Detailed descriptions of the four primary service quality dimensions are presented in the following sections.

4.1 Theme 1: Physical Environment Quality

The physical environment quality is focused on the MOOC platform, the OpenLearning website. The primary response from students about what they think of the OpenLearning platform is the platform's physical environment quality.

Three sub-themes emerged from the analysis that helps explain what students think of the OpenLearning platform where MOOC operates: convenience, platform appearance, and security. Most respondents agreed that the MOOC platform is convenient for them. The example supporting statements from the informants are as follows:

I feel like MOOC is convenient, easy to access, and the course's navigation bar is easy to understand (Informant 4)

By learning through MOOC, I can organize my time. I can learn the course anytime, anywhere as long there is internet connection (Informant 7)

Although MOOCs are convenient, some students do not know how to use them well. Two informants think that MOOC is not suitable for first-time users as they experience some difficulty in using MOOC:

There are lots of improvements in MOOC design from last year. However, most of my friends do not know how to use it (Informant 2)

It takes lots of time for the first-time students to learn how to use the OpenLearning as the layouts are not so organized, it is challenging for me to find information (Informant 9)

One informant mentions that the MOOC platform has an attractive design. The quote illustration is as follows:

My first impression of Open Learning is that it has an attractive design. The MOOC page has an attractive colour, the layout of the MOOC is nice (Informant 3)

Nevertheless, some informants highlight how they feel about OpenLearning's color, that it is not attractive, the discussion forum is too informal, the messy flow of the contents, and the MOOC direction is too complicated while they use MOOC. The informants provide feedback as follows to support this theme:

The students can skip the MOOC contents, so the flow of the contents is being messed up. OpenLearning should make the next topic being open after the students accomplish the previous topic. (Informant 5)

I think MOOC is quite difficult and confusing. I need to observe each section in the MOOC. The MOOC layout needs to be interesting and it need simple direction. (Informant 14)

Therefore, the MOOC platform must provide the instructors with design choices to create an attractive MOOC. Besides, with the attractive appearance of MOOCs, students will feel motivated to learn. Also, the layout needs to be easily understood and user-friendly. Moreover, OpenLearning must ensure that the next topic can only be opened after the students finish the previous one. Next, two informants were concerned that signing up using their Facebook account may harm their privacy. The quote illustration is as follows:

The sign-up is quite difficult for me as I do not want to give my information and do not want to sign up using my Facebook account. I am afraid to share my information with other people. (Informant 6)

4.2 Theme 2: Interaction Quality

Two sub-themes emerged under interaction quality which is student-instructor interaction and student-student interaction. The student-instructor interaction is perceived to be the expected part of MOOC. Two informants feel that the interaction with the instructor should be informal and fast:

The instructors always give fast feedback or responses on comment, liking, and so on from my experience. The direct chat or message make MOOC more convenient. (Informant 1)

The interaction in MOOCs should be friendly so that students feel included in the topic discussion. (Informant 13)

However, four informants repeatedly highlight how they feel about low support, advice, or information from MOOC instructors. The following are some examples of supporting statements from the informants:

If I do not understand the tasks, I need to wait for the instructors to reply my message which sometimes take lots of time. (Informant 12)

I know the instructors do not have lots of time but at least they should set a time when they will be online so that I can get the guidance on that time, I do not like to wait. (Informant 16)

Although the informants feel that all instructors are responsible for providing support, information, and guidance about the tasks or contents, informants generally think there should be an interaction with other students as they are learning in the same MOOC course. The example supporting statements from the informants are as follows:

There is no depth interaction between student and student, I feel lonely when I use MOOC. When I ask for their help, no one responds. (Informant 10)

However, some informants feel the interaction with other students in MOOC is awkward as they do not know each other and prefer not to interact with each other:

I do not like when I need to give comments and liking other students works as I feel like I am exposing myself. (Informant 6)

I am not comfortable to learn with students that I do not know. I feel awkward to interact with them. (Informant 11)

4.3 Theme 3: Learning Quality

The two sub-themes that emerged under learning quality are teaching material and assessment. Most informants cite several difficulties of MOOC teaching materials. The understanding of MOOC slides and videos associated with MOOC experience is the most mentioned. Such challenges include the contents being too simple, thus making it hard to understand the slides:

The important thing that I look in MOOC is content. The MOOC's contents need to be detailed as the students need to understand it by their own. (Informant 4)

It is difficult to understand what the instructors want to deliver based only on the slide and videos. (Informant 7)

Some of the slides are colourful but hard to understand without the instructors explained more about it. (Informant 9)

Other problems with MOOC experience include a lack of instructor elaboration and information, content flow, and video duration. The informants respond as follows regarding this matter:

The instructors need to put more explanation in the slide's notes. I know there is minimum guidance from the instructors, but they need to put all the details so that students do not get wrong knowledge and information. (Informant 8)

The video contents sometimes too long. The slides note only have points without further explanation. (Informant 16)

Assessment is commonly cited as the barrier to learning in MOOCs. It is perceived to harm available time and evaluation marks. The example supporting statements from the informants are as follows:

The difficulty of the task and lack of guidance from the instructors make I just ignore the task in MOOC. There are some of MOOC that I take lots of time to complete it. (Informant 5)

The task's mark based on automatic evaluation, sometimes I want the instructors give comments about my task result. (Informant 15)

4.4 Theme 4: Learning Outcome Quality

While the informants lacked guidance from the instructors and other students on the contents and assessment during the learning process in MOOC, the learning outcome in MOOC encouraged them to complete their MOOC. However, they do not know the benefits of a MOOC certificate:

I look for the learning outcome in the MOOC that at least give me little bit of knowledge as I strive for success from the MOOC assessment and activities. It an extra if the outcome can give me skills or inputs that I can use in my future career. (Informant 2)

The learning outcome of MOOC is good as if we must fulfil the objectives and done the task. At the end of the course we get online certificate. Right now, I do not sure whether the certificate will give benefit to me or not. (Informant 14)

5 Discussion

Based on the findings, the informants in this study can allow their experiences to inform future academic practices about the service quality in MOOCs. Besides, the results will give instructors and MOOC's website platforms the dimensions of e-service quality needed to increase the students' experience (Safri et al., 2020a). The study has resulted in four primary themes, and seven sub-themes emerged from the findings.

The sub-themes for the physical environment quality are convenience, platform appearance, and security. The physical environment quality is focused on the MOOC platform, the OpenLearning website. Convenience for a website means it is easy to read and understand (Loiacono et al., 2002). Additionally, convenience is a subdimension in e-banking services and physical banking, where poor service quality leads to reduced customer satisfaction (Bakar et al., 2017; Chu et al., 2012). Besides, if MOOCs can become convenient for students, it can increase the number of students who enroll and complete the courses. Therefore, the MOOC pages must be structured, and the information content must be accurately logical and easily understood. A well-organized navigation structure will provide students with a better sense of technology readiness and greater enjoyment in learning (Pham et al., 2019). Platform appearance, color, and website appearance attract much attention (Cyr, 2014; Manganari et al., 2009).

Additionally, website appearances include color appeal, visual design, navigation, and information design (Cyr, 2014). Meanwhile, security is the freedom to form risks, dangers, or doubts during service (Li & Suomi, 2009). OpenLearning needs a robust security system where students must use different and stronger passwords than their Facebook passwords.

The second primary theme is interaction with two sub-themes: student-instructor and student-student interaction. In MOOC, student-instructor interaction can be improved if the instructors utilize personal email, chat rooms, and discussion forums (Sher, 2009). Therefore, instructors are encouraged to reply to students' questions or comments as soon as possible and frequently post messages on discussion boards to increase student interaction (Kuo et al., 2014). Moreover, the interaction between students and instructors should be informal and friendly to make students feel welcome and motivate them to finish their MOOCs. Furthermore, instructors must always care about students' interests and motivate students to interact and give feedback. Student-student interaction is essential in e-learning; as shown in a previous quantitative study by Sher (2009), student-student interaction was significantly associated with perceived learning. Therefore, it is the instructor's responsibility to encourage students to actively participate in the course discussions as only then the student-student interaction can begin.

The third primary theme is teaching material with two sub-themes: conducting material and assessment. This study suggests that instructors invest in developing their MOOC for the sub-theme of teaching material. They must create self-explanatory MOOC content so students will understand even with a little instructor's help. Although instructors must build their learning material, MOOC materials can be used for several semesters, and new content can be introduced when their curriculum is changed (Safri et al., 2020c). For the sub-theme assessment, as MOOC is e-learning that students can learn at their own pace, MOOC assessment needs to be reasonable and rational for the students to do as it can indirectly influence student satisfaction (Seng & Ling, 2013; Tam, 2014).

The fourth primary theme is the quality of learning outcomes, where MOOC is certified by public universities. In the current study context, MOOC needs to be verified by UiTM to be used for job applications among fresh graduates and provide additional knowledge and skills for experienced workers. If the students feel that a MOOC certificate is worthy, they will finish it quickly. If employers can accept a MOOC certificate, the candidate must show tangible proof of the hard skills they have acquired through MOOC and any evidence of completed work projects (McIntyre, 2018).

Based on the thematic analysis, this study identifies four primary dimensions of e-learning service quality: physical environment quality, interaction quality, e-learning quality, and outcome quality that the informants perceived from MOOC (see illustration in Figure 1).

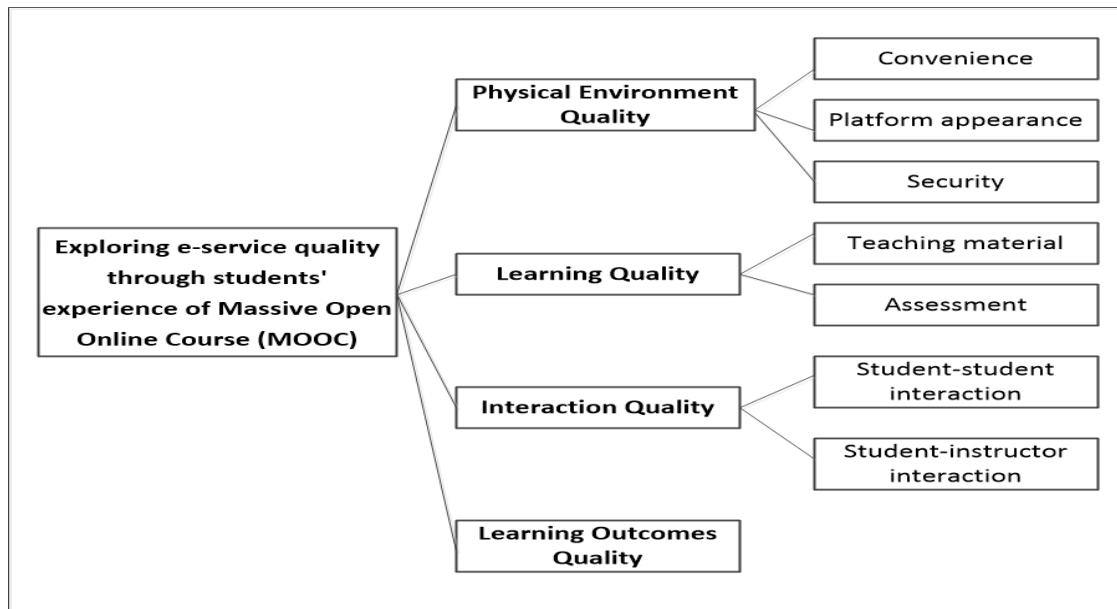


Figure 1: e-Service Quality of MOOC Model

6 Limitation and Conclusion

This study has explored learning through MOOCs among undergraduate students of hotel and tourism management. Using the e-service quality approach, this study highlights a range of subdimensions that have affected the students using MOOCs as a learning medium. These views and experiences should be considered when designing MOOCs to improve students' experience and increase the completion number of MOOCs (Safri et al., 2020b). It is essential to recognize its limitations. Firstly, the sample size is small as there is no definite or minimum number of informants for a qualitative study. Thus, the number will stop when the data collected are enough to support the study's result.

Moreover, all participants have already completed at least three subjects from MOOC. Thus, they may have the motivation to continue using MOOC as a study medium. The participants are also relatively well educated in using online technologies. The findings may not be generalizable to other settings or students of different faculties, age groups, and countries (since all participants are from the FHTM, Malaysian, and under 25 years old). Additionally, the findings can be generalized for the OpenLearning platform and may not apply to other MOOC platforms used by other universities. Thus, future researchers could do more analysis, such as comparing what e-service quality is used on various MOOC platforms. Therefore, this study has generated a detailed understanding of physical environment quality, learning quality, interaction quality, and learning outcomes influencing students' learning experience through MOOC. The findings target instructors and other MOOC platforms to motivate students to complete their MOOC courses. The study also highlights MOOCs' weaknesses that instructors and OpenLearning need to note in order to improve their MOOCs. Moreover, MOOC platforms and instructors need to enhance their MOOCs by following the identified sub-

dimensions and investigating each sub-dimension issue to help students stay focused on MOOC courses and eventually complete them. Although MOOC is life-long learning, instructors must ensure that their MOOC courses can help students achieve their studies.

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8 References

- Al-Atabi, M. (2013). *Entrepreneurship: The first MOOC in Malaysia* Proceedings of the Sixth Conference of MIT's Learning International Networks Consortium, Cambridge, Massachusetts. <http://linc.mit.edu/linc2013/proceedings/Session3/Session3Al-Atabi.pdf>
- Annamdevula, S., & Bellamkonda, R. S. (2016). Effect of student perceived service quality on student satisfaction, loyalty and motivation in Indian universities: Development of HiEduQual. *Journal of Modelling in Management*, 11(2), 488-517. <https://doi.org/10.1108/jm2-01-2014-0010>
- Azhan, M. H. B. N., Saman, M. Y. B. M., & Man, M. B. (2016). *A framework for collaborative multi-institution MOOC environment* Proceedings of the International Conference on Internet of things and Cloud Computing, <https://doi.org/10.1145/2896387.2896421>
- Bakar, J. A., Clemes, M. D., & Bicknell, K. (2017). A comprehensive hierarchical model of retail banking. *International Journal of Bank Marketing*, 35(4), 662-684. <https://doi.org/10.1108/ijbm-03-2016-0041>
- Business Matters. (2020). *Why e-learning will be the trend this year*. Business Matters. <https://www.bmmagazine.co.uk/in-business/why-e-learning-will-be-the-trend-this-year/>
- Chen, C. J., Wong, V. S., Teh, C. S., & Chuah, K. M. (2017). MOOC videos-derived emotions. *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, 9(2-9), 137-140. <http://journal.utem.edu.my/index.php/jtec/article/view/2688/1737>
- Chu, P.-Y., Lee, G.-Y., & Chao, Y. (2012). Service quality, customer satisfaction, customer trust, and loyalty in an e-banking context. *Social Behavior and Personality: an international journal*, 40(8), 1271-1283. <https://doi.org/10.2224/sbp.2012.40.8.1271>

- Clark, R. C., & Mayer, R. E. (2016). e-Learning: Promise and pitfalls. In R. C. Clark & R. E. Mayer (Eds.), *e-Learning and the Science of Instruction* (pp. 7-28).
<https://doi.org/10.1002/9781119239086.ch1>
- Clemes, M. D., David, A. C., & Wang, Y. (2013). Understanding Chinese university students' experiences: An empirical analysis. *Asia Pacific Journal of Marketing and Logistics*, 25(3), 391-427. <https://doi.org/10.1108/apjml-07-2012-0068>
- Clemes, M. D., Gan, C. E. C., & Kao, T.-H. (2008). University student satisfaction: An empirical analysis. *Journal of Marketing for Higher Education*, 17(2), 292-325.
<https://doi.org/10.1080/08841240801912831>
- Cyr, D. (2014). Return visits: A review of how website design can engender visitor loyalty. *Journal of Information Technology*, 29(1), 1-26. <https://doi.org/10.1057/jit.2013.25>
- Dhiman, G. (2015). *80+ best MOOC (Massive Open Online Course) providers list*. Knowledge Lover. Retrieved December 2, 2017 from <https://knowledgelover.com/best-mooc-massive-open-online-course-providers-list/>
- G2 Collective Inc. (2011). *Top 5 issues with MOOCs*. G2 Collective, Inc. Retrieved September 27, 2017 from <http://www.g2collective.com/2013/05/01/top-5-issues-with-moocs/>
- Jacobs, J. (2019, 24th February). Education: A free MOOC on cloud computing. *The Edge Malaysia*. <https://www.theedgemarkets.com/article/education-free-mooc-cloud-computing>
- Janice. (2017). *Difference between e-learning and online learning*. eztalks.com. Retrieved January 01, 2019 from <https://www.eztalks.com/elearning/difference-between-elearning-and-online-learning.html>
- Kharod, S. (2021, May 19). *eLearning and the future of education*. eLearning Industry. <https://elearningindustry.com/elearning-and-the-future-of-education>
- Kuo, Y.-C., Walker, A. E., Schroder, K. E. E., & Belland, B. R. (2014). Interaction, Internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online education courses. *The Internet and Higher Education*, 20, 35-50.
<https://doi.org/10.1016/j.iheduc.2013.10.001>
- Li, H., & Suomi, R. (2009). A proposed scale for measuring e-service quality. *International Journal of u-and e-Service, Science and Technology*, 2(1), 1-10.
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.576.4147&rep=rep1&type=pdf>
- Littlefield, J. (2017). *The dark side of the MOOCs: Big problems with Massive Open Online Courses*. ThoughtCo. Retrieved September 28, 2017 from <https://www.thoughtco.com/problems-with-online-classes-1098085>
- Loiacono, E. T., Watson, R. T., & Goodhue, D. L. (2002). WebQual: A measure of website quality. *Marketing theory and applications*, 13(3), 432-438.
- Manganari, E. E., Siomkos, G. J., & Vrechopoulos, A. P. (2009). Store atmosphere in web retailing. *European Journal of Marketing*, 43(9/10), 1140-1153.
<https://doi.org/10.1108/03090560910976401>
- McIntyre, C. (2018). *How employers view MOOC certificates in 2018*. LinkedIn. Retrieved January 17, 2020 from <https://www.linkedin.com/pulse/how-employers-view-mooc-certificates-2018-carolyn-mcintyre>
- Muhammad, R., Mohamad Abdullah, K., Ismail, F. H., Abdullah, N., & Abdul Ghani, A. (2018). The significance of Rumah Terbuka during Eid festivity in promoting visitor attraction. *Social and Management Research Journal*, 15(1), 25-36.
<http://ir.uitm.edu.my/id/eprint/21157/>

- Pham, L., Limbu, Y. B., Bui, T. K., Nguyen, H. T., & Pham, H. T. (2019). Does e-learning service quality influence e-learning student satisfaction and loyalty? Evidence from Vietnam. *International Journal of Educational Technology in Higher Education*, 16(1), 7. <https://doi.org/10.1186/s41239-019-0136-3>
- Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, 5(4), 411. <https://doi.org/10.1007/s11628-011-0120-z>
- Safri, S. N. W., Mohi, Z., & Hanafiah, M. H. (2020a). Conceptualization of MOOC e-learning service quality dimensions in Faculty of Hotel and Tourism Management, UITM, Malaysia. *3rd Asia Pacific International Conference of Management and Business Science (AICMBS 2019)*, 268-271. <https://doi.org/https://doi.org/10.2991/aebmr.k.200410.041>
- Safri, S. N. W., Mohi, Z., & Hanafiah, M. H. (2020b). Massive Open Online Course (MOOC) service quality assessment: Issues and instruments. *Journal of Tourism, Hospitality & Culinary Arts (JTHCA)*, 12(1), 1-9. <http://ir.uitm.edu.my/id/eprint/29184>
- Safri, S. N. W., Mohi, Z., & Hanafiah, M. H. (2020c). Massive Open Online Course (MOOC): Our saviour during COVID-19 pandemic? *Special Issue: Sustainability, Safety and Security (3S)-Crunch Time Ahead for Hospitality, Tourism, and Travel Industry Hospitality and Tourism Conference 2019*, 12(3), 120-128.
- Sahyoun, S. (2014). *OpenLearning selected as Malaysia's national MOOC platform*. OpenLearning. Retrieved April 01, 2018 from <https://www.openlearning.com/blog/OpenlearningComSelectedAsMalaysiaSNationalMoo cPlatform>
- Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Managing Service Quality: An International Journal*, 13(3), 233-246. <https://doi.org/10.1108/09604520310476490>
- Seng, E. L. K., & Ling, T. P. (2013). A statistical analysis of education service quality dimensions on business school students' satisfaction. *International Education Studies*, 6(8), 136. <https://doi.org/10.5539/ies.v6n8p136>
- Shah, D. (2019). *By the numbers: MOOCs in 2019*. Class Central. Retrieved 19th January, 2021 from <https://www.classcentral.com/report/mooc-stats-2019/>
- Sher, A. (2009). Assessing the relationship of student-instructor and student-student interaction to student learning and satisfaction in web-based online learning environment. *Journal of Interactive Online Learning*, 8(2).
- Silverman, D. (2013). *Doing qualitative research: A practical handbook*. SAGE Publications Limited.
- Smith, N., Caldwell, H., Richards, M., & Bandara, A. (2017). A comparison of MOOC development and delivery approaches. *The International Journal of Information and Learning Technology*, 34(2), 152-164. <https://doi.org/10.1108/IJILT-09-2016-0047>
- Stodnick, M., & Rogers, P. (2008). Using SERVQUAL to measure the quality of the classroom experience. *Decision Sciences Journal of Innovative Education*, 6(1), 115-133. <https://doi.org/10.1111/j.1540-4609.2007.00162.x>
- Swain, H. (2015, 20th October). This change will be the end of the Open University as we know it. *The Guardian*. <https://www.theguardian.com/education/2015/oct/20/open-university-strike-ou-regional-centres-moocs>
- Swan, D. (2015, 4th June). Canberra gets its first MOOC. *Herald Sun*. https://www.heraldsun.com.au/business/breaking-news/canberra-gets-its-first-mooc/news-story/72a3531883e592fc76de5b60b37c7912?from=herald%20sun_rss

- Tam, M. (2014). Outcomes-based approach to quality assessment and curriculum improvement in higher education. *Quality Assurance in Education*, 22(2), 158-168. <https://doi.org/10.1108/qa-09-2011-0059>
- University of Illinois. (2020). *Strengths and weaknesses of online learning*. The Board of Trustees of the University of Illinois. <https://www.uis.edu/ion/resources/tutorials/online-education-overview/strengths-and-weaknesses/#strengths>
- Wadhvani, P., & Gankar, S. (2020). *eLearning Market size worth over \$375bn by 2026*. <https://www.gminsights.com/pressrelease/elearning-market>
- Wilshire, A. (2017). *Entrepreneurship at Taylor's University – The case for online learning* [Case Study]. <https://openlearning.scdn5.secure.raxcdn.com/media-22399de/files/CaseStudyTaylors.pdf>
- Zhu, Y., Pei, L., & Shang, J. (2017). *Improving video engagement by gamification: a proposed Design of MOOC videos* International Conference on Blended Learning,