Satisfaction of Quantity Surveying Students towards Online Distance Learning (ODL) during Covid-19 Pandemic

Abdul 'Izz Mohamad Kamil[1*], Noor Akmal Adillah Ismail[2], Ahmad Arzlee Hassan[3], Raja Rafidah Raja Muhammad Rooshdi[4] and Mohd Arif Marhani[5]

[1 2 3 4 5] Faculty of Architecture. Planning and Surveying, Universiti Teknologi MARA, UiTM Shah Alam, 40450 Shah Alam, Selangor, Malaysia
abdulizz89@uitm.edu.my
noorakmal@uitm.edu.my
arzlee@uitm.edu.my
raja_rafidah@uitm.edu.my
arif2713@uitm.edu.my
[*]Corresponding Author

Abstract: When the Covid-19 pandemic started in 2019, it affected all industries and businesses around the globe including education institutions. All schools and universities required closures to avoid the widespread of the virus, therefore the mechanism to continue teaching and learning was transformed into online method, known as Online Distance Learning (ODL). However, many issues and challenges were recognized with regard to this transition of ODL conduct such as poor internet connection, lack of understanding via online teaching as compared to face-to-face method, insufficient online facilities, and many more. Hence, this paper aims to investigate university students' satisfaction towards ODL during Covid-19 pandemic. A survey using questionnaire was conducted amongst Semester 1 to 6 Quantity Surveying students at Universiti Teknologi MARA, Shah Alam, Malaysia. The survey results were then analysed using SPSS tools. Findings from the survey found that most of the students satisfied with the ODL platform used for their online classes, however standardisation on the platform utilization amongst the courses are needed to stimulate better ODL experience. Although they also satisfied with the lecturers' teaching and learning approaches during ODL, they expected that the university could assist them more on providing sufficient online facilities. This paper significantly contributes towards adding more literature to existing research regarding perspectives on ODL performance, concerning the factors influencing the students' satisfaction mainly on the quality of ODL implementation approaches.

Keywords: Satisfaction, Quantity Surveying, Students, ODL, Covid-19 pandemic

1. Introduction

Coronavirus is a contagious illness that is rapidly spreading among humans. Covid-19 is a new sprain that first appeared in December 2019 in Wuhan, China. The Covid-19 pandemic's impact on the education system results in widespread closures of schools and higher education institutions around the world. School closures in response to the Covid-19 pandemic have highlighted a number of issues affecting educational access. Covid-19 is on the rise, and as a result, a large number of children, adults, and youths are unable to attend school or college (UNESCO, 2020).

According to Lah and Botelho (2012), the impact of school closures on student performance is murky. Similarly, school closures may have an impact on students due to disruptions in teacher and student networks, which can lead to poor performance. Bridge (2020) reported that, in order to avoid

strain during the pandemic season, schools and colleges are shifting toward educational technologies for student learning. As a result, the current study's goal is to develop and test a conceptual model of student satisfaction with online teaching during Covid-19, when both students and teachers are forced to use the online platform for continuous learning and teaching.

During school closures caused by Covid-19, UNESCO recommends distance learning programmes and open educational applications that schools and teachers can use to teach their students and limit the disruption of education. Thereby, many educational institutions prefer online classes (Shehzadi et al., 2020).

The E-learning framework has become more popular as a versatile platform for learning and teaching processes (Salloum & Shaalan, 2018). E-learning is defined as a new online learning paradigm founded on information technology (Moore et al., 2011). Academics, educators, and other practitioners are eager to learn how e-learning can produce better outcomes and academic achievements than traditional learning methods. Consequently, learner satisfaction is critical in the effective implementation of online learning, particularly in institutions where it is new. Therefore, this paper aims to investigate specifically the Quantity Surveying students' satisfaction towards Online Distance Learning (ODL) during Covid-19 pandemic.

2. Literature Review

The unusual scenario leads the government to undertake drastic and reforms the educational system (Adrianus et al.,2021). Education at all levels has been practising ODL using technology and digital tools (Raju et al. 2021). Many comparative studies have been conducted to determine whether face-to-face or traditional teaching methods are more effective, or whether online or hybrid learning is preferable (Lockman & Schirmer, 2020; Pei & Wu, 2019). The studies' findings show that students perform significantly better in online learning than in traditional learning. Henriksen et al. (2020) discussed the challenges that educators face when transitioning from on-site to online teaching. Several research studies on online learning have also been carried out in the past to investigate student satisfaction, acceptance of e-learning, distance learning success factors, and learning effciency (Sher, 2009; Lee, 2014; Yen et al., 2018). However, there is a paucity of literature on the factors that affect students' satisfaction and performance in online classes during the Covid-19 pandemic (Rajabalee & Santally, 2020).

According to the findings of the current study, a mismatch between students' abilities and the new learning environment has resulted in technostress, which has affected student satisfaction and performance (Abd Aziz et al., 2021) .Based on Gopal et al. (2021), there are numerous factors that influence student satisfaction and performance in online classes during the Covid-19 pandemic period. Quality of instructor, course design, prompt feedback, and student expectations are among the factors that contribute to student satisfaction. Students' dissatisfaction with distance learning, on the other hand, was to be expected for a variety of reasons. First, there is a digital divide among students based on their geographical location (Yulia, 2020). Second, the need to modernise traditional learning methods necessitates a significant amount of planning in a short period of time. Finally, there was a lack of readiness among teachers and students for distance education, as well as communication difficulties (Zaharah & Kirilova, 2020). Accordingly, while the implementation of e-learning is not always smooth and, universities quickly implemented e-learning during the Covid-19 outbreak. effective

3. Research Methodology

The main framework of the study targeted in identifying students' satisfaction and perception towards Open Distance Learning (ODL) involving Semester 1 to Semester 6 Quantity Surveying students at the Faculty of Architecture, Planning and Surveying, UiTM Shah Alam, Selangor, Malaysia. Quantitative research focuses on objectivity and is especially appropriate when there is the possibility of collecting quantifiable measures of variables and inferences from samples of a population (Queiros & Almeida, 2017). The method chosen serves best to objectively understand level of satisfaction, challenges and perceptions of a sample towards a particular newly introduced settings. Questionnaires were drafted and distributed to the students currently undergoing the ODL experience. Sampling technique selected is clustered sampling where students from various clusters but of the same

department are targeted to respond to the questionaires. The main takeaways from the research should address students' view on the current norm and how that would help improve the way forward.

The survey was divided into four (4) sections, which are; A) Respondent Background, B) Students' Satisfaction Towards Learning, Distribution and Submission of Assignments, C) Challenges in Learning, Distribution and Submission of Assignments and lastly, D) General Comments on their Experience with ODL and Suggestions to improve their online learning experience. A number of 793 were distributed and 663 students responded to the questionnaires. The data were then processed using SPPS software before the analyzing of data was carried out.

4. Results and Discussion

4.1 Respondents' Profile

The survey was distributed online to all Quantity Surveying students at Faculty of Architecture, Planning and Surveying, UiTM Shah Alam, ranging from Semester 1 to Semester 6. From the total of 793 registered students from overall semesters, only 663 responses received, with 83.6% response rate. Table 1 below portrays the distribution of respondents based on semester.

Table 1. Respondents' profile

Semester	Frequency (No.)	Percentage (%)
1	41	6.2
2	91	13.7
3	121	18.3
4	197	29.7
5	93	14.0
6	120	18.1
Total	663	100

Table 1 shows that majority of the students was from Semester 4 (29.7%), followed by Semester 3 (18.3%), Semester 6 (18.1%), Semester 5 (14%). Semester 2 (13.7%) and the lowest percentage was indicated by Semester 1 students (6.2%). The percentage proportion by semester amongst the respondents was unequal considering the total of enrolled students are different for every semester intake (normally March and September for UiTM).

4.2 Satisfaction towards Online Distance Learning (ODL)

The total of 11 questions were asked in the survey in evaluating the students' satisfaction towards Online Distance Learning (ODL) during the Covid-19 pandemic. The satisfaction level was rated using 1-5 Likert scale of 1 = Very Dissatisfied, 2 = Dissatisfied, 3 = Neutral, 4 = Satisfied, and 5 = Very Satisfied. Table 2 presents the results of the satisfaction assessment based on mean score and standard deviation (SD).

Table 2. Respondents' satisfaction towards ODL

Questions	Mean score	Standard deviation	Ranking
How satisfied are you with the teaching platform (WhatsApp/Google Meet/Google Classroom, etc.)?	3.73	3.301	2
How satisfied are you with the engagement (effectiveness of communication between students and lecturers) during ODL?	3.31	2.944	3
How satisfied are you with the conducted classes (the way lecturers delivered notes/Q&A session, etc.)?	3.76	3.328	1
How satisfied are you with the time allocation for each lesson, task and assessment?	3.53	3.150	3

How satisfied are you with the platform of assessment and assignment submission throughout ODL?	3.78	3.366	1
How satisfied are you with the Final Assessment conducted via ODL?	3.58	3.219	2
How satisfied are you with the quality of learning via ODL compared to face-to-face (f2f)?	2.98	2.659	5
How satisfied are you with the academic facilities provided during ODL?	3.32	2.944	4
How satisfied are you with the overall course content (notes material, coursework, etc.)?	3.62	3.227	2
How satisfied are you with the services provided by the university (Bantuan B40/Bantuan Kolej/etc.) during ODL?	3.82	3.413	1
How satisfied are you with the overall semester of ODL?	3.40	3.042	3

According to Table 2, the way the lecturers conducted the ODL class (notes given, Q&A session, and others) was ranked first with a mean score of 3.76 (SD = 3.328). It was followed in second place by how satisfied respondents were with the teaching platform via WhatsApp/Google Meet/Google Classroom, or others (mean score = 3.73, SD = 3.301). Furthermore, ranked third was regarding the effectiveness of communication between students and lecturers throughout the ODL, with a mean score of 3.31 (SD = 2.944).

In terms of coursework (continuous and final assessments), the platform of assessment and assignment submission throughout ODL was ranked first with a mean score of 3.78 (SD=3.366). Besides, respondents ranked their satisfaction with the Final Assessment conducted via ODL second place (mean score = 3.73, SD = 3.301). Furthermore, respondents were pleased with the time allocated for each lesson, was ranked third with a mean score of 3.53 (SD = 3.150).

Overall, the respondents satisfied with the services provided by the university (Bantuan B40/Bantuan Kolej or others during ODL, which was ranked first with a mean score of 3.82 (SD = 3.413). Meanwhile, at second and third rankings were the respondents' satisfaction with the overall course content (notes material, coursework, etc.) (mean score = 3.62, SD = 3.227) and overall semester of ODL (mean score = 3.40, SD = 3.042). Besides, the respondents satisfied with the academic facilities provided during ODL, which was ranked fourth with a mean score of 3.32 (SD = 2.944). Finally, at the last ranking was respondents were satisfied with the quality of learning via ODL compared to face-to-face (f2f) (mean score = 2.98, SD = 2.659).

4.3 Issues and Challenges in Online Distance Learning (ODL)

12 questions were queried through the survey regarding issues and challenges faced by the students during Online Distance Learning (ODL). The respondents were required to rate their level of agreement towards the statements provided in the questionnaire using 1-5 Likert scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. Table 3 indicates the results and summarized based on its mean score and standard deviation (SD).

Table 3. Issues and Challenges during ODL

Questions	Mean score	Standard deviation	Ranking
I have a good internet connection	3.63	3.270	7
I use a Laptop/Tablet/iPad/Desktop to have a comfortable experience for ODL	4.22	3.772	1
I technically prepared for the classes	3.71	3.289	5
I do not understand anything from the live lectures	2.65	2.286	8
My lecturers were able to construct the classes and delivered the content via online	3.87	3.422	4
The online class materials were useful and accurate	3.69	3.259	6
My lecturers were responsive to my questions	4.13	3.665	2

My lecturers used both online and offline method approaches	3.96	3.536	3
My lecturers have given ample time to complete assignment and assessment	3.97	3.541	1
I have difficulty on the info accessibility to complete my assignment	3.16	2.812	3
I managed to do my assignment in the group very well	3.70	3.286	2
I have difficulty to submit my assignment via ODL	2.61	2.321	4

According to Table 3, the majority of respondents used a Laptop, Tablet, iPad, or Desktop to have a comfortable experience for ODL, which was ranked first with a mean score of 4.22 (SD = 3.772). Meanwhile, ranked second, third, and fourth were the respondents' lecturers responsive to their questions (mean score = 4.13, SD = 3.665), lecturers used both online and offline method approaches (mean score = 3.96, SD = 3.536), and lecturers were able to construct the classes and deliver the content via online (mean score = 3.87, SD = 3.422). Beside that, the respondents who were technically prepared for the classes was ranked fifth with a mean score of 3.71 (SD = 3.289). In addition, respondents agreed that the online class materials provided were useful and accurate during ODL (mean score = 3.69, SD = 3.259). Despite having a good internet connection during ODL classes (mean score = 3.63, SD = 3.270), the majority of respondents do not understand anything from the live lectures (mean score = 2.65, SD = 2.286).

In terms of coursework issues and challenges, the majority of respondents agreed that their lecturers had given them enough time to complete the continuous and final assessments (mean score = 3.97, SD = 3.541). Furthermore, the respondents completed their group assignment very well with a mean score of 3.70 (SD = 3.286) and struggled with information accessibility to complete their assignment with a mean score of 3.16 (SD = 2.812). Finally, respondents who had difficulty submitting my assignment via ODL was ranked fourth (mean score = 2.61, SD = 2.321).

4.4 Discussion on findings

The survey results regarding the student's satisfaction towards ODL showed that most of the students were satisfied with the common or popular platform such as Whatsapp, Google Meet, Telegram, and others, as the best platform for ODL. As suggested by Saidi et al. (2021), the selection of appropriate tools is crucial in ensuring that the teaching and learning process is successfully conducted with no student is left behind. As such, the institution must decide the best platform for the students, for them to have the best experience in ODL. It is recommended that the institutions manipulate a standardised platform as there are still many students dissatisfied with its non-standardised instruction on the ODL applied mechanism. In learning management system described by Naveh at al. (2012), among the critical success factors that could indicate the satisfaction of the students towards ODL are content completeness, content currency, easy to navigate, easy to access and course staff responsiveness.

Next, based on the survey findings, the students also agreed with the way the lecturers delivered the notes and how the lecturers conducted the Q&A sessions in each class. It is understood that most of the lecturers in the Quantity Surveying Department UiTM have employed online and offline approaches to deliver notes in which they conducted their ODL classes by sharing narrated PowerPoint and slides in advance and conducting discussion and Q&A sessions later during the online class sessions. It was suggested to use these approaches to ensure that all students can have a fair input as not all of them have a good internet connection. As stated by Mathew & Chung (2021), it was difficult to the student to cooperate with ODL with poor internet connection. Although most of the students were satisfied with their first experience in ODL, however, many of them have demanded if their university could provide sufficient facilities to help them during the pandemic online classes. They claimed that they had difficulties in preparing facilities independently on their own remotely from their places during ODL. Hence, they still prefer conventional face-to-face classes as they were not fully prepared having fully

online class especially for core subjects which require the students to be physically attending the classes to gain a better understanding. In line with suggestions by Musa et al. (2020), in order to develop ODL effectively, readiness towards ODL approach and needs for robust methods must be thoroughly assessed. The educators must know the students condition so that ODL can be conducted smoothly allowing the students to access lessons and interact with educators efficiently.

Overall, based on the issue and challenges faced by the student during ODL, it can be summarized that most of the students had difficulties in having a good internet connection, issues on information accessibility to complete the assignment and submitting them via ODL platform, and difficulties in following the live lectures. Since all students come from a various background, it had become an issue for several students coming from the rural areas as they faced much more critical problems related to ODL. This is supported by the study from Ag-Ahmad (2020) which found out that other than connectivity problems, most students found that online learning was difficult as they faced a lot of distractions at home, which affected their focus, and understanding of the lessons. Additionally, motivation of learning is a crucial factor for the students to maintain focus due to many issues such as family, environment and technical destruction, which could affect emotional and mental stability (Allam et al., 2020). Nevertheless, all the challenges and issues could be reduced provided that the lecturers had given the students ample time to complete assignments and assessments. Other than that, lecturers who were always being responsive to the questions asked by the students anytime throughout ODL, and also with the lecturers utilizing both online and offline methods approaches in delivering their lectures as part of their efforts for ODL classes, could possibly help minimizing the issues.

5.   Conclusion

The objective of this study was ultimately achieved in identifying the students' satisfaction and perception towards Open Distance Learning (ODL). Numerous factors have influenced the students' satisfaction and performance throughout online classes during the Covid-19 pandemic. Quality of instructor, course design, prompt feedback, and student expectations are among the factors that contribute to students satisfaction. Students' dissatisfaction with distance learning, on the other hand, was to be expected for a variety of reasons. From the study, it is agreed that the factor influencing the students' satisfaction is mainly based on the quality possessed by the lecturers in conducting the ODL classes and also the platform used for the online class sessions.

This study is significant in facilitating the lecturers or educators in considering many factors to identify the most appropriate approach for ODL during Covid-19 pandemic, especially the most convenient ones for the students. Other than that, this study also contributes towards adding new perspectives of the existing literature on the ODL practices and readiness. It provides directions for the lecturers, the management of the faculty and the university as a whole to apply the best ODL practice henceforward. Based on this study, it is hoped that some improvements can be put forward by all parties involved so that ODL conducted in the future would be more conducive and enjoyable for both studemts and educators.

6.   Suggestions

With regard to the study findings, it is recommended that the scope of the study should be expanded if more similar or related studies are to be executed in the future. This study only focused and limited to explore on Quantity Surveying students' satisfaction towards ODL based in UiTM Shah Alam only. Therefore, it is suggested that the next survey using the same method of questionnaire could be done and broaden the scope to involve the Quantity Surveying students in other universities in Malaysia as well. The comparisons in terms of ODL mechanism applied between public and private institutions might also be one of interesting topics that should be investigated in deliberating the facilities provided

to the students when using ODL platform. The qualitative approach adopting interviews in getting different views from lecturers or educators towards conducting teaching and learning (T & L) during ODL, could also be considered for future studies.

7.   Co-Author Contribution

The authors affirmed that there is no conflict of interest in this article. Author 1 carried out the field work, did the data entry and made the conclusion section for this paper. Author 2 conducted the statistical analysis and interpretation of the results, and also did the abstract and the suggestion parts. Author 3 did the research methodology, whereas Author 4 and Author 5 wrote the introduction and the the literature review.

8.   References

Abd Aziz, N. N., Awang Kader, M. A. R., & Ab Halim, R. (2021). The impact of Technostress on student satisfaction and performance expectancy. *Asian Journal of University Education, 17*(4), 538–552.

Adrianus S. A., Anugrahsari, S., Parlina, N., & Kusumastuti, Y. S. (2021). Merdeka belajar in an online learning during the COVID-19 outbreak: *Concept and Implementation. Asian Journal of University Education, 17*(4), 35.

Ag-Ahmad, N. (2020). Open and distance learning (odl): Preferences, issues and challenges amidst Covid-19 pandemic. *Creative Practices in Language Learning and Teaching (CPLT), 8*(2), 1-14.

Allam, S. N. S., Hassan, M. S., Mohideen, R. S., Ramlan, A. F., & Kamal, R. M. (2020). Online distance learning readiness during Covid-19 outbreak among undergraduate students. *International Journal of Academic Research in Business and Social Sciences, 10*(5), 642-657.

Chen, S. J., & Chen, S. M. (2007). Fuzzy risk analysis based on the ranking of generalized trapezoidal fuzzy numbers. *Applied Intelligence, 26*(1), 1-11.

Chua, D. (2014, April 25). New wave of choreographers. *New Straits Times*, p.7.

Gomez, M.M., Sierra, J.M.C., Jabaloyes, J., & Zarozo, Manuel. (2010). A multivariate method for analyzing and improving the use of student evaluation of teaching questionnaires: A case study. *Quality Quantitative*.

Gunkel, M. (2008). *Guidelines for academic writing*. http://www.im.ovgu.de/im_media/downloads/examinations/academic_paperwriting_MG.pdf. Accessed 20 Feb 2014.

Kahraman, C., Cevi, S., Ates, N. Y., & Gulbay, M. (2007). Fuzzy multi-crieria evaluation of industrial robotic systems. *Computer & Industrial Engineering*, 52, 414-433 (2007).

Mathew, V. N., & Chung, E. (2021). University students' perspectives on open and Distance Learning (ODL) implementation amidst COVID-19. *Asian Journal of University Education, 16*(4), 152.

Musa, A. H., Rosle, A. N., Baharuddin, F. N., & Sara, S. (2020). The Effectiveness of Online Distance Learning (ODL) Approach in University: A Respond of Covid-19 Pandemic Crisis. *Journal of Academic Research in Business and Social Sciences, 10*(9), 1069-1076.

Naveh, G., Tubin, D., & Pliskin, N. (2012). Student satisfaction with learning management systems: a lens of critical success factors. Technology, *Pedagogy and Education, 21*(3), 337-350.

Ramli, N., & Mohamad, D. (2010). On the Jaccard index with degree of optimism in ranking fuzzy numbers. In E. Hullermeier, R. Kruse, & F. Hoffman (Eds.), *Information processing and management of uncertainty in knowledge-based system application* (pp. 383-391). New York: Springer.

Rosen, K.H. (1988). *Discrete mathematics and its applications*. New York: Random House, Inc.

Raju, R., Md Noh, N. H., Ishak, S. N., & Eri, Z. D. (2021). Digital Tools acceptance in open distance learning (ODL) among computer science students during COVID-19 pandemic: A comparative study. *Asian Journal of University Education, 17*(4), 408.

Saidi, R. M., Sharip, A. A., Abd Rahim, N. Z., Zulkifli, Z. A., & Zain, S. M. M. (2021). Evaluating Students' Preferences of Open and Distance Learning (ODL) Tools. *Procedia Computer Science*, 179, 955-961.