Perception of Online Teaching and Learning (T&L) Activities Among Postgraduate Students in Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM)

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The COVID-19 pandemic has changed the landscape of teaching pedagogies, assessment methods, supervision, and student engagement in higher education institutions. Exploration of students' perception on online teaching and learning (T&L) in terms of their level of satisfaction is an important core indicator of their acceptance to enhance the long-term impact of the online (T&L) activities. The objective of the study is to determine the level of satisfaction of online (T&L) activities and its involved technical support among postgraduate students in the Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM). A validated questionnaire was used to conduct the survey. A total of 81 postgraduate students were recruited using purposive sampling in the study. Results showed that more than 86% of the students were satisfied with the online T&L activities except for two areas where 50% of the students felt that the curriculum structure design was too heavy and they felt stressed after attending the first online class and examination. On the other hand, more than 70% of the students were satisfied with the technical support for the online T&L. Although the satisfaction level for both was high, there was no association between them, χ^2 (1, $N = 162$) = 3.8, $p = 0.42$. In conclusion, the postgraduate students of the Faculty of Health Sciences, UKM are satisfied with the online T&L process, which implies a good reception. A review of curriculum structure and design that considers the psychological and behavior changes among students during online T&L is also recommended for the online T&L continues to be effective in the future.

Keywords: online teaching and learning, satisfaction level, student perception, postgraduate students, technical support

INTRODUCTION

The spread of newly emerged pathogen COVID-19 in December 2019 has caused nations around the world to impose total lockdown to curb the infection transmission among its population. Tourism, logistics, economics, media, and agriculture are one of the many sectors that was greatly affected by the pandemic surge. Besides medical and the local trading sector, the higher and lower

education sector in several countries including Malaysia has opted to open after the first lockdown to ensure the education supply chain was not interrupted continuously. The initial lockdowns had brought strict isolation measures which had delayed educational institutions across the globe from commencing with classes (Choi et al., 2021).

Due to the lockdown, educators from all around the globe had to change their teaching pedagogies overnight, which include teaching methods, mode of assessment, supervision technique, and student engagements among others to fully online distance learning (Lillejord et al., 2018; Langford and Damşa, 2020). This abrupt shift in teaching methods does not only cause tense to the educators in terms of sharing knowledge but also to the students who are on the receiving end as well. Both educators and students had to acclimatize swiftly to these changes to ensure the formal education process is not compromised. Virtual teaching and learning (T&L) *via* online or e-learning method that has been adopted to replace the conventional face-to-face teaching for the purpose of minimizing physical interactions and COVID-19 infection rate.

Prior to the COVID-19 pandemic, the integration of e-learning in higher education institutions was perceived as moderate, where the traditional face-to-face mode augmented with online materials was the most popular learning mode, followed by the blended learning (Nordin et al., 2011). The learning management system (LMS) or also known as the virtual learning environment (VLE) provided by respective institutions is the platform used by students mostly for the assessment (39.7%) and course management (39.1%) (Hamat et al., 2011). When LMS is not being used, content sharing tools such as Slideshare (45.3%), photograph or video sharing such as Youtube (37%), and social networking tools such as Facebook (36.8%) are used as alternatives (Hamat et al., 2011).

Availability and accessibility to internet connections is essential in enabling e-learning through web-based learning and switching from campus face-to-face learning to a distance education model. The renewed model can be implemented as a self-paced independent study, in real-time or asynchronous interactive sessions between students and teachers (Wasim et al., 2014). However, unstable network connection was found to be the major challenge for online T&L during the pandemic, especially for students from the remote areas (Mishra et al., 2020). The absence of devices or equipment such as desktop or laptop for online learning at home when mobile phones are not effective for online class participation is also experienced by students with low socioeconomic conditions (Mishra et al., 2020). A lack of access in the virtual environment was found even before the pandemic, where most students accessed their online courses from their hostel (71.4%), or computer laboratory (50.2%) using the campus wireless network. Less than half access their online courses from home (46.9%) (Nordin et al., 2011). Besides that, in the initial phase of the pandemic, most educators and students had trouble conversing subjects that was not designed for online delivery such as laboratory activities and practical classes. To overcome the challenge, educators resorted to video-based laboratories or virtual laboratories using simulation tools and virtual reality to allow remote participation (Gamage et al., 2020).

Although the COVID-19 pandemic appeared as uncommon catalyst for promoting e-learning, it is still unclear whether students are ready and willing to make greater use of online education to obtain high-quality learning and learning opportunities, which could totally change students' attitudes and impression, and subsequently the general themes of online education. After 2 years of surviving T&L in online mode, it is relevant to explore the perception of learners toward this matter in terms of their degree of adaptation and possible suggestions in improving the T&L activities (Bali and Liu, 2018). Therefore, the purpose of the current study is to explore the perception of online T&L among postgraduate students in Faculty of Health Sciences, Universiti Kebangsaan Malaysia (UKM).

MATERIALS AND METHODS

This was a cross-sectional study with purposive sampling method. The sample population was postgraduate students in the Faculty of Health Sciences, UKM, with admission year between February 2020–2021 and February 2021–2022. The inclusion criteria were all students who have completed the Statistics for Health Sciences and Research Methodology course by the faculty through online learning. Current students who were enrolled from October 2021 onward were excluded from the population sample size.

A validated self-administered questionnaire was adopted from Farooqi et al. (2021) to assess perception on online T&L among Faculty of Health Sciences, UKM postgraduate students. The questionnaire was shared through student's email and WhatsApp in November 2021 for 3 weeks using Microsoft forms. The questions were categorized based on the assessing satisfaction with online T&L and their technical support during the online T&L. The questionnaire included participant acknowledgments; 16 items that is to be rated at 4-point Likert scale (from 1–strongly disagree to 4 – strongly agree) (**Figures 1**, **2**).

Data acquired from the study were analyzed using SPSS. A descriptive method was used to measure the satisfaction level of online T&L activities and the satisfaction level of technical support of online T&L among postgraduate students in Faculty of Health Sciences, UKM. For descriptive statistics, percentages and bar graphs were created. Chi-square was used on the data to determine the association between technical support and level of satisfaction of online T&L activities among postgraduate students in Faculty of Health Sciences, UKM. The level of significance was set to be at 0.05.

RESULTS AND DISCUSSION

The online survey consisted of 16 questions, and the sample size was students from Ph.D, Master by Coursework and Master by Research program in Faculty of Health Sciences, UKM. A total 81 students responded and among which 23 (28%) were men and 58 (72%) were women. Totally, 23 Ph.D (28%), 45 Master by Research (56%), and 13 Master by Coursework (16%) students participated in the survey.
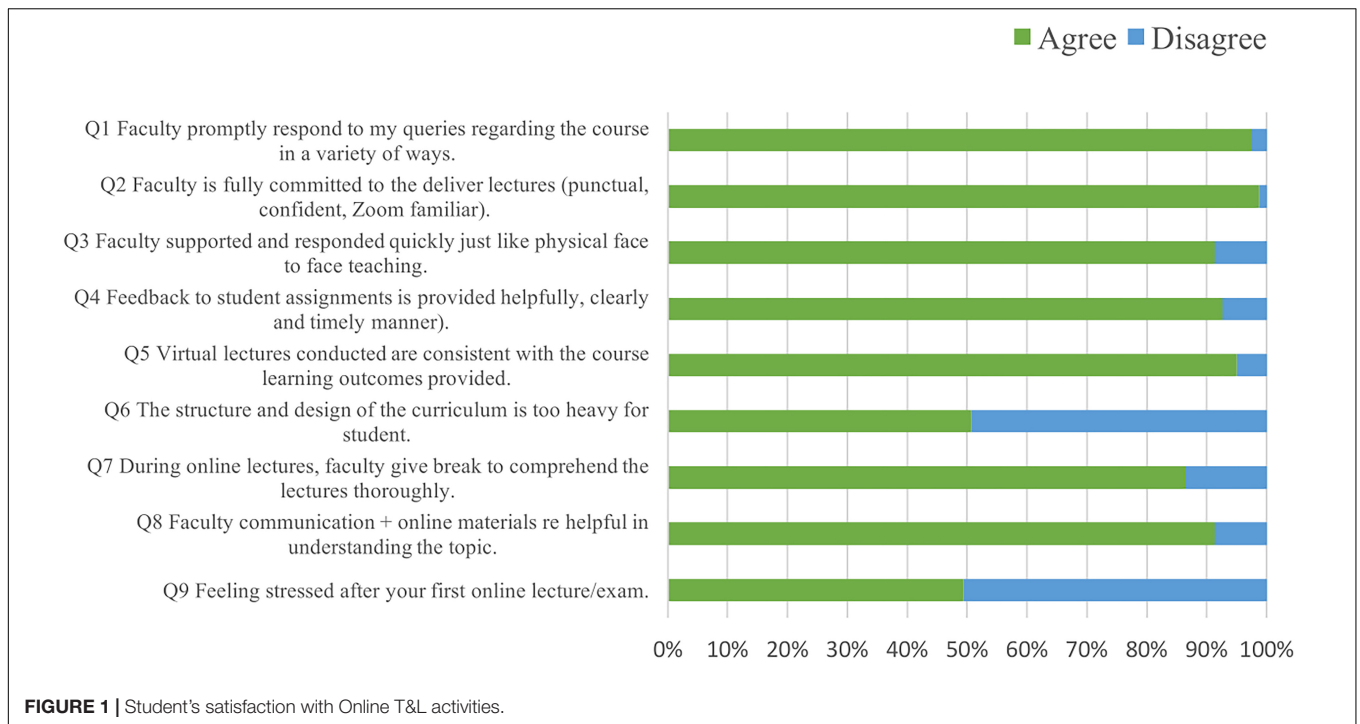
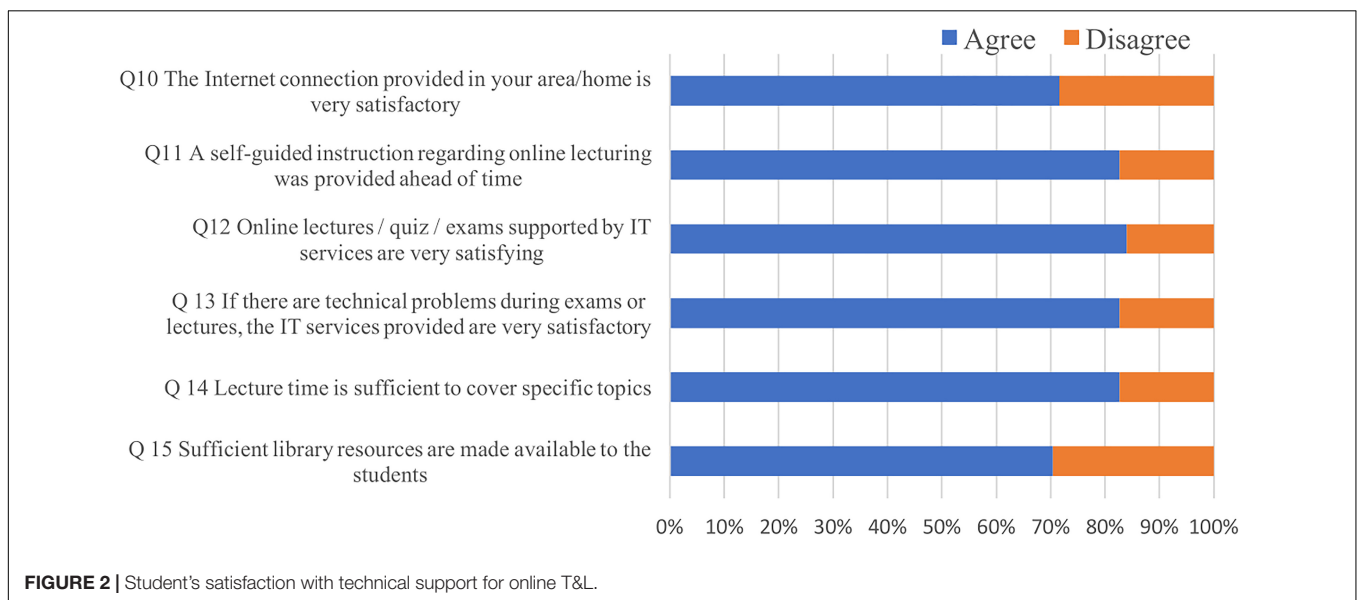**FIGURE 1 |** Student's satisfaction with Online T&L activities.

FIGURE 2 | Student's satisfaction with technical support for online T&L.

Students' satisfaction level with T&L activities showed that majority of the students (more than 86%) indicated that they were satisfied with the online T&L except for two areas. Totally, fifty percent (50%) of the students found that the structure and design of curriculum was too heavy, and they felt stressed after online lecture and examination (**Figure 1**). The findings denote that students' satisfaction with online T&L was at the higher level (more than 86%), which implies that the quality of T&L in the students' view in overall was good. These aspects of current findings were similar with a previous study done by Suarman et al. (2013) reporting that the students' satisfaction with the

online T&L was moderate (more than 80%). However, about 50% of them are hoping to receive better structure and design of the curriculum and not feeling stressed after their online examination such as current study. This might be because the curriculum structure is designed for offline delivery as opposed to online. For online courses, innovation of the curriculum should not only focus on students' key competencies, but also must attract students' motivation and learning interests, reflect the nature of interesting, comprehensive, and active course content, and should enhance students' engagement and communication (Li et al., 2021). Online learning was stressful for some students as

they might be studying in a completely different environment that was not prepared for education (Elshami et al., 2021).

On the other hand, students' satisfaction level showed more than 70% of respondents satisfied with the technical support, such as internet connections at home, IT services and trouble shooting for online lectures and tests, library resources, and instructions for online lectures (**Figure 2**). This denotes that overall, the postgraduate students had no problems with technical aspects during online T&L activities. Students expected to have adequate experience and better satisfaction in online classes when institutions provide sufficient online resources and technical support to enhance student–instructor interaction (Elshami et al., 2021).

Since the satisfaction level was found to be good for the online T&L activities and their involved technical support, association between the two was determined using chi-square test. Chi-square test was used to determine the association between online T&L and technical support. However, the association between these satisfaction level of online T&L and satisfaction level of technical support was found to be not significant, χ^2 (1, N = 162) = 3.8, p = 0.42. Satisfaction level of students with technical support does not influence the satisfaction level of the online T&L. They are independent of each other. This can be interpreted as satisfaction level with technical support does not define or support the satisfaction level of the online T&L. In another word, students might not be satisfied with the online T&L activities even though if they have a good technical support, or *vice versa*. This might be because technical support could be one of the small supporting factors that determines satisfaction level of students. They are many more factors such as instructors' factors, communication tools, and many more which also contributes to the satisfaction level (Bolliger and Wasilik, 2009).

CONCLUSION

The questionnaire in this study managed to assess the satisfaction level of online T&L activities and technical support among postgraduate student in Faculty of Health Sciences, UKM. In conclusion, results displayed that the postgraduate students were fairly satisfied with online T&L activities and their technical support, thus indicating a positive experience and acceptance of e-learning. A review of curriculum structure and design that considers the students' psychological well-being during online T&L is recommended for online T&L continues to be delivered effectively in the future.

Several limitations exist in this study. The use of closed-ended questions may not investigate various aspects of satisfaction in online T&L, particularly in relation to technical support, thus at

risk of losing important information. The reported satisfaction levels were also not representative of students across different programs. Future research that takes into account different demographic background as well as students' past experience with e-learning or training will help to identify other factors that may influence online T&L. Exploring educators' satisfaction with online T&L is also worthwhile as this will help gain a different perspective for improving e-learning in the future.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

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