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THROWN INTO THE DEEP END: EXPERIENCES OF REAL ESTATE AND URBAN PLANNING STUDENTS IN NAVIGATING E-LEARNING DURING COVID-19

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Abstract

Built environment undergraduates are future professionals who will shape cities in the future. Normally, they acquire adequate, relevant and current industry-related knowledge during their study. Yet, the COVID-19 pandemic has replaced their normal learning process with emergency online learning that must be navigated by educators and students alike. Under normal circumstances, the programme syllabi and materials are designed for conventional face-to-face learning specific to the future profession. The physical and social restrictions related to COVID-19 prevention have thrust upon the built environment students learning limitations that are specific to their field. This paper aims to explore the experiences of real estate and urban planning students during the emergency online learning period not only to document the students' experiences but also to inform on future curricula development. A constructivist-based qualitative approach was adopted, with qualitative data collected from an online open-ended questionnaire on real estate and urban planning students. Using the framework by Khalil et al. (2020), a thematic content analysis was conducted around four core themes: (1) educational impact, (2) time management, (3) challenges encountered, and (4) preferences for the future. The findings support future syllabi that are emergency-resilient and can ensure professional education that is highly adaptable in emergency situations.

Keywords: Online learning, e-Learning, COVID-19, emergency online learning, emergency-resilient education, built environment

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INTRODUCTION

The COVID-19 pandemic that began at the end of 2019 triggered a world-wide disruption of various sectors including education, as evidenced by the sheer number of literatures on COVID-19's impact, management and adaptation. The Malaysian higher education sector is one of the affected areas that have swiftly adapted to the new circumstances under the nation-wide mandatory countermeasure known as the Movement Control Order (MCO). The MCO's severe physical and social restrictions on students and lecturers significantly impacted teaching and learning (T&L) at higher education institutions (HEIs) as T&L was switched from conventional to online learning. The impact of emergency online learning on the knowledge acquisition of built environment students is a cause for concern because a significant amount of knowledge and skill transfer are affected outside classrooms.

Various issues were explored with the emergency online learning such as T&L issues and learner performance. There is a discernible gap in the literature from the built environment field on how the emergency online learning at HEIs has impacted the knowledge acquisition of the built environment students. This gap is especially glaring in the context of Malaysia. As a developing country, it is imperative to ensure that the future built environment professionals have acquired the necessary skills embedded in their courses to undertake their future careers.

Based on the above, these questions need to be addressed: What were the issues faced by the built environment undergraduates in their emergency online learning? How did these students adapt to the online learning environment that is different from their normal learning environment? How can these experiences be used to inform future-ready built environment programmes? This paper aims to unpack the experiences of students of built environment programmes in adapting and immersing in the emergency online learning. A qualitative approach using open ended questionnaire survey was adopted in this exploratory study which involves planning students, a design-based programme, and real estate students, a survey programme, of Universiti Malaya (UM), Malaysia. Being the nation's top-ranked university, UM serves as the benchmark for T&L innovations and thus lessons learned in this study can be used to guide other built environment programmes. This paper is organized as follows. Firstly, a literature review on the impact of COVID-19 on higher education will be presented, bringing the focus to emergency online learning and professional degree programmes. Next, the context of the paper will be outlined, followed by the methodology. The findings will then be discussed before concluding with potential strategies to be adopted for a future-ready planning and real estate education.

RESEARCH BACKGROUND

COVID-19 and Emergency Online Learning

COVID-19 first appeared in Wuhan, China in late December 2019 and was first reported in Malaysia on 25 January 2020 (Ministry of Health, 2022). At the earlier phase of the pandemic, the tone of the literature on COVID-19's impact on higher education was one of uncertainty and despondence, mainly dwelling on how teaching and learning (T&L) was altered due to the strategy of social and physical restrictions to counter the pandemic (Mseleku, 2020). Due to mandatory lockdown, students in many countries had to stay at home and higher education providers had to switch to emergency online learning mode (Mseleku, 2020; Sun, Tang & Zuo, 2020).

Prior to the pandemic, online learning was seen as complementing the conventional T&L. Back then, ICT was seen as a function of social learning space and not as the main T&L platform (Ramu et al, 2020). Online T&L may occur either synchronously, i.e. involving live interaction between the instructor and students, or asynchronously, i.e. significant delays between instruction and receipt (Finklestein, 2006). The advantages of online learning include offering an interesting and flexible experience for the learner, a denser knowledge content compared to conventional classroom and greater time saving and utility (Khalil et al., 2020). However, the main disadvantage is the high reliance on internet connection and technology as the delivery mechanism, which may retard the teaching and learning process in less developed contexts (Mseleku, 2020; Paschal & Mkulu, 2020). Another requirement of online learning is planning; for instance, flipped classroom requires students to be given the material in advance (Khalil et al., 2020). As such, the unplanned emergency online learning will be less effective. The reduced non-verbal communication of online learning has also been criticised as important cues may be lost (Khalil et al., 2020).

The abrupt switch to online mode caused issues such as disruptions in research activities (Paschal & Mkulu, 2020), student isolation and associated mental health issues (Mseleku, 2020; Paschal & Mkulu, 2020), learning distraction (Khalil et al., 2020; Paschal & Mkulu, 2020) and prolonged study period (Paschal & Mkulu, 2020). The emergency online learning further accentuated the gap among students from different socio-economic backgrounds (Mseleku, 2020). Eventually however, a more positive outlook was presented as the pandemic was seen as a catalyst for online learning (see for instance Pham & Ho, 2020; Khalil et al., 2020). Synchronised online learning was reported to be well-received among students, due to the availability of student engagement during the course of learning (Khalil et al., 2020).

The Impact of Emergency Online Learning on Professional Degrees

The disruption of T&L in professional degrees brought upon by the pandemic has become a cause of concern and immediately became a hot topic of study in fields such as medicine (Findyartini et al, 2020; Khalil et al., 2020, Otaki et al, 2021; Papapanou et al., 2021), pharmacy (Roche, 2021), nursing (Cullum, 2020; Le et al., 2021), education (Mintz et al., 2020, Mseleku, 2020; Paschal & Mkulu, 2020), journalism (Yu, 2020) and law (Johnston-Walsh & Lintal, 2021). Compared to non-professional degrees, professional degrees are designed to deliver practical contents that oftentimes require personal guidance from the educator in the classroom or hands-on work-based learning field experience. The specific nature of professional programmes also requires specific tools or methods that were not accessible to students during the pandemic (Findyartini et al, 2020; Khalil et al., 2020). An immediate concern was on students' professional development when the attitudes, values, knowledge, beliefs and skills unique to the professional subgroup were not transferred to the students during the online learning (Findyartini et al, 2020).

Some of the challenges reported in studies on professional degree during COVID-19 pandemic include methodological, content perception, technical and behavioural (Khalil et al., 2020). For instance, medical students were prevented from having real patient exposure (Findyartini et al, 2020) whilst journalism students lost the vital communicative environment (Poluekhtova et al., 2020). For programmes that require the mastery of psychomotor skills, the process of knowledge transfer was significantly affected by online distance learning (Findyartini et al, 2020).

Within the context of professional degrees, and perhaps also generally true with other degrees, the emergency online learning forced students to use adaptive coping mechanisms in the unfamiliar mode of learning (Findyartini et al, 2020). Beyond the adjustment period, studies reported varied degrees of students' acceptance and preference of the online mode. Depending on the theory/practice ratio of the study, a module that has higher theory content is more likely to be accepted for online mode due to the perceived time savings (Khalil et al., 2020). Locally, there is a noticeable lack of studies in built environment education during the pandemic except for the work by Mohd Hussain et al. (2021) on landscape design students' performance.

This study involves students from UM's real estate and urban planning programmes. In terms of curriculum design, the pre-COVID syllabus delivery for both programmes are similar in terms of common T&L methods that include lecture, tutorial, seminar presentation, computer lab work, site visit and industrial training, with the exception of studio for urban planning students. Conventional assessment methods include tests, individual and group assignments and final examination. Typically, a course adopts a combination of two or more T&L and

assessment methods to fulfil the requirements from the accreditation bodies. The majority of courses have a combination of continuous and summative assessments, with some based on 100% continuous assessment.

During emergency online learning, changes to T&L methods included (i) online lectures and tutorials replacing face-to-face classroom interactions; (ii) secondary rather than field data for student assignments and projects; (iii) softcopy rather than physical assessment reports only in softcopy format and (iv) alternative modes of Summative Assessment comprising Online Open Book Exam and Reflection Notes in lieu of final examinations. Both synchronous and asynchronous modes of T&L were used to facilitate student-centred learning. At the start of the emergency online learning, the university recommended synchronous T&L to be done at least 3 times i.e. at the beginning, middle and end of the e-Learning period (Universiti Malaya, 2020).

METHODOLOGY

The research design was based on a constructivist-based qualitative approach (Creswell, 2014) which enabled an in depth understanding of the impact of COVID-19 on the education of built environment students, in particular real estate and urban planning.

Data Collection Instrument

An open-ended questionnaire was used to collect data from the respondents. The questionnaire was administered online because students were at their homes due to the ongoing COVID-19 pandemic. The open-ended questions ensured students could give detailed accounts of their perceptions and experiences of the emergency online learning. The questionnaire was prepared using Google Form, which was freely available.

Data Collection Procedure

Using purposive sampling, links of the online questionnaire survey were sent to all current Bachelor of Real Estate and Bachelor of Urban and Regional Planning students in Universiti Malaya. Table 2 summarises the profile of the respondents. Overall, the survey involved a total of 236 respondents comprising 133 real estate and 103 planning students.

Table 2: Characteristics of the study respondents (n=236)

Characteristics	Variables	<i>f</i>	%
Programme	Real Estate	133	56.4
	Urban and Regional Planning	103	43.6
Year of Study	First	68	28.8
	Second	74	31.4
	Third	67	28.4
	Fourth	27	11.4

Source: Author (2022)

Data Analysis

The qualitative data was in the form of written responses from the questionnaire survey. Using the framework by Khalil et al. (2020), a thematic content analysis was conducted around four core themes: (1) Educational impact, (2) Time management, (3) Challenges encountered, and (4) Preferences for the future. Deductive coding was also undertaken to generate sub-themes as prescribed by Marks & Yardley (2014) to ensure a more robust analysis.

FINDINGS

Generally, the findings were observed to be present equally in both programmes unless specifically highlighted.

Theme 1: Educational Impacts

Five sub-themes were generated under this theme i.e. (1) Content understanding, (2) Workload, (3) Screen fatigue, (4) Online collaborative learning and (5) Assessment.

Many respondents feel that learning certain courses online can be quite challenging especially for non-theoretical classes such as courses that require calculations among real estate students. The absence of teaching aids such as white board that are normally found in physical classrooms also poses a challenge for students especially when lecturers solely rely on their powerpoint slides using the share screen feature found in online meetings.

“For some courses, when the lecturer solely explains to us without a diagram or sketch, I might lose track and be unable to keep up with the explained content. The subject might be better delivered with the help of a whiteboard.”

The challenge is deeply felt by students who are new to the field such as the first year students. Being new, the students need more guided learning and this is constrained by e-learning due to lack of face-to-face interactions where lecturers may not realize the struggles faced by the new students.

The second sub-theme emerged from the findings concerned workload. Contrary to the general perception that eLearning does not require much commitment from the students, many expressed the concern of juggling with too many assignments, with respondents commenting on “due dates” and “overlapping assignments”. Additionally, respondents complained about being restricted by the MCO to obtain adequate and appropriate data to complete their assignments:

“Some assignment requirements are not suitable to be done during lockdown due to the unavailability of data. We tried to email the authority to get data but normally the emails were not replied”.

Another sub-theme that emerged concerned peer management. Some respondents expressed the need for real and face-to-face interactions with their peers to facilitate the learning process. Specifically, Urban Planning studio projects with a 12-hour studio time suffered when group members shirked their responsibilities, citing the pandemic for excuse:

“Meetings with team members are unproductive. Most of the time they will give excuses not to join meetings (although everyone agreed on date and time) and ask to record meetings instead. And this will burden other team members...”

Nonetheless, some lecturers were creative in finding opportunities to stimulate collaborative learning by utilising online tools such as Google Docs where students can work together on certain topics given by lecturers. By writing together, it enables students to engage with their peers. Besides helping students who struggled to study alone, it also offered a degree of anonymity that could encourage shy students to participate, as revealed in the following response:

“...a question board for each subject/course that can be seen by the whole class, then we can post questions that everyone in the course can see... and lecturers can also answer all the question in one place... I think students dare to ask more questions if we can ask anonymously and the online writing tool can help with that”.

In preparing summative assessment during the pandemic, lecturers were inclined to develop questions based on High Order Thinking (HOT) that required answers beyond the lecture notes. For the assessment sub-theme, the respondents highlighted how the more difficult examination questions would require more time compared to conventional final examination. Additionally, students also reported anxiety and fear of losing internet connection during examination which further compounded the exam-related stress.

Theme 2: Time Management

No sub-themes were generated under this theme. In general, respondents from both programmes feel that eLearning allows them to manage their time better. The best thing about being able to attend online classes is that they do not have to travel or move from one place to another. Additionally, the availability of asynchronous online learning means that students may conduct learning activities at their own convenience.

Theme 3: Challenges Encountered

Two sub-themes were generated under this theme i.e. (1) Technical and (2) non-Technical. Technical challenges related to online learning mainly concerned connectivity and tools. Whilst online learning enables students to access educational content at the comfort and convenience of their home, effective T&L can only occur if students are equipped with reliable tools, high bandwidth and stable internet access. Ironically, many respondents felt that these were the main challenges that they have to face during online learning. As mentioned by a respondent:

“Everything is good for the teaching methods and materials provided by the lecturers. However, there were times we faced problems with our laptop and internet connection...”

The challenge of online learning is also evident among international students who may have accessibility issues to online platforms used by the lecturers in conducting classes, as mentioned by this respondent:

“It is very inconvenient to use Google meet in China... Whatsapp is also not used in China, therefore it can quite troublesome for us communicate with our lecturers and friends”

Apart from the technical challenges, respondents also indicated having faced non-technical challenges classified as (1) Self-motivation and (2) Familial Issues.

In terms of self-motivation, students reported a decline in their positive attitude as time went on. Lack of internal and external drive and stimulation and peer group dynamic were cited as reasons to lose motivation to study. Among keywords that typically appear were “lack of motivation”, “lack of concentration” and “no vibes”.

Quite a number of students from both programmes highlight experiencing screen fatigue due to the prolonged sessions of online learning. This can be seen from the following statement:

“Let's assume that there's 3 to 4 classes a day... with a period of 2 hours each, we'll need to face the monitor about 3 to 8 hours... and after the classes, we'll need to have meetings with our course mates for assignments as we know assignments require the close cooperation between members hence another 1-3 hours for each course...”

Familial issues formed another non-technical challenge for some respondents. Respondents discerned having to juggle their learning schedules with household chores. Although both genders indicated being expected to contribute to household chores, the expectation on female students seemed to be higher.

Theme 4: Preferences for Future

No sub-themes were generated under this theme. A very noticeable preference related to online learning was increased lecturer-student engagement during T&L. Among suggestions were lecturers to call students' names during online class, lecturers asking students to present a topic and lecturers giving instantaneous feedback on student work.

Another preference was the variation in content delivery by having both synchronous and asynchronous lessons so that students who suffered from internet issues or screen fatigue would be able to catch up on their lessons.

DISCUSSION

Our analysis did confirm the framework by Khalil et al (2020) for emergency online experiences. Nonetheless, we further categorised the experiences into technological, human and syllabus based for the purpose of informing on future-ready real estate and planning education.

Several issues stemmed from having poor digital infrastructure and unfamiliarity with online applications and platforms. Despite the focus on student experiences, it can be inferred that these problems were encountered by students and lecturers alike, as also reported by Mseleku (2020) and Paschal & Mkulu (2020). Moreover, the digital gap was also observed in terms of the

intergenerational divide. The attitude and aptitude of lecturers must be right in order to successfully navigate such situations. In terms of attitude, lecturers must be innovative, creative and adaptive in changing from conventional to novel approach, whereas a degree of aptitude must also be present to enable the implementation of new technologies and pedagogical methods in delivering the curriculum.

Screen fatigue was found to be a major issue among the respondents and this could have prevented the lesson penetration and retention. The effects of prolonged study period during the pandemic was also observed by Paschal & Mkulu (2020). Students need peer support in their studies, not only to help in content reinforcement but also to offload stress and anxiety as reported by (Mseleku, 2020). For new students this may be challenging as they have spent little, if any at all, time together on campus. This has prevented them from establishing rapport and mutual trust among them.

Core subjects that require hands-on teaching and field experience have always been cited as the most difficult to adapt to online learning. For instance, valuation for real estate and planning studios require sensory experience on site which is unable to be relayed through online learning. The inability to physically explore the site will cause students to miss important cues, viz. the smell of a dumping ground next to a site. Another issue is data collection whereby students were not able to collect data and received little support from bureaucratic government agencies.

Future curriculum development may consider agile T&L and assessment elements. In other professions, the education providers were quick to capitalise on the situation by introducing new methods of learning. For instance, Papanou et al (2020) described an innovation in a medical programme where students were incentivised to volunteer in service-learning projects that can carry academic credits. Thus, curriculum structure should be flexible and adaptable to accommodate the sudden challenges and changes. This also must be supported with flexible assessment methods, which must garner full support from all stakeholders including MQA, HEIs and professional bodies.

CONCLUSION

Education is a collective responsibility among academia, government, industry and society. All stakeholders must provide the required support in providing a conducive ecosystem for online education, especially for built environment programmes that are more practice-based. Both the government and industry must provide a lifeline during emergency learning situations in terms of data and knowledge sharing and relaxing bureaucracy. The government, in particular, can support online learning by developing the required digital infrastructure and

ensuring reliable and user-friendly databases. The existence of good digital infrastructure and solid databases can indeed promote education resilience.

The findings support future syllabi that are agile and emergency-resilient, highly adaptable in emergency situations. The main lesson learned from the pandemic is how HEIs and professional bodies should expect the unexpected and not be too rigid in their standards and requirements. In the future, emergency situations may occur in the form of pandemic, war/strife, natural and man-made disasters, etc. Finally, improvements in digital infrastructure and pedagogical training must be carried out alongside a humane approach to T&L where communication and interactions are uninterrupted during emergencies.

In terms of T&L methods for online learning, micro lessons may be implemented to break the lessons into digestible chunks and interspersed with activities. This will prevent students from being overwhelmed by the amount of lesson time they have to sit through and also will retain their attention. The micro-lessons can adopt low-tech, hi-impact delivery methods such as Whatsapp. This is to ensure all students can follow the lessons in a timely, effective and inclusive manner, as well as saving on data consumption.

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