Distance Learning for Design Student: An Analysis of Student Performance in Independent Landscape Design Studio

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ABSTRACT

Independent Landscape Design (LDA350) is the final semester course that required a full landscape design process. This design-based syllabus is more acquainted with face to face or physical teaching-learning process. However, to pursuit the IR 4.0 education, this course has adopted MOOCLAA350 to engage and equip these design students with significant understanding, graphic presentation skills as well as technical aspect related to design developments and constructions. The teaching and learning environment has subsequently expanded. With the outbreak of the Covid-19 pandemic that started early this year, therefore this course is easily adaptable to this educational change with ODL (Open Distance Learning) being the new strategy that was put forth for teaching and learning. This paper analyses student performance in adopting MOOC and ODL during the Covid-19 outbreak. An online survey supported with a comparative analysis between semesters was conducted to evaluate the student's readiness, challenges and performance throughout the semester. Some tools and techniques to ensure the continuity of learning during the current pandemic are described. The findings revealed factors contributing to student performance and the reality behind the success of this new teaching strategy.

1.0 Introduction

Distance learning in education has significantly witnesses growth in changing the pedagogical conventional learning environment. According to Schneider (2020), distance or open learning has become a new norm and will continue to embrace the teaching strategy. However, the delivery methods and effectiveness of distance learning for the design-based student has always been doubtful and remains irrelevant. Therefore, when the Covid-19 pandemic struck and disconnecting people physically, the open learning methods was the only solution to keep people connected and continue working in distance (Adnan M., & Anwar K. (2020) and Agarwal S., & Kaushik J. S. (2020)). Adnan (2020) added that educational institutions have to adapt, design appropriate and effective content, arrange an effective delivery system and provide digital literacy training to pursuit the current situation and achieve better learning outcomes. The prompt changes in the learning environment due to the outbreak of the Covid-19 pandemic has uplifted the open distance learning (ODL) method to another level (Montebello (2017)). This further seeing the transformation of conventional learning through face to face being a significant challenge for landscape architecture design-based courses applied by University Teknologi MARA, Malaysia (UiTM). From April to August 2020, this unique semester has further demonstrated the challenges faced by both academics and students in making sure that the online learning is deliverable especially for the Independent Landscape Design course, a compulsory course offered for the final year student of Diploma in Landscape Architecture, UiTM Perak Branch.

2.0 Distance Learning for Design student

In line with this ODL application, an online survey was carried out in March 2020 to understand the student readiness and their challenges for ODL implementation. A total of 102 students registered for the Independent Landscape Design course are the respondents for this survey. They are final year students in semester 6 that involved fully in ODL during the Covid pandemic semester from February to July 2020. Within the comfort of their home, the majority of the students with 84.3% informed that they owned laptop while 82.4% note having smartphones that able them to well participate in the ODL process (see Figure 1). Equip with personal electronic devices, these findings further denote that students are ready to enter the fully online learning procedure from home.
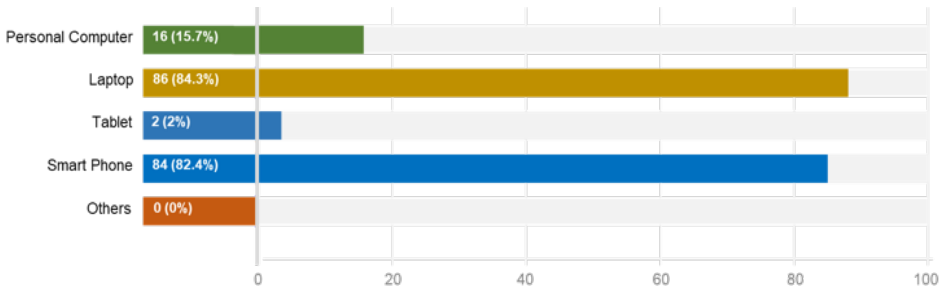
Figure 1 Electronic devices own by students

Since this online survey was focus on the Independent Landscape Design online application, the students were required to highlight the online platform preferences that aid them in their learning process. As the respondents were allowed to select multiple choice answers, the result in Figure 2 illustrates that the majority of the respondents with 86.3% prefer WhatsApp application as their main platform. This WhatsApp application is the most accessible, affordable and allow quick responses which align with Cook and Dupras (2004) and Gewin (2020) research that acknowledged the most effective online platforms is the one enabled learners to interact with the material, pursuing the information at their speed and engage in the course through feedback and commentaries. The preferences result further followed with ZOOM application (61.8%), Telegram (54.9%), i-Learn V3 UiTM (52.9%), MOOC Open Learning platform (51%) and Google Classroom (46.1%). These findings further aid the academics in setting up the right learning platform in line with the student's preferences in making sure that the online delivery is successful and at the same time able to attain the course learning outcome as stated in the syllabus. Due to student familiarity with these online platforms, it is hoped that the ODL application is able to uplift the student's learning experience and boost the student's result for this semester.
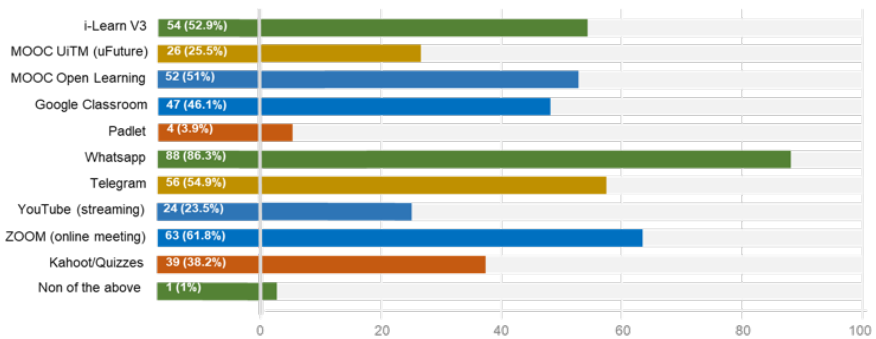

Figure 2 Selected online platform

3. Analysis of Student Performance during ODL

According to Paul (2019), to measure the effectiveness in conducting ODL during the Covid-19 pandemic, a study could analyse the student performance based on the results by several semesters. Therefore, this study analyses the student performance within the three recent semesters (refer to Figure 3). This survey sample size is based on the registered students for each semester. The performance is based on final grades achieved by the students. Students are evaluated by their ability in performing landscape design proposal consisting of design solution, ideas, technical requirement and final documentation. This study conducted a comparative analysis between the semester to measure the differences and trends of how the grades perform. Based on the analysis, it is surprising to discover that result for this semester depicted an incensement of students getting Grade A for this course (see Figure 3). Despite the challenges faced by both academics and students throughout this ODL implementation, the student's results for this semester is satisfactory. The delivery process even to the academics is quite challenging for this semester knowing the subjective demand of landscape design and at the same time to making sure that all 102 students able to grasp the critical knowledge related to design development and processes, construction drawings and documentation as well as a technical report. As the proverb says, all hard work pays off, comparative results for three semesters depicted in Figure 3 demonstrated that regardless of limitation throughout the ODL implementation, the results for this (Covid 19) semester have to surpass the percentage of a student getting grade A cluster (grade A+, grade A and grade A-) with an increase of 11%.

This Independent Landscape Design requires students to venture into different project scope and demand (with various design strands that include waterfront landscape design, urban landscape, parks and community design, institutional landscape design, cultural landscape, urban heritage and landscape, etc.), therefore considering this complexity and to attain to each project aim, hence this result reveals the successful implementation of the online learning for the landscape architecture program. The increased percentage of grade A cluster has also evidence in the decrease of the percentage of a student getting grade B (11%) and grade C (1%) as compare to the previous semester March 2019-August 2019 result.
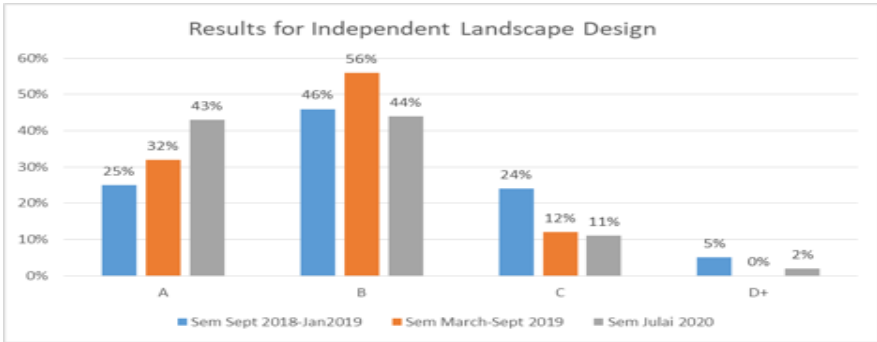
Figure 3 Result by percentage for Three Semester for Independent Landscape Design course

Through student preferences of the online learning platform based on the survey conducted in March 2020 (see Figure 2), it is, therefore, evidence that i-Learn v3 and MOOC Open Learning platform have sufficiently aided the students undertaking Independent Landscape Design. Given WhatsApp, ZOOM and Telegram as the intermediate platform that sufficiently stands as the communication platform between students and academics, MOOC Independent Landscape Design serves as the core reference platform that aided students with four development modules - Module 1 (Introduction of Independent Study); Module 2 (Site Planning & Design Development); Module 3 (Construction & Documentation); and Module 4 (Portfolio and Design Samples). Through consistent online critique session via Google Classroom, Padlet, together with sufficient references uploaded through i_Learn v3 and updated samples in MOOC Independent Landscape Design, challenges faced through ODL implementation is tackle successfully.

Besides, these successful students in distance learning contexts showed the ability to study independently, highly motivated and able to absorb the communicated information on their own. Hence the excellent result depicted in Figure 3 has verified that an online learning platform is another teaching method for a landscape architecture student.

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[1] Due to MCO (Movement Control Order) imposed by the Malaysian Government from 18 March 2020, some students were affected financially due to parents loss of jobs, and some of them are doing part-time online work to support the family financial problems (data were based on the online survey for Independent Landscape Design that was conducted in March 2020). These difficulties have indirectly impacted the work progress of the related students.

4. Conclusions

Based on the e-survey findings and student performance analysis, this paper demonstrated that distance learning is significant in safeguarding the teaching and learning strategy amid the Covid-19 pandemic. The student performance, for instance, showed an overwhelming contribution of online learning platform replacing the conventional teaching method. These findings also represent the student's survival strategy and how they have able to overcome the situation as part of the lifelong learning experience. This adds a new dimension to the field of online learning evaluation that enables the comparison of different modalities besides proposing a methodological shift for the future. Furthermore, this online learning for design-based students evidences the desired findings, where the majority of students are still able to achieve good grades although they are facing various challenges and difficulties. The educator's efforts in exploring various teaching strategy, together with the students' initiatives and motivation, are the self-driven factors that have made this online teaching and learning successful. Therefore, this paper highlighted the reliability of teaching strategy, learning initiatives, online platforms and electronic devices are important factors assisting the effectiveness of these pedagogical changes.

Acknowledgments

This study aims to assess whether the use of the informative map increases the cognitive level among geography students. The cognitive level was tested using test scores based on pre-test and post-test questions. The cognitive levels are classified as knowledge, comprehension, application, and analysis developed based on the standard school level as approved by the geography teacher in the respected school. The test score was compared at the end of the sessions.

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