

# The Impact of Building Community and digital skills on students' Online Active Learning Experience During COVID-19 Pandemic

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## ABSTRACT

Covid-19 and the subsequent Movement Control Order (MCO) imposed by the government has deeply impacted the higher education institutions in Malaysia. The new normal has dramatically transformed to online learning. Universiti Teknologi Malaysia (UTM) took the bold move to be among the first universities in Malaysia to start online learning to ensure that students can continue with their education and graduation as anticipated. Whilst academics have done a remarkable job in putting together materials and assessments in preparation for online delivery of courses, the university must ensure quality and fair assessment as well as how well they have fared in the face of a major catastrophe. Accordingly, evaluations should be carried regularly, especially from the perspectives of students. The purpose of this paper is to explore the online learning experience of international undergraduate students on philosophy course. The paper adopted educational action research method by developing and distributing a questionnaire using google forms to collect data from 88 students in two international sections during the academic year 2020/2021. The results showed that although the majority of students rate their overall online experience as “excellent”, however, 60% of them think that their learning outcome could have been better if the study was face to face. Regarding the teaching modes, the preferred selection of majority of students was hybrid, synchronous, and asynchronous modes respectively. Moreover, the findings indicated that that students are still coping with the new norms working from the home, but they had dissatisfaction with certain elements such as missing the face-to-face interaction and the challenge to carry out collaborative group projects while dispersed in different places. The findings provide updated insights on online learning after being adopted as a new norm during the COVID-19 pandemic and applied in UTM ever since, as such, can be useful for the university management, educators' best practices, and similar higher education institutions to enhance and develop new online teaching and learning plans.

**Keywords:** Online learning, Educational action research, Covid-19, MCO

remotely on digital platforms, education has altered tremendously. In Malaysia, the Movement Control Order (MCO) was implemented in the middle of March 2020, forcing Higher Education Institutions (HEIs) to fully

## INTRODUCTION

The COVID-19 pandemic and its far-reaching consequences will continue to play out in a variety of areas around the world. With the growth of online learning, where teaching is conducted

prep, online tutorials, and stay in touch with students. Finally, lecturers had to modify examinations to accommodate the online learning environment. For instance, converting the final exams to coursework (Albukhary International University, 2020) or take-home exams. Today, two years after and the pandemic continues to exist, there are many higher education institutions in Malaysia still rely primarily on online teaching and learning. Especially, those with big numbers of international students, most of whom cannot attend physically because of the travel restrictions. As such, both instructors and students spend a lengthy time using gadgets. Lecturers may be exposed to computer vision sickness as they have to read, mark tests and provide feedback electronically (Forster, 2020). Besides, responding to numerous students' inquiries via email, WhatsApp, telegram, and similar applications has been a daily routine. All of the aforementioned causes the lecturers a great deal of anxiety, panic, and stress. On the other hand, students have faced considerable hurdles as a result of online learning. Some students struggle with e-learning, because professors tend to give them more homework (Yap, 2020, cited in Lim, 2020a, b). In comparison to classroom learning, students do not have the opportunity to interact with lecturers and friends (Rafidi, 2020). Students and lecturers can notice each other's body language and sustain eye contact in face-to-face learning. However, in an online situation, audio and video are used instead, which can be distracting if the line connection is poor. Student consultation is only possible at a set time. In brief, boosting student involvement through active learning can be a significant challenge because online learning may affect the integration of group discussion during the online session. Consequently, the effectiveness and efficiency of online

transition to online learning, posing unprecedented challenges (Menon, 2020). Malaysian higher education institutions (HEIs) reacted quickly to the rapid shift in teaching and learning, however, differently based on their readiness. Some of these institutions embraced technology-enhanced learning well before the present pandemic. While some faculty members already possessed online teaching skills, such as live streaming, pre-recorded teaching sessions, guiding discussions on a digital platform, and offering feedback online (Lim, 2020a, b). Accordingly, when the pandemic hit the country in February 2020, those institutions switched swiftly to online learning, that allowed for the continuation of the academic year. Universiti Teknologi Malaysia, for example, was one of the first HEIs in Malaysia to issue thorough instructions and action plans to mitigate COVID-19's impact on its stakeholders (Nawi, Na, Sazalli, Phang, Adnan, et.al.2020). SOP for staff and students are included in the guidelines. The University's digital care department trains lecturers on how to use different platforms and tools for recording lectures, sharing resources, online collaboration, and constructing virtual laboratories (Nawi, et.al.2020).

However, the stress felt by Malaysian instructors who had to transition to online learning was unfathomable. They had to learn how to use the learning management system before providing online classes in the lowest amount of time possible with minimal training and preparation (Bernama, 2020a). There was not enough time for trial and assessment of benefits and drawbacks, no strategizing - lecturers simply move to online instruction. Moreover, some instructors do not have access to high-speed Internet at home (Albukhary International University, 2020), so they rely on their phone network to perform teaching

available on the success of online learning among Malaysian HEIs (Sia and Adamu, 2021). Will Malaysian higher education institutions return to a strong presence of face-to-face learning during the pandemic, or will they continue to offer online courses? Will the e-flipped classroom model eventually replace the flipped classroom in Malaysian HEIs? The answers to those issues are dependent on the experiences of stakeholders, particularly HEI administration, lecturers, and students, throughout the crisis. Accordingly, previous studies recommend future qualitative and quantitative research studies in Malaysia should be done to assess the current online learning strategy and the extent to which lecturers and students prefer online learning to provide evidence-based practice (Teo et al., 2020; Toquero, 2020; Sia and Adamu, 2021).

Regular assessments based on student data are critical for improving the process and providing high-quality online learning. As such, the aim of this paper is to explore the online learning experience of undergraduate students on philosophy course offered by University Teknologi Malaysia (UTM) during the academic year 2020/2021.

The objectives of this paper are as follows: 1. to explore the students' experience of online learning. 2. to investigate the effectiveness of online courses & resources. 3. to investigate the efficiency of online teaching & learning methods and tools. 4. To assess the effectiveness of online teaching methods and tools in undergraduate courses.

## 2. LITERATURE REVIEW

The global disruption by COVID-19 pandemic has severely affected all aspects of life. Higher education was

learning may be hampered. As a result, the quality of teaching and learning could be jeopardized. It is, thus, critical to comprehend students' perspectives because their feedback could reveal some emotional and readiness issues in coping with this situation, as well as the level of online teaching & learning efficiency and effectiveness. Chin, (2020), however, sees a unique opportunity in the current crisis for colleges around the world to experiment with remote learning methods while also providing students with hands-on experience with technology-assisted learning. Furthermore, it allows both lecturers and students to study and apply the various features of e-learning systems and applications.

Overall, to effectively exploit the online learning strategy in universities, there is a need for ongoing evaluation and re-strategizing based on input from lecturers and students, and this field of research needs greater attention (Sia and Adamu, 2021). Furthermore, these technical tools necessitate the acquisition of necessary skills in their utilization. Thus, educators must continue to improve themselves and develop a desire to share their expertise with others all across the globe, which will be useful. There is a need to design measures to evaluate student engagement in an online class from the perspective of lecturers (Sia and Adamu, 2021).

According to Toquero, (2020) HEIs should form a task force to gather documentation and evidence-based practices and services provided to students. Thus, actions can be taken accordingly. The ultimate goal is to improve students' learning experiences while also documenting evidence-based methods for future use and accreditation. Moreover, some studies stated that it is currently unknown if HEIs will be able to weather this storm, as there is no official data

effective with a wide audience and no necessities of physical infrastructure (Misko et al., 2004). Nonetheless, the online teaching & learning has a few limitations, as the lecturers face difficulty in preparing materials for the online method, which is a very time-consuming process. Additionally, with online learning it becomes a challenging task to assist the students in accessing the learning materials as online learning requires less supervision. Moreover, the students need to adapt themselves to the new virtual classroom environment from the traditional classroom, which is a challenging task (SanchezGordon and Luján-Mora, 2014). Another limitation that may occur related to technical aspects where many education institutions face inadequate supply of e-learning equipment needs, such as highly efficient devices and Internet connections. Some of the students have poor computer literacy and self-motivation, which affects their access to the online learning (Randy, 2011). Bhuasiri (2012) indicated the obstacles in online learning for developing countries including investments in technology such as hardware, software licenses, learning material development, equipment maintenance, and training. Besides, some issues related to management support. According to Imsa-ard, (2020) students in Thailand could study online, yet, the majority of them preferred face-to-face to online classrooms, believing that face-to-face classrooms were more comfortable. Importantly, the shift to online method and the interruptions that have occurred may not just be a short-term issue but can also have long-term consequences for the affected cohorts and are likely to increase inequality. Fortunately, there is a range of modern tools available to face the challenge of distance learning imposed

significantly affected and faced major changes that impacted the teaching & learning process. These impacts include social distancing, quarantines, isolation measures, campus closures, border closures, and travel restrictions (QS, 2020). Universities across the globe were forced to go into lockdown, closing all the campuses and as a result switching the teaching method to online learning (Nawi, et.al.2020). According to a survey of the literature, school closures due to COVID-19 have impacted 1,198,530,172 students in 186 countries (UNESCO, 2020). Due to the spread of the disease and the closure of physical classes, online learning in synchronous and asynchronous environments became the alternative learning methods (Singh and Thurman, 2019).

The online learning offers a space for independent learning and developing new skills in the process leading to life-long learning (Dhawan, 2020). However, the online learning can be challenging to the disabled, underprivileged, and marginalized students who had limited resources and accessibility to online learning (The Regional Risk Communication and Community Engagement (RCCE) Working Group, 2020). This inability to access and involve in online learning causes the disparity and dropout among them. Online learning also requires students' commitment and discipline, especially for vulnerable students who need interaction that allows them to strengthen their social skills (UNESCO IESALC, 2020). Even though, online learning provides advantages for both students and universities. The students may opt to have flexible time for learning, which is more convenient for them to access the teaching materials. On the other hand, the universities also gain benefits through the implementation of this learning method, which is more cost-

characteristics such as gender, ethnicity, course year level, and financial aid status affecting the students' online learning readiness (Lau and Shaikh, 2012).

In situations such as the pandemic, online learning becomes an effective alternative learning method for both of students and lecturers, however, there are some issues that require consideration, such as the limited accessibility to the internet. Thus, the Malaysian government has played an important role in aiding by providing the internet allowance to the B40 families and students to access the internet ('Internet Allowance', 2020). This allowance allows the students to get free internet access for online learning. Inadequate online learning infrastructures and limited accessibility to the internet make the online learning process harder for the students, (Lee, 2020) especially in more rural and isolated areas in Malaysia. Beside the limited accessibility to the internet, the students experience difficulty in communicating with their lectures, interacting with their friends, and laboratory access, which affected their studies.

In most Malaysian HEIs, a series of online webinars are held to introduce new cohorts to the online learning environment. Similarly, there is a significant need for literature that gives instructors additional insight into how to deal with online classrooms and the best ways to engage with students online in order to improve their grades. Redesigning course assessments and reorganizing course content to accommodate online learning is also part of the new standard (Daniel, 2020). Some universities, for example, have switched from centralized end-of-semester exams to take-home tests (Mustafa and Abu Karim, 2020; University Selangor, 2020). It is a completely new concept that allows students to write an examination with

by the COVID-19 pandemic (Nawi, et.al.2020). Using these tools, the modification of contents that were previously taught face-to-face is easily conceivable. There are however other important tasks in the learning process, such as assessment or autonomous learning, that can still be challenging without the direct supervision of teachers.

### 2.1 Online Teaching Experience in Malaysia

The Malaysian government included school shutdown as part of the physical distance policy to reduce the spread of COVID-19 and relieve the burden on the health system. Some higher education institutions (HEIs) are caught off guard, whereas proactive universities have their backup online learning tools ready (Nawi, et.al.2020). Nonetheless, conducting teaching fully online is new, as such, the academic industry will need to upskill and, in some circumstances, reskill.

Online learning in the Malaysian Higher Education Institutions started in the late 1990s (Hussin et al., 2009). The online learning demand has been increasing due to the capability to reach global audiences, unique functionality, accessibility, and flexibility in the long run (Azhari and Ming, 2015). In line with the educational developments, the Malaysian Ministry of Education under the Malaysian Education Blueprint 2015–2025 (Higher Education) has introduced initiatives in making the online learning an integral component of higher education and lifelong learning (Malaysian Education Blueprint 2015–2025 (Higher Education): E-16).

However, there are persistent concerns about the quality of online learning compared to a face-to-face learning environment (Panyajamorn et al., 2018). A study in Malaysia has reported students' computer and internet efficacy, and personal

platforms that are used to create and maintain connections between students on various campuses. Students are asked to make and share collages or infographics of their work during class activities, which their peers can view and comment on. This results in a lively and interactive learning environment (Sia and Adamu,2021).

According to Grandisoli and Jacobi, (2020) the HEIs will no longer be seen as places where knowledge is disseminated, but rather as places where new applied and contextualized knowledge is created and produced. In the digital realm, the flipped classroom has been shown to be more effective. Lecturers are able to create interactive slides and lead lectures with relative ease. In fact, educators can now schedule feedback sessions for their students as well as online consultations in this new venue. Oral presentations are now conducted in the form of PowerPoint narration for student assessments, with students recording the presentation and submitting it online (Grandisoli and Jacobi, 2020)..

While some Malaysian HEIs have adopted online marking evaluation, others are experimenting with this new marking technique for the first time. As many instructors and students have pointed out, online marking is an uneven mode of communication regarding evaluation (Sia and Adamu,2021). Lecturers use the feedback studio to provide feedback to students. It is advantageous to students because they can immediately discover areas where they need to improve as well as areas where they performed well. This is in contrast to the old system, in which the instructor just enters the marks in the assessment sheet and gives students who are concerned about their performance general feedback (Sia and Adamu,2021).

Recent research results suggest that additional efforts should be made to

more flexibility and less pressure in a more open environment. Similarly, some courses are now utilizing i-Lectures as a means of delivering pre-recorded lectures to students.

## 2.2 Integration of Digital tools and Active learning strategies in online Classes

As a result of the shift to online delivery, various web technologies are now being used for instructional purposes. Some HEIs have subscribed to various online teaching platforms such as CiscoWebex, Blackboard collaboration, Canvas, Moodle cloud, and Edmodo LMS (Lee, 2020). They are strong and completely functional synchronous web-conferencing systems that include a whiteboard, video streaming, screen sharing, a text chat box, Internet resources, and numerous audio and video connections, among other features (Yusuf, 2020). Simultaneously, they assist in facilitating communication between authentic and digital learning resources while also providing tailored learning opportunities (Aljawarneh, 2020). This has greatly increased the amount of space available for teaching and learning. Blankley et al. (2019) discovered evidence to support this claim, demonstrating that the usage of online technological tools improves the student learning experience.

That shift will have a great impact on education, as such, it will require a deeper understanding in order to be used effectively. Students use user-generated content resources like Wikis, discussion boards, blogs, WhatsApp, and social media platforms to aid peer-to-peer learning(Sia and Adamu,2021). In the absence of coming to campus, this serves to provide a conducive setting for students to engage and have a feeling of belonging. WhatsApp, in example, is used to keep students up to date and share issues with their peers and professors. Facebook and Twitter are two more social networking

peers, teachers, and the institution. A strong sense of belonging and security is required for a student to have the freedom to study and self-express. Therefore, it is very important that educators enhance student engagement through active learning strategies and educational technology integration in online class. Educational games, document sharing, real-time collaborative tools, applying digital organizational methods, and generating authentic digital projects are all examples of technology today (Banit, Theis, & Lucas, 2013). According to Downes & Bishop, (2012), technology integration has various good consequences on student engagement, organization, teamwork, and critical thinking. Effective technology integration strategy may include student-led reflection and having students learn technology specially to help them enhance their communication skills in a variety of ways. (Kamucho, 2005; Kornell, 2014; Kornell, Hays, & Bjork, 2009; Marzano, Pickering, & Pollock, 2001; Peterson & Siadat, 2009; Shirvani, 2009).

Martinez and Schilling (2010) stated that shy or quiet students who do not participate in conventional class activities will often be more involved while utilizing technology since they perceive it to be less intimidating. Collaboration can also take place using technology, and students develop a sense of pride when they do authentic work that demonstrates their perceptions and newly acquired information (Martinez and Schilling, 2010). Furthermore, student engagement has been linked to improved academic outcomes (Fredricks et al., 2016; Roseth, et al., 2008; Turner, Christensen, Kackar-Cam, Trucano, & Fulmer, 2014). Students who are actively involved in class develop a sense of belonging and inclusion, and they begin to act and

improve educators' online teaching abilities, as the majority of lecturers are unfamiliar with both synchronous and asynchronous online teaching and learning platforms (Huang et al., 2020). Synchronous learning requires both participants to be present at the same moment in order for teaching and learning to take place (Chen et al., 2005). Synchronous learning, in particular, is a real-time and live online social engagement in which students receive instant responses. Asynchronous mode, on the other hand, relates to online communications that do not occur in real time (Dahlstrom-Hakki et al., 2020). Lecturer-student contact is primarily "anytime, anywhere," while most also use additional media like synchronous chats, recorded lectures, or computer-assisted modules like tutorials or simulations (Wu et al., 2019).

In reality, the technical requirements of online education are higher than those of face-to-face instruction (Bao, 2020). Delivering content poses a huge challenge in the online learning environment. Students must learn to use video and talk with lecturers utilizing their microphone during an online class session, to boost participation. Furthermore, an efficient online teaching environment requires adequate technical support, good Internet connectivity, and the availability of user-friendly teaching software (Vershitskaya, et al., 2020). Therefore, synchronous learning should be promoted and stressed to ensure that students attend online classrooms rather than watching lectures during their free time.

On the other hand, positive social interactions are crucial to a student's success. The group's community is shaped by staffing changes, the entry of new students, and the departure of old students. These characteristics can make it difficult for a new student to feel at ease and form bonds with their

& Yon Tan, 2012). Students who are not skilled in using technology, will be at a tremendous disadvantage in today's technological culture Bagwell (2008). According to Carvey, (2008), using educational technology and digital tools can "increase student grades, raise standardized test scores, and lead to better student behavior." Moreover, teachers' relationships with their students can be strengthened through the usage of technology. Shayne, (2008) claims that more impact on student learning will be possible as a result of the closer ties. However, employing educational technology and digital tools should be done reasonably, otherwise, excessive use of technology, according to Georgiu (2012), can reduce students' learning ability, cause emotional and "volitional damage," and lower motivation.

#### METHODOLOGY

We adopted a quantitative small-scale educational research method to address and achieve its objectives. The methodology included the following procedures: 1. developing the study instrument which involved a questionnaire, 2. determining the study population & sample., 3. Collecting and analyzing data.

The population of this study included undergraduate students in Universiti Teknologi Malaysia UTM, however, the focus of this study is on international students. Previous studies hypothesized that fresh students may face more difficulty in coping with the situation since they are new to university system as well as to online learning. Accordingly, the sample included only year one international undergraduate students in 2 philosophy sections.

The questionnaire consisted of 5 sections: 1. Demographics & general information. 2. Online course assessment. 3. Perception on online learning & teaching methods &

feel like valuable members of the classroom community (Lemov, 2010; Roseth et al., 2008; Turner et al., 2014). According to Turner et.al (2014), "autonomy, competence, relatedness/belongingness, and meaningfulness" are the four essential human needs. These concepts, if they are necessary components of human existence, are also necessary for student participation and engagement in the classroom (Turner et al., 2014).

Moreover, numerous studies identify positive impacts from collaborative learning (Contreras Leon & Chapeton Castro, 2016; Jansen, 2012; Mosley, Ardito, & Scollins, 2016; Roseth, Johnson, & Johnson, 2008; Trespalacios, Chamberlin & Gallagher, 2011; Turner, Christensen, Kackar-Cam, Trucano, & Fulmer, 2014). Collaboration in an educational setting is used in many ways. It can be used to enhance critical thinking (Jansen, 2014; Mosley et al., 2016), create positive community feelings with a number of students with similar needs (Contreras Leon & Chapeton Castro, 2016), provide 'grit' through support of teammates (Jacobs, 2016; Jansen, 2012), and increase academic and social abilities (Jansen, 2012; Roseth et al., 2008; Sears & Reagin, 2013; Turner et al., 2014; Trespalacios et al., 2011). Allowing students to participate in collaborative learning provides them with the tools they need to gain confidence and expand their abilities and interests in more difficult subjects, so assisting them in becoming more academically successful.

Carlson et al. (2012) noted that while implementing technology in an online classroom, instructors must consider the usefulness of the technology, its ease of use, how it has been used in the past, and how it might be used in the future. Despite the fact that ICT can help students gain information and skills, the instructor is the driving force behind learning (Yang, Tzuo, Higgins



The following table depicts the T & L methods and technology tools that we applied in class and the purpose of using them to show their relatedness to the objectives of our study.

strategies. 4. Assessment of online learning & teaching methods and tools. 5. Overall online learning experience assessment, which included besides the structured questions, an open-ended question to provide any further details or reflection.

Table 1,1 T & L Method & Technology for Community Building & Enhancing Students' engagement

T & L Method & Technology for Community Building & Enhancing Students' engagement			
Active Learning	Purpose	Digital Tool	Purpose
Jigsaw Activity	<ul style="list-style-type: none"> <li>-Encourages cooperation</li> <li>- Enhance critical thinking &amp; problem solving.</li> <li>- Developing social skills &amp; Communication</li> </ul>	Kahoot	<ul style="list-style-type: none"> <li>-Game-based learning for Increasing students' engagement and motivation.</li> <li>- Giving fair instant feedback on learning progress</li> </ul>
Fishbowl Presentation	<ul style="list-style-type: none"> <li>- Builds comprehension of complex texts.</li> <li>- Develops group discussion skills.</li> <li>- Enhance active listening &amp; engagement.</li> </ul>	Quizziz	Helps maximizing learning efficacy and engagement
Reflection	<ul style="list-style-type: none"> <li>-Engages students in metacognition</li> <li>- Promotes self-awareness and character development</li> </ul>	Quizlet	<ul style="list-style-type: none"> <li>-Helps incorporating collaboration and teamwork in class.</li> <li>- Personalized study mode based on students' needs</li> </ul>
Class Discussion	<ul style="list-style-type: none"> <li>-Increases students' active participation.</li> <li>- Increases retention of factual knowledge &amp; class enjoyment.</li> <li>-Strengthens interpersonal communication</li> <li>-Enhances analytical and critical thinking skills</li> </ul>	Symbaloo	<ul style="list-style-type: none"> <li>-Customize learning</li> <li>- Organize digital portfolios.</li> <li>- Create classroom social hub.</li> </ul>
Group Project	<ul style="list-style-type: none"> <li>-Builds collaborative skills.</li> <li>-improves learning efficiency.</li> <li>-develop students' interpersonal skills.</li> <li>- Develops respect &amp;</li> </ul>	Insertlearn	<ul style="list-style-type: none"> <li>-Increases engagement.</li> <li>- Active participation through annotations.</li> <li>-Real-Time Assessment and Intervention</li> </ul>

	appreciation of different perspectives		
Collaborative works& Wikis	-Enhance students' cooperation. - facilitate communitybuilding -Improves online interaction skills	Padlet	- Promotes communication. - Enhances collaboration. - Increases engagement and learning performance

20% were females, 61% of them are internationals living in their countries, 31% live in Malaysia and 8% in a country other than their home country. 18% of those who live in Malaysia, resides in UTM campus hostels, and 25% live off campus.

**RESULTS AND DISCUSSION**

Moving on to the results; this is a general overview of the students' demographics. The total number of students in the two sections was 88, however, only 77 forms were received back. Of which, 80% were males &

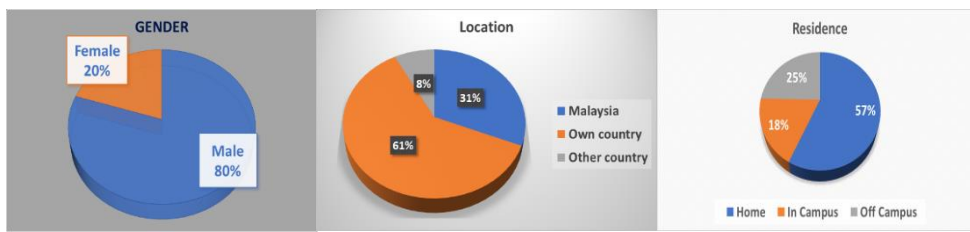


Figure 1,1 Students' Demographics

and 4% think it was poor. In details 66 students out of 77 perceive that the online course content was well organized and planned, while 64, stated that the course objectives were clear, 58 think that the course workload was appropriate, and 62 perceive the course organization allowed all students to participate fully.

**Online Course Assessment**

Interestingly, in evaluating the online course 37 students out of 77 stated it was excellent,30 students stated it was good and 8 stated satisfactory. Only 2 students stated it was fair for them. Moreover, 43 % perceive their online learning was good, 32% think it was very good, 17% perceive it satisfactory, and 4 % perceive it fair

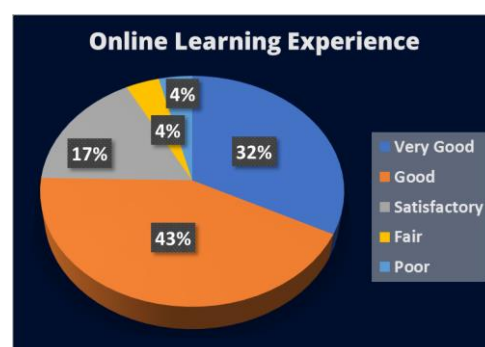
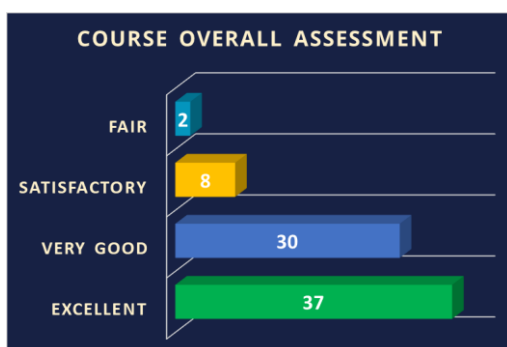


Figure 1.2 Course overall assessment

Figure 1.3 Students' Online experience

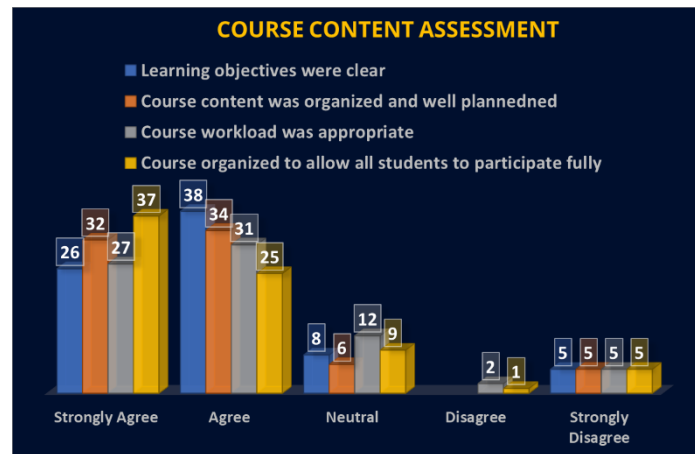


Figure 1.4 Course Content Assessment by Students

as a result of internet interruption. Accordingly, 41% of the student sample perceived the hybrid mode was very good and preferred to them. While 36% preferred the synchronous mode, and only 23% preferred asynchronous mode of studying online.

**Perception on online Teaching Modes**

We used three modes in teaching the sections; synchronous, asynchronous, and hybrid modes of online delivery to ease the stress of long focus on gadgets and minimize the instances of drop out

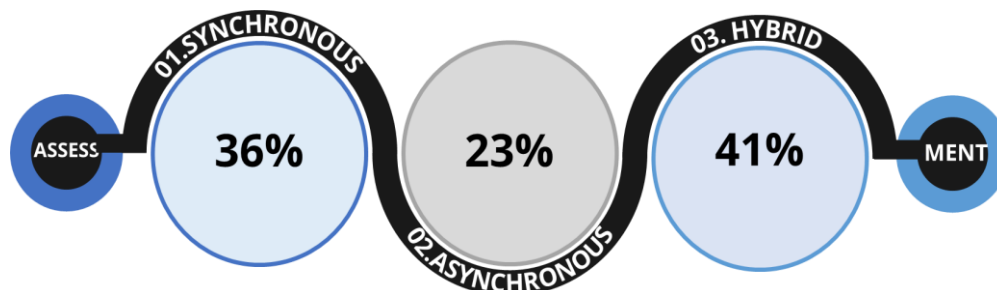


Figure 1.5 Students' Preference of Teaching Modes

process. On the other hand, we used a variety of strategies and activities in online classes and the student's perception on the most efficient were ordered as follows: collaborative work, group project, class presentation, quizzes, jigsaw, class discussion, writing reflection & wikis, and finally, fishbowl activity. Figures 1.6 and 1.7 depicts the details

**Perception on online teaching Methods & strategies**

Concerning their perception on online learning & teaching methods & strategies, 37 students selected (lecture) as preferred method for them, 29 preferred active learning method with short lecture, while only 15 preferred flipped class method. Worth noting that the three methods were most of the time combined in the

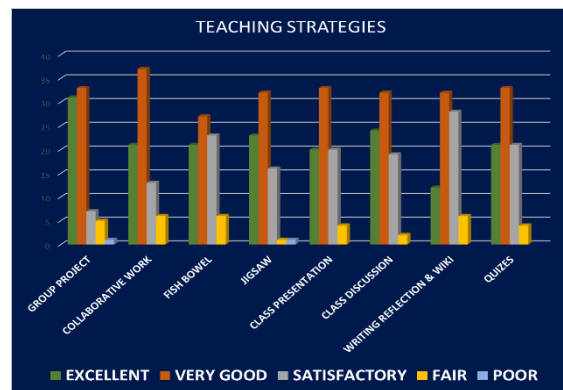
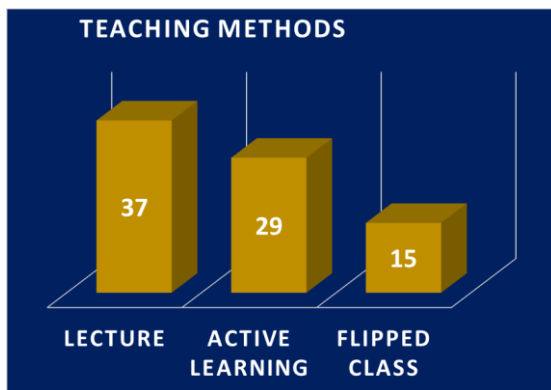


Figure 1.6 Students' Preferred Teaching Method

Figure 1.7 Students' Preferred Teaching Strategies

study course, Kahoot, Quizziz, Padlet, Quizlet and Symbaloo were the most useful, interesting, and most preferred respectively from the students' perspective as shown in figure 1.8.

**Perception on online Teaching using Educational Technology and Digital Tools**

Among the software and educational technology tools used throughout the

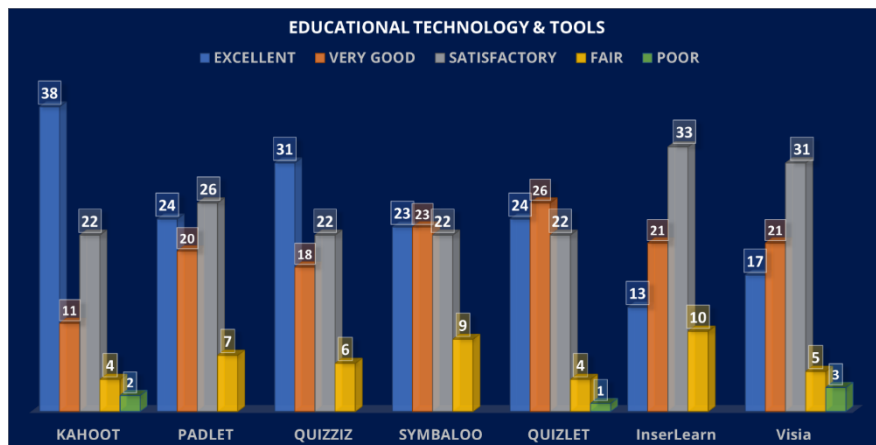
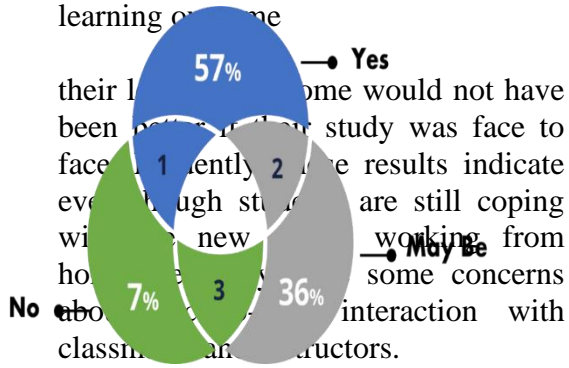


Figure 1.8 Students' Perception on using online Digital Tools

their perception about the factors that negatively influenced their online experience, and how much effort they had to do to achieve the best outcomes and whether they perceive that their learning outcome



their learning outcome would not have been different if the study was face to face. The results indicate that although students are still coping with new working from home, some concerns about interaction with classroom and instructors.

**Overall online learning experience**

This section of the questionnaire consisted of four questions including students previous online learning experience, if any, their perception about the factors that positively influenced their online experience, could have been better if the study was face to face. Figure 1.9 demonstrates the students' perception about their learning outcomes in online class compared to face-to-face class. Thus, 57% perceive their learning outcome could have been better, 36% were not sure, accordingly, they responded (May be), while only 7% think that

lecturer's teaching style (49 students), personal interest (42), course content and the Active learning & engaging activities in class (35, and 31) respectively. Figure 1.10 shows the factors that contributed positively to students' online learning experience.

Figure 1.9 Students' Perception about online learning outcome

The results, further, indicated that although most students did not have previous regular online learning, however, 37% (29 students) of them think that online learning is one of the factors that contributed positively to their learning outcome. Along with, the

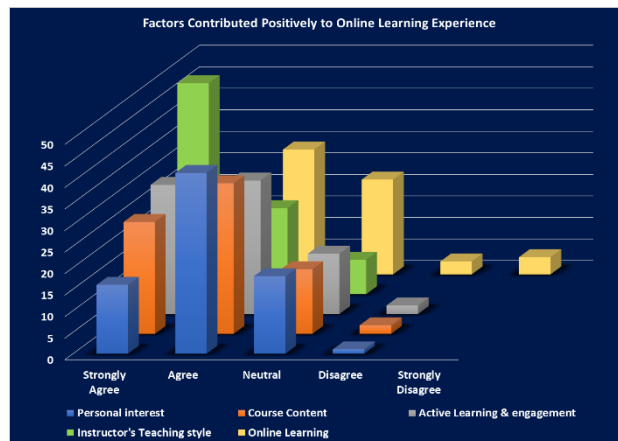


Figure 1.10 Factors positively contributed to students' online learning experience

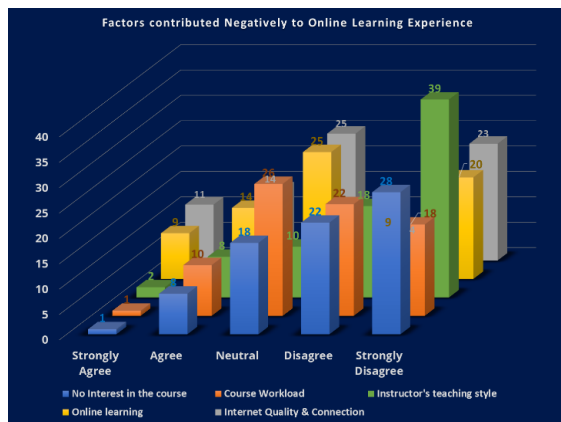


Figure 1.10 Factors negatively contributed to students' online learning experience

and the active learning and engaging activities in class respectively.

This study confirms previous findings that among the factors which contribute negatively to the online learning experience according to students, the internet quality and connection. While the online learning itself as a mode of study was a negative factor for 30% of students. Even though students are still coping with the new norms working from home, yet, they miss face-to-face interaction with instructors & class – mates as 57% of them think that their learning outcome could have been better in normal class. This study contributes to research on online T&L, provides insights on international undergraduate students' perception on online learning during the pandemic, offer knowledge on selection of suitable educational technology tools for online teaching, and introduces update on online teaching best practices for UTM staff & similar institutions. Future research may focus on investigating differences in experience and perception between international and local students,

By contrast, among the factors that contributed negatively to the online learning experience according to students, the internet quality and connection which is not a surprising finding as frequently stated in the literature. Moreover, the online learning itself as a mode of study was a negative factor for 23 students. While

## CONCLUSION

This paper intended to explore the impact of building community and digital skills on students' online active learning experience during COVID-19 pandemic. The findings showed that despite the students' considerable satisfaction with their online learning experience, yet, they have lingering concerns about when they can be able to meet and interact with their colleagues and instructors face to face. Moreover, the lecturers teaching style and the selection of teaching methods and tools that are applied in explaining topics and concepts are very crucial in online classes and affect the students' learning outcome. The (Lecture) as a teaching method is still an effective strategy and was preferred by students in this study, together with active learning methods and activities. Among the most efficient activities according to students, collaborative work, group project, class presentation, quizzes, jigsaw, class discussion, writing reflection & wikis, and finally, fishbowl activity. Moreover, among the factors that contributed positively to their online learning experience, the lecturer's teaching style, course content

from their experiences with technology. *Middle School Journal*, 43(5), 6-15.

- Fredricks, J.A., McColskey W. (2012). The measurement of student engagement: A comparative analysis of various methods and student self-report instruments.
- Georgiu, G. (2012) Critical Approaches on the Use of New Communication Technologies for Educational Purposes. *Euro mentor Journal*, 3, 103-113.
- Jacobs, G. M. (2016). Ten strengths of how teachers do cooperative learning. *Online Submission*.
- Jansen, A. (2012). Developing productive dispositions during small-group work in two sixth-grade mathematics classrooms: Teachers' facilitation efforts and students' self-reported benefits. *Middle Grades Research Journal*, 7(1), 37-56. Retrieved from <http://pearl.stkate.edu/docview/1458788304?accountid=26879>.
- Johnson, F. (2007). *Proactive discipline for reactive students*. Louisville, KY: Butler Books.
- Kamuche, F. U. (2005). Do weekly quizzes improve student performance? *Academic Exchange Quarterly*, 9(3), 188-192.
- Kornell, N. (2014). Attempting to answer a meaningful question enhances subsequent learning even when feedback is delayed. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 40(1), 106-114.
- Kornell, N., Hays, M. J., & Bjork, R. A. (2009). Unsuccessful retrieval attempts enhance subsequent learning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 35(4), 989-998
- international postgraduate students and international undergraduate students.
- REFERENCES**
- Albukhary International University (2020), "AIU response to COVID-19 & the ensuing MCO", available at: <https://www.aiu.edu.my/wp-content/uploads/2020/04/AIU-Response-to-COVID-19-and-The-Ensuing-MCO.pdf>
- Bagwell, B. (2008). *Conceptualizing and Teaching New Literacies: A Multiple-Case Study of Teachers' Perspectives of Information and Communication Technology*. Ann Arbor: ProQuest Dissertations and Theses.
- Banitt, Justin; Theis, Sharon; and Van Leeuwe, Lucas. (2013). *The Effects of Technology Integration on Student Engagement*. Retrieved from Sophia, the St. Catherine University repository website: <https://sophia.stkate.edu/maed/7>
- Carlson, C., Philip, A., McNeill, S., Powell, T., & Witt, L. "Which Technology Should I Use to Teach Online?": Online Technology and Communication Course Instruction. *Journal of Online Learning and Teaching*, 8, 334-347.
- Carvey, R. T. (2008). *An Analysis of the Relationship of Educational Technology Implementation Level and Student Achievement*. Ann Arbor: ProQuest, UMI Dissertations Publishing.
- Contreras León, J. J., &Chapetón Castro, C. M. (2016). Cooperative learning with a focus on the social: A pedagogical proposal for the EFL classroom. *How*, 23(2), 125-147.
- Downes, J.M., & Bishop, P. (2012, May). Educators engage digital natives and learn



- of Social Sciences And Humanities  
Universiti Teknologi Malaysia
- Peterson, E., & Siadat, M. V. (2009). Combination of formative and summative assessment instruments in elementary algebra classes: a prescription for success. *Journal of Applied Research in the Community College*, 16(2), 92-102.
- Rafidi, R. (2020), "Address e-learning challenges, students urge", available at: <https://www.nst.com.my/education/2020/06/603056/address-e-learning-challenges-students-urge>
- Roseth, C. J., Johnson, D. W., & Johnson, R. T. (2008). Promoting early adolescents' achievement and peer relationships: The effects of cooperative, competitive, and individualistic goal structures. *Psychological Bulletin*, 134(2), 223-246.  
doi:  
<http://dx.doi.org.purl.stkate.edu/10.1037/0033-2909.134.2.223>
- Shayne, P. A. (2008). *Home-school Communication with Parents of Middle School Students: A Study on the Effects of Technology*. Ann Arbor: ProQuest, UMI Dissertations Publishing.
- Shirvani, H. (2009). Examining an assessment strategy on high school mathematics achievement: daily quizzes vs. weekly tests. *American Secondary Education*, 38(1), 34-45.
- Sears, D. A., & Reagin, J. M. (2013). Individual versus collaborative problem solving: Divergent outcomes depending on task complexity. *Instructional Science*, 41(6), 1153-1172.
- Sia, Joseph Kee-Ming and Adamu, Abbas Adamu, (2021). Facing the unknown: pandemic and higher education in Malaysia, *Asian Education and Development Studies* Vol. 10 No. 2, 2021 pp. 263-275
- Teo, T.S., Kim, S.L. and Jiang, L. (2020), "E-learning implementation in South Korea: integrating effectiveness and Lemov, D. (2010). *Teach like a champion: 49 Techniques that put students on the path to college*. San Francisco: Jossey-Bass.
- Martinez, M., & Schilling, S. (2010). Using technology to engage and educate youth. *New Directions for Youth Development*, 127, 51-61. doi: 10.1002/yd.362
- Martin, N., Yin, Z. & Mayall, H. (2006, February). Classroom management training, teaching experience and gender: do these variables impact teachers' attitudes and beliefs toward classroom management style? *Annual Conference of the Southwest Educational Research Association*, Austin, TX. Retrieved from: <http://files.eric.ed.gov/fulltext/ED494050.pdf>
- Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria: ASCD.
- Menon, S. (2020), "E-learning to continue for higher education institutions", available at: <https://www.thestar.com.my/news/nation/2020/03/20/e-learning-to-continue-for-higher-education-institutions>
- Mosley, P., Ardito, G., & Scollins, L. (2016). Robotic cooperative learning promotes student STEM interest. *American Journal Of Engineering Education*, 7(2), 117-128.
- Nawi, Nina Diana, Na, Kew Si, Sazalli, Nurhasmiza Abu Hasan, Phang, Fatin Aliah, Adnan, Nur Asyura Wan, Fakhruddin, Wan Farah Wani Wan, Rashid, Ana Haziqah A, Rosli, Mohd Shafie, Atan, Noor Azean, Abdullah, Akmaliza, Noh, Nur Hazirah Seth, Tasir, Zaidatun et.al. (2020). *A Report on FSSH UTM's Experience Towards Digitizing Education*, Faculty



- legitimacy perspectives”, *Information Systems Frontiers*, Vol. 22 No. 2, pp. 511-528.
- Toquero, C.M. (2020), “Challenges and opportunities for higher education amid the COVID-19 pandemic: the Philippine context”, *Pedagogical Research*, Vol. 5 No. 4, pp. 1-5
- Trespacios, J., Chamberlin, B., & Gallagher, R. R. (2011). Collaboration, engagement & fun: How youth preferences in video gaming can inform 21<sup>st</sup> century education. *TechTrends*, 55(6), 49-54.
- Turner, J. C., Christensen, A., Kackar-Cam, H., Trucano, M., & Fulmer, S. M. (2014). Enhancing students' engagement: Report of a 3-year intervention with middle school teachers. *American Educational Research Journal*, 51(6), 1195.
- UNESCO (2020), “COVID-19 impact on education”, available at: <https://en.unesco.org/covid19/educationresponse>
- Vitto, J. (2003). *Relationship-driven classroom management*. Thousand Oaks, CA:Corwin Press
- Yang, C., Tzuo, P., Wiggins, H., & Tan, C. Y. Information and Communication Technology As A Pedagogical Tool In Teacher Preparation And Higher Education. *Journal of College Teaching & Learning*, 9, 327-338.