THE VIRTUAL LEARNING SPACE: AN INQUIRY ON ACADEMICS' TRANSITION EXPERIENCE, ENGAGEMENT WITH STUDENTS AND DIGITAL SKILLS

Nadiah Suki
Asia Pacific University of Technology and Innovation
Email: nadiah@apu.edu.my

Jonathan Jeevan Strinivas Kovilpillai
Asia Pacific University of Technology and Innovation
Email: jonathanj@apu.edu.my

Sireesha Prathi Gadapa
Asia Pacific University of Technology and Innovation
Email: sireesha.prathi@apu.edu.my

Abstract

In 2020 when the Covid-19 pandemic hit, higher education institutions had to adapt to online and digital learning (ODL) and carried on teaching. The spatial classroom experience familiar to lecturers and students alike was transformed into teaching and learning in the virtual space. One year on, how have academics adjusted to the ODL experience? This paper inquiries into the transition experience; level of engagement; and digital skills of the affected instructors at Asia Pacific University of Technology and Innovation (APU), a private university in Kuala Lumpur. Surveys were carried out in 2020 and 2021 to find out about lecturers' experience in transitioning from physical to online learning space; their challenges in keeping an increasingly distracted student audience engaged, and their experience in mastering technology tools to deliver effective instructions and facilitate learning. Their experience and reflections are reported in this paper.

Keywords: *Online and Digital Learning (ODL), Transition Experience, Students' Engagement, Digital Skills*

1.0 Introduction

This paper reflects upon the Asia Pacific University of Technology and Innovation (APU) academic team's transition from classroom teaching to online distance learning (ODL) during the 2020 pandemic. It compares the experience of accelerating ODL implementation in March 2020 to lecturers' acceptance of ODL teaching as the new norm, a year later in 2021.

Digital learning was planned in APU as early as 2018, to be rolled out in stages in the form of 'blended learning', supplementing face-to-face classes. The pandemic and the subsequently issued Movement Control Order (MCO) by the Malaysian government presented an opportunity to implement online teaching post-haste. This experience together with continuous improvement morphed into the existing ODL policy in APU (A.P.U., 2022). As a narrative review, this paper has three objectives: 1) to reflect on the academics' ODL experiences in 2020 and 2021; 2) to feature key takeaways on online learning and teaching that can be shared with the global higher education community; and 3) to initiate conversations between policymakers and practitioners on sustainable practices to mitigate further shocks and impacts to teaching and learning in the future.

1.1 Transition Experience

During the initial stages of ODL adoption, instructors faced stress points attributed to a lack of training and limited skillset, poor internet connectivity and frequent addressing of students' queries online (Adi Badiozaman et al., 2020; Rizvi and Nabi, 2021; Sia and Abbas Adamu, 2021). As the ODL experience progresses, timely information sharing within their organisation, availability of pedagogy training and online support alleviated the stress. ODL approach of instructors tends to be student-oriented, with concerns expressed by the instructor on the efficacy of the online learning space and students' internet connectivity, to be able to participate in online lessons.

1.2 Student Engagement

The term engagement is something that all academics talk about. All academics aspire to create the engagement needed to facilitate learning. During the Covid-19 pandemic, the urgency for proper classroom engagement was exacerbated (Hollister et al., 2022) as students and teachers were forced into a remote and distant classroom experience. Teachers now had the added responsibility of ensuring they kept not just a classroom of students engaged, but a computerised electronic meeting room of displayed photos and distant voices engaged. With their students hidden behind electronic screens of devices such as laptops, tablets and mobile phones, engagement became a higher mountain that lecturers have had to scale (Adnan, 2020).

1.3 Digital Skills

Digitalisation itself means the process of the transition of a company or an entire economic industry to new models of business processes, management, and production methods based on information technology (Abrosimova et al., 2019: Kireeva et al, 2019). Universities provide the platforms with which lecturers were expected to transition their classrooms into digital classrooms. These platforms were rich with tools that could aid a lecturer in creating engaging class sessions. The challenge lecturers faced was in mastering these tools. Mastering these tools meant that lecturers

now had to add technology knowledge to their existing mastery of content knowledge together with increasing online pedagogical knowledge.

This paper discusses the academics' experience transitioning from physical classes to virtual classrooms. Contextual reference will be made to APU's experience and management decisions in response to the pandemic. It will then zoom in to review the levels of engagement that lecturers have achieved in their classes between 2020 and 2021, their challenges in keeping an increasingly distracted student audience engaged, and their attempts at mastering the technology tools that aid online classroom engagement. Finally, the attainment of digital skills will be reflected upon. The following skills are investigated: digital teaching is mainly focused on conducting classroom sessions, preparing and grading assessments, and ideas of engagement. Technical skills are mainly focused on the usage of Moodle (APU's Learning Management System) to conduct a digital assessment and Microsoft Teams for collaboration, teaching and learning.

2.0 Literature Review

2.1 From Face-to-Face Teaching to Online Distance Learning

Lecturers in 'traditional' academic institutions generally have been trained to teach in front of their students within the four walls of the classroom. The game-changer which was the pandemic caused teaching institutions, especially universities to adopt and adapt existing resources for delivery online. Teaching institutions have had to evaluate their resources when transitioning, to ensure that the 'physical' content fits with the pedagogical intent; and content knowledge is matched with the instructor's own technical skills in delivering the material to their students (Aguilar, 2020). There are significant differences between face-to-face classes and online distance learning, and lecturers have had to reflect on and curate their students' learning experiences in this new learning space (Bryson and Andres, 2020; Deshmukh, 2021). While the management team handled the pandemic preparedness and emergency plans (Izumi et al., 2021), among the challenges faced by the teaching team on the ground, were the technology literacy of the teaching staff (Aguilar, 2020); inequitable students' access to the Internet (Adi Badiozaman et al., 2020; Code et al., 2020); curating readily available and abundant content for online teaching (Ferri et al., 2020); the availability of pedagogy and technology support during the transition (Adi Badiozaman et al., 2020); getting used to the new learning space (Deshmukh, 2021); and some level of mental stress due to little training and preparation, changes in teaching and assessment methods and being the 'frontliners' answering continuous questions from students (Sia and Abbas Adamu, 2021).

Despite the challenges mentioned, some opportunities were identified at the centre of the storm. In the months following the 'lockdown', there was a surge in online support materials created by lecturers: printed handouts were replaced by content on the LMS, and lecturers were presented with an opportunity to break away from traditional teaching (Bryson and Andres, 2020). A new learning space had been discovered, where lessons could be collaborative, flexible and self-paced (Adedoyin and Soykan, 2020; Deshmukh, 2021). There was an availability of materials prepared by the teaching team themselves, and there is a wealth of online materials at their disposal (Bryson and Andres, 2020). Since online learning is expected to continue post-pandemic (Bryson and Andres, 2020) and employees have expressed preference for flexibility (Bechtel et al., 2021), there is an opportunity to develop long term educational strategy based on online learning space (Ferri et al.,

2020). In facilitating the successful implementation of this digital transition, it was found that open communication and timely information sharing from leadership to the academics were useful in allaying fears of the transition (Izumi et al., 2021). Allowing employees control over the process and being supported with leadership collaboration may also boost the chances of success (Heim and Sardar-Drenda, 2021). Despite glaring inequity in infrastructure and technological access, pedagogy training together with technological support was found to be helpful to the teaching team (Adi Badiozaman et al., 2020). Faculty members were found to be adaptive and resilient, as they experiment with this new learning space (Deshmukh, 2021).

In APU, the management's decision to continue teaching online was intended to lessen the disruption to student learning. This initiative was supported by a team of "Digital Learning Champions", one from each School, who provided peer support for the transition and continued adaptation of technology for learning. Existing infrastructure was beefed up by the Technology and Infrastructure team and round-the-clock technical support was provided. Among the teaching team, a community of practice (of sorts) was developed via the delivery of knowledge-sharing sessions and peer training to boost the academics' capacity building. This aggregated effort culminated in the creation of a Digital Learning Hub to support this teaching evolution.

2.2. Engagement with Students and their Learning Experience

2.2.1 Scope of "Student Engagement"

Student engagement can be viewed as a yardstick to measure student experience and achievement of learning outcomes based on the amount of time and effort invested by institutions in developing the resources to develop the students and improve their performance.

As a measure of what engagement is, let's briefly explore what it isn't. If students are not engaged with their learning, then what are they? Some writers have proposed "alienation", "apathy", or "disillusionment" as terms to describe students who are not engaged with learning (Trowler, 2010). To reduce alienation, apathy or disillusionment, institutions need to ensure constant interaction between the teacher and the student (McBrien et al., 2009). However, due to the sudden nature of the pandemic and the shift to synchronised online classes, many teachers were unable to provide students with the interaction they required. This could be cited as one of the causes of alienation, apathy, and disillusionment. In many surveys of students during the height of the pandemic, frighteningly high numbers of students, in some cases, up to 78% claimed to be not engaged with their lessons (Hollister et al., 2022).

2.2.2 Importance of Student Engagement

Imagine teaching a classroom full of students who are all either asleep or actively preoccupied with their own work and not listening to the lecturer. Although some may argue that this is fairly common in our face-to-face classrooms, the discussion on student engagement and its effectiveness has taken on new levels of importance with the pervasion of the online classroom during the Covid-19 pandemic (Martin and Bolliger, 2018). Keeping students engaged ensures the transfer of knowledge and skills necessary to achieve learning outcomes and produce learners of quality. The challenge of doing so is not solely the prerogative of the online classroom, but can also be found in physical classrooms, especially those of a larger nature. Institutions are already toying with the idea of using

intelligent systems to assist teachers of large physical classes to maintain engagement with students (Pabba and Kumar, 2022). However, the fact remains that in maintaining highly engaged students, physical classrooms have the advantage compared to online classrooms, simply due to the amount of distractions that the online student is faced with as he attends classes on his own in his private space (Meyer, 2014). It is up to the teacher, both in the physical and online classroom, to ensure students remain engaged at all times (Groccia, 2018). Many frameworks and models have been proposed over the years to accomplish this.

Lecturers must use whatever tool at their disposal to maximise behavioural engagement. This is the minimum expectation from both types of classrooms. Here, the online classroom can lay claim to having the upper hand as there is a myriad of tools built into online class platforms that can be used by the teacher. However, the focus on behavioural engagement cannot be limited only to the dissemination and access to learning materials online, to prevent the course from turning into a "correspondence" type of learning (Kennedy, 2020a). Careful use of these tools can turn even the driest of topics onto an engaging ones for the student. Depending on the level of study, different tools were utilised. For lower levels of undergraduate studies, web-based tools such as Quizlet etc have been found to be stimulating for the learner. However, as the learner progresses to higher levels of learning and subsequently higher-order thinking skills, more introspective and retrospective elements of engagement need to be utilised. (Triantafyllou, 2021). At this point engaging the learner in discourse using discussion forums provides a better alternative.

Locally, at APU, at the onset of digital learning transformation, there was even backlash from students who initially indicated fiercely that online classes were not helping them stay focused, where placing an unnecessary strain on their eyes, and were generally a futile exercise. However, we stayed the course.

2.2.3 Types of Learner Engagement

Engagement is divided into three main dimensions – behavioural, cognitive, and affective (Chapman, 2003; Mandernach, 2015). This report focuses mainly on the behavioural dimension by focusing on responses to learning activities, participation, persistence in attendance, and positive conduct while online. The authors believe that cognitive engagement can be adequately assessed through the performances of the students in exams and other forms of assessment. Affective engagement can only be fully studied once students return physically to the classroom and compare their feelings to the pandemic and post-pandemic learning.

When focusing on behavioural engagement, the key factors to consider are learning platforms and the interactivity of such platforms. Before diving deep into techniques of student engagement, it was imperative that leadership took a step back, to appreciate the big picture of the various types of engagement that could be beneficial to our students. The main areas of focus were teachers, curriculum, peers, and technology (Hollister et al., 2022).

Please note that the focus on behavioural engagement in this paper does not in any way diminish the importance of cognitive and affective engagement. On the contrary, as cautioned above, solely focusing on behavioural engagement runs the risk of turning a class into a form of correspondence

learning where engagement is merely superficial. This is a real danger and must be avoided (Kennedy, 2020b).

Adding elements of the Universal Design for Learning can improve affective and cognitive engagement. Since UDL concerns itself with representing information, expression and action, it is perfectly suited to engage learners in ways beyond simply modifying their behaviour. Where behavioural engagement ensures students attend online classes, chat with the lecturer, and download learning materials, cognitive engagement sparks the learner into expressing their thoughts and opinions, as well as acting upon the learning that they receive (Marino et al., 2014).

2.3 Engagement Practices at APU

In terms of practice, APU embarked on a triple-pronged engagement strategy. The first was to engage students with our LMS – Moodle. Moodle was then linked to a very powerful collaboration tool – MS Teams. The third prong in this strategy was to encourage academics to explore the plethora of edutech tools available to engage students in the main teaching and learning sphere – the online classroom

The idea behind this strategy was to increase student engagement in the four relevant areas of student-teacher interaction, student-content interaction, student-technology interaction and student-student interaction as these four are identified as the major factors in creating behavioural engagements in online classrooms (Nafukho and Chakraborty, 2014).

2.3.1 Use of MS Teams Collaborative Software

Asia Pacific University started the use of Microsoft Teams as part of the Office 365 Suite in 2018. Academics were encouraged to set up Teams classes as a supplement to the physical classroom and the Moodle LMS that was in use. This created a form of Blended Learning combining the synchronous nature of physical classes with the added asynchronous learning time provided for within the MS Teams platform environment. (Montgomery et al., 2015). Usage data of MS Teams for the period of 2018 until March 2020 is scarce and non-empirical at best. What was clear is that lecturers were still being encouraged at this point rather than being mandated, and this led to slower traction than would be expected.

The onset of Covid-19 and the forced closure of the University changed that. In March 2020, APU went into lockdown and all classes were instantly converted to the Teams platform. Having had some practice in the environment assisted both teachers and students to make this transaction seamless. Microsoft Teams also brought with it its own set of tools and features that enhanced engagement opportunities for teachers to create teacher-student and student-student engagement.

2.3.2 Moodle Learning Management Systems

The Moodle LMS had been a part of the learning environment at APU for more than a decade now when Covid-19 struck. LMS usage was both an asynchronous learning device as well as a repository of learning materials. This multi-purpose use of the LMS gave students an advantage of familiarity with the platform (Venugopal and Jain, 2015). It is widely accepted that usage of LMS platforms greatly improves student engagement. Learning Management Systems also provide educators with

data that can provide them with information on student progress, and more importantly, student engagement. For students in higher levels of learning, Moodle provided suitable tools where discussion and discourse could take place without leaving the LMS environment. This enabled lecturers to create a fully comprehensive learning design that could be accessed by students without the need to leave the APU ecosystem.

2.3.3 Web-Based Tools

Web-based educational tools, as mentioned elsewhere in this paper, were tremendously useful in the days before the pandemic. Many tools such as Quizlet, Kahoot, Flipgrid, Padlet, and Zeetings were already popular in the classrooms at APU. These tools required limited ICT skills and were easily adapted by teachers once the classes were moved to the online platform. Their effectiveness in keeping learners engaged cannot be understated (Bond et al., 2020). Although more suited to lower levels of learning, web-based Ed-tech tools were also popular with post-grad students to a certain degree. It was dependent on the lecturer to appropriately use the tool to engage students at different levels of learning. At this juncture, the ICT skills of the lecturers began to come into question. Those with a higher ICT knowledge and skills or who were willing to learn basic ICT skills were able to create ed-tech-based lessons that engaged students. Lecturers who were unable to utilise ICT found themselves constantly challenged by the need to keep students engaged in this fairly unfamiliar environment and claimed that online teaching was a poor replacement for the face-to-face type.


Figure 1: Some Tools used for Student Engagement at APU During the Pandemic

2.4 Impact of Engagement Practices

A survey conducted among around 1800 students in APU at the beginning of 2022 found that the ODL practices put into place for Covid-19 were primarily successful. There were areas of improvement that stood out, but these could be attributed to the skillset of the lecturers rather than the practices themselves. Some of the tenets of the implementation of ODL in any environment is the technological, pedagogical, and content knowledge of the personnel behind the implementation
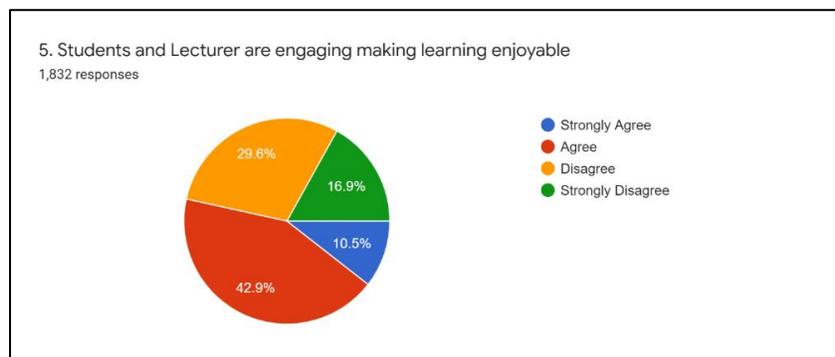
2.4.1 Lecturer-Student Engagement

One of the key results encountered was the increase in communication between lecturers and students. More than 50% of respondents indicated an increase in communication. If communication is the yardstick of behavioural engagement, then this is a good indication of increased engagement.
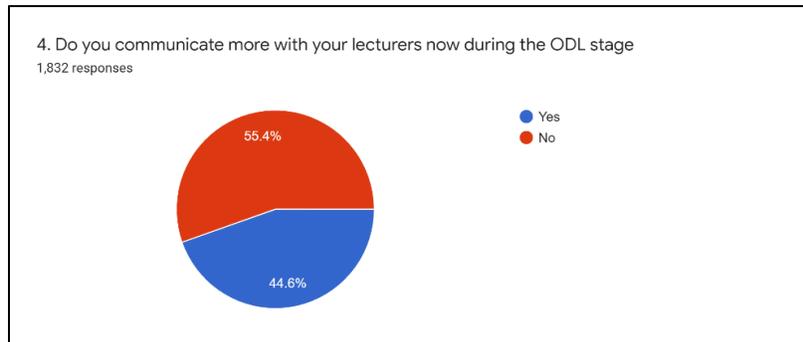
Figure 2: Student-Lecturer Communication

More than 50% of respondents claimed that their learning was becoming more enjoyable due to having a richer engagement with the lecturer. Lecturers should be made aware of this fact and strive to improve their relationship with students so that their students will enjoy the lessons more. Learning becomes easier when you are enjoying the learning.

Figure 3: Student-Lecturer Engagement

2.4.2 Student-Content Engagement

Student-content engagement saw a slightly lower result than expected, as more students claimed that the online learning activities did not engage them. To the researchers, this tied in neatly with the narrative that ed-tech tools are a medium and effective use of them requires upskilling on the part of academics.
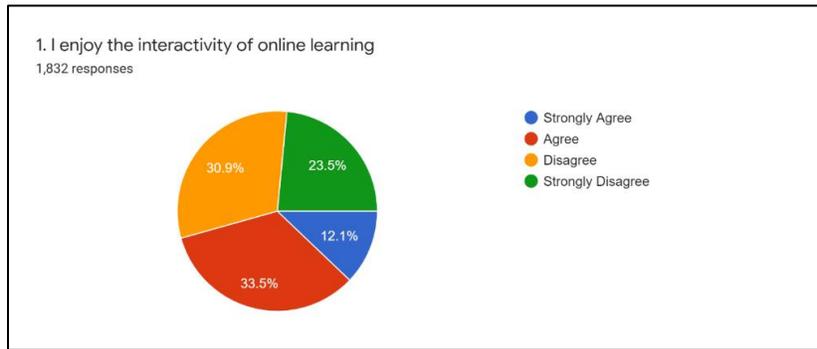
Figure 4: Interactivity of Lessons

2.4.3 Student-Student Engagement

Results indicated that there was a serious lack of student-student engagement as almost 75% of respondents claimed to be disconnected from their peers during the period of online classes. Perhaps this is telling of the nature of the learning designs that did not facilitate discourse between students and forcing them to interact with each other.
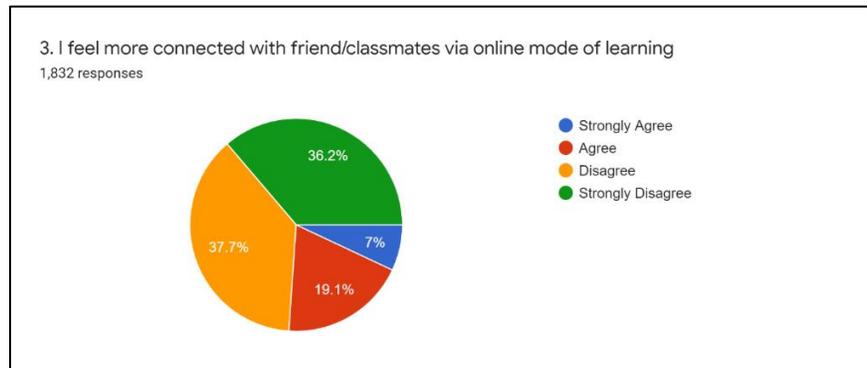
Figure 5 Student-Peer Engagement

2.5 Instructors' Digital Skills

Researchers have concluded that technological integration involves the educators' and students' smooth use of technology as a tool to complete a task in a disciplined study that encourages higher-order thinking skills. The incorporation of technology in the classroom is a process that involves a change in an educational system and occurs over a period (NCES, 2002).


Figure 6: Digital Skills

In the digital environment, students can use the help of other students and teachers to share their ideas and experiences. The digital classroom includes all forms of electronically supported learning and teaching. In this paper, the focus was on synchronous digital classrooms and demonstrating the impact of using technology on different parts of the learning process. In APU, a Digital Educator is a module lecturer who creates a synchronous digital learning classroom environment using Microsoft Teams that allows students to develop both academic skills and 21st-century skills. The digital classroom is conducive to all students by expanding the classroom in the community beyond the four walls. Students are engaged with activities and tasks connected to the real world.

A difficult part of the teaching and learning process is conducting the online assessment. It requires a blend of pedagogical knowledge and skill to create such assessments. Educators use Microsoft forms, a learning management system to conduct both formative and summative assessments. Educators used engagement tools in their teaching for informal activities to measure the learning outcomes.

3.0 Methodology

Data was collected using an online survey, the first one carried out in the months of August and September 2020, and subsequently in the months of July and Aug 2021. The respondents involved a cross-section of academic staff, representing eight Schools in APU.

Our questionnaire tested the fields related to (1) lecturers' transition experience (2) their engagement with students on the virtual platform and (3) their personal assessment of their digital skills for teaching. Additional open-ended questions were added in the 2021 survey, inquiring about their perception one year later after the adoption of ODL.
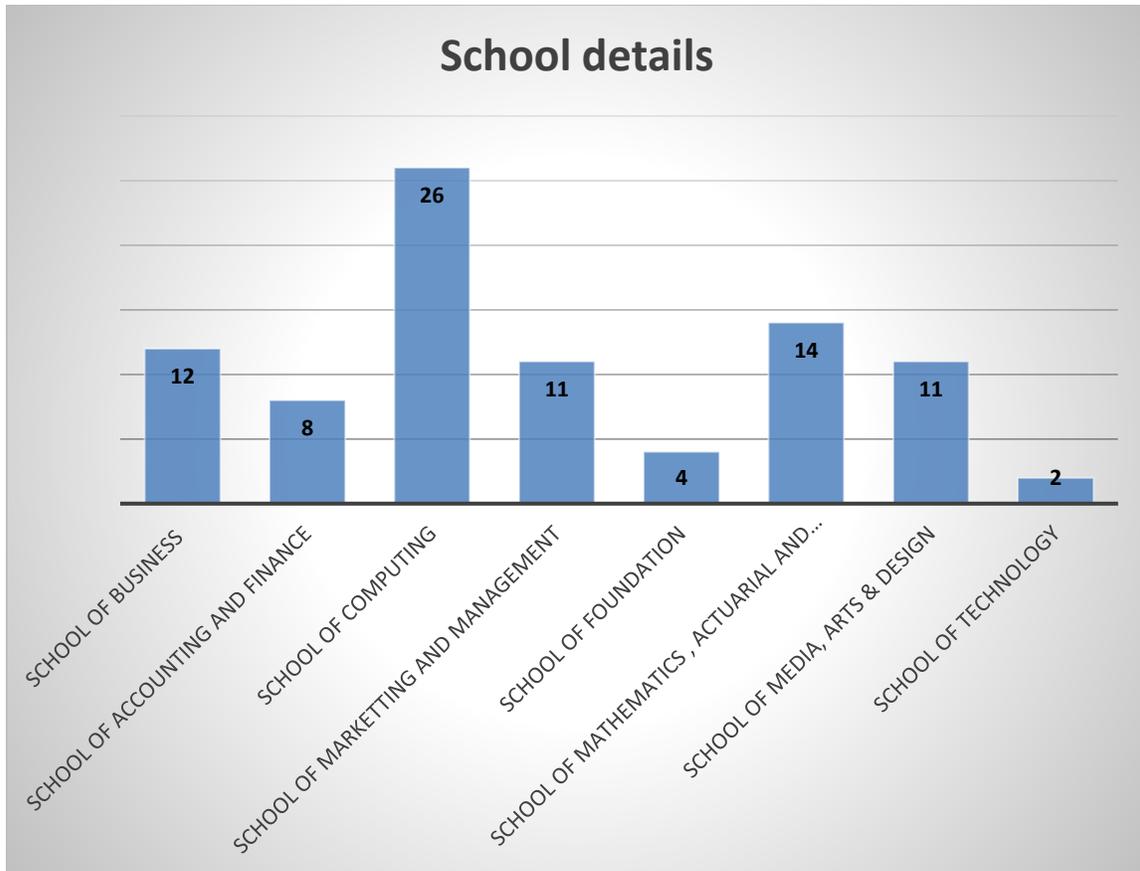
Figure 7: Survey Participation

4.0 Results and Findings

Findings from the survey indicated that most members of the academic team consider themselves supported with digital tools, peer support and training to deliver their lessons online. The majority also considered themselves capable of engaging with students online and delivering effective lessons. Around 30-40% self-rated and considered their digital skills as "Advanced".

4.1 Transition Experience

Comparison from both surveys indicated higher adaptability to teaching on the new learning platform one year on. More than 60% agreed that they have the technical support, peer support and ample learning opportunities to improve their teaching.
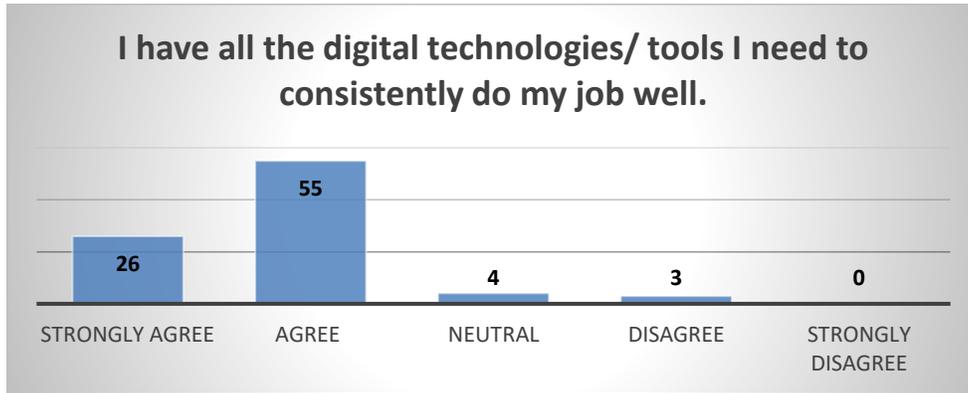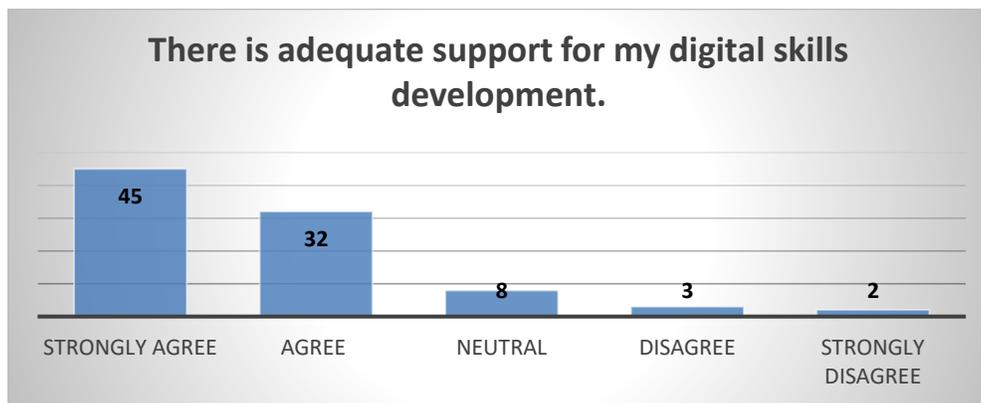
I have all the digital technologies/ tools I need to consistently do my job well.

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
26	55	4	3	0

Figure 8: Digital Technologies/ Tools Availability

There is adequate support for my digital skills development.

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
45	32	8	3	2

Figure 9: Support for Digital Skills Development

I receive ample learning opportunities at my current job.

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLYDISAGREE
12	53	19	3	1
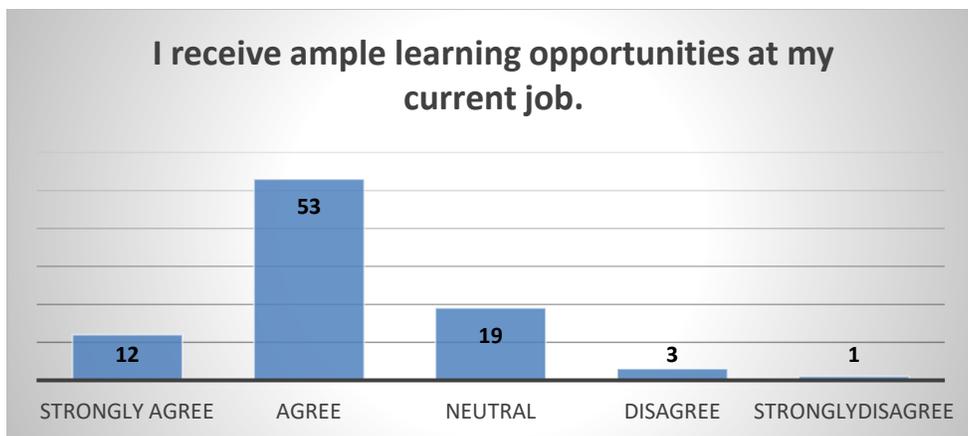
**Figure 10: Learning Opportunities**

Technical support provided by APU Technology Services, peer support from the Digital Champions representing each school, and the availability of external webinars and internal trainings appears to have reassured the lecturers to transition more confidently into online teaching.

4.2 Student Engagement

The following figures indicate the various techniques used by lecturers to engage with the students within the challenging environment of online learning and teaching. More than 60% of academics consider themselves able to engage with students. There was familiarity with the assessment methods, both formative and summative assessment types that address the course learning outcomes.
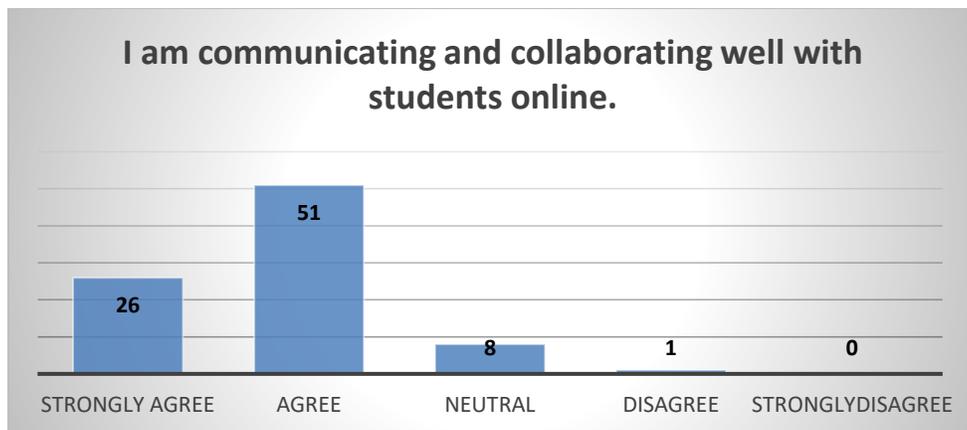
Figure 11: Online Communication with Students
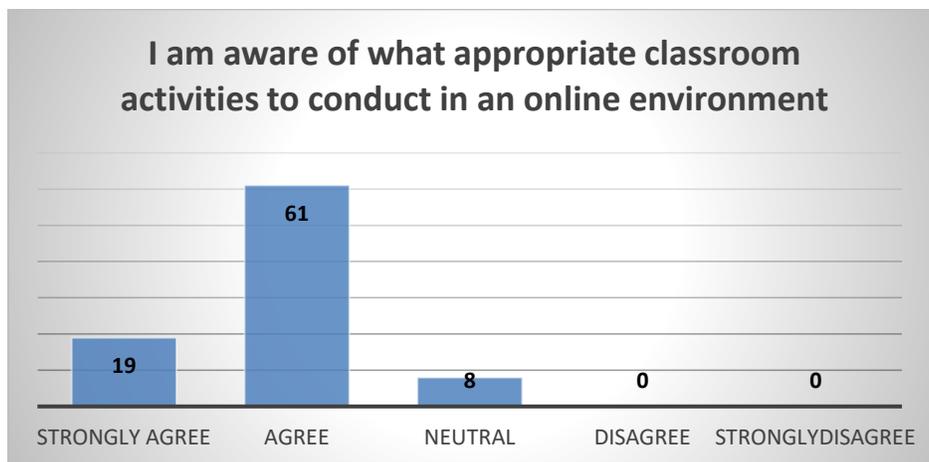

Figure 12: Online Classroom Activities
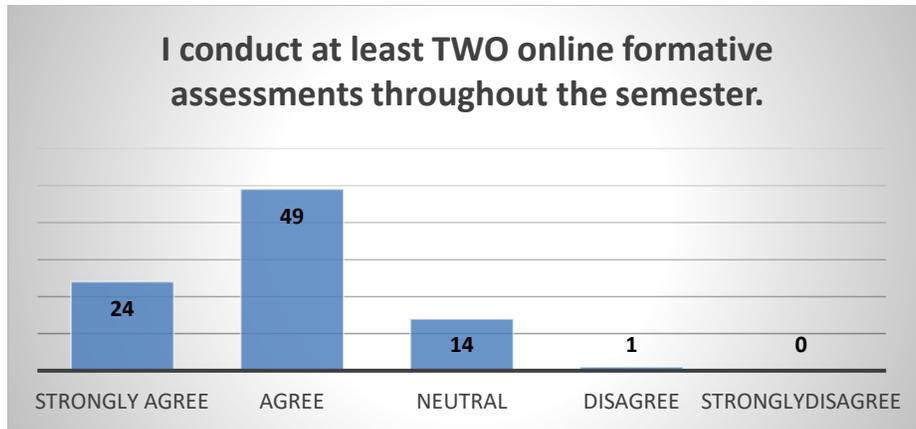
**Figure 13: Formative Assessments**
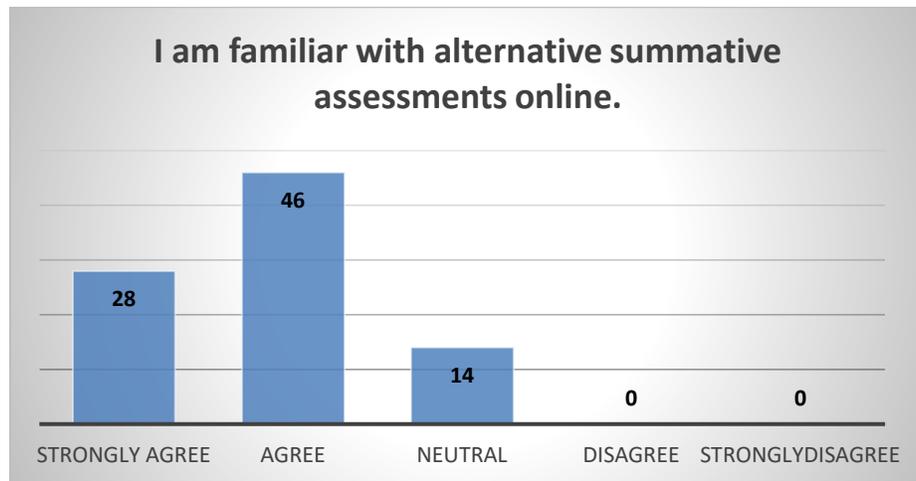
Figure 14: Summative Assessments
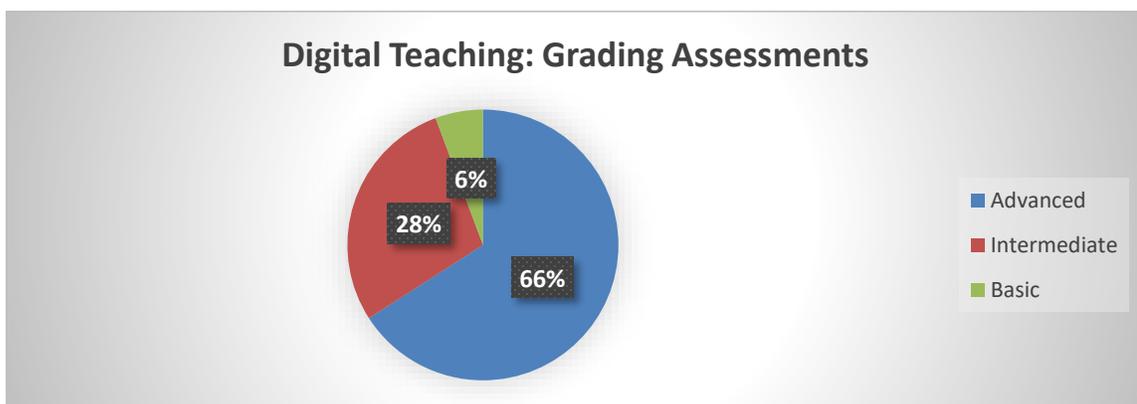
4.3 Digital Skills

Based on the lecturers' self-rating of their digital skills, it is notable that most responses fell at the levels of "Advanced" or intermediate. The questions were further broken down to address core digital skills i.e. Moodle LMS and Microsoft Teams for collaborative learning. A significant number of lecturers have rated themselves as competent to conduct online lessons, despite not having delivered online lessons before March 2020. 40% consider themselves advanced in preparing and administering online assessments and more than 60% consider themselves advanced users when grading online assessments.
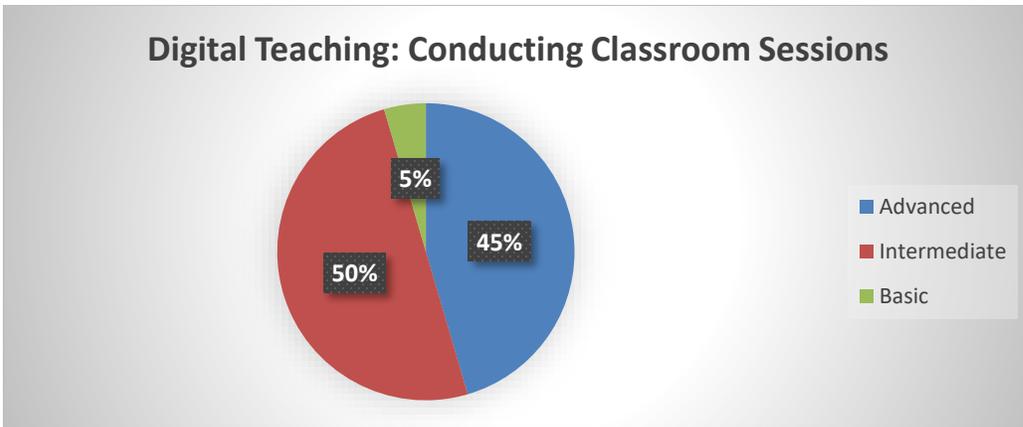
Figure 16: Digital Skills - Conducting Online Lessons
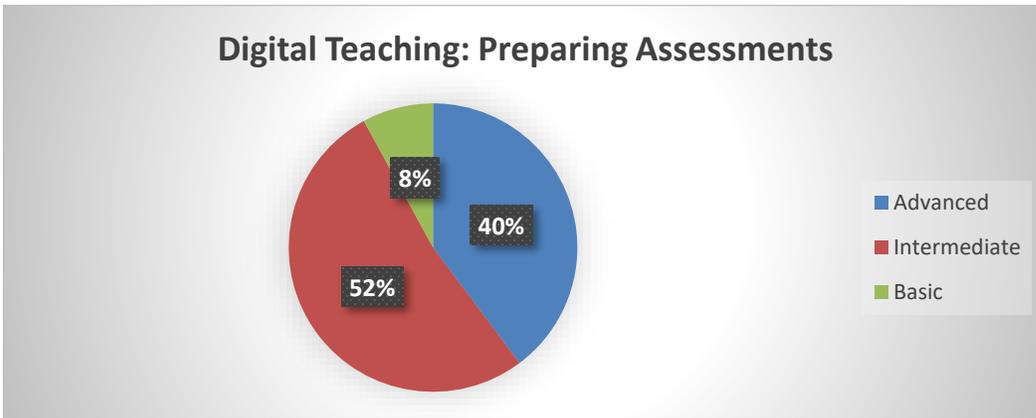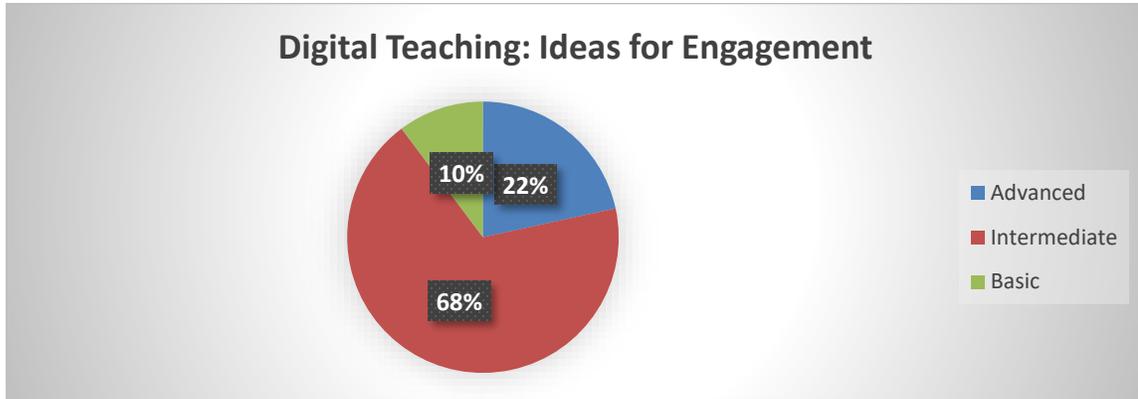

**Figure 17: Digital Skills - Preparing Assessments**

Figure 18: Digital Skills - Grading Assessments

Many lecturers continuously look for new ideas for engagement. This ties in with the results in Figures 11 and 12, indicative of initiatives to engage with students via class activities, as well as online communications.


**Figure 19: Digital Skills - Ideas for Engagement**

Both Moodle and Microsoft Teams were arguably central in the delivery of online learning in APU, however, between them, an overwhelming 73% expressed advanced proficiency in the use of Teams, compared to 27% for Moodle. 60% also rated themselves as very proficient in using educational tools to engage with students and provide variety in their lessons.
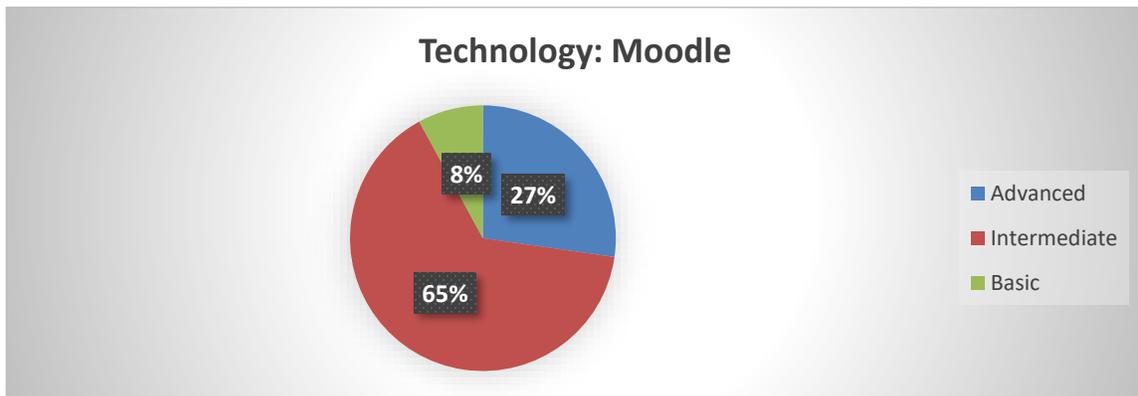
Figure 20: Digital Skills - Moodle LMS
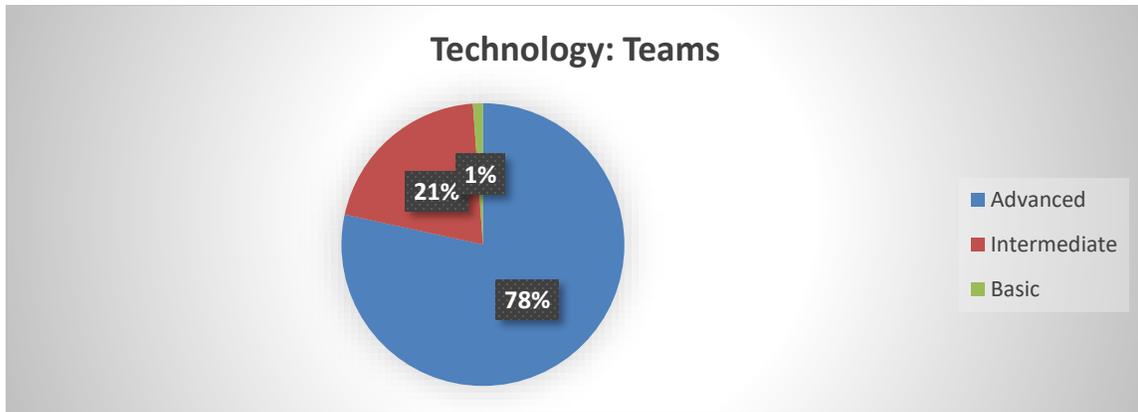
Figure 21: Digital Skills - Microsoft Teams
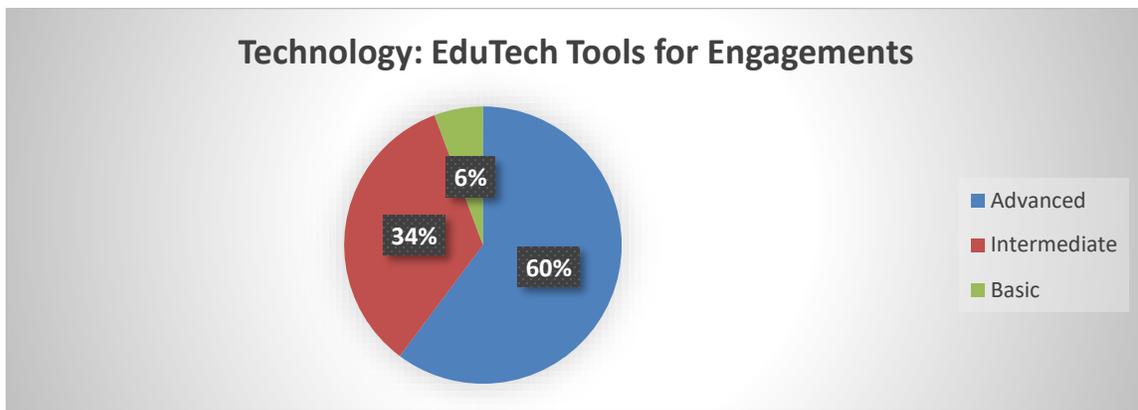
Figure 22: Digital Skills - EduTech Tools

Open-ended questions were added to the 2021 survey, to capture the academics' reflection of ODL one year after the initial implementation. There were concerns expressed in relation to psychological issues due to the challenge of managing work-life balance and work hours, as well as the feeling of social isolation. Specific side effects such as screen fatigue were also expressed. With regard to the education technology skills, suggestions were offered for training in Instructional Design Skills and subscription to selected educational technology tools.

The improvement areas identified connect to 3 main themes: firstly, the balance of work-life demands; secondly, the recognition for achievement; thirdly, the skills' development related to the mastery of grading tools and educational technology tools for engagement. The overall "good" points identified were that academics were adapting better to online tools one year on; they consider that student engagement has improved based on their adoption of a student-centred teaching approach; the support provided was seen and felt; and there was an overall improvement of multiple digital skills within the time of 1 year.

Good:	Issues/ Improvement Areas:	Open-ended Questions/ Concerns:
- Adapting better to online tools - Improved student engagement/ Student-centred approach - Support provided & felt - Digital Skills improved	- Work-life balance/ Self management and workload - Recognition for achievement - Mastery of Grading Tools and EdTech apps for Engagement	- Work-life balance; work hours - Screen Fatigue - Wellness/ mental health/ coping/ overwhelmed - Social Isolation - ID skills - EdTech Tools subscription

Figure 23: Themes Derived from Open-Ended Responses

In response to the initial survey in 2020 and as part of APU's continuous improvement, the action was taken in the following areas: To address the academic team's teaching experience transition, peer groups such as the Digital Learning Champions continued to provide their support. Technology support by the Centre for Technology and Innovation and the Infrastructure and Technology Services proved invaluable then, and to this day; For student engagement, lecturers were introduced to several online learning applications through various peer/ community sharing sessions, learning from each other, and deriving ideas from others' best practices; The increased level of digital skills was recognised and reinforced with a few workshops on instructional design initiated by APU's Digital Learning Hub; Finally, to enhance social connection and improve employee wellbeing, MOOD sessions were held to talk through our feelings and process the multiple emotions felt during this transition.

Conclusions and Reflection

Figure 24: Action Items by APU

5.0 Conclusion

The transition from physical classrooms and face-to-face lessons to ODL in tertiary education institutions in Malaysia was necessitated by the pandemic. Preparedness was part of the equation, to enable a smooth transition to a new teaching mode, with students' interest as the main priority. Comparing the experiences between 2020 and 2021, APU lecturers have marched on more confidently in their teaching skills, student-lecturer engagement and overall digital skills. Various initiatives were implemented by the university to create cohesion in the transition experience; interaction and engagement with our students; and the improvement of lecturers' digital skills. The surveys carried out provided a comparative insight between experiences during ODL's initial implementation in 2020 and the affirmation of the teaching style and skills developed one year later in 2021. Further research, if intended, may investigate the experience from ODL to hybrid teaching in 2022, and coming full circle to physical classrooms in 2023 onwards.

In accordance with the second hypothesis, which is captivating content of social media marketing, it has a positive relationship with customer satisfaction and is statistically significant. With a correlation of 51.1%, captivating content has a relatively strong correlation, hence, the hypothesis stated is accepted. The more extensive the captivating content is, the higher the impact it has on customer satisfaction. The third hypothesis, responsiveness of marketing tactics, has a positive relationship with customer satisfaction, statistically, it is proven to be significant. The correlation results show that the responsiveness of marketing tactics has a value of 55.3%. In other words, it has a relatively stronger correlation and thus, the hypothesis is accepted. More responsive marketing tactics have a higher tendency on elevating customer satisfaction.

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