

## Dr Hamid and Dr Kasinathan – Brunei

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# Using Digital Technologies and Innovative Platforms for Online Teaching During the COVID-19 Pandemic as The New Norm

### Purpose and context of the presentation

The presenters discuss the current global crisis in education due to the COVID-19 pandemic, digital resources for online teaching, challenges with online teaching and traditional teaching, some innovative platforms for online teaching, and some reflections on the effects and the current situation of COVID-19 faced by the education sector for Brunei.

### The situation in Brunei

In Brunei, the second wave of the pandemic proved to be the most disruptive. During school closures, digital technology became entrenched across all stages of education from primary to tertiary. Amongst the online platforms used, mobile phone technology has become an asset for online learning. In particular, a majority of online learning takes place via WhatsApp.

The administration of exams and assessment has been complicated by the change to online learning, so much so that formal examinations have been put on hold. Oral exams have also been postponed. Instead, at University Technology Brunei, continuous assessment is now the requirement. This has required significant course adjustments to change from a 60% exam assessment to ongoing quizzes and structured questions to make up the 60% weight.

### Technologies and platforms

The primary technologies and platforms used in Brunei are Zoom, Microsoft Teams (the official Brunei government platform), Google classroom, WebEx and Telegram.

Moodle is also used as a learning management system, a way to provide a variety of asynchronous learning activities to students in addition to virtual lectures, and also as a platform to submit assignments. Canvas is another alternative used as an LMS in Brunei.

Outside of higher education, primary and secondary educators are using the following platforms and technologies for teaching and assessment:

- Assessment tools: Google forms/documents, Kahoot, quizziz, Slido.com, Screenshot via WhatsApp, Google classroom, emails, photos.
- Teaching/LMS platforms: Google classroom, Microsoft Teams, Zoom, Canvas, Moodle, WebEx, Edmodo.

Regarding photos, emails and WhatsApp, some teachers (especially in primary school) allow students to take screenshots of their work which their parents then upload to a parents' WhatsApp group. This is designed as a solution for children who do not have their own phones or devices. WhatsApp is also a useful tool in higher education.

## Loss of the human factor in virtual classrooms

A major challenge of online teaching is the absence of the ‘human factor’. Students have reported missing the opportunities to socialise with friends and build face to face relationships with teachers, leading to demotivation, depression and fatigue. Academic staff are also experiencing ‘technological stress’.

## Illustrations of practice: Student engagement

In order to build student engagement and attempt to replace virtually some of the face-to-face engagement, in the communications course, the lecturer encourages role play activities in which students dress up for class based on a chosen theme. Additionally, the lecturer uses a background template of a lecture hall, onto which she transposes the faces of those who have logged into the virtual lectures, to create a sense of community and familiarity for the students.

### WhatsApp as engagement tool

WhatsApp can be used in higher education to set up groups of students to which activities can be sent, and feedback returned to the group quickly. When a student in the group asks a question, all students will see the answer, saving time on similar individual queries.

## Surveyed challenges of online education

Academic lecturers and students were surveyed as to their perceived challenges of online education.

### Themes from lecturers' responses

#### Theme 1 – discomfort and unfamiliarity

Initially, discomfort and lack of familiarity were the primary challenges. Lecturers knew their subjects well but not how to teach them via technology, and this was exacerbated by nervousness that the students might be more technologically expert than themselves, which might result in a lack of control.

#### One lecturer's experience

One lecturer started using Google Meet, as everyone already used Google. A link to a meeting was created and shared to students via WhatsApp. This was considered to be the simplest and quickest way to transition to online education at the start. The lecturer believes that now, with time and experience, lecturers are more comfortable using a variety of online platforms such as Zoom and Microsoft.

#### Theme 2 – stress and pressure

This was identified through comments on class flow and connectivity issues which disrupt and delay lessons or require them to be rescheduled. Microphone and webcam issues also caused stress. Additionally, lecturers were stressed because their KPIs (key performance

indicators) are linked to class evaluations, and the lockdown came into effect shortly before these evaluations were due. Lecturers were concerned that the sudden change to online education with little preparation time or support for teachers and students would be reflected negatively in student evaluations. A third source of pressure was the need for many subjects to include practical activities which could not be quickly transitioned to online learning. Simulations, Artificial Reality (AR) and Virtual Reality (VR) are all possible solutions which could not be quickly implemented.

### **Theme 3 – interest and enthusiasm**

Maintaining student engagement was considered a major challenge, considering that when online, students could easily be distracted by other websites. One lecturer's solution was to use Kahoot or Slido (which integrates with PowerPoint) to deliver interactive activities and quizzes to maintain student attention and interest, and to monitor student participation in real time.

### **Theme 4 – Zoom fatigue**

Lecturers reported fatigue from hours of Zoom or other online synchronous teaching each day. The presentation discussed Stanford University's ZEF scale (Zoom exhaustion and fatigue) which considers general fatigue, emotional fatigue, motivational fatigue, and psychological fatigue. These issues were reflected in the survey of lecturers in Brunei. While digital technologies can be interesting and engaging, they can also lead to fatigue. Lecturers reported eye strain and lack of mobility within this context.

### **Theme 5 – time constraints**

Learning and preparation time was cited as a challenge for lecturers when transitioning to online education.

## **Themes from students' responses**

1. Students reported confusion in the early online education period due to a lack of consistency of platform and technology use between lecturers. One lecturer might use Zoom, then they may change to a lecture using Teams, followed by a lecture using Google classroom.
2. Students also reported concern with lecture and teaching format, as it was not effective to directly copy a two-hour in-person lecture to an online environment.
3. Thirdly, students reported dissatisfaction with the loss of the classroom environment and social opportunities and dynamics.
4. Fourthly, students reported financial constraints, having to pay for data to access online materials and lectures. Two proposed solutions are for mobile phone companies to offer student-friendly packages and for private higher education institutions to subsidise the costs.
5. Fifthly, students reported issues with technology and connectivity, including some not having access to a device, or having to share devices with other siblings or parents.