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New Academia Learning Innovations in Universiti Malaya

Inovasi Pembelajaran Akademia Baharu di Universiti Malaya

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ABSTRACT

Teaching and learning innovations in higher learning institutions have been radically changed over time to suit the once an agricultural nation to a more industrialised society. This change needs to be taken as the New Millennium Learners are influenced by advanced information and communication technologies. As we aim to achieve a shift towards more active learning through innovations, a variety of approaches are employed as we make use of digital and physical learning spaces. Blended learning that moves away from traditional classroom approaches with a more interactive learning is integrated in the teaching and learning process. The use of space beyond the conventional classroom setting enhances collaboration with peers and teachers from other countries. This paper intends to synthesise the innovative teaching and learning approaches in Universiti Malaya to accommodate the progressive change of the diverse academic community and industry requirements of our graduates. It aims to present an overview of the current academia learning innovations that have been taking place in the university that provide some form of engagement with technology. It also shows how instructors and students are supported by the various initiatives, approaches and collaborative efforts carried out by the university in keeping abreast with technological advancements. Finally several implications for teaching and learning in higher education are also discussed in this paper.

Keywords: higher education; innovation; teaching and learning; blended learning; learning space

ABSTRAK

Inovasi pengajaran dan pembelajaran telah berubah secara radikal mengikut peredaran masa dengan peralihan dari negara pertanian ke arah negara perindustrian. Perubahan ini perlu dibuat kerana Pelajar Alaf Baharu dipengaruhi oleh informasi dan teknologi komunikasi lanjutan. Sejajar dengan hasrat kami untuk mencapai peralihan ke arah pembelajaran yang lebih aktif melalui inovasi, pelbagai pendekatan diambil dengan menggunakan ruang belajar secara digital dan fizikal. Pembelajaran teradun yang melibatkan pembelajaran yang lebih interaktif, berbeza dari pendekatan kelas tradisional, diintegrasikan dalam proses pengajaran dan pembelajaran. Penggunaan ruang di luar persekitaran bilik darjah yang konvensional meningkatkan lagi kolaborasi dengan rakan sebaya dan pengajar dari negara lain. Artikel ini mensintesis pendekatan pengajaran dan pembelajaran yang inovatif di Universiti Malaya bagi disesuaikan dengan perubahan kemajuan masyarakat akademik yang pelbagai dan keperluan industri untuk para graduan. Ia bertujuan untuk memberi satu gambaran berkenaan inovasi pembelajaran akademia semasa yang telah dijalankan di universiti yang menyediakan satu bentuk penglibatan dengan teknologi. Ia juga menunjukkan bagaimana pengajar dan pelajar disokong oleh pelbagai inisiatif, pendekatan dan usaha kolaboratif yang dilaksanakan oleh universiti seiring dengan kemajuan teknologi. Akhir sekali, beberapa implikasi terhadap pengajaran dan pembelajaran di pengajian tinggi turut dibincang dalam artikel ini.

Kata kunci: pengajian tinggi; innovasi; pengajaran dan pembelajaran; pembelajaran teradun; ruang pembelajaran

INTRODUCTION

Education plays a crucial role in society to develop a skilled workforce that will contribute to the economic growth of a country and global humanity. As the world is rapidly changing due to technological advances, teaching and learning environments are brought to the next level supported by cutting-edge technology and innovative pedagogical approaches. In an effort to maximise learning experiences for students in the context of higher education, educational experiences are re-defined to create dynamic and stimulating environments. With the advent of the digital age, technology is offering transformation, innovation and connectivity in the globalised world with digital learning tools, learning spaces and student mobility that revolutionise educational systems. The past decade has seen such rapid developments with the extensive and accelerated use of technology in instruction and

individualised learning bringing new paradigms shifts in education. The use of e-learning platforms and blended learning for example, has transformed the ways in which technology can extensively facilitate, enhance and support educational goals in teaching and learning.

With its reputation as a global and regional educational hub, Malaysia is technologically driven in transforming and redesigning its higher education ecosystem and educational landscape for the benefit of local and international students. This is very much reflected in the Malaysia Education Blueprint 2015-2025 in Shift 9-Globalised Online Learning which states that with its high internet usage , Malaysia is "in a good position to harness the power of online learning to widen access to good quality content, enhance the quality of teaching and learning, lower the cost of delivery, and bring Malaysian expertise to the global community" (p. 23). The blueprint states using blended learning as a pedagogical approach in all higher education institutions, enables students to benefit from a robust infrastructure which includes video conferencing, live streaming and Massive Open Online Courses (MOOCs).

Universiti Malaya (UM), the country's premier university, is one of the higher institutions of learning taking the lead to democratise education and provide a stimulating environment by moving away from lecture-based classrooms to more interactive teaching and experiential learning, this is made possible through technologically enhanced instruction and active learning that supports positive learning outcomes. By doing this, the university fosters diversity and inclusivity by applying knowledge to a more engaging learning environment in order to develop independent learners who are involved in their own learning journey. This includes the provision of a robust cyber infrastructure to support the flow and processing of information, learning platforms to host online courses such as MOOC, online video conferencing, collaborative learning, live-streaming, as well as its own teaching and learning platform that provides synchronous and asynchronous types of e-learning. The purpose of this paper is thus to share some on-going practices in integrating new innovations in teaching and learning in UM.

REVIEW OF LITERATURE

One of the 10 Shifts outlined in the Malaysian Education Blueprint 2015-2025 (Higher Education) to create a world-ranked education system is to enhance the quality of teaching and learning through the use of technology-enable innovations. To achieve this outcome, blended learning models should be imparted as the primary pedagogical approach. E-learning is one innovative form of pedagogy that can transform traditional classroom teaching and learning. It is useful not only for delivering distance learning programmes but also for regular classroom use, as it allows a flexible approach to learning. In the domain of education, e-learning has become a virtual framework for the exchange and sharing of techno-pedagogic knowledge and experiences between social actors forming what is known as Communities of Practice of E-learning or CoPEs (Chikh & Berkani 2010). The technical environment for the e-learning actors in CoPEs should be strongly assisted by resources, tools and services offered by the organisation. For an effective implementation of e-learning, however, it should be supported with suitable learning management systems (LMS). There are many LMS available for instructors to use. Some of them require users to pay such as Blackboard, Top-Class and WebCT. However, there are also open-source software that are available without any charges such as Moodle, Eliademy, and Claroline Connect. The most often utilized free open-source software is Moodle because of its ease of use and its various functions (Escobar-Rodriguez & Monge-Lozano 2012). Studies on the use of Moodle for teaching and learning have focused on different aspects from its acceptance (Sánchez & Hueros 2010; Yeou 2016) to its impact on students' performance (Al-Ani 2013; Mwalumbwe & Mtebe 2017) and its easy accessibility to staff and students (Subramani & Iyappan 2018).

A learning platform such as Moodle can support the delivery of e-learning in many ways. One example is through blended learning, which involves combining traditional face-to-face classroom instruction and online teaching. The benefits of implementing blended learning have been well documented. Studies have shown that students perform better in blended classes compared to fully face-to-face or online classes (Dziuban & Moskal 2001; Martyn 2003; Twigg 2003; Vaughan 2007). Some researchers have suggested that blended learning can promote a more flexible approach to learning and student autonomy (Tam 2000). It is also suggested that blended learning implementation can help to achieve economic goals such as reduced costs and efficient use of resources (Graham 2013;

Moskal et al. 2013) Others such as López-Pérez et al. (2011) found that blended learning contributed to the improvement of exam grades and reduction of dropout rates. A recent study by Hilliard and Stewart (2019) found that a community of inquiry can be promoted through blended learning by providing students with more time to be engaged in online activities that allowed them to interact with their peers and learn from each other.

In line with the many studies that have highlighted the positive effects of blended learning, universities are taking a step in the right direction in advocating blended learning to innovate their programmes. However, its implementation requires a principled understanding of what constitutes an effective blended learning classroom. As pointed by Garrison and Kanuka (2004), ''blended learning is an integration of face-to-face and online learning experiences – not a layering of one on top of the other'' (p. 99). Others, such as So and Brush (2008) caution that it is not adequate to simply change a traditional online class into a blended learning class as it does not guarantee that students will be provided with "more interactive and flexible learning experiences'' (p. 322). This implies that the implementation of blended learning requires a great degree of planning on the part of university instructors to ensure that the inclusion of the online component to face-to-face teaching is not just an add-on. Nunan, et al. (2000) suggest that the implementation of blended learning signals a paradigm shift where the emphasis changes from teaching to learning. Therefore, in pursuing an innovative approach to pedagogy, it is important that instructors are aware of how to implement blended learning effectively and that they are well-supported by the university. Strategic and operational planning are required in order to facilitate the development of blended learning and ensure it is sustained (Garrison & Kanuka 2004). It is also insufficient to depend on administrative planning alone for university to adopt blended learning. Advocacy is also recommended among university administrators, faculty members and other university personnel to successfully implement blended learning (Porter, Graham, Spring & Welch 2014). Further, Jackson (2017) highlights the importance of Moodle as a learning platform and suggests that instructors should be supported with professional development programmes that can help them design differentiated learning resources that can promote a flexible approach to teaching and learning and improve learning outcomes.

As the implementation of new innovative pedagogy is highly dependent on instructors, it is important that any efforts to inculcate a culture of innovation in the classroom takes into consideration instructors' perceptions regarding technological uses in teaching. Bloens et al.'s (2018) study shows that instructors' beliefs on blended learning can be categorized into three profiles: 1) disregard 2) adaptation and 3) transformation. Instructors' with the first type of profile, disregard, do not consider extra support to cater for learners' needs within the blended learning environment. As for instructors with the second profile, they feel that providing more support in the blended learning environment is adequate to address students' needs. Instructors with the final profile believe in a complete redesign of the blended learning arrangements to match the student characteristics. The findings highlight the importance of developing training programmes that focus on instructors' beliefs about pedagogy.

In addition, it is also important to understand students' perception of blended learning. Although many studies have highlighted instructors and students' positive perceptions of blended learning, there are also studies that have indicated otherwise. A recent study by Blaine (2019) found that teachers and students had different views regarding interaction in a blended learning course. While teachers had positive perceptions regarding the interaction, students had unfavourable views of the interaction. Clearly, innovative use of technology such as blended learning requires a mutual understanding of what it entails and instructors should be guided in their implementation through clear university policies.

Also, universities are recognizing the importance of implementing another form of e-learning which is flipped classrooms. The model of flipped classroom emphasises student-centred learning. Research has found that flipped classrooms enable students to actively take charge of their own learning as class time is spent on more effective and creative activities. Teachers have more opportunities to monitor, scaffold and measure students' learning (Gilboy, et al. 2015; Betihavas et al. 2016). Recent studies on students' perceptions of flipped classrooms have shown that students have positive attitudes towards the flipped classroom, correlated with their academic performance. A study by Nouri (2016) found a strong correlation between students' positive attitude towards the flipped classroom and their perceptions of increased motivation and learning, engagement and effective learning. A review of studies on flipped classrooms by Zamzami Zainuddin et al.

(2019) also highlights the positive impact of flipped classrooms on students' self-efficacy. Participation in flipped classrooms promoted students' self-regulated strategies and helped them become autonomous learners. Nevertheless, the review also found that the implementation of flipped classrooms is not without its challenges. Among the challenges include students' lack of motivation in viewing uploaded videos due to unclear instructions from the instructor. Also, students who are ill-prepared with the new approach might struggle to learn independently as they are used to the conventional method of learning the content presented by the instructor prior to being assigned any homework. Instructors will need to be aware of these issues in their implementation of flipped classrooms.

INNOVATIVE TEACHING AND LEARNING ON UM CAMPUS

THE AIMS PROGRAMME IN UM

The ASEAN International Mobility for Students (AIMS) programme was initiated in 2009 as a collaboration between the governments of Malaysia, Indonesia and Thailand and SEAMEO RIHED. Its purpose was to create a vibrant student mobility programme for citizens of all SEAMEO member countries. AIMS has now expanded its collaboration with the governments of eight countries namely Malaysia, Indonesia, Thailand, Vietnam, Philippines, Japan, Brunei and Korea. By 2015, it has been ambitiously agreed as a short-term goal among AIMS member countries that at least 500 students will be mobilized across the region, with expanding disciplines as well as membership. The programmes offered are both inbound and outbound programmes.

For inbound programmes in Universiti Malaya, two areas of study fields are offered under AIMS which are International Business, and Language and Culture. All courses are taught in English. At present, there are various participating universities from five countries collaborating in the Language and Culture programme and seven countries participating in the International Business programme (see Appendix 1). The statistics of students in the AIMS Inbound and Outbound programmes are illustrated in Figure 1.

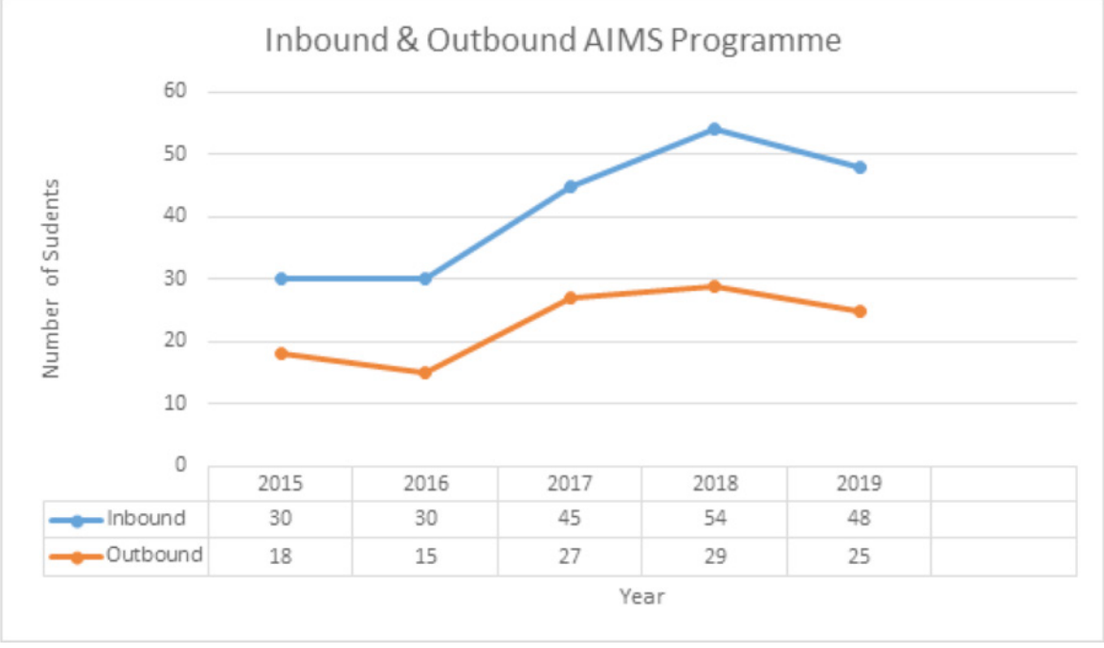

FIGURE 1. AIMS statistics for Inbound and Outbound programmes
Source: International Student Centre, UM

The trends for student mobility between 2015 and 2019 were identified and analysed. As shown in Figure 1, the results revealed an increase in inbound students through the AIMS programme, showing particular interests for international students to participate in the activities that have become increasingly popular. The increase in international student numbers especially those coming to seek different learning experiences and to tap on the University's staff expertise indirectly means higher

expectations in the way teaching is carried out and a new perspective of learning is embedded within the UM community. As a result, UM has continuously attempted to innovate its approach to teaching and learning to produce graduates who are knowledgeable, well-rounded and can effectively contribute to society. Some of the innovations implemented by UM include different forms of e-learning such as blended learning, flipped classroom, MOOC and the use of social media. Teaching and learning platforms are not limited to books as students engage in these various platforms for self-directed and guided learning. In this way, interactive environments are created to facilitate learning using innovative digital technology.

BLENDED LEARNING

To implement innovative pedagogical approaches, it is important that university instructors are well-supported with suitable infrastructure and facilities for the effective implementation and delivery of elearning. Through its provision of technological infrastructure, Universiti Malaya promotes innovation by encouraging technology use in teaching and learning combining traditional classroom settings with online learning tools. One example of technological innovation in UM is the use of SPeCTRUM which stands for "Student Powered e-Collaboration Transforming UM", an e-learning system hosted by Moodle. It is a web application that enables instructors to upload their teaching materials and resources based on the courses that they teach. Students have access to the course materials when they are registered for the courses.

SPeCTRUM reflects UM's ideal vision of innovative pedagogy. A key aspect noted here is the notion of "student powered e-collaboration" in the acronym. This implies that students hold the key to transformative teaching and learning practices and that technology plays a role in the instructors' implementation of student-centred approaches in their teaching. With the availability of such infrastructure, it is possible for UM instructors to create a blended learning environment which involves complementing face-to-face teaching with online learning. Students can have access to SPeCTRUM anytime and anywhere as it is also available as a mobile version making it compatible with any mobile devices. The traditional classroom learning is transformed as students are no longer restricted by physical spaces or geographical locations to access and engage with online materials. Instructors can also implement differentiated instruction as students can be divided into groups using the Group function.

FLIPPED CLASSROOM

Another example of a student-centred approach implemented in UM is the "flipped classroom", an approach that has received considerable attention recently in higher education literature. This approach essentially involves an inversion of the traditional lecture and homework. Prior to coming to class, students can view videos such as pre-recorded lectures on a specific topic. This leaves classroom time for student-centred activities. Instead of using classroom time to deliver lectures, the time can be used by students for active learning. In other words, the traditional 'homework' is not done by students outside class but in class. SPeCTRUM supports the teaching of flipped classrooms. With such a platform, students can access materials online. For instance, the course instructor can upload a variety of multimedia materials that learners can access outside the classroom. Learners can view videos or read given articles prior to attending classes. One aspect of this is that they can view videos according to their own pace. They can either view several times or skip parts of the video depending on their learning style and ability.

In class, the instructor can provide learners with suitable tasks to generate discussions based on their viewing of lectures or reading of assigned articles. In this way, students will be actively involved in their learning. This can promote critical thinking and higher order thinking skills, help increase student motivation and promote independent learning. Learner interaction with the materials and with each other can also be supported via SPeCTRUM through functions such as *Forum* and *Chat*.

The instructor's role in class also changes through this approach. It requires planning on the part of the instructor in terms of the types of materials that they want students to review prior to attending class. Instructors also need to plan the type of tasks that they want students to work on in their learning of a specific content. As students attempt a task, the instructor facilitates their process of learning, assessing their level of understanding and providing the scaffold needed to support their learning and correct their understanding. Instructors also need to be aware of how the task set can engage learners in higher order thinking. They can gauge

students' understanding of particular tasks through the various functions of SPeCTRUM such as Quiz and Assessment. Other than that, instructors can also evaluate students' perceptions of the use of e-learning in teaching by administering a questionnaire using SPeCTRUM.

SUPPORTING INSTRUCTORS IN IMPLEMENTING INNOVATION

Apart from providing the infrastructure, the university also encourages instructors to implement e-learning in their course through various initiatives. An example is by stipulating the criteria for blended learning in the use of SPeCTRUM. For a course to be considered blended, there are criteria to be fulfilled. These include ensuring that there are at least a certain number or resources, activities and assignments. The criteria also helps to guide instructors in their implementation of blended learning as they can organise their materials and plan their activities in ways that reflect a blended learning approach.

Once every semester, the university encourages campus wide usage of e-learning through its E-learning Week. During this time, there is no face-to-face lecture. Instead, faculties that participate in the e-Learning week are required to conduct classes online using SPeCTRUM or other forms of technology. Although these efforts appear to be top-down, they seem to be effective in encouraging instructors to gradually move away from conducting classes primarily through traditional face-to face teaching and incorporate e-learning in their teaching. Zamzami Zainuddin and Mohammad Attaran (2015) examined students' perceptions and feedback towards flipped classrooms in Universiti Malaya. They found that most students had positive perceptions towards flipped classrooms. Students especially the passive ones as well as international students who were not fluent in English benefited from this learning approach.

The university is also aware that the implementation of e-learning may not necessarily be easy for all instructors. Instructors have varying knowledge and skills in technology use and some may find it challenging to use new technology in their teaching. To encourage instructors to adopt a blended learning approach, they are invited to attend various workshops organised by the university's Academic Enhancement and Leadership Development Centre (ADeC) which is a training centre for UM's academic staff. Inhouse professional trainers and external consultants are often invited to conduct training in teaching innovations to develop the knowledge and skills of the academic staff on various aspects of pedagogy. Such training is meant to introduce instructional technology tools and techniques in various pedagogical aspects such as classroom activities and assessment. Workshops conducted by ADeC not only focus on introducing specific functions of SPeCTRUM such as *Live Chat* and *Quiz*, but also provide hands-on practice on using these technologies and suggest ways to incorporate them into classroom learning. With the recent move to online teaching, ADeC has recorded a series of Webinars related to approaches and digital tools for online teaching to be accessed by UM academic staff.

MASSIVE OPEN ONLINE COURSES (MOOC)

UM has also adopted an innovative approach to online education by offering a range of Massive Open Online Courses (MOOCs). These include courses on healthcare and Islamic Calligraphy, hosted by platforms such as Open Learning and Future Learn. Offering MOOCs enables UM to widen its reach in providing quality and accessible education, allowing a larger population to have access to higher education depending on their needs and circumstances. Some students may enrol due to professional requirements, whereas others may join a course to advance their knowledge on a specific field. Students enrolled in a particular course can have access to video lectures and online resources. They also would be able to interact with the course tutor and other students from various geographical locations. While this is a new innovation and more research is needed to investigate its effectiveness, it is acknowledged that MOOC has the potential to transform the way higher education courses are packaged and delivered. Unlike traditional university courses, MOOC offers flexibility in terms of how and when students access the programme.

THE USE OF SPACE AND PLACE

The roles of space and place are also redefined as innovative approaches to teaching and learning, moving away from the typical physical classroom setting to provide a learning environment that is creative and borderless. Creative spaces in educational settings can be demonstrated through its virtual space with the learners as active participants.

This includes the application of virtual classrooms, collaborative projects and cross-cultural exchanges through student mobility that form integral parts in the teaching and learning experience. Technology can provide strong support for innovation and opportunities for such collaborations.

CREATIVE COLLABORATION

Collaborations with partner universities, global network associations like AIMS and individual institutions provide further opportunities for students to learn in innovative ways that are engaging that enable them to develop skills in a cross-cultural context to reach their full potential. Students are given opportunities for experiential learning to unleash their creative potentials and learning experiences that will not be obtained from a conventional classroom setting. Bearing in mind that our students are from Generation X (people born from the mid-1990s to the early 2000s) and keeping up with their use of technology, this kind of experiential learning empowers learners and makes learning more meaningful in a cross-cultural setting. This is also in line with the university's strategic plan to increase participation of staff and students in the global community.

SYNCHRONOUS VIRTUAL CLASSROOM: VIDEO CONFERENCING

Video conferencing is a new form of communications technology which allows students and lecturers to interact at a distance. It is a system where two or more participants, based in different physical locations, can see and hear each other in real time using special equipment. A video conference can be either two-way (point-to-point) or multipoint, linking three or more sites with sound and video. Video conferencing engages students actively through discussions, observations and interactions that broaden their perspectives through audio-visual exchanges via the internet. In making video conferencing a successful method of performing interactive video communications, several audio-visual peripherals are needed– TV monitor or video projector, camera(s), microphone(s) and sound playback. A high-speed Internet connection is needed for high-quality images and sound proofing and controlling lighting conditions are important. The potential of video conferencing in enriching knowledge sharing in the distance learning context is widely recognised and accepted by UM communities. Bates (2000) stresses that effective integration of innovative technologies in teaching and learning requires stakeholder's involvement. The UM teaching staff have embedded this form of learning in the classroom as they realised the benefit of different learning styles. The administrators are critical for the success of the implementation as they provide resources and incentives and the technical staff have been supportive in making sure that installation, operation, maintenance, network administration and security are updated.

Video conferencing as an approach to synchronous learning has been widely used in Universiti Malaya. This involves joint courses offered between several universities in the region. The content for the joint courses is related and hence, some of the resources are shared. There are two phases to the video-conferencing session; the first is watching a pre-recorded lecture by renowned scholars in the area from the universities involved. The second phase of the session is a multipoint video conference amongst students from these universities where they would discuss the lectures and self-reflect on the matter at hand. The structure of the video conferencing sessions does not always conform to watching lectures and carrying out discussions. Sometimes, students from each university take turns to present a topic which they have agreed prior to the session. In general, video conferencing encourages synchronous learning, providing a new dimension in classroom interaction as well as engaging a wider collaborative environment for blended education.

FIELD WORK

Innovations also involve the design of tasks and activities based on the creativity of the lecturer to engage learners to learn in a collaborative way by considering the needs and learner diversity. One of the most exciting innovations in teaching is experiential learning through field work and field trips between learners from different cultures and different higher learning institutions where they share experiences and learn from each other. This concept of learning also comes through activities such as internships and community engagement projects that help reinforce what students have been learning in their classrooms besides developing soft skills and generating students' interests. Field trip experiences between two or more countries take place in different environments that ensure engaging educational experiences in a cross-cultural set up.

One such example involved UM undergraduate students and their counterparts from a university in Hong Kong in a project collaboration for field linguistics. The students from both universities jointly participated in all the academic and social activities conducted including joint linguistic data collection sessions. A seminar was also organised where the students participated in interactive learning sessions.

UM emphasises experiential learning that can prepare students for the world of employment. One example is through field research where students get firsthand experience and knowledge since this approach takes place in a natural environment. UM has a Field Studies Centre where students and researchers can conduct site visits and biological and ecological field work. The UM undergraduate programmes also include the Industrial Training component where students undergo Internship training for a specific duration depending on the faculty requirements. During their internship students are attached to various organizations. At the Centre for Sport and Exercise Sciences, for instance, students attend courses that enable them to put theory into practice, such as conducting customised fitness training programmes to cater to individuals by making use of physical spaces and sports facilities within the vicinity of the centre and the entire campus.

STUDENTS' FEEDBACK ON THE USE OF E-LEARNING

Findings from a larger survey carried out on e-learning experiences among international students conducted at Universiti Malaya provided useful feedback that can be summarised in this paper. The findings reported here are based on responses from several inbound undergraduate students under the AIMS and other mobility programmes. Students generally rated their experiences with e-learning at Universiti Malaya as positive irrespective of the academic programmes they came from. The students reported using a variety of e-learning tools in their courses such as the use of SPeCTRUM, videos and Kahoot. SPeCTRUM was the most popular platform used with the students stating accessibility of materials being the most important benefit of the tool, allowing them to do independent study. Availability of the materials and resources at any time was the most important reason given for the use of SPeCTRUM. One student reported that SPeCTRUM "would allow personalization of learning methods, given that there are sufficient learning resources (tutorials, videos and books)." Another student reported that it was "the most effective way of learning." Some students also indicated that the variety of tools on SPeCTRUM were appropriate and the platform encouraged them to be able to work independently.

E-learning as an innovative mechanism for improving learning performance for students in higher education can be more time efficient for both teachers and students. Not only teachers and students can save time traveling to class, e-learning also allows classes to be carried out in a "much relaxed environment." One student reported that e-learning allowed him "to stay in bed and still attend lessons". The students also indicated that browsing and uploading selected educational materials encouraged self-directed learning. This indirectly translates to enhancing students' lifelong learning skills. Another advantage that we often overlook when discussing the benefits of e-learning is the assistance in providing the physically disabled students. To date, Universiti Malaya has not hosted inbound students who have problems travelling around because of physical disability. Since the University is aggressively using e-learning as a teaching approach, students from AIMS member countries with physical disabilities could be given the opportunity to join the programme so they too can get equal access to education. However, several students suggested having more interactivity with the instructor who was regarded as playing an important role in the e-learning experience. Other suggestions included increasing the content of the materials such as including recorded video lectures and increased amount of e-learning.

CONCLUSIONS

The development of new teaching and learning environments are encouraged and supported at Universiti Malaya as the university strives to be an educational hub in higher education in the global community. Fostering creative learning with the support of innovative teaching is becoming increasingly important as we provide adequate opportunities for our students to engage in the real world and make learning environments more exciting and challenging. The university is currently

reviewing its current curriculum to ensure that it offers academic programmes that nurture innovative talents. Skills that include critical thinking, problem solving, communication, cross-cultural awareness and active learning in collaborative environments have a strong focus going beyond the mastery of academic knowledge as we prepare our students for the 21st century. Innovative approaches enhance such learning experiences and encourage the development of new teaching and learning environments.

As the university strives to be innovative in its teaching and learning approaches, methods and strategies, there are several challenges that need to be addressed with attempts to integrate innovations. These are institutional and based on the available resources, accessibility, assessment and contexts as well as the instructor's creativity to select the activities and technology to enhance the learning experiences of students appropriate for achieving their learning outcomes. As we empower our students to develop practical skills and knowledge through the use of interactive and innovative teaching methods, we need to be aware of how their implementation affects student learning and evaluate the effectiveness of such methods in enhancing their learning experiences. The delivery of teaching through different digital platforms can sometimes be challenging and there is a need to examine how academic staff and students respond to the use of such platforms. In closing, future research should examine the different aspects of innovations from the perspectives of staff and students to study the effectiveness and its impact on teaching and learning.

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APPENDIX 1

AIMS University partners

Language & Culture	International Business
BRUNEI • University Brunei Darussalam	BRUNEI • University Brunei Darussalam
INDONESIA • Ahmad Dahlan University • Maranatha Christian University • Universitas Indonesia • ISI Denpasar • ISI Surakarta • Universitas Indonesia	INDONESIA • Binus University • Universitas Indonesia
PHILIPPINES • Ateneo de Manila University • University of The Philippines • University of Santo Tomas	PHILIPPINES • St. Paul University of the Philippines • University of St. La Salle • De La Salle University • University of The Philippines
THAILAND • Chulalongkorn University • Thammasat University	THAILAND • Chulalongkorn University • Mahidol University • Thammasat University
JAPAN • University of Tsukuba • Hiroshima University • Sophia University • Waseda University • Ritsumeikan University	VIETNAM • Foreign Trade University • Hue University
	JAPAN • University of Tsukuba • Waseda University • Ritsumeikan University
	KOREA • Hannam University • Kangwon University