

PERCEPTIONS OF BLENDED LEARNING AMONG 3D ANIMATION LECTURERS AT A  
HIGHER EDUCATION INSTITUTION AND ITS INFLUENCE ON THE TEACHING AND  
LEARNING PROCESS

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**Abstract**

This paper presents a critical qualitative review and analysis of blended learning (BL) in the creative design education environment from the perspective of animation lecturers through examining their observations, shared experience, technology adoption, and perceptions of BL benefits. The aim of study is to understand how design lecturers adopt their teaching strategy to a blended learning environment, and how their challenges could influence the direction of current pedagogical research in the use of BL to teach design courses. Using interpretative analysis of narrative themes, the paper charts the blended teaching experiences of five 3D animation educators at a Malaysian higher education institution (HEI) through qualitative, interpretive analysis. Findings reveal that among the three factors of technology concerns, personal conviction and disruptions, the greatest challenge to perceptions towards BL environment is clarity of management goals, as well as factors like social communication and technical support to ensure educators can cope successfully in adopting digital learning management platforms such as LMS. Significantly, findings pinpoint the challenge of cohesive management policies and directives to address design academics' lack of training and experience in adopting blended learning and designing meaningful teacher-learner interactions. In conclusion, recommendations are provided on how to improve design education blended learning pedagogical models, through emphasising the role of social communication, and to ensure clarity of management directives by redefining the potential of utilising blended learning for robust outcomes in design education.

*Keywords: 3D Animation Blended Learning, Design Education, Learning Management System, Pedagogy, Teaching and Learning*

## **1.0 INTRODUCTION**

The established omnipresence of technology is an inevitable intrusion into the lives of today's generations. The immersive nature of technology in the educational sector has contributed much to increased accessibility of knowledge and while education research has produced mixed findings, this has resulted in further development in digital learning frontiers. The adoption of technology has resulted in greater opportunities for the concept of learning taking place in a distributed environment. One such opportunity is *Blended Learning* (BL), an approach leveraging on face-to-face environments as well as virtual environments through technological tools for teaching and learning. Past studies have found that computerised media technologies do not facilitate effective learning (Graham, 2006); however, more recent shifts have forecast that global digital learning systems would migrate to mainstream status by 2025 Palvia et al (2018). This shift challenges professional educators to consider the practicality in rapid adoption of BL such as technology costs, internet diffusion, and cultural factors such as the digital divide and traditional teaching practices. Discussions in the field has been fragmented over the past three decades of digital education developmental strategies. This bears further examination in the context of managing *higher education institutions* (HEI), as it presents exciting opportunities to enhance learning experiences whilst challenging embedded teaching practices and traditional conventions. Questions guiding inquiry include: *What key factors influence the perceptions of effective teaching and learning in blending learning? How do lecturers respond to the notion of blended learning?*

### **1.1 Objectives of the Study**

To achieve the research aim, and to facilitate the process of inquiry, this study seeks to:

- Provide insights to the factors affecting the adoption of blended learning among design educators in higher education institutions.
- Determine the nature and the extent of 3D animation lecturers' perceived role in a blended learning environment.

This study seeks fresh perspectives of creative design education, an academic discipline that has traditionally relied on the teacher's presence as students' mentoring

guide. The aim is to uncover the scope of concerns and issues that contribute to the blended learning environment for design education courses. This leads institutional leaders to better understand the concerns of design academics and how perceptions of blended learning models challenge their role as the communication interface with students. With the constant flux and disruptions in online education, management solutions for improving the delivery of design courses should consider the value of blended learning from teachers' perspective.

## **1.2 Scope of the Study**

To establish the parameters on this study, the researcher is concerned mainly with the perceptions of instructors in the adoption of BL as a pedagogical approach. 3D animation courses designed for distance learning will not be considered for this study. This paper frames two research questions earlier mentioned to the typology of social learning by George and Walker (2016), who argue that research into the learning new knowledge from specific social situation is a valuable cognitive resource which enables educators to form meaningful learning communities of the future. The focus of research is narrowed to qualitative study at a Malaysian private HEI, which aspires to enhance digital learning through the decision by its leadership to implement BL into their curriculum and academic management system.

## **2.0 LITERATURE REVIEW**

The evolution of digital era has seen an upswell of many potential opportunities to use blended learning delivery, with instructional approaches that involve empowering every educator with every available digital or virtual method to "change the conversation about education and technology" (Schapiro, 2015, cited by Doe, 2016: p.100). Such encouraging opportunities to improve teaching and learning through BL pedagogies and experiences has captured the interest of Malaysian *higher education institutions* (HEI). Implementation of hybrid learning allows for BL to be utilised within traditional classrooms.

As higher education practitioners increasingly perceive technology as a beneficial complement to traditional, face-to-face physical learning, this in turn influences the adoption of BL and has made HEI environments a very dynamic site in understanding BL experiences for educators, students, and the institutional management (Sell, Lynch and Doe, 2016). Tharma Raj and Ramakrishnan (2017) discuss *meaningfulness* of learning outcomes through a framework of variables to engage students, stressing on aspects related to task

variety, significance, autonomy, as well as provision of teacher feedback. The perceptions of BL effectiveness are commonly studied under three areas as follows: the application of *technology*, the role of *communication*, and understanding the *teacher's role*.

## 2.1 Technology

The emergence of BL is closely tied to the development in instructional technology. Blending learning environments, unlike traditional face-to-face settings, has been critically researched for experiential advantages. As studied by Lazar et al (2020), digital educational technologies are helpful in reducing psychological barriers and negative attitudes towards digital anxiety, by allowing greater flexibility, promoting autonomous management of time, access to information, enabling both educators and students to be more responsive and responsible in teaching and learning outcomes respectively.

However, the need for technological support to cope with BL implementation remains a substantial struggle (Dzakiria et al, 2006; McGuire, 2018). Effective online support services are critical as technical resource scarcity could trigger negative behavioural impacts such as reducing perceived learning value. Management may be antagonistic towards changes that challenge core values and practices (Garrison and Kanuka, 2004). BL requires consistent investment into technological skills competencies among academics, who in turn require trained facilitator support, while positive attitudinal change can be shaped through behavioural approaches that emphasise social interaction (Bown et al, 2017; Yamagata-Lynch, cited in Martin et al, 2020).

## 2.2 Communication

Communications is important for any meaningful learning to take place, regardless of the learning strategy employed. A qualitative review by Kilis and Yildirim (2019) stress *social presence* as having a key role in the teaching-learning process. McGuire (2018) claims teachers are taking on more responsibilities to achieve specific BL goals, some of which are contrarian to the practices of traditional pedagogical models of teaching effectively. These studies imply a greater scope of social communication competencies, especially in online modes, to be emphasised. Research shows that a lack of effective interpersonal communication deters the adoption of BL by academics in formal pedagogical delivery (McGuire, 2018).

The implementation of successful BL depends on core planning strategies adapted

and suited to specific learners. While many benefits are gained from hybrid strategies, equally fierce criticisms have arisen against asynchronous approaches, which they argue could hinder active participation among university students who make up large classes for undergraduate courses (Kemp and Grieve, 2014). In their pioneering research a decade ago, Dzakiria et al (2006) examined non-immediate feedback and the presentation of materials to correlate their contribution towards achieving desired learning outcomes. They found interactive communication in asynchronous settings increases the need for *social presence*.

Information overload is another issue that educators face, since distributed learning with general instructions do not necessarily produce critical-minded individuals with thinking competencies (McGuire, 2018: 20). In addition, certain online instructions involving depth explanation of details pose challenges to learners. The instructions may be positively received by some students but pose difficulties to others less capable to receive instruction unless given with hands-on guidance (Martin et al, 2020). Effective blended learning deployment requires participatory learning strategies using simultaneous, “bichronous” application of synchronous and asynchronous communication (Martin et al, 2020). Bichronous communication entails teachers and students to communicate socially at different levels for meaningful learning. To resolve this disruptive challenge, digital education researchers are studying the substantial impact of social communication in motivating students on blended learning modes, considering factors of student expectations and structure of content against institutional challenges (Meşe and Sevilen, 2021).

### **2.3 Teachers' Role**

The deployment of blended learning undoubtedly affects the roles of teachers, whose presence is traditionally thought to be essential in predicting learning outcomes. Dzakiria et al (2006) argue that aside from teaching, BL delivery involves course development, revisions, and assessments. In ensuring this, stakeholders (institutional management, teachers, students) must jointly manage three aspects: *social presence*, *teaching presence* and *cognitive presence* to address learner dissonance and create attitudinal change (Watson et al, 2016). The integration of these dynamics (social, cognitive, teaching presence) in blended learning is helpful in nurturing informal communication among communities that must work collaboratively (Watson et al, 2016: p.59). Online group projects and activities foster learning through enabling gradual confidence building, creating meaningful learning outcomes. BL success is thus dependent on the collaborative roles of teachers, learners,

and institutions.

In the case of design education, Bown et al (2017: p.194) note that design is intrinsically an interdisciplinary practice that connects communities by fostering “participatory cultures”. The adoption of BL in creative art and design education curricula has been discussed from various aspects including technological support, cultural shifts for learners, and the role of communication between teachers and students (Fleischmann, 2020). Design academics, researchers note, are concerned with psychological learning outcomes (attitude and behavioural change, rather than knowledge per se), as these factors determine the degree of guidance and feedback required to facilitate skills improvement and teamwork capabilities, especially for collaborative design courses (Gavilanez et al, in Tucker, 2017: pp.28-54). Given the unique position of the creative learning environment, there is evidence from literature that design educators must be reform-minded in adapting to new learning technologies and virtual platforms to enable both institutions and students to develop positive responses to normative changes relevant for applied practice in creative arts.

### **3.0 RESEARCH METHODOLOGY**

Qualitative methods, unlike quantitative research, pinpoint the intrinsic nature of research problem as the unique focus of study (Creswell, 2013: p.102). Epistemological determination of data is important in qualitative methods as they help reveal recurring themes or corroborating perspectives. Semi-structured interviewing methodology is a useful form of observation of individual’s behaviours, values, perceptions, and cultural worldviews (Rocha, 2021: pp.17-18). Interviews, while challenging to analyse and interpret due to depth of data collected and encoded, encourage participants to share perspectives, stories, and experiences. When interpreted, data analysis could reveal patterns that shows *attitudes* and *motivations* towards the subject, rather than evidence of existing problems. These attitudes are significant as they influence the immediacy and relevance of opinions to *the participants themselves* (Meşe and Sevilen, 2021).

As questions are anchored in real-life scenarios, the key advantage of qualitative analysis is that insights signify authentic attitudes and behaviours while contextualised to help the researcher understand broader social and cultural factors (Palvia et al, 2018). Interviews utilising a semi-structured approach with open-ended questions enable participants to explore their opinions on a subjective paradigm.

Probing questions allow participants to clarify their opinions and to provide acute contextual views, while enabling the researcher to take a reflexive position and to use interpretive paradigms to understand attitudes of a social group towards the studied phenomenon (Creswell, 2013). The negative aspects of qualitative interview as a research method are found in subjective interpretation, including pre-existing biased opinions towards verbal language and behavioural nuances shown during interactions that might affect outcomes (Rocha, 2021: p.4).

### **3.1 Participants and Setting**

Participants of this study are five full time lecturers in a private higher institution in Kuala Lumpur, Malaysia. Their ages range from 30 to 40 years old. Four participants were males, one a female. In terms of years of teaching experiences, they range from 2 to 3 years (two participants), 8 to 10 years (two participants), and 16 years (one participant). Each participant was assigned courses that varies in content and objectives. Each was assigned to teach at least two modules related to 3D animation, with a maximum of 4 modules for the semester. Each lecturer was briefed at the start of the semester to update their respective classes in the LMS.

To provide background context, the university had initiated LMS two years before this research. Thereafter, directives were given to implement BL through the academic management system. A training session was organised whereby the features and benefits of LMS were explained. Guidelines on the long-term goals of BL implementation were vaguely outlined. This study represents the state at which lecturers had received the basic guidelines. Transcription of lecturer interviews was performed through listening to recordings. Transcriptions were then sent to participants to be reviewed. Participants' responses are categorised into two main narrative themes in this analysis. Some participants contributed substantially when discussing specific themes, others spoke more generally, resulting in balanced contributions to the two themes. Hence, the voices of the participants are well represented in the study.

### **4.0 RESULT AND FINDINGS**

Thematic analysis is applied to categorise findings by codifying narratives from interview data collected. Two main responses will be discussed in this section, as expressed by the participants: those practicing blended learning, and not practicing blended learning.

#### 4.1 Participants Practicing Blended Learning

Throughout the interviews, “hands-on” teaching was frequently implied in responses. “Hands-on” is defined as practical or applied knowledge through guided repetition. Participant 1 (P1), Participant 2 (P2) and Participant 4 (P4) are practicing blended learning in their classes.

P2 defines BL as *“using digital media like online, videos or anything that you can send through the Internet for students to learn.”* This suggests an emphasis on the usage of technology to teach, which correlates with a positive outlook in the adoption of BL. In a teaching career spanning nine years, he has had opportunities to practice the approach.

P1 defines BL as *“[the] mishmash between traditional learning and digital learning.”*

Citing that the adoption of BL has been “natural” in the process of change, he believes the nature of 3D animation education has an impact on the tools used for BL:

*“For 3D animation, most of our teaching methods has to be hands-on. Unlike science subjects that require lab and other purpose-built facilities, animation students can fully use the LMS to access tutorials, send work in progress for feedback, and share their opinions with others as they develop skills to animate.”*

This second view contextualises the nature of creative learning. The distinction of “hands-on” learning for creative design curricula suggests the importance of developing *independence* in learning skillsets required for creative disciplines.

P4 understands BL to be *“different ways to teach and to reach the student.”* He attributes BL as the means to communicate with learners through various mediums. Thematic analysis on these two sets of responses found three identifiable factors: *Technological Concerns, Personal Conviction* and *Disruptions*.

##### 4.1.1 Technological Concerns

Differing positions on technological considerations are notable, where comprehensive end-to-end technical support for LMS application and equipment availability is perceived to enhance BL effectiveness. P2 stated: *“Fast Internet line that would be one, a big screen*

*with good microphone would be great. And a platform to upload teaching-related files, a reliable server, and so on.”*

For collaborations, high-speed Internet connections are crucial, as P1 states: *“Online resources are plenty ... I think every collaborative project needs them.”*

P1 spends a fair amount of time organising online content for his sessions. P4, concurring with P2 and P1, mentions the need for video resources, online forums and so on. However, his response reveals a general scepticism:

*“I think at most I will use online discussions to interact with students but face to face, that is the most important to me. I am a bit old school and so online way of learning I found to be not so effective. But for communicating directly on changes on schedule and keeping in touch, I would use social media.”*

#### **4.1.2 Personal Convictions**

P1 mentions additional workload in lesson planning was required but is not deterred considering the benefits.

*“Yes [the amount of prep work is higher], but I believe once we get to know the additional advantages, then this shouldn't be a problem.”*

Acknowledging the possibility of resistance, he advocates training and exposure to ensure proper grounded understanding of the concept.

*“It depends on whether teachers take personal interest in using blended learning. Proper training takes time to see whether they're really committed. I feel that only with commitment to this can teachers engage students in their classroom.”*

On the other hand, P4 stated that clear operational guidelines of BL would foster stronger support for its adoption by academics: *“I think it's better that someone actually [shows] how it is helpful. Then I will try it, but if [left by] myself to learn, probably I won't heavily practice blended learning.”*

This reveals that self-initiated efforts to adopt BL without sufficient guidance could

deter BL adoption. P2 states: *"I have been continually adapting and gradually familiarised with it during my teaching career."* This appears to be a testament to his personal commitment as to BL's relevance in legitimising his teaching credibility.

#### **4.1.3 Disruptions**

Since BL teaching disrupts what educators may have been familiar with in traditional face-to-face teaching, and how different students perceive the quality of experiential learning, acute empathy was expressed. Participant 4 shares on how BL affects delivery:

*"If providing or showing examples, I can just copy a link and send the link to the students. But if I am explaining processes involved part by part through online tutorial, simply viewing it by themselves makes it very hard to totally understand."*

Another form of disruption is behavioural adaptation to change, as lecturers need to come out of their comfort zone and approach things differently. P1 elaborates:

*"It's a matter of change in their mentality. We need to break out from this resistance to using LMS. By gradually adjusting, I think teachers will understand how empowering it can be."*

P2 saw the fruits of blending approaches to learning and teaching at the beginning of his career, and this had reduced disruptive elements in adapting to BL delivery.

#### **4.2 Non-Practicing Blended Learning**

Participant 3 (P3) and Participant 5 (P5) did not adopt blended learning in classes as both stated they were unsure of the benefits of such teaching strategies and institutional directives. Neither had they inquired the management on the possibilities of adopting blended learning in the future.

##### **4.2.1 Technological Concerns**

P3's classes consist mainly of hands-on demonstration of art materials, techniques as well as observation of transferable skills. He expresses concerns about contrasts between technology and face-to-face sessions:

*"Yeah, I think face-to-face really is more holistic because camera angles in tutorial videos only capture one or some aspects, but when you are in class, that becomes 360 degrees. They could move around tangible materials and objects, but when online, can*

*you move around them personally? Something is lost in that translation.”*

P3 highlights concern with ineffectiveness, whereby students' habits of online interaction could disrupt thinking and processing information. This indicates that technology could result in information attrition and affects the learning and teaching process. P5 echoes the need for good Internet speed and is critical of the state of current Internet services in the country: *“Internet. One thing is that in Malaysia, the Internet is not really that good.”*

#### **4.2.2 Personal Convictions**

Although the majority of classes that P3 teaches are hands-on, he expressed a belief that blended learning can be adopted for tutorials:

*“Lectures are okay, I mean you capture the lecture [by showing] slides online. Teacher doesn't need to be with you. But demonstration is ... like washing the car, something that is so manual, I think things will be lost through technology.”*

He reinforces the opinion that hands-on demonstrations favour face-to-face sessions. P3 is in opinion that blended learning can be adapted for lecture-based subjects. P5's opinions differ sharply from P3's.

*“But for theory subjects like Art History is does not work because it needs more explanations, and you need students to be there in class to grab their attention.”*

P5 believes that reinforcements during lesson review and personal learning time is crucial, but indicates uncertainty over some aspects, such as theoretical lessons.

*“For software-based lessons I am ready to go, but for theory basics, [I'm] not ready yet. I still need to practice or maybe we need time in a semester to see if our teaching method [works] or not. But software ... I don't think it's a problem to rollout for blended learning.”*

#### **4.2.3 Disruptions**

P5 affirms her belief that the applicability of technology in classrooms, instead of causing

disruptions to be learning, can greatly benefit lecture-based classes:

*“I think video [works] for theory. Say I’m teaching Art History and discussing some important paintings. I only can show them the painting with very low quality. But if I get the video that shows great details, this can help. But you still need a class for proper teaching of theory.”*

P5 believes hands-on subjects that employ the use of software would be able to quickly adopt to blended approaches:

*“For me, to teach software like 3D...Maya or 3D Max, the lessons in class [are] not enough, maybe in between 3-hour class for one tutorial, they might forget the steps of modelling or texturing after the class [finishes]. but in blended learning they can replay the video if they don’t remember the steps or have not practiced certain steps.”*

P3 echoed the notion of learner resistance: *“Especially something that is [new] ... I think everything problematic has to be fully addressed.”*

Recognising this deficiency, P3 questions the readiness of the students’ daily communication interaction methods, to be able to adapt:

*“I realised, no doubt students are super connected, [but] they are actually very fragmented. To ask them to learn how to use the system is already a chore. We haven’t reached critical mastery of learning online, unlike Facebook, where it’s a daily thing they are logged in to, to check on stuff. Blended learning to them is like ... my God, asking them to check email is already a real problem. Some don’t even know it, no doubt they are full-fledged superfast.”*

## **5.0 THEMATIC ANALYSIS OF FINDINGS**

The use of thematic analysis is to enable identification of themes found in interview data sets, and to show linkages in participants’ attitudes (Blandford et al, 2016). Thematic analysis is discussed in two parts, namely lecturers’ perceptions towards blended learning, and the influences of blended learning towards students’ learning.

## 5.1 Perceptions

This section describes lecturers' attitudes towards blended learning. Participants were asked to provide a definition of BL. Responses ranged from the use of technology-based teaching aids in classrooms; social networking to communicate with students; the combination between traditional learning and digital learning. Two participants were unaware of the terminology.

P1: *"This is my own thought. The word blended itself means we can engage the class in a traditional way while blended ... while blending some technological advantages to the lesson itself."*

P2: *"Blended learning is using, you know, digital media like online, videos or anything that you can send it through the internet for students to learn."* At the time of the interview, P3 and P5 stated they were unaware of the terminology and precise definition of blended learning. However, both attributed technology as a component of BL. In general, interviewees defined blended learning as "technology for teaching" that is different from the face-to-face classroom sessions.

P1 states that he utilised some components of LMS for online activities: *"The LMS is a platform to put all my [teaching] items... I use Socrative to play a little game with them and maybe ask questions about subject knowledge. I give them explanation for their answers"*. The use of technology is perceived by P1 to be directly associated with, and is in fact, a necessary component of, student engagement through BL.

This contrasts with the views of P2 who supervises final year graduation projects: *"I use online to check on work in progress. If the file size is too huge, they upload it to Dropbox or a cloud storage so I can download and have a look, at home, or anywhere ... even through my phone. I then give them my feedback."*

P1 and P2 described extensive usage of different platforms for classes. P2 and P4 affirm the use of technology to communicate beyond designated learning time and place. P4 spoke on improving communication with students:

*"Face-to-face and online forums for assignment discussions can be helpful, but ... I like face-to-face, so online, you know, not so effective to me. But it's easy to stay in touch online. Facebook is*

*the best way to reach students if, say, I have schedule changes.”*

P3 teaches graphic drawing subjects in the institution. He interacts mostly with students in the studio. His classes consist of dry and wet art materials and observation tutorials. He also teaches lecture-based subjects such as Art History. On the university's usage of the *Learning Management System* (LMS), he states:

“I think there's a varying degree of success. In helping students improve drawing quality, the LMS doesn't make sense as a support tool. They are not going to gain watching a video teaching when I see them every other day right?” [This interview was conducted before Covid-19 pandemic quarantine commenced in Malaysia in mid-March 2020.]

P3 concludes: *“Regardless of what tool, so long as I deliver or communicate the message right, I am doing my job, you know.”* He advocates for proper considerations for specific teaching requirements before adopting online teaching pedagogy and the use of LMS.

P5, as the youngest participant, had been at the university for a year. She had lectured at a prior private institution. She was unaware of the university's directive: *“I use online videos occasionally, maybe to show certain aspects like how art museums look like.”* For her, the use of quality media enables learners to visualise concepts and locations.

Participants were asked how BL has affected their roles. All noted that changes have gradually taken place. Their responses were varied, indicating the degree of perceptible changes which have occurred in the process.

P2 states: *“I think not much difference, the roles will still be the same. You know, blended learning or not, lecturers still have to guide students. Just different methods, different tools, different approach.”*

P5 reinforces this perception, that changes do not affect lecturers in a drastically negative manner. Nevertheless, the increase in self-responsibilities and self-guidance marks one of the changes faced by P1: *“More of ... exploring I guess, exploring the capability of the LMS and blended learning method. I am still in the exploration mode. Actually, there are a lot of things you can do with the LMS. It can enable lecturers to be effective, but I don't have the time. I just go through the basics although I am aware there*

are more”.

Fundamentally, the primary role of lecturers as facilitators and gatekeepers of knowledge is not affected by BL. P3, on the other hand, foresees drastic changes.

*“I think our role will recede eventually. Once content is online, learning actually ‘begins’, I guess. It reaches masses through sharing platforms, so who gives it much thought? Quality of work [won’t] really matter anymore. [Assignments are] just a title of your work, just an idea. If someone creates, they are self-learning. Lecturers will no longer be needed.”*

## **5.2 Influences**

In terms of influence, participants who did not practice blended learning acknowledges the inevitable adoption of technologies in living and learning. While blended learning allows learners to repeatedly access learning materials, a flexible or less-structured mode was a subjective positive outcome. As Participant 1 states:

*“Well, everything is going digital already so for students in this era, some of them might not even read books or journals at all. Some do like to fiddle around online rather than just reading pages from textbooks when they are learning. So, flexibility is good, right?”*

P2 defines this flexibility as a potential benefit in teaching: *“... It it’s a short animation project, I do give my students the flexibility to show their step-by-step progression online.”*

P4 views BL interface as an opportunity to ensure constant communication rather than delivering lessons: *“It’s easy to reach the student that’s why online helps us keep track on any changes on schedules so as to keep in touch with students.”*

Flexibility was reinforced by P3: *“You could play [tutorial videos] over and over, but I guess that is only one good [aspect] about it.”*

Another aspect that emerged from the study was social presence. P5 insisted: *“You need the students to be in class to grab their attention. Instead of doing online, because they might get [bored] and just ... they just watch and listen halfway and yeah...”*

Similarly, P3 indicates the human factor is less prominent in blended learning. *“Even with communication technology, there is this lack. It’s not as immediate as showing nuances that simply cannot be captured by video.”*

P3 draws an analogy between mediated learning with a ‘live’ musical experience: *“Online you lose the chance for in-between jokes, gestures and all the jazz of being live. It’s like listening to a CD versus going to a concert. You know why people pay thousands to attend a concert when you can just listen to the CD?”*

This reflects the gap in blended modes of learning that removes the presence of lecturers and their spontaneity in responses or behaviour.

Spontaneity is a weak characteristic of BL as shared by P4: *“I think when face-to-face, they talk and expresses more. If they have questions on the spot, they usually voice out. Sometimes I can straightaway demonstrate the solution or clarify problems. Whereas if online, there is a limitation to showing something valuable and personal.”*

According to him, social presence correlates with the immediacy of responses from students and spontaneity to help learners understand. P1 responded similarly, stating his preference for face-to-face sessions as main instructional mode.

*“I need to demonstrate in front of them, how the animated visuals are supposed to run, and how to navigate to software functions. Sometimes the students may face problems in locating certain buttons or maybe they accidentally press something. I still need to demonstrate to show how to troubleshoot or solve something.”*

Through face-to-face sessions, he is able to respond immediately to queries and limit the misunderstanding that might occur during the teaching and learning process.

P2 differ in terms of social presence and offering immediate responses: *“Another thing I like is giving online feedback. I mean the immediate feedback ... they ask me for suggestions, and I can immediately give my response online.”* This suggests that there a level of spontaneity in responding through blended mode is a distinct characteristic of the new mode of learning, which is contrary to the responses of other participants.

## 6.0 DISCUSSION OF FINDINGS

Two research questions earlier mentioned were: *What key factors influence the perceptions of effective teaching and learning in blending learning?* and *How do lecturers respond to the notion of blended learning?*

Thematic analysis was applied, anchoring on themes of social, teaching, and cognitive presence. Data produced overlapping findings. Interviewees often answered in the context of more than one theme concurrently, such as personal commitment to blended learning and ability to overcome issues on their own.

A key finding on technological concerns is the overall perceived view of the design lecturers is that the availability of high-speed Internet is critical to implementing blended learning and online education effectively.

In the overall analysis of lecturers' personal convictions to adapt to their evolving role as learning facilitator, data uncovered deterrents in the form of unclear management and operational guidelines in resistance to utilising blended learning, but also a level of personal commitment and willingness to solve technical and operational issues. In these situations, the factor of committed technical support given to academics facing interactional difficulties online would be helpful to overcome cognitive challenges of online delivery. Thus, a correlation can be seen with Kilis and Yidirim (2019) and Watson et al (2006), which suggest the joint management of *social presence*, *teaching presence* and *cognitive presence* for more meaningful learning outcomes.

Disruptions are critical challenges uncovered in the course of analysing participants' attitudes. While the limited availability of resources for theoretical-based subjects was pointed out, for practical curricula, it was interpreted from their apparent awareness that tutorial materials for animation teaching are much more accessible. On the other hand, the consensus among participants seems to be that the face-to-face approach is more effective for teaching design subjects that use traditional graphic medium. The ability to gauge the class and to customise levels of explanation varies; *teaching presence* during face-to-face instruction is thus needed for undivided attention.

However, in sum, varying practices and technical skills mastery shows a conflict of opinions among those teaching theory subjects and those in instructional skills practices,

indicating there is a need to minimise disruptions to learning in blended mode by providing guidance and time allowance to transition from pre-implementation of BL system through trial, and to assess effectiveness post-implementation.

The findings on perceptions towards blended learning and influence on academics' response indicates that online interactional teaching approaches challenge the role of lecturers as the gatekeeper of knowledge by de-emphasising their importance and lessening their role. The result is that blended learning creates a level of resistance to the notion of facilitator, but not the idea of technological use for education delivery.

While digital sharing and online content reaches a bigger base of learners, social presence is a continued concern, as the psychological effect of teacher presence is directly linked to student motivation and satisfaction, especially if team projects were the basis of assessments (Tharma Raj and Ramakrishnan, 2017: p106).

Participants reported a wide array of responses towards BL and the way it influences teaching and learning for 3D animation teaching. The significant aspects that emerged in this study were the clear division of responses into two factors: flexibility and presence.

Flexibility of technology enables learners to choose the approach which improves effectiveness of learning. Flexibility is defined by the free will choice that a learner has in the space they best engage learning in. However, flexibility has its advantages and disadvantages. Participant who did not practice blended learning were unsure whether flexibility could truly and effectively inculcate independent learning.

Social presence of teachers to command attention is another crucial factor that could be lost in online learning modes as opposed to face-to-face contact, resulting in perceptions that certain courses may be disadvantaged delivered in blended learning mode. In addressing the concerns of practitioners of design education, qualitative responses show a perception that blended learning could not fully replace face-to-face guidance in design learning. The mention of asynchronous/synchronous communication tools shows that while convenient, some academics still favour the advantages that social presence which face-to-face sessions offer, which results in perceived higher quality learning. This concurs with Martin et al (2020), who found that the favourable environment of "bichronous" online learning help facilitate social communication, besides playing a significant role in developing

interpersonal competencies as a socio-psychological element that makes delivery more effective.

## **7.0 RECOMMENDATIONS AND CONCLUSIONS**

While design lecturers have expressed generally positive perceptions, there remains an uncertainty of what underlies BL practices and even in clarifying its definition. Technology utilisation in classroom setting is perceived to be beneficial as part of the new suite of instructional approaches, yet its pertinence in the revolution of education have also blurred understanding between teaching with technology and the objectives of BL. This has not deterred educators from attempting to deploy BL, resulting in the strong uptake of desire to be trained and well equipped, but some recommendations should be considered. Clear management policies are important to foster uptake of, and engagement with, BL.

Study result suggests that for blended learning of design courses, clear directions, purpose and tools or skills must be provided. This concurs with Tharma Raj and Ramakrishnan (2017) that design education quality must be the underlying foundation for successful BL. Meaningfulness of digital learning comes through various pedagogical approaches. Concurring with Sell, Lynch and Doe (2016), learning in blended modes need to consider the right delivery solutions and methods to achieve “purpose-fit”. Based on findings, the assumption about successful BL is founded on new competencies and skills of digital adoption, closer teacher-learner communication, and interactional strategies.

To that end, the distinctions between content delivery and operational challenges should be critically addressed before rollout of BL to clarify the institution's objectives and agendas, and to strengthen perceptions about the institutional readiness to change. This study also indicates that training is required to establish standards and guidance policies, to ensure educators clearly understand the purposes for BL adoption.

Anchoring on the qualitative findings of a HEI implementation of BL strategy, this study has identified critical issues in understanding existing and emerging challenges in facilitating BL. As findings affirm, blended learning is here to stay among Malaysian HEIs as it utilises the best of face-to-face and online or virtual instructional approaches, although communication beyond designated learning time and place must be further researched.

Despite demonstrated benefits, it is undoubted that HEIs have unique operational dilemmas in effective BL implementation. Local HEIs are pressured to carry out their

responsibilities as digital era educators and to remain relevant in changing times. Whilst the research strategy for this study has omitted examining current technologies available and other technological accessibility aspects to fill the gaps of digital teaching skills among higher education practitioners, it is recommended for HEIs to focus on helping academics cope with different instructional technologies and to clarify its vision for adoption and implementation of BL in fulfilling their larger educational mission.

Ultimately the success of BL adoption among design educators is dependent on technological proficiencies and understanding of hybrid learning pedagogy in the context of design education. Of no less importance is the institution's technical support for educators in adapting to BL. Clarifying educators' confusion sets the stage for the potential of BL to be better recognised. Evidence advocating the benefits of collaborative, authentic blended learning approaches are predicted to become more than a discrete option, but a preferred experience among both educators and learners in the decade ahead.

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