

# Hybrid Learning for Educators and Students: A Review Study

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**Abstracts:** In this post COVID-19 pandemic era, Hybrid Learning (HL) has been identified as a proficient approach to education by many scholars. During the final stages of the pandemic, stakeholders in the education sector faced with the challenges to adapt and accommodate both in-person and online students simultaneously. Hybrid learning is now common to educators and students in higher education. The purpose of this paper is to examine the perception of educators and students on hybrid learning through the review of recent HL related literature. Literature suggests some challenges of HL for students and educators. The need for design of HL such as integrating the presence concept into hybrid classes is essential. Both parties' viewpoints on HL can serve as an input for decision makers for better policies and outcomes on higher education systems, especially on hybrid and flexible learning. More research on the 'presence' concept are to be conducted to create a conducive HLE in the digital era.

**Keywords:** Hybrid Learning, Educators, Students, Perception.

## 1. INTRODUCTION

The COVID-19 pandemic that emerged over two years ago caused a global shock, leading to widespread shutdowns and disruptions in various sectors. It has affected various industries, including the education sector, which led to the implementation of better education technology initiatives. To overcome the challenges raised by school closures, schools and universities have transferred to online education and embraced technologies that facilitate distant learning techniques. During this era, Education 4.0 was introduced in a sense to reduce the problems of distance learning. The affordance of computer-mediated communication and collaboration technologies based on video technology such as Zoom, Google Meet, Cisco's Webex, and Microsoft's Team have enabled hybrid and flexible work arrangements. However, the use of these technologies are more obvious in workplaces that have embraced a more flexible and hybrid work culture and policy (e.g. Florsheim, 2022; Vargas-Llave et al., 2020) for workplaces. In the education sector, higher education institutions are expected to meet the demand of industries for producing more relevant and digital capable graduates. Should higher education be prepared to train graduates to be more agile, hybrid and flexible for future workplaces?

One of the emerging trends of Education 4.0 is the Hybrid Learning Environment (HLE), and the academic key players such as educators and students are responsible for determining the productive use of hybrid learning technology in this environment. Hence, this paper is focusing on the perceptions of these key players. The purpose of this paper is to examine the perception of educators and students on hybrid learning through the review of the recent HL related literature. The viewpoints of both parties on HL can serve as an input for decision makers for better policies and outcomes on higher education systems, especially on hybrid and flexible learning.

### 1.1. Definition of Hybrid Learning (HL)

HLE is defined as a space that comprises an online platform as the venue for learning and students are either in online or face to face mode while the educator is in face-to-face mode (Ulla & Perales, 2022; Pham & Pham, 2022; Driscoll, 2022; Cheerapakorn et al., 2023). Huzinga et al. (2022) coined the term Hybrid Virtual Classroom (HVC) as the same meaning as the term Hybrid Learning Environment (HLE).

The introduction of Hybrid Learning (HL) is has been anticipated by various stakeholders in the Malaysia

education sector (Izhar et al., 2021). A HLE integrates technology into the traditional education system. Singh (2021) added that, besides the platform, HL could enhance the learning experience and maintain consistency in learning. By integrating two learning modes that are complementary to one another, this mode seeks to maximise the advantages of learning (Pham & Pham, 2022).

## **2. Perceptions of Hybrid Learning (HL)**

The meaning of perception is how some things or entity are understood or interpreted. Perception is also defined as the awareness that one has through the use of senses. Philosophy, psychology, and cognitive science all define perception as the act of becoming aware or understanding of sensory data (Pham & Pham, 2022). The following reviews present the students' and educators' perception on HL.

It is essential for students and educators to improve learning and teaching techniques by using technology in the current digital age, especially to normalise their post pandemic lifestyle. It is not only because of the pandemic, but also due to other reasons such as the digitalization era, global warming, new variants of disease and demand from working students. Considering these issues, the existence and implementation of technology currently keeps the educational system running (Haleem et al., 2020; Zhang et al., 2023).

Although there are many ways to create and define an HLE, the common element is the incorporation of both online and in-person activities. A synchronous session lasts the same amount of time whether it takes place online or in person whereas an asynchronous session enables both modes to view the class recording online at various points throughout the lesson.

During classes, educators have the opportunity to respond in person towards the students in their class, however for students who are online, educators need to use other learning tools for interaction. A face-to-face session allows participants to predominate verbal communication; frequently using visual cues and nonverbal body language while the online interactions just include written material and virtual communication without the aid of any body language (Pham & Pham, 2022; UNESCO, 2022; Doghonadze, 2021). Even though there is a video conferencing interface to replace the actual form of physical presence, it is still not the same as the real face to face presence.

### **2.1. Review on Students' Perception of HL**

A few studies that investigated the perception of students in an HLE have been done. One key principle in HL (or any mode of learning) is the students' background and their preferences are crucial in determining their learning satisfactions.

In a study conducted by Hall & Villarel (2015), four components stand out as potential indicators of students' perception in terms of motivation and comprehension of the course. The four indicators are organisation and flexibility, online activities, interactive classes, and balance. All of the elements found in the study should be able to assist students in their learning process. The perception in hybrid learning environments differs depending on the field of domain.

Another research about perception investigated students' perception of the usage of HL systems in the context of speaking courses for non-English major students. Anabel et al. (2022) found that students who do not speak English well were anxious about trying the HLE for the first time. The students were not well equipped with devices. Besides, they lacked motivation and had poor time management skills to participate in an HL class. The findings of the investigation concluded the students were not convinced that online learning could help them to learn English and at the same time they were unable to focus on using the hybrid platform for communicating with their lecturers and in class classmates. The digital resources and communication tools they employed in the speaking class during hybrid learning included Zoom, YouTube, e-books, digital dictionaries like Google Translate, and English-learning websites like esl.lab.com. The students had spent a considerable amount of time using these communication tools.

A usual setting of a group of university students using HLE has been investigated during the lockdown of Covid 19. From the research of Pham & Pham (2022), it is found students enjoyed the flexibility of learning mode as they can be online or in class. Students who were in class liked the idea of the classroom becoming quiet since the class had fewer students compared to before when everyone was in the classroom. As for students who were remote, they enjoyed being in their own space as it helped them to overcome the fear of conducting presentations in front of the class. By being in their own space, HLE also gives opportunities for remote students to control their learning environment. The perception of students in class of HL is different than the students in remote because they want to have face to face communication with lecturers as it is more convenient for them. However, a number of students from both modes concur that HLE excites them about learning more because they can blend synchronous and asynchronous learning by using interactive tools such as polls, quizzes, virtual game and video conference.

Istinjanto's (2022) analysis of his research identified four elements in students' perception of HL when students are on face-to-face mode which are: 1) learning effectiveness, 2) existence of social interaction with teachers and peers, 3) experiences of living on campus, and 4) physical wellness. The study also stated students' perception of HL when students are on online mode which are: 1) the effectiveness of online learning, 2) flexibility, 3) new learning technology, 4) efficiency, and 5) green computing. The study concluded students accept HL to exist in future teaching and learning plans.

Findings based on Raes's et al. (2020) research reported that remote learners perceived a feeling of being uninvolved, neglected and frustrated with technical issues, as they were not able to be 'physically presence' in the class. The Involvement Principle should be included in the design of hybrid classes. Students should receive comparable learning experiences regardless of their location. Raes et al. (2020) further explained students' behaviours via online tend to be passive, listening to their instructors like 'watching a television', as opposed to attending a class session. Hence, students in remote places should be more disciplined during HL.

## **2.2. Review on Educators' Perception of HL**

Another crucial stakeholder in the HLE is educators. Understanding their perspective and thoughts on this new teaching style is vital. To ensure the effectiveness of the educational process in the teaching-learning context, it is critically necessary to examine instructors' point of view (Radhyi & Usman, 2022).

In research conducted by Annabel et al. (2022), educators had to redesign the (hybrid) learning method by adding other learning aids and models to the class. This research was applied to a special learning context which is the English language. By using only online platforms, the students were not able to follow the content provided by educators. Some students had issues with connectivity when their internet was weak. Then the learning process became slow because students missed out the pronunciation given by educators. Within this situation, educators had to incorporate instructional aids such as the Audio-lingual method and Present, Practise, Produce (PPP) framework to the learning session. To enhance the learning process and provide students with fresh experiences and educational possibilities, educators are encouraged to experiment with various models of learning and technology (Singh, 2021).

Overall, educators are more than ready to explore technology opportunities to conduct their classes (Radhyi & Usman, 2022) although they face challenges in handling technical and coordination issues (Raes et al., 2020). Quality of the teaching is partly dependent on their competence in using the technology. Usually, they ought to be proactive in testing the technology and evaluating their teaching design and outcomes constantly.

### **2.2.1 The Needs of Designing HLE**

There is a growing trend towards creating an effective HLE since education technology is advancing and co-existing with traditional learning. Higher education institutions are depending on the growth of education technology to sustain learning in this digital era (Singh, 2021; Izhar et al., 2021; Radhyi & Usman, 2022). Experts of teaching advocate the better design of HLE.

Research has been made in an IT course where students who are online and face to face participated in team-based problem-solving exercises in class and finished online assignments at their own speed (Woodworth & Applin, 2007). An additional investigation from Bonakdarian et al. (2010) on HLE in a computer course which applies synchronous technologies to maintain online and face to face students' participation. The instructional approach combined online and face-to-face learners in the same class by utilising synchronous technologies as a means of enhancing learning.

A hybrid approach classroom needs a few supportive learning tools. First is the internet connection for linking students in face to face mode with students in online mode; the internet connection functions as the 'heartbeat' that enable learning from anywhere, including at home (Pham & Pham, 2022). Secondly, suitable devices to be used during class sessions such as laptops, a computer lab, smart phones, tablets, and a smart screen are needed in order to create the HL session (Pham & Pham, 2022). These devices need to be supported with online learning platforms such as video conferencing software, quizzes and game software and many more. The use of multimedia products in the classroom aids in the perception and assimilation of current information, boosts students' mental development, sparks their interest in the subject, and supports their independent and imaginative quest for novel concepts (Kotiah et al., 2022). In this situation, educators can promote a two-way communication, consequently enhancing their students' engagement in class within two different modes.

## DISCUSSIONS

Due to the fact that HLE requires the use of new technologies, there will be difficulties and hurdles in adopting this innovative model of teaching and learning. Moreover, prior research has not provided conclusive results regarding the HL approach and characteristics that could encourage or dissuade students from studying using face to face, online, and hybrid learning modalities (Istinjanto, 2022). It is hoped that this paper is able to identify the reasons that made students or educators feel demotivated, which is one of the major challenges in HL.

Internet connectivity is essential for HLE. One of the first issues that the research has identified is the unreliability of the internet network. The learning process is interrupted because of the poor internet connection that happened during class session (Anable et al., 2022; Pham & Pham, 2022; Radhyi & Usman, 2022; Doghonadze, 2021; Palmer et al., 2022). It serves no purpose to have an HLE that requires participants to access the internet from anywhere in the world unless there is a good internet connection. It is quite different from the educators' perspective, whereby they have access to stable internet connections as the classroom is often equipped with hybrid technologies facility (Anabel, 2022). At some point, lecturers have to wait for a few more minutes for all students to be online with reliable internet connection and this can make learning become slower.

Students who are on online mode found that they were not engaged in remote class compared to when they were face to face (Pham & Pham, 2022). This is supported by a data analysis from Huizinga et al. (2022) in which the educators pointed out that online learners are less engaged in lessons, which changes the climate in the classroom. Students' engagement in class is very crucial especially when the students are remote.

Engagement with participants is one of the components of the learning process in the Community of Inquiry (COI) paradigm (Garrison, Anderson & Archer, 2001). According to the COI, participants' engagement is related to the content, peers and educators. For COI, the concept of social presence is crucial. Garrison & Anderson (2003, p. 28) said, "...social presence in an online environment can be defined as the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people with their full personality". Historically, Gunawardena (1995) and Gunawardena & Zittle (1997) did some research on social presence where their findings showed that social presence has been a strong predictor for successful learning environments and actual learning by students.

In a study conducted by Anabel et al. (2022), it has been found that the students' participation in online mode often lacked motivation and time management. It took the students some time to transition from in-class to online mode, and it also took them longer to get fully engaged in the learning process. Educators too experienced this lack of motivation when they had to devote additional time to prepare for the class (Doghonadze, 2021). In addition to

this, there are some educators and students who have not yet grasped the use of online platforms for HL.

## CONCLUSION AND THE OUTLOOK OF HL

The Ministry of Higher Education Malaysia has just released a statement stating that HL and flexibility will be one of the 5 initiatives to attract youngsters to further their studies at tertiary level (MOE, 2023). HLE have long been mentioned in various studies, making them a viable option to take into account in the future of education. This study takes consideration of both stakeholders' perspectives regarding HL experiences.

The recent advanced technologies in artificial intelligence (AI), multimedia and image processing, immersive technology (virtual reality, augmented reality), online video conference applications, learning management technology and its expansion to MOOC technology, and many other messaging or social media applications have transformed the landscape of education. Digitally improved content presentation, analytics, and content recording and video technologies enable flexible learning in higher education. Students need more personalized content and immersive experiences. The recently launched of Apple's Vision Pro technology on spatial computing has made possible the creation of 3D rich and spatial environments for enhancing the experience of communication and presence in the virtual environments. More research on the 'presence' concept is to be conducted in order to create a viable HLE in the digital era.

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