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Student perspectives of hybrid delivery in a transnational education context during Covid-19

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Abstract

The Covid-19 pandemic created the need for (often rapid) transitions to online delivery in many higher education settings. As the world transitioned to living with the pandemic, the need to adequately support students with health concerns about returning to campus, either for themselves or those with whom they were living, plus a range of other access issues, created the need to shift to a hybrid delivery mode in many places. This study examines the student experiences of hybrid delivery in a TNE branch campus in the United Arab Emirates and their suggestions for how hybrid delivery could be improved for future delivery. The study employed open-ended survey questions to ask about the most effective, least effective and improvement areas from students who were enrolled in hybrid courses. The responses were analysed, and after examining the data provided in the survey, some measure of success in implementing a hybrid delivery model has been identified. However, a number of areas for concern were also raised in the responses. Additionally, students also identified solutions to some of the problems to improve the quality. Issues with technology, engagement, support and the benefit of remaining online in hybrid mode were some of the least and most effective issues raised by the students.

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Introduction

Many changes were thrust upon the world during the Covid-19 pandemic, and this was certainly true of the education industry. The delivery of classes during lockdown periods presented educators with many challenges, one of the most problematic being the organisation of seamless class delivery to home-bound students (Jena, 2020). Universities had to continue teaching their students with little certainty regarding the possible length of the lockdowns in various parts of the world. There was a need to prepare for continued operation, possibly for the long term, and institutions had to act very quickly to do this. Universities turned to a variety of platforms designed to facilitate remote education and provide the means to deliver classes to students live and online. Even with the availability of high-speed internet in many locations, there were difficulties with this delivery format (Dietrich et al., 2020). During the pandemic, maintaining social distancing during delivery has been vital and doing so while also providing a successful and engaging learning environment has also been an area of experimentation and research. Available research stresses that student engagement is impacted by a range of factors, including learning environments (Raes, 2022). That is why research regarding the experiences of remote and socially distanced learning is vital. Along with the ease of online classes, challenges also arose in this delivery format for students, lecturers, and universities. According to a study conducted by Shuchi et al. (2021), the disadvantages of online learning exceed their advantages. Some concerns from the student perspective were poor internet connections and unfamiliarity with the delivery platforms. For the teachers, there was also a lack of knowledge of the available platforms (Al-Khumaim et al., 2021). Furthermore, many tutors were poorly or completely untrained and were forced to operate unfamiliar software while still being expected to deliver quality classes. For the universities, there were problematic assessment practices and the additional cost of upgrading and/or providing the means to deliver the classes with hardware purchases (Shuchi et al., 2021).

While many students felt the desire to get back into the classroom for face-to-face learning after long periods of online delivery, others were still concerned about the possibility of becoming infected by Covid-19, were concerned about the risk of exposure to vulnerable family members or were too remotely located to make the journey to campus (Capone et al., 2020). As a consequence, many institutions initiated hybrid classes in an attempt to address the needs of their students as the world transitioned to living with the pandemic. Like fully online delivery, the implementation of hybrid teaching uncovered further important teaching and learning issues (Mishra et al., 2020). Therefore, a need has arisen to better understand hybrid delivery, its advantages, disadvantages, and areas of improvement from the perspective of university students. Additionally, to learn from their recent experiences during the Covid-19 pandemic so that teaching, learning and student experience in this mode of delivery can be better supported as we navigate the changing landscape of higher education. This research focuses on discovering from the students' experiences of a particular case of a hybrid mode of delivery which was implemented in transnational education (TNE) set up in an

International Branch Campus (IBC) to answer the overarching research question: What are the most effective and least effective aspects of hybrid delivery and what are areas of improvement required for future delivery of hybrid learning and teaching?

Literature review

A number of studies investigating the challenges of providing and participating in Hybrid Learning classes have consistently reported that whilst there are benefits of this mode of delivery, challenges both technological and pedagogical also exist (Raes, 2022). Studies such as Beatty (2019) highlight the differing opinions between those who attend online and those who participate in physical classes. This study considered on-campus synchronous hybrid learning and teaching during Covid-19 and defines synchronous hybrid learning as "students in different locations, some on-site and others online, engage(d) in learning in a shared learning space" (Bülow, 2022). The following review will discuss the most and least effective aspects of using hybrid delivery and some areas of improvement for future delivery of hybrid learning and teaching from current literature to answer the overarching research question that this study has raised.

While there are grievances with hybrid learning, it has many benefits. The Mumford et al. study (2019) revealed the benefits of collaborative aspects of hybrid delivery, including a shared sense of support and the opportunity for remote students to access a synchronous, real-time classroom rather than the blended or distance learning models where students bounce ideas via chat boards or the comment sections of a learning management system. In addition, Dietrich et al.'s (2020) study found that chat box functions in online/hybrid delivery platforms were beneficial to students who might otherwise not ask questions in a face-to-face classroom environment.

One striking benefit has been the rapid development in teachers' knowledge and skills in the use of teaching and learning technology. Many have found that their understanding of and ability to use remote education tools has improved more over the last two years than in the previous decade (Dietrich et al., 2020). Another distinct advantage of a hybrid class is that – in theory, at least – no student should miss any of the lessons. Having said that, studies have found that engaging the remote student was more difficult due to sound and/or vision issues, inattention of teachers to remote students, and the missing social aspect of being with their fellow students (Reis et al., 2019; Govindarajan & Srivastava, 2020). Clearly, the continued use of hybrid forms of delivery will require that more is done to ensure classes are wholly inclusive.

As far as the physical institution is concerned, having several students in a smaller classroom with their distant peers on screen can encourage a cosier, friendlier and more intimate learning atmosphere (Raes et al., 2019), which in turn leads to happier and more contented learners and teachers. Broader access and the scope for flexibility are also benefits of these forms of delivery (Shuchi et al., 2019). In addition, less travel is involved, which can make attendance easier for learners

who live in more remote settings and has environmental benefits (Eliveria, 2019; Li et al., 2021).

While in times prior to the pandemic, many teachers, even those equipped with up-to-date technological tools, were reluctant to utilise educational technology (Situmorang et al., 2021), the enforced shift has required administrators, IT services and academics to focus on the most efficient ways to deploy technology and implement effective methods and practices of delivery on those technologies. This changed environment means teachers must be capable of delivering quality classes in an online and/or hybrid environment, and institutions must provide adequate support for teaching and learning in these contexts (Bülow, 2022). Moreover, there is little doubt that recent events have made teaching and learning more complex for teachers and students in higher education, with each having to rely heavily on the other's competence to engage with the technology the institution provides (Mavroudi & Tsagari, 2018; Bülow, 2022). Significantly, the importance of good design and delivery of instruction has also been magnified in this environment (Mumford et al., 2019).

Moreover, even though digital-native students have been brought up using computers and touchscreen mobile devices to interact and keep in touch with friends, it would seem that using these devices for remote classes has taken many of them beyond their existing abilities and comfort zones during Covid-19. The transition for many has been something of a struggle, with online students feeling distanced or shut off from their peers and lecturers in the classroom during the pandemic (Hawley et al., 2021; Beatty, 2019). Research depicts that the learning and teaching sphere has no experience or knowledge to bank on for online delivery (Sam, 2022), and students felt concerned about the quality of the online mode (Hawley, 2021). Olt's (2018) study was aimed directly at remote learners and found a general consensus amongst remote students of feeling alienated from those in the physical class. However, this could have more to do with how the classes were conducted rather than the means by which they were delivered. Sharma and Bumb's (2021) study listed 25 challenges faced in online classes, which included a lack of interaction with peers, interruptions in the online classroom, and mental stress resulting from the pandemic.

There were also concerns around connectivity, lack of attendance in synchronous classes, and finishing assignments in a timely fashion, with some online students not owning appropriate technical devices for attending class (Sam, 2022). A number of students indicated their stress levels were exacerbated by technical issues such as connectivity and the inability to access certain aspects of the platforms or learning management systems (LMS). This was compounded by a lack of clarity in instruction or rule definitions and failure to provide timely support for technical difficulties during classes (Dietrich et al., 2020). Moreover, students' mental and emotional health may have been impacted during learning at home due to Covid-19 lockdowns with implications on academic work (Kwan, 2022). These negative mental health consequences could have also been brought about by the sudden shift to online learning (Hawley, 2021).

Another problematic area for teachers and students is the lack of awareness of non-verbal communication via the hybrid classroom delivery. For students, this was often due to the failure of cameras to track a teacher's movements around the classroom. For teachers, the limited view of students, no more than a tiny head and shoulders image of each remote student amongst many such images (Fauville et al., 2021), increased the challenges in engaging students effectively. Even that depended on whether the students chose to turn on their cameras.

Due to the requirements of remote learners and remote teachers, video conferencing has become a vital tool for education (Lowenthal et al., 2020). A prime example of this has been the increased use of Zoom for conferencing (Fauville et al., 2021). As a result of the heavy reliance on these online platforms, however, Zoom fatigue has also been cited as a problem, with warning signs for future increases in anxiety and stress levels for both learner and tutor (Fauville et al., 2021). For teachers, technical issues are a problem, as they face daily demands of multiple hours of back-and-forth monitor checking while catering to the non-virtual students in the classroom. Many students' problems lie in their feeling of being left out, certainly as far as group work is concerned (Frennesson et al., 2020), as well as a lack of a culture of online learning, and even more so when dealing with special needs students (Putri et al., 2020).

Support for students has been crucial in dealing with the challenges brought up by Covid-19 (Kwan, 2022). Many problems and issues with hybrid classes may have been surmounted (Li et al., 2019). However, issues such as financial aid, course design, a broader scope for adopting techniques, student frustration and more appropriate teacher training are yet to be adequately addressed. Furthermore, Covid-19 and its impacts on delivery have raised further challenges in the context of Transnational Education (TNE) (Yencken et al., 2021). The context of TNE has a unique setting with education being provided to students in a different country than the one in which the awarding institution is based (Sun et al., 2022). In regular conditions, even though TNE has become a "dynamic phenomenon on the global landscape of higher education", maintaining quality and standards for offshore operations by host campuses is not without challenges as both the scale and scope of TNE increase (Hu et al., 2019, p. 306). However, this has become more complex due to the pandemic and changes in the mode of delivery.

This study has been conducted to fill the gap in research and better understand a specific case of hybrid delivery, its advantages, disadvantages, and suggestions from the perspective of students and their experiences during Covid-19, specifically in the TNE International Branch Campus (IBC) operations.

Methods

This study investigated student perspectives on hybrid delivery during the Covid-19 pandemic at a TNE International Branch Campus in the UAE. The campus has a diverse student body with students belonging to over fifty different nationalities studying in foundation, diploma,

undergraduate and postgraduate programs. The campus adopted a hybrid learning and teaching mode in September 2021 and January 2022 trimesters across courses, levels and disciplines. After that, hybrid learning and teaching were discontinued on this campus for all course levels except for postgraduate studies. The staff had no prior experience delivering units in a hybrid mode and had been teaching online for four and a half trimesters during the pandemic before the transition to hybrid teaching and learning. The Learning and Teaching Committee arranged two workshops for the staff before the start of the trimester. One was on understanding teaching and learning in the hybrid delivery mode, and the other was on using the new technology provided in the hybrid classrooms. The hybrid technological set-up at the research site included the introduction of wireless mics and the regular set-up of the classroom computers, allowing a camera set-up, audio systems and projectors. Students studying remotely in hybrid mode had access to technology and online classes.

All 220 undergraduate students enrolled in hybrid courses across four disciplines of undergraduate degrees (Business, Arts, Communication, Information Technology) running at an International Branch Campus in the UAE were provided with a student survey. 151 of the 220 students that fulfilled the criteria responded to it. The data was collected via Qualtrics using the convenience sampling technique to recruit the participants by emailing a link to the survey. The survey was sent out by the Student Services department to all the students enrolled in the hybrid mode in the September 2021 trimester and was conducted towards the end of the trimester. No identifying information was gathered in the survey to maintain the anonymity of the participants.

Students were asked four questions as depicted in the copy of the survey questions below:

1. Please identify how you are attending hybrid classes this trimester:
 - Face to face on campus
 - Joining in online
 - Sometimes face-to-face and sometimes online
2. What are the most effective aspects of hybrid delivery in your experience this trimester?
3. What are the least effective aspects of hybrid delivery in your experience this trimester?
4. What can be done to improve the quality of hybrid learning and teaching to make it more effective?

The first question was, about which mode of attendance they used. The following three questions were open-ended about the (most/least) effective aspects of hybrid delivery and how future delivery could be improved. The survey focused on delivery and the teaching and learning experience during one trimester (September 2021). Simple frequency distribution tables were used to depict and summarise

students' responses about hybrid delivery. The tables were analysed, and the findings were described. The advantages of online learning were grouped together, and a breakdown was analysed in a separate table for further investigation. The tables were used to depict the trends in the dataset and help organise the data to analyse it. In order to achieve this, the first column showcases the number of times a specific response occurs. The second column denotes the percentage of students who have provided the particular response of those who have attempted the question. The last column provides the percentage of the students who provided the specific response from the total number of students who responded to the survey. This thorough depiction supports a better understanding of the students' perspectives on this issue. Table 1 depicts the responses on the most effective aspects of hybrid delivery (Question 2). Table 2 depicts the responses on the least effective aspects of hybrid delivery (Question 3). Table 3 shows suggestions for improving the quality of hybrid delivery (Question 4).

An ethics approval was obtained for the study from the university prior to the start of the project. No identifying information was collected in the survey prompting candid responses from the students regarding effectiveness and suggestions for improvement.

Findings and analysis

The survey was sent out to 220 undergraduate students who were enrolled in classes delivered in a hybrid mode across all degree courses at a university's international branch campus in the UAE, of which 151 (68.6%) responded.

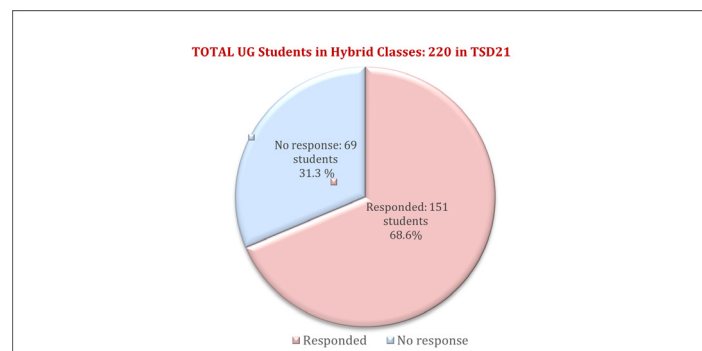


Figure 1. Participants' response rate.

Responses to the first question (Q1 - Please identify how you are attending hybrid classes this trimester) revealed that almost a fifth of these students (19.87%) attended only face-to-face classes at the university campus. Nearly a third of students (31.13%) engaged in classes only through the online option, while the remaining half (49.01%) opted for a mixture of face-to-face (F2F) and online attendance.

When we examine the feedback for question 2 (Table 1 – which are the most effective aspects of hybrid delivery?), the possibility of attending classes online was nominated by 49 students (32.45%). With an equal number of responses, the fact that students were provided with a choice to opt for a mixture of face-to-face and online attendance was also

popular. Students also found the online option functioning as a backup, should there be a Covid-related emergency, a useful feature of the hybrid delivery (28 students or 18.54%). The next positive point was the ease and convenience for students to choose which option to take (16 students or 10.6%). Thirteen students (8.6%) mentioned that they appreciated that the hybrid format created recordings which made it possible for them to catch up should they miss a class. An additional nine students (5.96%) indicated that the availability of F2F classes where they enjoyed the peer interaction, the campus life and the social aspect of the physical class was a benefit of the hybrid format. As this occurred following a year of online-only delivery during the worst of the pandemic, it is not surprising that some students were pleased to be back in the classroom. The same number of students reported that hybrid delivery provided a more accessible work environment for students. Finally, there were six students (3.97%) who were in their home country for reasons of travel restrictions and expressed their appreciation of the support they received from teachers via the online learning experience.

Less common responses included: five students (3.31%) nominated the quality of the teaching and learning activities; five students who indicated improved learning and understanding, engagement and interaction; three students (1.99%) who stated that the variety in the mode and setting of learning, and the resources and access to the classes were of benefit; two students (1.32%) who were happy that they could choose their own pace of learning, as were the same number of students who stated they were satisfied with classroom management; and two students who liked the fact that any practical labs could still be held on campus.

Table 1. Q2: What are the most effective aspects of hybrid delivery in your experience this trimester?

Effective aspects of hybrid learning	Frequency	Percentage of overall frequency	Percentage of students
Online learning	49	26.06 %	32.45%
Flexibility and choice in mode of attendance	28	14.89%	18.54%
Back-up option to attend classes during the pandemic in case of emergencies	28	14.89%	18.54%
Convenience & ease	16	8.51%	10.60%
Class recordings for reviewing work	13	6.91%	8.60%
Allows F2F learning, peer interaction and campus experience	9	4.79%	5.96%
Ease for working students	9	4.79%	5.96%
Support for overseas students	6	3.19%	3.97%
Teaching & Activities	5	2.66 %	3.31%
Learning & Understanding	5	2.66 %	3.31%
Engagement & Interaction	5	2.66 %	3.31%
Variety in mode and setting of learning	3	1.60 %	1.99%
Resources and Access	3	1.60 %	1.99%
Choose own pace of learning	2	1.06 %	1.32%
Class management	2	1.06 %	1.32%
Practical labs can be on campus	2	1.06 %	1.32%
Others	3	1.60 %	1.99%
Total	188	100 %	

Question three (Table 2) focused on the least favourable aspects of hybrid learning, and the respondent figures for this question drew a narrower focus and larger figures. The most common and satisfying reply to this question was that

there was no problem with hybrid delivery, with 36 students (23.84%) responding favourably to the hybrid model. However, the next most common response from 27 students (17.88%) indicated that there was a lack of help or attention during the classes for those who did not attend the physical class and mentioned that the teacher's lack of responses and focus was problematic for those attending online. 24 students (15.89%) brought up issues with interaction and engagement and that there was a loss of focus in class, while 16 respondents (10.6%) stated that technical problems with microphone volume caused difficulty in hearing the teacher. Other issues included the lack of visuals for the whiteboard for online students (3.31%), miscommunication and lack of coordination (2.65%), failure to provide adequate online resources, and ineffective classes when the majority were online (1.99% each). At the tail end of the least effective aspects identified, two students each said arrangements for their physical safety in a physical class (1.32%) were inadequate, some of the theory classes did not have the option to attend physically, and not enough support was on hand for the labs. There were twelve students (7.95%) who responded with a variety of other issues.

Table 2. Q3- What are the least effective aspects of hybrid delivery in your experience this trimester?

Least effective aspects of hybrid learning	Frequency	Percentage of overall frequency	Percentage of Students
No ineffective aspect reported, students reporting that all is going well in hybrid mode, students who prefer to remain in hybrid mode	36	24.32%	23.84%
Lack of help or attention during class for those attending online (teachers' focus, response, asking questions)	27	18.24%	17.88%
Online class participation, interaction and engagement issues including losing focus	24	16.21%	15.89%
Technical issues including especially the inability to hear the teacher for those attending online	16	10.81%	10.60%
Issues impacting learning and information for those attending online	12	8.11%	7.95%
Inability to see the board	5	3.39%	3.31%
Miscommunication and lack of coordination	4	2.70%	2.65%
Lack of university-arranged resources for students attending in online mode	3	2.03%	1.99%
Ineffective when more students choose to attend online and fewer students in class	3	2.03%	1.99%
Physical safety arrangements in F2F classes	2	1.35%	1.32%
Some theory classes should have the option to attend F2F	2	1.35%	1.32%
More support required for labs	2	1.35%	1.32%
Others	12	8.11%	7.95%
Total	148	100%	

Question four (Table 3) asked respondents to identify areas in which hybrid learning and teaching may be improved in order to make it more effective. There were 23 students (15.23%) who said that they were already satisfied with the quality of the hybrid classes. The same number of students felt there could be more engagement with those who were online, and that their questions were not adequately addressed. Less than half this figure, nine students (5.96%), said they would like to see an improvement in both the amount of interaction and the use of more interesting material in the classes.

Table 3. Q4: What can be done to improve the quality of hybrid learning and teaching to make it more effective?

Suggestion	Frequency	Percentage of overall frequency	Percentage of students
Include and engage online students and their questions	23	21.10%	15.23%
Already satisfied with the hybrid mode quality	23	21.10%	15.23%
Make classes interactive and interesting	9	8.25%	5.96%
Mic Issues	7	6.42%	4.64%
Ensure online students can view the whiteboard	6	5.50%	3.97%
Discontinue hybrid mode – separate sessions for online and F2F students	6	5.50%	3.97%
Return to only F2F sessions	5	4.59%	3.31%
Keep providing online option through hybrid mode	5	4.59%	3.31%
Tech issues including provision of guest links to session, teachers should be prepared, Blackboard collaborate	5	4.59%	3.31%
Teachers should be accessible for additional support for both online and F2F students separately	3	2.76%	1.99%
Provide training to lecturers to teach synchronously	2	1.83%	1.32
Assessment issues surrounding online exams should be improved	2	1.83%	1.32
WiFi issues on campus	2	1.83%	1.32
Recordings of all classes	2	1.83%	1.32
Others	9	8.26%	5.96%
Total	109		

We move on to technical issues. Seven students (4.64%) said they wanted working, and effective microphones either on their end or the teacher's end, and six students (3.97%) suggested the visual aspect of the class could be improved as they had difficulty seeing the whiteboard. The same number felt that separating classes into online and F2F classes would be more desirable than the hybrid delivery option, while five students (4.59%) said they wanted to see a complete end to hybrid delivery and would opt for F2F classes only. In contrast, another five students said they wanted the opposite and suggested classes should be permanently delivered in the hybrid mode. Further tech issues that needed attention were glitches with connections and access to the delivery platform (Blackboard Collaborate), and with this in mind, two students (1.32%) said that their teachers needed to be better trained (or possibly be better prepared) to conduct the class for the two audiences synchronously.

Three students (1.99%) felt that better access to teachers after the classes for both online and F2F students at separate times would provide a more desirable outcome. Two students (1.32%) felt that virtual exams could be removed, and also that the method of conducting online exams needed to be improved. WiFi issues were a problem for two students who attended the physical classes on campus, though it is likely that this would have more to do with accessing resources than the class delivery. The same number stated that they would like all classes to be made available via recordings of the sessions. There were a variety of single student issues that totalled nine single responses (5.96%).

While it is true to say that every student identified at least one area that they had found problematic, the same is true of the positive aspects of the student experience. If we look at the top four areas of difficulties identified in the study, we see the totals for lack of help, lack of teacher attention, lack of interaction and loss of focus (53.37%) are marginally lower than the top four areas of strengths (55.84%). Moreover, more than 50% of students felt that there were either no issues at all, or that they valued the opportunity to attend classes online.

Discussion and conclusion

This research was conducted to explore the advantages and pitfalls of hybrid learning in higher education and to gain insights into further implementation beyond Covid-19. While the study has revealed quite a number of problematic areas, the same can be said for the positive aspects of adopting hybrid classes. Indeed, a variety of student views contradict each other in this survey, and other research has also reported similar findings. For instance, the same percentage of students reported a need to improve engagement for online students in a hybrid delivery as those who indicated satisfaction with hybrid delivery when asked for suggestions to improve the quality of the hybrid mode of delivery. Also, among the expectations for hybrid teaching are the basic skills to be able to navigate the tech that will deliver the class to learners (Martin et al., 2019). However, as hybrid learning is still, relatively speaking, in its infancy (Raes et al., 2020), it will almost certainly take several terms or years to iron out all of the problems. That said, the findings have provided at least a partial insight into the trials, successes and indicators for future improvements of the hybrid class delivery.

The majority of students participating in this study alternated their mode of attendance during hybrid classes (sometimes online and sometimes F2F). However, the most ineffective aspects were reported regarding the online mode during hybrid delivery. The three most ineffective aspects of hybridity reported by students in this study were (after the highest scoring feedback being that there is no ineffective aspect): a. lack of help/attention for those in online mode during a hybrid class. b. lack of 'class participation', 'interaction', and 'engagement' for those in an online mode during a hybrid class. c. technical issues during hybrid sessions with the inability to hear the teacher the primary issue in this area. In this study's survey, a small percentage of students suggested that teachers should be provided training for teaching in a hybrid mode. Therefore, the issues reported for hybrid delivery are mainly that the teachers and technology are falling short of engaging and supporting those in the online mode during hybrid delivery, which is exacerbated by technical issues for those in the online mode during this type of delivery. These findings corroborate with existing literature as teacher training issues have been a source of contention for online delivery for a number of years, and moving so swiftly into enforced online and then hybrid learning has certainly presented global challenges (Mavroudi, 2018). Additionally, the slow uptake of universities to provide effective teacher training may have also raised issues with many institutions paying scant regard to ensure their staff are up to speed with the latest methods

of delivery, as well as in many cases, failing to adequately provide the infrastructure to provide such (Al-Kumain et al., 2021).

The majority of problems seem to be compounded by teachers having to rely on newly released tech platforms that have been problematic in a number of areas, certainly when students in the physical campus had to wait around for teachers to get the tech working for online attendees (Raes et al., 2019). It is still something of a mystery as to why many institutions have been so slow on the uptake of online delivery methods, especially considering such advances have been made in online delivery (Jena, 2020). The reason for the slow uptake of online/hybrid delivery could be due to teachers' or institutions' fear of technology and the anxiety that using new means of delivery brings (Sharma, 2021). Adding weight to this theory is Park and Choi's study (2009) which pegs older students suffering from the same apprehensions as the teachers in this area. Sharma also reported similar instances of poorly functioning technology as well as gaping chasms in connectivity being a continual source of frustration and demotivation for students and faculty members, which meant that large numbers of students could not partake in meaningful sessions (2021). This study's most reported technical issues included mic issues and the inability to hear the teachers, online students' inability to see the whiteboard, issues with the online delivery platform or guest link and lack of teacher preparation to handle technical issues. The above two ineffective aspects could be exacerbating the third most reported one in this study, which is online students' lack of class participation, interaction, and engagement.

In light of the above findings and discussion, it is interesting to note the comparison here to the three topmost effective aspects of hybrid delivery that students noted in this study. There were a. online learning, b. flexibility to choose their mode of attendance and also c. a back-up to attend classes in case of emergencies. Therefore, all three of these topmost effective aspects of hybrid teaching and learning reported by the students in this study, in fact, centre around the option and availability of online learning in the hybrid delivery model, and the top three ineffective aspects of hybrid delivery was focused on the training, tech and better participation, interaction and engagement in online mode of hybrid delivery. Additionally, the top reported suggestion (Quesiton 4) of this study was to include and engage the online students in the hybrid delivery mode and their questions.

First, it may be inferred from this analysis that teacher training is required to effectively teach, engage, interact with and support students who attend classes remotely in online modes in hybrid delivery. Second, teachers must also be provided training and support to use the technical equipment during the hybrid mode of delivery and the technical issues must be fixed and improved. Several other answers to the three questions in this study focus on the same. In a nutshell, while students, based on the results of this study appreciate the availability of the online option in a hybrid delivery, their concerns are singularly focused around its improvement. As we grapple with this, in the meantime, having gone through hybrid delivery in Covid-19,

a small percentage of the students requested in the study suggested that hybrid delivery be discontinued, and roughly the same number requested that online and F2F classes be separated. Otherwise, there is the possibility of fractured delivery, students missing out on major points, the need to repeat information for those whose connection drops, and all of this becoming a source of frustration for many (Olt, 2018).

Li et al.'s (2021) study supports the use of online delivery. It demonstrated the appeal of educational growth, the challenge of adapting to new learning techniques, and the benefits of flexibility in acquiring knowledge in a different environment by finding ways around technological glitches and effective teacher training (2021). The students in this study also reported that a practical advantage of hybrid delivery reported was the 'availability of class recordings' followed by support for working students and overseas students. Furthermore, Al-Kumain et al. (2021) found other causes for concern. They included continual interruptions from students joining classes late, connectivity dropouts, anxiety over the use of the delivery platforms, the resultant stress the fear of Covid brought with it, and the unfamiliarity of online learning and all that goes with it. Adding to this is the lack of physical connection with peers, F2F chats with teachers and the general camaraderie surrounding the social aspect of the physical campus spaces (Xing & Saghaian, 2022). While Olt's paper on synchronous online learning did highlight several benefits to the platforms, such as distance being no object and the number of students who could attend otherwise missed classes, the one variable all respondents depended on was a clear and stable Internet connection (2018).

After examining the data provided by this survey, there are reasons to see some measure of success in the implementation of a hybrid delivery model, but also a number of areas for concern. There are also possible solutions to counteract some of the negative aspects of hybrid teaching and learning identified by students. As many problems with hybrid classes came down to slow or intermittent connections, reliable broadband connections are essential to curtailing accessibility issues. In addition, adequate teacher and student training are necessary to improve the quality of the teaching and learning experience for everyone. It is also necessary to ensure the early introduction of teachers and students to new software and hardware. This will go a long way to allaying fears or apprehension towards new technology. The one aspect this survey did not cover was the teachers' opinions and thoughts. It would be helpful to have more research conducted in this area, as it would provide a more complete and rounded view of hybrid class delivery. A complete picture requires information on the whole field of issues the stakeholders face from both sides of the teaching and learning fence, and further research is required. While this study has identified a range of issues that need to be addressed to improve students' experience in hybrid delivery, it has also demonstrated that it can be a positive and valuable learning environment for many students. The overarching message from this study is that the keys to a seamless delivery of hybrid classes and engaged and happy students and teachers are better support, effective training and reliable technology.

References

- Al-Kumaim, N. H., Alhazmi, A. K., Mohammed, F., Gazem, N. A., Shabbir, M. S., & Fazea, Y. (2021). Exploring the impact of the COVID-19 pandemic on university students' learning life: An integrated conceptual motivational model for sustainable and healthy online learning. *Sustainability*, 13(5), 2546. <https://doi.org/10.3390/su13052546>
- Beatty, B. J. (2019). *Hybrid-flexible course design* (1st ed.). EdTech Books. <https://edtechbooks.org/hyflex>
- Bülow, M. W. (2022). Designing synchronous hybrid learning spaces: Challenges and opportunities. In Gil, E., Mor, Y., Dimitriadis, Y., Köppe, C. (Eds.) *Hybrid learning spaces. Understanding teaching-learning practice* (pp. 135-163). Springer, Cham. https://doi.org/10.1007/978-3-030-88520-5_9
- Capone, V., Caso, D., Donizzetti, A. R., & Procentese, F. (2020). University student mental well-being during COVID-19 outbreak: What are the relationships between information seeking, perceived risk and personal resources related to the academic context? *Sustainability*, 12(17), 7039. <https://doi.org/10.3390/su12177039>
- Dietrich, N., Kentheswaran, K., Ahmadi, A., Teychené, J., Bessière, Y., Alfenore, S., Laborie, S., Bastoul, D., Loubiere, K., Guigui, C., Sperandio, M., Barna, L., Paul, E., Abussud, C., Line A., & Hébrard, G. (2020). Attempts, successes, and failures of distance learning in the time of COVID-19. *Journal of Chemical Education*, 97(9), 2448-2457. <https://doi.org/10.1021/acs.jchemed.0c0071>
- Dudaité, J., & Prakapas, R. (2019). Influence of use of Activinspire interactive whiteboards in classroom on students' learning. *Digital Education Review*, 35, 299-308. <https://eric.ed.gov/?id=EJ1220152>
- Eliveria, A., Serami, L., Famorca, L. P., & De La Cruz, J. S. (2019). Investigating students' engagement in a hybrid learning environment. *IOP Conference Series: Materials, Science and Engineering*. <https://doi.org/10.1088/1757-899X/482/1/012011>
- Fauville, G., Luo, M., Queiroz, A. C. M., Bailenson, J. M. & Hancock, J. (2021). *Nonverbal mechanisms predict Zoom fatigue and explain why women experience higher levels than men*. SSRN <http://dx.doi.org/10.2139/ssrn.3820035>
- Frennesson, L., Lama, P., Libertson, F., Martin, T., & Wahlström, F. (2020). The challenge of assigning groups. *Introduction to Teaching and Learning in Higher Education*, (June), 1-15. https://lucris.lub.lu.se/ws/portalfiles/portal/82387543/Group_2_The_challenge_of_assigning_groups_final.pdf
- Govindarajan, V. & Srivastava, A. (2020). What the shift to virtual learning could mean for the future of higher ed. *Harvard Business Review*. <https://hbr.org/2020/03/what-the-shift-to-virtual-learning-could-mean-for-the-future-of-higher-ed>
- Hawley, S. R., Thrivikraman, J. K. Noveck, N., St.Romain, T., Ludy, M., Barnhart, L., Chee, W. S. S., Cho, M. J., Chong, M. H. Z., Du, C., Fenton, J. I., Hsiao, P. Y., Hsiao, R., Keaver, L., Lee, H., Shen, W., Lai, C., Tseng, K., Tseng, W., & Tucker, R.M. (2021). Concerns of College Students during the COVID-19 Pandemic: Thematic Perspectives from the United States, Asia, and Europe. *Journal of Applied Learning & Teaching*, 4(1), 11-20. <https://doi.org/10.37074/jalt.2021.4.1.10>
- Hu, M., Eisenclas, S. A., & Trevaskes, S. (2019). Factors affecting the quality of transnational higher education in China: A qualitative content analysis on Chinese host universities' self-appraisal reports. *Journal of Higher Education Policy and Management*, 41(3), 306-321, DOI: 10.1080/1360080X.2019.1591679
- Huang, F., Teo, T., Sánchez-Prieto, J. C., García-Peñalvo, F. J., & Olmos-Migueláñez, S. (2019). Cultural values and technology adoption: A model comparison with university teachers from China and Spain. *Computers & Education*, 133(1), 69-81. <https://doi.org/10.1016/j.compedu.2019.01>
- Kwan, J. (2022). Academic burnout, resilience level, and campus connectedness among undergraduate students during the Covid-19 pandemic: Evidence from Singapore. *Journal of Applied Learning & Teaching*, 5(1), 52-63. <https://doi.org/10.37074/jalt.2022.5.s1.7>
- Jena, P. K. (2020). Online learning during lockdown period for COVID-19 in India. *International Journal of Multidisciplinary Educational Research*, 9(5), 82-92. <https://doi.org/10.31235/osf.io/qu38b>
- Li, Q., Li, Z., & Han, J. (2021). A hybrid learning pedagogy for surmounting the challenges of the COVID-19 pandemic in the performing arts education. *Education and information technologies*, 26(6), 7635-7655. <https://doi.org/10.1007/s10639-021-10612-1>
- Lowenthal, P., Borup, J., West, R. & Archambault, L. (2020). Thinking beyond Zoom: Using asynchronous video to maintain connection and engagement during the COVID-19 pandemic. *Journal of Technology and Teacher Education*, 28(2), 383-391. Society for Information Technology & Teacher Education. <https://www.learntechlib.org/primary/p/216192/>
- Martin, F., Budhrani, K., & Wang, C. (2019). Examining faculty perception of their readiness to teach online. *Online Learning*, 23(3), 97-119. <https://doi.org/10.24059/olj.v23i3.1555>
- Mavroudi, A. & Tsagari, D. (2018) Profiling of English language teachers as trainees in an online course and ensuing implications, *Computers & Education*, 126, 1-12. <https://doi.org/10.1016/j.compedu.2018.06.029>
- Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>

- Mumford, S., & Dikilitaş, K. (2019). Pre-service language teachers' reflection development through online interaction in a hybrid learning course. *Computers & Education, 144*, 103706. <https://doi.org/10.1016/j.compedu.2019.103706>
- Olt, P. A. (2018). Virtually there: Distant freshmen blended in classes through synchronous online education. *Innovative Higher Education, 43*(5), 381–395. <https://doi.org/10.1007/s10755-018-9437-z>
- Park, J. H., & Choi, H. J. (2009). Factors influencing adult learners' decision to drop out or persist in online learning. *Journal of Educational Technology & Society, 12*(4), 207–217. <https://www.jstor.org/stable/jeductechsoci.12.4.207>
- Putri, R. S., Purwanto, A., Pramono, R., Asbari, M., Wijayanti, L. M., & Hyun, C. C. (2020). Impact of the COVID-19 pandemic on online home learning: An explorative study of primary schools in Indonesia. *International Journal of Advanced Science and Technology, 29*(5), 4809-4818. <https://doi.org/10.1108/JRIT-10-2018-0024>
- Raes, A. (2022). Exploring student and teacher experiences in hybrid learning environments: Does presence matter? *Postdigital Science and Education, 4*, 138–159. <https://doi.org/10.1007/s42438-021-00274-0>
- Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2019). A systematic literature review on synchronous hybrid learning: Gaps identified. *Learning Environments Research, 23*, 269–290. <https://doi.org/10.1007/s10984-019-09303-z>
- Raes, A., Vanneste, P., Pieters, M., Windey, I., Van Den Noortgate, W., & Depaepe, F. (2019). Learning and instruction in the hybrid virtual classroom: An investigation of students' engagement and the effect of quizzes. *Computers & Education, 143*, 103682. <https://doi.org/10.1016/j.compedu.2019.103682>
- Sam, C. Y. (2022). Post-COVID-19 and higher education. *Journal of Applied Learning & Teaching, 5*(1), 156-164. <https://doi.org/10.37074/jalt.2022.5.1.21>
- Sharma, S., & Bumb, A. (2021). The challenges faced in technology-driven classes during COVID-19. *International Journal of Distance Education Technologies, 19*(1), 17–39. <https://doi.org/10.4018/ijdet.20210101.oa2>
- Shuchi, M. S., Tabassum, S. C., & Toufique, M. M. K. (2021). A year of online classes amid COVID-19 pandemic at a Bangladeshi university: Economics students' experience and suggestions for improvements. *Journal of Applied Learning & Teaching, 4*(2), 37-45. <https://doi.org/10.37074/jalt.2021.4.2.3>
- Situmorang, K., Pramusita, S. M., & Nugroho, D. Y. (2021). English teachers' reflections and lessons learned in language teaching during COVID-19 pandemic. *Journal of English Education and Development, 5*(1), 50-61. <https://doi.org/10.31605/eduvelop.v5i1.1111>
- Sun, Y., Li, N., Hao, J. L., Di Sarno, L., & Wang, L. (2022). Post-COVID-19 development of transnational education in China: Challenges and opportunities. *Education Sciences, 12*(6) 416. <https://doi.org/10.3390/educsci12060416>
- Teo, T., Huang, F., & Hoi, C. K. W. (2017). Explicating the influences that explain intention to use technology among English teachers in China. *Interactive Learning Environments, 26*(4), 460–475. <https://doi.org/10.1080/10494820.2017.1341>
- Xing, X., & Saghaian, S. (2022). Learning outcomes of a hybrid online virtual classroom and in-person traditional classroom during the COVID pandemic. *Sustainability, 14* (9), 5263. <https://doi.org/10.3390/su1409563>
- Yencken, E., Croucher, G., Elliott, K., & Locke, W. (2021). Transnational education provision in a time of disruption: Perspectives from Australia. *International Journal of Chinese Education, 10*(3), 1-16. <https://doi.org/10.1177/22125868211069174>