

Online Learning Experiences of Irish University Students during the COVID-19 Pandemic.

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Abstract.

The coronavirus (COVID-19) crisis and the resulting lockdowns have affected nearly every sector of the global economy, and the higher education sector is no exception. Following the closure of campuses on the 12th of March 2020, all teaching in Irish higher education institutions had to be delivered entirely online through to the end of August 2020. Responding to this unique situation, this study investigated 132 full-time Business postgraduate students' online learning experience in an Irish University. Findings from both quantitative and qualitative data provide insights into what worked, what did not and why. Most students still prefer in-class learning, despite some very positive online learning experiences. They felt that the social aspect and the learning benefits from face-to-face interaction with instructors and peers are not fully replicable in the online learning environment. The findings suggest that the foundation for an effective online learning experience is engagement.

Keywords: COVID-19, higher education, Ireland, Online learning, postgraduate students, student engagement.

1. Introduction.

The COVID-19 pandemic reached the Republic of Ireland on the 29th of February 2020 (BBC, 2020). It quickly spread to all counties within three weeks (Cullen, 2020). On the 12th of March 2020, the government announced the closure of all schools, colleges, and childcare facilities, and advised cancelling large gatherings (Leahy, Cullen, Lynch & Kelly, 2020).

This meant all teaching and student support activities in the Irish higher education sector had to be delivered completely online. The sudden change posed huge challenges to the Irish universities, their faculty and staff, and their students, as the universities mainly offer on-campus programmes. The majority of students studying at these universities had chosen in-person education in preference to online programmes.

This study was initiated with the purpose of gaining insights into university students' online learning experience during the COVID-19 pandemic. The findings will be beneficial for informing our practice going forward, both during these uncertain times and beyond, providing an opportunity to see which aspects of university teaching and learning can be effectively delivered at distance, and which aspects benefit most from face-to-face interaction.

2. Literature Review.

Online learning is a subset of distance learning and is described as learning via internet, intranet and extranet (Keengwe and Kidd, 2010). Levels of sophistication of online learning vary, ranging from basic online programmes which deliver text and graphics of the course content, exercises, tasks and assessments online, to more sophisticated online learning programmes which include audio/video content, simulations and live sessions with discussions among peers and with experts, all delivered online (Urdan and Weggen, 2000). In this paper, the term online learning is used synonymously with Web-based learning or Internet-based learning.

2.1 Online learning delivery.

There are two modes of online learning delivery: synchronous and asynchronous. These two types of online learning are offered via virtual learning platforms, usually facilitated by learning management systems (Britain and Liber, 2004). Learning management systems contain tools for uploading and sharing course material, downloading and reviewing students' assignments, and conducting online virtual classes with chats, discussions, surveys, *etc.* (Rice, 2008).

2.1.1 Synchronous delivery.

Synchronous delivery happens in real-time. This means students and teachers are able to interact live in a virtual place and engage in real-time online communication and discussions regardless of location (Snart, 2010, Clark and Mayer, 2016). The advantage of synchronous delivery is that students have access to immediate feedback and participate in live interaction. However, this type of learning requires real-time online presence and high-quality infrastructure (Snart, 2010).

2.1.2 Asynchronous delivery.

Asynchronous delivery does not require the real-time online presence of students, as learning

occurs in accordance with students' own schedules (Gagne, Wager, Golas, Keller & Russell, 2005). The advantage of asynchronous learning is that students are in control of their time and learning, and their learning is self-paced. However, students are unable to receive immediate feedback from the lecturers or interact immediately with classmates (Snart, 2010).

2.2 In-class learning vs online learning.

In a comparative study, Dabbagh and Bannan-Ritland (2005) examined the differences between in-class and online learning environments. Their findings suggested that in-class learning environments are often (a) bound by location and presence of the instructor and students, (b) presented in real-time, (c) controlled by an instructor and (d) linear in teaching methods. Comparatively, online learning environments are unbound and dynamic, tend to include a diverse range of pedagogical practices and are more often characterised by active learning student-centred pedagogical techniques (Barker, 2003; Keengwe and Kidd, 2010). In-class learning environments tend to be more hierarchical, but students' questions can be addressed in a timely manner (Black, 2002).

There has been an ongoing debate over the effectiveness of online learning versus in-class learning. Empirical studies have both supported (McFarland and Hamilton, 2005; Parkhurst, Moskal, Lucena, Downey, Bigley & Elber, 2008) and refuted (Driscoll, Jicha, Hunt, Tichavsky & Thompson, 2012; Logan, Augustyniak & Rees, 2002) the relative effectiveness of the online approach.

In terms of skill development, research shows that online teaching can be just as effective as in-class teaching (Bowman, 2003; Tucker, 2001). Studies also show that, comparing in-class and online learning, student satisfaction does not significantly differ when the online courses are designed using pedagogically sound practices in combination with appropriate instructional, technical and peer support being provided, such as with online discussion boards and regular check-in times (Driscoll et al., 2012; York, 2008; Allen, Mabry, Mattrey, Bourhis, Titsworth & Burrell, 2004; Lee, Srinivasan, Trail, Lewis & Lopez, 2011).

2.2.1 Advantages of online learning.

Flexible.

Online learning offers flexibility (Parsad, Lewis & Tice, 2008). Within an online course, students must take more responsibility for their own learning and must be more proactive in

the learning process (Logan et al., 2002). One study suggests that the students who select online courses and enjoy learning online tend to be more independent and prefer a more flexible learning environment (Worley and Dyrud, 2003).

Student centred.

In particular with asynchronous course design, students can learn at their own pace, learn course material repeatedly for in-depth understanding and learning, take breaks when they are tired and manage their own schedule (York, 2008).

Less intimidating.

Clark-Ibanez and Scott (2008) found that students experienced the online learning environment as less intimidating, and that it offers a more comfortable environment for students who are shy or lack confidence and who may be intimidated by the public speaking element of an in-class environment. This type of learning experience reduces the embarrassment of failure in front of a group (Urduan and Weggen, 2000).

2.2.2 Doubts and concerns over online learning.

The central cause of significant doubts and concerns over the efficiency of online environments is that online learning cannot fully replicate the interaction that occurs within the in-class environment (Rovai and Barnum, 2007). Students appear to learn more in-class and benefit hugely from spontaneous and open discussions with their peers and teachers (Bok, 2009). Some researchers argue that, although online platform offers interaction opportunities such as announcements, discussion boards etc., these features are not comparable to real-time face-to-face interaction (Summers, Waigandt & Whittaker, 2005). With interaction hindered, online learning is at a serious disadvantage. In addition to impacting on learning, lack of interaction can create feelings of isolation and alienation among students (Gallagher and McCormick, 1999).

Asynchronous online learning relies on self-regulated learning, and not all students are equipped with the skills to be able to succeed at this type of learning. Hence, students who are not comfortable with student-centred approaches may be at a disadvantage (Driscoll et al., 2012).

2.3 Best practices in online learning.

Many researchers emphasise the importance of having an online learning community (Sun and Chen, 2016). Research has shown a strong correlation between having a sense of community with interaction and the effectiveness of online learning (Cox and Cox, 2008, Bryant and Bates, 2015). An effective online learning community creates a sense of belonging where students feel comfortable to share useful information, set up common learning goals, get to know each other and develop trust (Yuan and Kim, 2014).

The key to a high-quality online course is incorporating “*a substantial amount of interaction*” (Driscoll et al., 2012), both between students and between the students and the instructors (Sumner, 2000; Clark-Ibanez and Scott, 2008). Research has suggested the level of interaction is a predictor of perceived learning in online courses (Rovai and Barnum, 2007). While interaction is essential, incorporating it into the online classroom has remained as one of the key challenges in designing and delivering effective online course (Brooks, 1997).

In particular, for students who have experienced most of their education in an in-class environment, it is essential for them to interact with their peers and instructors when moving to an online learning environment. In this way they can still benefit from peer-learning and receive feedback and encouragement from the instructor (Brooks, 1997; Jaffee, 1997).

3. Research Method.

The research questions for this study were developed in the context of the COVID-19 pandemic and Irish universities:

1. What online learning experiences are considered positive for students who choose on-campus education and why?
2. What online learning experiences are considered negative for students who choose on-campus education and why?
3. What are the implications of these experiences for Higher Education during and after the pandemic?

A mixture of quantitative and qualitative methodologies was adopted for this empirical research. Mixed methods of this kind are not only able to gather and analyse generalisable

data, but also to carry out an in-depth investigation to look at a fraction of the participants more closely (Basit, 2010). Given the research questions, it was considered appropriate to focus on questionnaire surveys and semi-structured interviews, as this approach has been found to produce both quantitative and qualitative data, with the latter providing insight into the subjects' thinking (Tuckman and Harper, 2012).

Ethics approval was obtained from the Human Research Ethics Committee – Humanities, in University College Dublin (UCD). A convenience sampling approach was used to collect both quantitative and qualitative data. Data was collected from the beginning of May to the end of July 2020. The process of data collection involved a two-stage questionnaire survey and semi-structured interviews with full-time postgraduate students. These students were enrolled in the Business School in the university at the time the research was carried out. The students were all enrolled in and completed the same elective Intercultural Development Programme, which included students from twenty different academic programmes across the Business School.

The two-stage survey was sent to 253 students and 132 responded. Among the students who responded to the survey, 34 were Irish while 98 were International students. With respect to gender, 84 identified as female (64%) and 48 as male (36%). In terms of age, 57% were between 18 and 24 years old, 40% were between 25 and 34 years, and 3% were 35 years or older.

Semi-structured individual interviews were conducted virtually with 30 postgraduate students, including 9 Irish and 21 international students. Of these students, 16 identified as female and 14 as male. Verbal consent was obtained from the students before conducting the virtual interviews. Students were fully briefed on the purpose of the research and the methodology, and were given opportunities to ask any questions they had about the way the data would be used. Students were informed that they could withdraw their consent for any reason and at any time, and that participation in the research was completely voluntary. The students were made aware that the interview would be used for research purposes and that although extracts of the interview might be published, their anonymity would be preserved at all stages of the research from data gathering to dissemination. The interviews were recorded and later transcribed.

Grounded theory was applied in the process of data analysis, allowing theories to emerge from the data, rather than data analysis being directed by any existing theory (Glaser and

Strauss, 2017). During the data analysis process, three types of data-reading approaches techniques were adopted (Mason, 2002), namely literal reading, interpretive reading and reflexive reading. These techniques proved very helpful in identifying categories. During the data analysis process, NVivo software was used to assist the organisation of texts, codes, categories and sub-categories. For the presentation of data, numbers were assigned to the students to preserve their anonymity ('Irish1', 'Irish2' etc. refers to Irish students while 'IO1', 'IO2' etc. refers to international students).

4. Findings.

4.1 Students' overall satisfaction of their online learning experience.

From the time Ireland's universities were shut on the 12th of March 2020, all teaching had to be delivered online for the rest of the Spring trimester (8 weeks remaining) and also for the entire Summer trimester (15 weeks). This meant all instructors had to move their teaching completely online. Many of these instructors had little or no previous online teaching experience. They had to quickly learn new skills and how to use new tools to deliver their course content online while maintaining the highest standard possible.

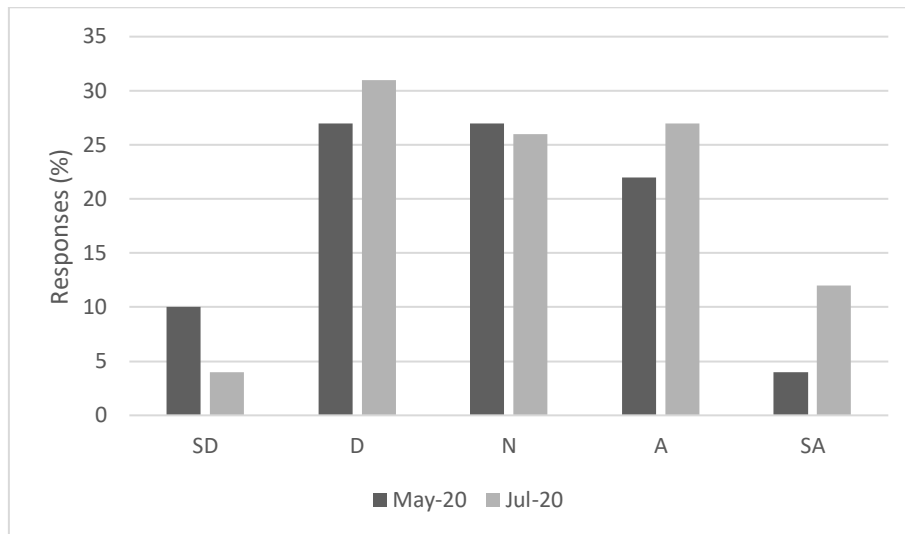
Students were asked how satisfied they were with their online learning experience in the Spring and the Summer trimesters. Students' perceptions of the effectiveness of their online learning experience ranged from being very satisfied to being very unhappy.

"[...] I was like really surprised. It's been really amazing. When we went into semester three, I was actually excited to start." (Irish1).

"[the University] obviously didn't know about the crisis as well. Overall the standard changed significantly and was nowhere near the in-class experience." (IO1).

Figure 1 shows that, compared to the Spring trimester (surveyed in May 2020), there was an improvement in how satisfied students were with their online learning in the Summer trimester (surveyed in July 2020). In the survey, students were asked to choose an answer from Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD) towards the statement: "I am satisfied with my online learning experience so far".

Fig. 1 Improvement in satisfaction with online learning over time. Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA).

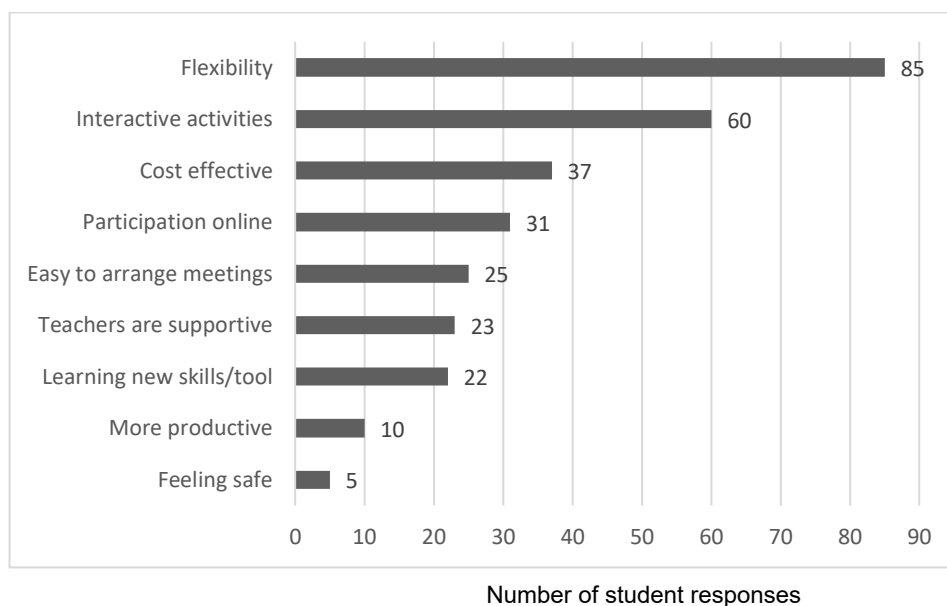


In the following sections, both positive and negative online experiences will be discussed in more detail.

4.2 Aspects of online learning that students enjoy.

There were a variety of aspects of the online learning experience that students identified as being positive. Figure 2 shows which aspects were ranked most highly by the students.

Fig. 2 Positive aspects of the online learning experience.



4.2.1 Flexibility.

Student feedback suggests that one key advantage of learning online is flexibility. Students appreciated being able to access recorded audio and/or audio-visual material at their convenience and to learn at their own pace.

“One of my modules ... they're all recorded, so you had your own time too, you know, you could schedule time when you actually wanted to watch them, which was really helpful.” (IO2).

The additional flexibility was particularly appreciated by students who enjoyed independent learning, and by international students. Some international students found the flexibility useful in dealing with time zone differences, while others found the ability to pause and review recordings helpful in addressing challenges such as the talking speed and accent, allowing them to gain a better understanding of the content. These challenges are difficult to overcome in the in-class environment. In addition, some students liked the fact that they could learn at their “cosy home” in their “pyjamas” and have “walking hours”. In terms of pre-recorded materials, presentations which were well-structured and shorter in length were preferred.

“Some lecturers have been providing shorter but very detailed videos- these are brilliant and very easy to follow. The shorter videos are better because often I stop and start the videos so that I can take notes.” (Irish2).

4.2.2 Interactive activities.

Students spoke highly of the classes that have interactive activities which allow them to engage with their instructors and classmates. These activities were commonly associated with live virtual sessions. Where such activities occurred on regular basis, students felt more connected to their peers and teachers.

“There were lectures where the professors made sure to be as lively as one would be face-to-face making all of us be on time for the lectures with our cameras on. I would say, in some cases I was thrilled to attend classes and maybe that would have not been the case in the classrooms.” (Irish3).

Interactive activities appreciated by students included live class discussions, group work, group discussions, polls, quizzes, icebreakers, presentations, regular meetings and social activities.

“Especially like when we had the breakout session for the intercultural development programme. I thought it was just so fun. We spent like 10 minutes ... laughing. I remember I was at the end of it. We were still laughing. Like, you want to come back. That for me, like, you're way more kind of engaged and you're more willing to be involved, you know, in the class because it's way more fun like than just listening to just pre-recorded stuff.” (Irish4).

4.2.3 Cost effective.

Some students found learning online more cost effective than attending classes on campus, as they did not need to travel and could save money by moving back to live with their families. However, this did not apply so much to international students, most of whom remained in Ireland during pandemic.

4.2.4 Participation.

Online learning environments allow both verbal and non-verbal participation. In terms of participation in live virtual classes, while many students indicated they were comfortable participating verbally, some students found that the non-verbal participation options such as chats, quizzes, polls and hand-raising made it easier for them to participate in virtual discussions during live sessions. These options seem to be preferred by introverted students, students who needed more time to organise their thoughts and international students who needed more time to articulate themselves in a second language.

“Speaking up online is easier because there are many different ways to do it. You can type, you can speak without video, or you can speak with video. As a person who is relatively introverted, I started participating more by typing and then I became gradually more comfortable participating and just started speaking up with my camera on because it's easier and less time consuming than typing.” (Irish5).

In addition, non-verbal participation helped to address particular situations, such as when students had to mute themselves due to noise background, when they did not want to disturb the class and when their internet connection was bad. They could ask questions in the chat function and lecturers could answer them later.

4.2.5 Easy to arrange meetings.

Interestingly, comparing to their on-campus experience, some students claimed that working

online made arranging meetings for group-work easier and more time-effective, as they did not need to find a physical space to meet. Also, access to online resources during meetings was quicker.

"I believe virtual teams have less interruptions and hurdles than working face-to-face. People can show up whenever at their own convenience rather than wasting time and effort on travelling towards college just for a group meeting." (IO3).

However, many students also found working in virtual teams more challenging, and these challenges will be discussed later in this paper.

4.2.6 Teachers are supportive.

Many students preferred live virtual sessions because they felt less isolated, focused better and felt more connected to their classmates and teachers. Live virtual sessions with interactive activities were rated highly by students because they could get their questions answered by the instructors, and they could interact with and learn from their peers. The students who preferred live virtual sessions appeared to have a number of qualities in common, including valuing concrete experience, finding it harder to learn alone and requiring more interaction with peers and instructors.

"Live sessions keeps everyone engaged. I can't stay focused when it's a recorded lecture. I just fall asleep, listening to them. I have to listen to them on 1.5 speed so that I don't fall asleep." (Irish6).

4.2.7 Learning new skills and tools.

While indicating that virtual participation was not as good as in-class learning, some students did appreciate the fact that they had to learn additional digital skills and tools in order to effectively learn and work virtually. Some students said they found it easier to organise their time and to study better and more productively.

"It has been very interesting to be able to pre-record presentations for submission or to present live over zoom. In general, online learning during COVID-19 has opened up a lot of possibility and shown how diverse learning can be." (IO4).

4.2.8 More productive.

Like the student quoted above, a small number of students claimed they studied better and were more productive when learning at distance. These students tended to share a number of

qualities, including needing and enjoying learning independently and preferring self-paced learning. They enjoyed interactive virtual classes, but believed that they studied better independently, and that this gave them better assessment results.

“I learned the most by going carefully through the material, step by step...and I know lectures are important. I never skipped lectures, but for my own learning, I don't pick up as much in lectures.” (Irish7).

However, other students, who appear to have a different learning preference, felt differently. This will be further explored in the next section.

“It has been difficult for me, as none of my modules had online classes and I feel detached from my class. It has also been difficult to understand the module on my own and do assignments related to it.” (IO5).

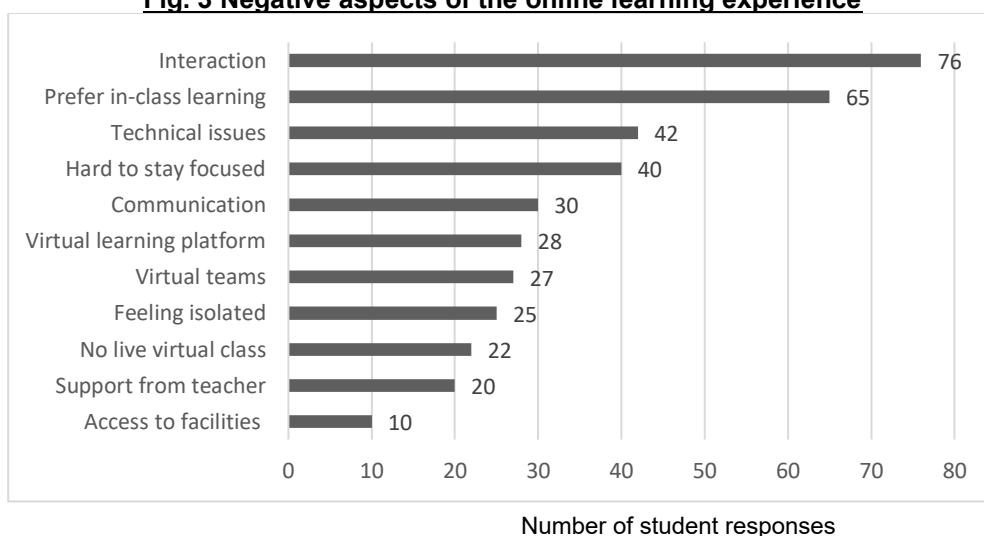
4.2.9 Feeling safe.

Some students, especially international students, indicated that they felt safe staying indoors without having to go out. This was particularly reassuring on an emotional level for those who were away from their families at the time the study was conducted.

4.3 Aspects of online learning students find challenging.

Along with the positive aspects of online learning, there were a number of aspects that students found challenging. Figure 3 indicates those aspects which were identified by the students as being the most challenging.

Fig. 3 Negative aspects of the online learning experience



4.3.1 Lack of interaction.

For the students who participated in the live virtual classes, their experience varied. While some students found the classes engaging and enjoyed them very much, other students found the classes “boring”, “*lost interest*” and found it “*hard to focus*”. The lack of interaction with their peers and teachers was the biggest challenge faced by the students who participated in this research. This often resulted in students feeling disconnected, losing interest in the class, finding it hard to concentrate and feeling disengaged.

“And look at something for two hours, you’re completely zoomed out after the first hour. I remember one of our classes. It was three hours. After an hour and a half, I remember I was just ... looking at Instagram.” (Irish1).

The data shows that one factor affecting how the live virtual classes were conducted was the content. When the content was theory-based and/or information-giving, the classes tended to have few interactive activities.

“Well, there was one lecture and I was just sitting there listening and it was very boring, and it wasn’t great. And I went for shower and came back, so that’s the general gist. It was not uncommon to be honest with you.” (Irish8).

When the content was more “*technical*” and more “*applied*”, more interactive activities were provided. Students suggested that the length of a live class should not be longer than 2.5 hours in total and there should be mini-breaks within that time.

4.3.2 Lack of virtual classes and feeling isolated.

Some students indicated that no virtual live classes were taking place at the time the survey was conducted. This lack of live classes was a major contributor to them not being able to concentrate and feeling isolated.

“If someone is just uploading the slides online and you know, just uploading a recording online. You’re never going to hear it, you know. You get so lazy sitting at home. Nobody’s hearing it, like, I am genuinely telling you, whoever (I) have spoken to from my course, no one is hearing it. No one is seeing the slides.” (IO5).

4.3.3 Hard to stay focused.

Another common challenge is that students found it hard to be able to concentrate and keep

focused during virtual classes and off-line. Most of the students indicated interacting with their peers and teachers on- and off-line helps them feel more connected and to focus better. For example, interactive activities during live virtual classes, quick responses from instructors to queries and regular check-ins were all referred to positively. Well-structured pre-recorded materials with clear instructions helped students focus better and keep motivated.

“It was hard to stay engaged with and because it was just all slides ... all writing on slides, there were pictures and things. To have to watch it for like an hour or two hours straight. It does get boring and it’s hard to stay engaged. I found myself sometimes ... looking around and just not paying attention to what they were saying. Because it was just monologue, it was just next slide, next slide, next slide. It’s really hard to keep interested.” (Irish9).

4.3.4 Prefer in-class learning.

It was not surprising that many students indicated they still prefer in-class learning, which was how they chose to learn in the first place. The social aspect of in-class learning is not replicable by online learning.

“It [in-class learning] makes for a complete university experience, as I could build good relationships with my peers, help and support each other, discuss more with professors.” (Irish10).

Findings reveal that interactions with their peers and teachers in a face-to-face environment plays an important role in the student learning experience. Such interactions help them to be “*more creative and more focused*”, “*more engaged*”, “*more motivated to learn*”, to “*network better*”, “*feel connected*”, have “*richer discussions*”, to gain first-hand “*international experience*”, to enjoy the social aspect of the learning and to benefit more from peer-learning. It seems that students who particularly enjoy interaction with others and who favour individual learning less, missed the in-class learning experience and found it harder to learn online.

“I’m [a] very Body language person. I like being in a room with somebody and talking to them and figuring [out] stuff in person, and I’d rather sit and listen to a lecture in person than I would behind a computer screen.” (Irish11).

4.3.5 Technical issues.

Internet connection problems and bandwidth limitations were the most common technical

challenges for students, especially those who participated in live virtual classes and worked in virtual teams on projects. Among the students who experienced live virtual class, the two most used platforms were Blackboard Ultra on Brightspace and Zoom. In terms of preferred platform, 61% preferred Zoom, 37% Brightspace and 2% others.

Though students acknowledged the security of Brightspace, which is the official platform in the University, frequent connection issues were a major drawback.

“Brightspace’s connection is not steady. Connection issues often happen. Yesterday, we had a session, we could only hear each other’s voices intermittently.” (IO7).

Though acknowledging Zoom was not primarily built for teaching, in addition to better connections and more stability, students mentioned that Zoom has all the features of Brightspace, but is also more user-friendly, more flexible and allows them to see their teacher and all classmates on screen at the same time, a feature that Brightspace does not currently offer.

4.3.6 Harder to work in virtual teams.

Many students felt that it was harder to work in virtual teams than in face-to-face teams. They felt a number of factors contributed to the challenge, including lack of virtual working experience, *“harder to hold people accountable”*, not knowing the group members previously, the size of the group, technical issues and time differences. Virtual communication was another challenge. Students indicated virtual communication was more challenging than face-to-face communication in some aspects, including the missing of visual cues like body language, disruption of internet connection and the need to turn the camera off if the internet bandwidth was not good, something which was often exacerbated by students living in shared accommodation. Students indicated that cultural differences still existed, but these were less obvious than when working face-to-face, and more thoughtful communication techniques were needed.

“Working [in teams] online is ten times harder than face-to-face. Communication is harder online when there is [a] language barrier [or] time zone differences, and miscommunication is easier.” (IO8).

4.3.7 Communication and support from teachers.

Many students indicated that virtual communication is harder than face-to-face communication

when there are complex concepts to be discussed and different personalities involved.

“We have got used to working virtually, but yes face-to-face is better [in the] majority of times, because it is easier to speak to a teammate who is not comfortable, and [to] understand the issues he/she is facing.” (IO9).

In addition, virtual communication was harder, particularly when instructional support from the teacher was needed. Without having the opportunities of *“asking questions in person after the classes”*, email was the main channel of communication with their teachers for most students. How fast a teacher replied to students’ email enquiries directly impacted on students’ satisfaction with their online learning experiences.

According to the students, *“teachers who are supportive”* tend to share characteristics including *“replies to email within 48 hours”*, *“very clear [about] communication channels”*, and *“communicates very clearly with us his/her expectations.”*

4.3.8 Access to facilities.

Though students were very understanding of the situation, some of them did express the disappointment of not being able to go to the library and use the study space.

5. Discussion.

As mentioned earlier, the context of this study is the COVID-19 pandemic, when all campus-based university teaching had to suddenly switch from in-class to completely online, and many of these online classes were delivered by instructors who had little or no prior online teaching experience. The students who participated in this study had experienced both in-class and online learning at the time the study was performed.

A clear message from this study is that the teaching methods that work in the traditional classroom do not necessarily work online, because the nature of the learning environment is different. Findings from this study suggest that the students’ overall online learning experience (as measured by students’ overall satisfaction) improved from the Spring trimester to the Summer trimester. This may be due to the instructors learning to use the online environment more effectively.

Not surprisingly, as these were students who chose on-campus learning in the first place, even in the Summer trimester most still preferred in-class learning to achieve the *“complete*

university experience", despite some very positive online learning experiences. While acknowledging the benefits of online learning, the students emphasised that the social aspect and the learning benefits from face-to-face interaction with instructors and peers is not fully replicable in the online learning environment.

For students who preferred in-class learning, the findings suggest that the foundation for an effective online learning experience is how engaged students feel with their learning. This includes how engaged they are with learning materials, their peers and their instructors. Engagement helps students to focus better, to be more motivated to learn and be more interested, to benefit from peer learning, to have an improved sense of belonging and to feel connected to the online learning community. To achieve engagement, interaction is the key. These findings reflect recommended best practices in online learning (Cox and Cox, 2008; Bryand and Bates, 2015).

Another important factor impacting on a particular student's online learning experience is their preferred learning style. Students have different learning styles (Kolb, 2005). It is well established in the literature that preferred learning styles will impact on students' learning outcomes in different learning environments and through different learning activities (Diaz and Cartnal, 1999). Findings from this study suggest that students who responded positively towards online learning appear to have an Autonomous learning style, with their learning preferences including independent and self-directed learning, and being in control of and able to regulate their own learning. Such students claimed to learn better through asynchronous delivery, while also enjoying synchronous delivery. On the other hand, students who responded negatively towards online learning appear to have a Participative learning style, with their learning preferences including interacting with peers and instructors and participating in discussions, group activities and structured learning activities. They tend to prefer synchronous delivery that has a substantial amount of interaction, while appreciating the flexibility asynchronous delivery offers.

To maximise the online learning experience, support should be offered to both instructors and students. Instructors should receive teaching support, with a focus on designing and delivering content online through a variety of platforms and tools. Students, especially those who have little prior online learning experience, should be provided with a well-structured and clear introductory course to help them to become familiar with the platforms and tools needed for online learning.

6. Conclusion.

The Pandemic is ongoing at the time of writing. No one knows when we will be able to return to providing a 'normal' face-to-face service to our students. Will we ever go back to 100% in-class teaching in the future? Or will we continue to use a blended approach combining both in-class and online learning? In this study, many students saw the value of incorporating online learning into university programmes in the future. This study shows that while online learning cannot replicate everything in-class learning can offer, it can be a valuable addition when delivered at high quality with interaction and engagement.

"Both have pros and cons. I think a combination of both would be great for future learning." (Irish12).

COVID-19 has 'forced' us to teach large numbers of students online and to explore what, for many instructors, was new territory in a short time. As a result, we have an opportunity to consider the future of higher education. For example, we should consider how to use some of the advantages of online teaching to enhance the total education experience, incorporating both face-to-face teaching and online activities.

Future studies could investigate further the impact of students' learning styles in both in-class and online learning environments. In terms of the blended approach, it would be interesting to investigate how best to combine in-class and online learning to maximise the learning experience for students who choose on-campus education.

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