A Semester Like No Other: A Student and Lecturer Perspective on the Impact of COVID-19 on 3rd Level Academic Life.

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Abstract.

The COVID-19 pandemic has drastically altered the nature of pedagogical life at all levels of academia, with 3rd level education being no exception. The sudden pivot to emergency online teaching at the onset of the pandemic has transformed the day-day activities of both lecturing staff and students alike, with both groups intertwined in an increasingly complex learning curve littered with obstacles and challenges. In this reflective paper, the impact of the COVID-19 pandemic on academic life is summarized by a 3rd year undergraduate student and a newly appointed lecturer in the Department of Life & Health Science at Dundalk Institute of Technology. They reflect on the initial response to the pandemic on their academic activities, how their approach to emergency online teaching evolved over the course of the spring semester and how issues of motivation, engagement and technological access might inform their practice in the future.

Keywords: Active Learning; COVID-19; Remote learning, Student perspective.

1.   Perspective of a 3rd year science student.

1.1 A Welcome break.

I was in a lab when we first heard about the possibility of a two week break due to the COVID-19 pandemic. At that point, the pandemic was just a viral outbreak in China, a country halfway across the world, which made it seem almost impossible for the virus to reach Ireland. Hence, the two-week break seemed like just a precaution, to reduce social interaction until things died down in mainland China. This was a welcome breather for all of the students in my course, who were in the midst of rushing assignments and desperately needed the time off, no matter the reason.

Our college implemented an institute closure around mid-March, following an announcement made by the government (Department of Education and Skills, 2020). This closure was intended to last until the 30th of March. The first week off was intended to be a study week with no additional lectures. I was really grateful for this, as our workload had increased tremendously since the previous semester. During this time of the year, students were always frantically trying to complete one assignment after another, and now we felt that we could stay at home and finally catch up on both assignments and much needed sleep.

At this point, the virus was spreading all over the world, with the number of deaths and new cases increasing daily (including in Ireland). However, due to a lack of information, most of my fellow students thought that as young, healthy individuals, we would not be affected by it. Hence, I spent more time worrying about my college work than the current state of the world. After the Easter holidays came and went, we realised that this two-week break might be extended to the end of the semester. Though it was initially exciting to spend more time at home, it also caused anxiety regarding the uncertainty of lecture and exam delivery. This meant that we had to get used to scheduling our own study time during the day, to go through videos and notes that lecturers had prepared for us. Although there was no significant difference in the amount of lecture material, it was the action of having to be self-disciplined and self-directed, that made it just that much harder to commit to lectures. I, while in the midst of completing assignments, had no plan nor strategies to tackle lectures, and left it all towards the end.

1.2 Adjusting to online learning.

At the start of the online learning process, I was delighted to have the freedom to access my study materials whenever and wherever I wanted. Instead of having to sit in a lecture hall for half of my day, I could now easily view the videos and notes on my phone and my laptop, without having to leave the warm comforts of my duvet. However, for a notorious procrastinator, I found myself accessing social media and online entertainment more often than I would open lecture notes, whether it was on my phone or my laptop. This habit was backed up by my self-rationalisation that the notes were always going to be there, and I could view them whenever I wanted. After convincing myself that I could simply study tomorrow, I would go back to scrolling Facebook or watching Netflix. Before I knew it, a whole day was wasted with zero productivity and nothing completed. A study conducted to understand the mechanisms behind procrastination concluded that diversion and passivity is a strong reward and incentive (Svartdal et al., 2018). In other words, this meant that doing nothing is more appealing when you have

something to do. I found this to be true in my own situation during the pandemic. Oddly the more work I needed to do, the easier and better it felt to not do it. Thus, while as a student I had always pushed for self-direction, the reality was that with a sudden influx of autonomy, I was overwhelmed with a desire to procrastinate, a common trend among self-directed learners (Codina et al., 2018).

We quickly found that different lecturers had different approaches to online teaching. Some did live lectures, which were recorded and uploaded to an online space, allowing for both synchronous and asynchronous delivery for students with tight schedules. Others did it all: notes; videos and even a document of the video commentary. In a typical live online lecture, there were ~ 8 - 9 students present in a class of 28, which was only about 30% of attendance. Granted, the same lesson would be on Moodle later, which allowed students to watch it at a more suitable time. The live lectures were useful if there were any questions about the lecture, as the lecturer could provide an immediate reply. It also provided a sense of intimacy with the knowledge that your lecturer is at the other end, teaching you as you go. I personally preferred video materials instead of notes, as it took less time to watch a video than read the notes. Typically, there would also be better explanations from the lecturer in the videos, which saved a lot of time learning new topics instead of trying to figure out the notes myself. Overall, I found the recorded live lectures to be the optimal method of delivery. Not only was there a platform for interaction between students and lecturer, but the recording served as a fail-safe for students who were unable to attend live lectures.

1.3 Issues of motivation & priorities.

Even though there was very low motivation to do any work during the pandemic, we all had one common goal in mind: to get our degree. It was the only mantra that I kept in my head to keep me going and finishing all of the assigned reports and projects. Although I kept on top of my assigned reports, I still did not go near most of my lecture notes for the majority of the semester. It could be argued that this could also be the case for pre-COVID times, where I would attend all lectures but only revise the notes before the exams, due to the demanding amount of continuous assessments that I had to prioritise. However, the accountability for missing lectures was not present in this case. Hence, to increase or maintain engagement with the materials, the sense of accountability had to be replaced somehow (Nagel, 2012). Some lecturers created optional quizzes or graded checkpoints that students had to complete. What I found most effective was the graded checkpoint for one of my projects, where 1% of the final grade was

allocated if we completed certain sections. This acted as a motivation for engagement, but importantly it was not too significant if a student was unable to complete the task. In my opinion, an ideal strategy would be to combine the quizzes and graded checkpoints to make a graded checkpoint quiz, where after a lecture video, students had to complete an easy 20 multiple choice quiz (within 48-72 hours of the video being made available) to assess the learning outcomes of the video. The quizzes could then contribute to 1% of our grade, just to give it an incentive to be completed. This would be ideal for all stakeholders, where students can have a very tangible reason to engage with lecture material today, not next week, and lecturers could see if their notes were easily understandable or if they needed to restructure their delivery method.

1.4 Exam preparation.

It was during the study week before final exams that I realised I had not looked through any of the lecture materials. My strategy to catch up on 2-months of missed lectures was to pick up where I left off, and binge watch all of the lecture videos, as if it were a newly released Netflix series. It was notable that even though the amount of materials were similar compared to what we received in 'normal' lectures; it took less time to go through the materials myself. This may be due to me fast forwarding through parts that I was already familiar with and only focusing on areas that I was unsure of, whereas lecturers would have to go through everything to ensure that everyone absorbed the information equally. Before online learning, I had studied for final exams by navigating past exam papers, expecting them to be similar to the exams I would sit. However, this was now pointless, as the same format used in previous exams could not be applied to online assessments. Instead, most modules adopted essay type exam questions, which required us to write a 1500-word essay over a short time-frame, while others relied on online quizzes or a combination of the two. Both assessment modes were familiar, but never as a tool for a high stakes exam. This undoubtedly caused a wave of panic and frustration within the class including me, as our award for this degree was heavily reliant on this exam. As described in a paper by Banks (2015) it was as if 'your whole life depends on it'. If we needed support, such as lecturers' help with understanding these exam formats, it was definitely at this point in the semester.

Emails of examination details containing never ending paragraphs of requirements and information started coming in waves from different lecturers. It was easy to misinterpret or overlook certain points, and this prompted us to extend our communication with each other.

Some of us in class created a WhatsApp group to talk about how we were coping with the exams, and life. From this, I learnt that a classmate had travelled to Dublin before the lockdown, and was afraid to return home to her family as she had an elderly relative at home that would be highly susceptible to the virus. Another classmate had a couple of children at home that needed her constant attention and barely had any time to deal with assignments and exams. In college, I pictured her as just another student amongst us, and now I understand the weight of her responsibilities as a mother. Then there was me, an international student that was across the globe from her family, alone, with flights cancelled and no way home. I called my parents as often as I could to update them, and to find out about the situation back home. I usually consider myself to be brave and unafraid to deal with any problems, but then and there, there was nothing I could do to protect my family. I felt helpless. Sometimes, I even felt angry that I was not home with them, that they had to go out to get groceries when I could have done it had I been home. Nevertheless, we all had to finish this exam no matter what we had on our plates.

1.5 Final thoughts.

At the end of the day, we are all just finding our way through this mess of a world. Sure, we all thought we knew what we were doing before, but now we are just waiting on news from a higher authority. From speaking to our lecturers, they oddly feel the same, as they wait on guidance from college leadership on how best to deliver content and exams. In an ironic twist, the best teachers have had to adapt to become students themselves, learning new approaches and tools to optimize the student experience in a pandemic, remote learning world. On top of the stress from college work, we had a lot of personal uncertainty regarding even the near future. Students waiting for information from their lecturers, public waiting on statements from the government, and the whole world just waiting with bated breath to see what this virus would become. Unlike video games, life has no walkthroughs nor the Konami code to fast forward to a better point in time, and just like always, we will have to go through all the individual levels, even in the pandemic edition.

2.   Perspective of a New Lecturer.

2.1 A new start.

In January 2020, I took up a lectureship in the Department of Life & Health Science at Dundalk Institute of Technology (DkIT). Previously, I spent 7 years in the United States as a postdoctoral

fellow and a research assistant professor. While these roles entailed significant teaching, a new position at DkIT marked a transition into a full teaching load. Having become interested in teaching from an active learning perspective, due to its demonstrable positive impact on science student performance and retention (Freeman et al., 2014; Theobald et al., 2020), the opportunity to teach full time and pursue research evaluating active learning methods such as laboratory practicals (Rembetski et al., 2018) and journal clubs (Drumm et al., 2019), was something I looked forward to immensely.

Every academic, regardless of their role (lecturer, researcher, administration, technical support) vividly recalls their first semester. Starting a new position is fraught with new experiences, and feelings of constantly catching up with faculty who may have performed their duties at impeccable levels for years or decades. In the early weeks, as fellow lecturers scurried around the corridors, busily setting up examination boards, exam correction and module preparation, I was astonished by the ease at which they handled their diverse and demanding workloads.

To the uninitiated, it seemed that experienced lecturers spoke a common language, which I had just started to learn. Listening to new colleagues, one slowly picked up new terms like "*white sheet*", *"failed element'*, *"CA absence forms"*. References were made to committees and processes that one had not yet encountered, such as ethical boards, programmatic review or student consultations. Faculty discussed these complex 'behind the scene' aspects of the academic machinery with an ease and familiarity that could make one feel as if they were struggling to keep up. However, friendly and insightful advice was poured on from veteran lecturers. Coffee breaks and lunch time chats involved recollections of other lecturers first semester, the challenges they encountered and how they navigated them. Whenever a question was asked about the new role, the most common reaction after the question was answered was a knowing smile, accompanied by:

> *"Don't worry, after this semester you'll know all about it!"*

2.2 Initial Impact of COVID-19 Pandemic.

After ~ 6 weeks, I was on top of my module delivery, a few papers were nearing completion and I received ethical approval for a research project on laboratory assessment methods. While still encountering new challenges, processes and procedures (examination approval, external examiner marking schemes, handling issues of plagiarism and late assessment submissions), I was beginning to feel confident that any new issue could be dealt with, as had all the others

thus far.

 In late February 2020, we all began to hear phrases that were unfamiliar to lecturers both new and old. Phrases such as *"Wuhan", "COVID", "coronavirus"*, *"social distancing"* became ubiquitous in everyday conversation. With the announcement of the institutional closure on March 12th 2020, we were advised to transition to online teaching. While the potential to enhance student learning via integration of digital technology with classroom lecturing was recognized amongst faculty (Rose & Meyer, 2002; Wisk, Franz & Breit, 2005; Livingston, 2018), and recent pilot studies using digital platforms for practical assessment had been positively received at the institute (Bree et al., 2020), the exclusive use of online platforms for content delivery was new to everyone.

The initial impact of the COVID-19 pandemic on academic life was a profound levelling of experience amongst lecturing faculty. Suddenly, we were all new faculty all over again, starting our first semester from scratch. Regardless of qualifications, teaching experience or length of service, all faculty were learning a new way of doing their job, with virtually no warning or training. All at once, every lecturer was encountering new experiences, challenges, and processes for the first time, at a pace that upon reflection was frightening. New phrases such as *"synchronous vs asynchronous delivery"*, "*Zoom*", "*Big Blue Button*", were thrown around as we grasped at ideas for optimal programme delivery. With the rapid pace of change and capricious nature of the national restrictions in March / April 2020, even seasoned lecturers who would have helped struggling colleagues under more benign circumstances expressed a feeling of being lost. This time there was no old-school faculty who had seen and done it all to listen and reassure us that everything would be fine. In an instant, both the least and most experienced of us were novices, with only trial and error to guide us.

Furthermore, there was a reversal of lecturer perceptions and roles. Some faculty in the department were already immersed in digital technology prior to lockdown. While this was perhaps viewed by some as an intellectual curiosity, or a novel and interesting, but ultimately non-essential supplement to traditional teaching prior to lockdown, all of a sudden, these skills and knowledge sets were deemed essential for the very survival of the day-to-day running and delivery of entire programmes. Similarly, the onset of lockdown and exclusive online teaching sometimes meant a role reversal among new (mentee) and experienced faculty (mentor). The older faculty that had graciously walked a new lecturer through time-honored departmental policies and procedures on student ethics, assessment and exam boards, were often the ones

that requested help from newer faculty in setting up a Microsoft TEAMS call with a student or how to share documents on an online cloud system.

2.3 Reflections on Asynchronous vs Synchronous Delivery.

The first question one asked when teaching remotely, was whether to deliver classes synchronously or asynchronously. This was given considerable thought, with positive and negative considerations to both avenues. Due to the nature of the national lockdown, students were confined at home with their families, often in areas that did not have optimal internet access. In many instances, students were caregivers for family members, responsible for young children or employed in essential work. These considerations led me to asynchronous delivery for my classes. Ultimately, this manifested as recorded video and audio lectures uploaded to a private YouTube channel. Links to the videos were then shared to students via email and the DkIT virtual learning environment (VLE), Moodle.

I was cognizant that students' demanding responsibilities meant they may be unable to schedule themselves to be available for a 3-hour class from 9-12 every Wednesday morning for example. Thus, allowing students to digest content at their own pace when time allowed seemed a more favorable alternative. While a combination of synchronous and asynchronous delivery was debated (synchronous online lectures via Zoom that could be recorded and shared later), it was felt that this might be perceived as unfair to students that could not be present for synchronous classes, as they would miss the interactive aspect such a format would allow. For these reasons, the asynchronous delivery was used to keep the delivery style and learning opportunities equal for all students.

On conclusion of the semester, while I still think asynchronous delivery was the most accommodating and egalitarian option, both students and I missed out on important aspects of academic life with this approach. One clear deficit in remote teaching, in any context, is the need to properly engage students. In lecture halls and lab practicals, student engagement is at the heart of the active learning process (Zepke, 2010, 2014; Docherty et al., 2018), which has proven benefits for student learning in STEM fields (Haak, HilleRisLambers, Pitre, & Freeman, 2011; Freeman et al., 2014; Theobald et al., 2020). To pursue active learning in a classroom, one could employ workshops, peer learning, group work and formative classroom assessment techniques (CATs). Rather than have students be passive recipients of information, the focus should be on making them academic partners by engaging them to use what they have learned,

rather than merely recite it (Blythe & Teaching for Understanding Project., 1998; Bass, 1999). In a real time, synchronous delivery, evaluating student learning and understanding can be accomplished rapidly with CATs (Angelo, 1993), often aided by technology (mobile gaming apps, student response systems, etc. (Wiske et al., 2005)). This allows rapid course correction if learning outcomes are not being achieved. In lectures, this can be accomplished simply by asking students questions as one walks between the benches of the hall.

In remote, asynchronous delivery, all of these tools were taken away and determining student learning became much harder. On a personal level, this was extremely hard to adjust to, as one of the aspects that attracted me to my new position was the opportunity to interact with and support students on a daily basis. Having spent recent years studying active learning, the asynchronous remote delivery made me feel like I was playing a game of football and choosing to leave all my best players on the bench. Furthermore, stimulating student engagement generally was a challenge. In addition, the loss of a social learning community, so vital for student success at 3rd level (Docherty et al., 2018; Senior, 2018), was exacerbated by asynchronous delivery. With asynchronous delivery, student learning was by default occurring in isolation, without peer to peer interaction. At the end of the semester, I wondered if this might have had significant emotional as well as pedagogical implications on students' wellbeing.

Ultimately, when choosing how to deliver classes remotely, lecturers were balancing many considerations: student accessibility and equal learning opportunities, engagement, technological and time constraints, and what was best suited to the delivery style or personality of the lecturer. It is obvious now that these are not mutually exclusive, and could act against one another. However, it is worth bearing in mind that whether synchronous or asynchronous delivery is chosen, ultimately remote learning in any format is unlikely to the preferred format for students or lecturers in the long term (Page, Meehan-Andrews, Weerakkody, Hughs & Rathner, 2017).

2.4 Lessons on Student Engagement.

In efforts to engage students during lockdown, many approaches were piloted. By regularly communicating with students via a VLE, as well as email, they were regularly informed on evolving requirements of assessments and delivery of online classes. In an attempt to introduce the student voice into module delivery, an interactive forum was created on the VLE, where students could input suggestions for content to include in tutorial sessions. It was hypothesized

that by giving students a voice in directing delivery they may become more engaged (Senior, 2018). Unfortunately, this format was met with relatively little success (< 5% of the class engaged with the forum). While the reason for this is unknown, it has been reported that students are far less likely to engage with online discussion forums if there no explicit link to summative assessment (Randsell, Borror & Su, 2018).

A more successful experiment in student engagement was to create a voluntary, formative assessment to be completed over Easter break. This assessment was constructed as a multiple-choice question (MCQ) quiz taken on the VLE. It was emphasized that this assessment would assist students in identifying areas requiring revision, and that the final summative exam would follow a similar format. Surprisingly, students were eager to interact with this assessment, with > 50% of the class completing it. While it was unexpected that students would voluntarily complete an assessment in the midst of an already heavy workload, informal student feedback suggested that by making the expectations and potential benefits of the formative assessment clear, students were more likely to engage with it. This example highlighted that to make students collaborators and partners in learning, clear communication and explicit links to positive outcomes are essential.

By far the most successful engagement and interaction with students during lockdown was from an informal email chat. Approximately 4 weeks into lockdown, an email was sent to each student in a 3rd year module. The email was brief and inquired how the student was doing in a general way, noting that I was checking in to see if there were any issues they wanted to raise. To my surprise, over the course of several hours, every student replied, often with lengthy responses. In many instances, this led to significant back and forth exchanges about their personal circumstances, how they were coping day to day, describing obstacles they faced and how they were overcoming them. While I had sent numerous emails over the preceding weeks inquiring on students' progress, it was always from an instructor perspective (inquiring about assessments, or class content). These emails elicited minimum responses. A more personal and informal "*How are you doing?"* email however, was met with a relative tsunami of feedback. Through these exchanges, I learned more about my students than I had in the previous 3 months when I saw them daily face to face. Talking through their individual issues revealed a plethora of experiences (some cared for young children I didn't know about, some were primary care givers in their household and were struggling with time management, some had mental stresses related to motivation and depression, others found the social disconnect from their peers especially taxing). This made me re-evaluate my perception of the student experience

outside of the classroom or VLE. All of a sudden, in light of so many real-world concerns, the effort my students had made in engaging with my material and assessments seemed Herculean rather than minimal.

My experience was not at all uncommon. From speaking to faculty and students alike, the pandemic forced us to communicate in ways we never did before. If there was a positive to be gleaned from this situation, it was that many of us have connected with more people on a human level than we may have otherwise. Isolation and lockdown has made us realize what the pandemic has taken away more than anything is the human connections that collaborative education and college life helps us form, and when starved of it, we seek new connections where we might not have previously.

2.5 Conclusions & thoughts for the future.

Due to the need to rapidly adjust normal protocol and procedures, at the end of my inaugural semester I had not gone through the normal rituals of new faculty. I had not been able to undertake new faculty training, I still haven't been properly set up on the printing system, I have yet to attend an in-person committee or exam board meeting, I haven't been able to be in my office after results day for student consultations. All of these rituals represent important 'firsts' for new faculty, which I haven't yet had. Semester 1 2020 is also being delivered remotely, so it seems that I will have my 'normal first semester more than a year (or longer) after taking up my post.

It is interesting to postulate however, that as a new faculty caught up in the normal whirlwind of change accompanying a new position, perhaps I was well equipped to deal with lockdown. In many ways, the slew of changes that we all had to adapt to in Spring 2020 were just additions to a 'list of new things to learn', a list that was already extensive before I ever heard the word 'COVID'. Had I been 'in a groove' in the position, with well-established regimes of module delivery, assessment and committee responsibilities that come with experience, perhaps the sudden and rapid pace of change would have been even harder to cope with.

The most challenging aspect of the COVID-19 pandemic was engaging students via asynchronous remote delivery. At the time of writing we are now engaged with another semester of remote delivery in Semester 1 2020. Will the same choices be made on delivery style going forward? Based on what I learned about students' responsibilities and concerns outside of class, I predict that I would still prefer an asynchronous delivery. However, perhaps this could be

integrated with optional synchronous formative assessment tutorials that utilize gaming technology to engage students (Kahoot, Socrative). In my experience, a significant amount of in-class time is devoted to similar activities and student discussion, time which is freed up with asynchronous delivery. For example; in what would normally be a 3-hour session of lectures, perhaps 2 hours could be devoted to students reviewing content asynchronously, followed by an optional 3rd hour later in the week of synchronous activity (modelled on the flipped classroom system (Gilboy, Heinerichs & Pazzagalia, 2015)). This would have the benefit of not only increasing overall engagement and therefore enhancing active learning (Lekwa, Reddy & Shernoff, 2019), but would also encourage peer to peer interaction and foster a sense of community amongst the class which is vital for achieving learning outcomes via online delivery (Thomas, 2014).

The most rewarding lesson I learned from my first semester, was the realisation that students do not exist in a bubble, where their only consideration is checking their emails, eagerly awaiting the next update on their assessments. My informal email exchanges were insightful, touching, and made me respect my students in ways that I previously hadn't considered. Going forward, I want to keep this realisation at the forefront of my thinking when designing assessments and delivering content. We are all professional educators, with resources, experiences and knowledge that students don't have access to. Thus, perhaps we need to adapt, within the confines of time and technological constraints, to the needs of students, not the other way around.

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