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The Future of Teaching and Learning in Higher Education in the Coronavirus Era

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Abstract

The entire higher education sector has experienced a serious downturn for the past two years because of the coronavirus pandemic, but has managed to stay in operation, typically employing a combination of videoconferencing and blended learning. Overall, student losses have not been quite as bad as first predicted, with inconsistent levels of job losses seen around the world. Higher education has kept its doors open and students have realised that enrolling in a higher degree is a more reliable option than finding employment or travelling overseas. The success of the new delivery methods has led some commentators to predict that online, technologically driven curricula will become the norm. Technology has simply provided a stop-gap to enable social distancing to occur during lockdowns that are still ongoing. This paper argues that the vast majority of staff and students do not aspire to teach and learn online. Lack of human presence, minimal collaboration and motivation issues, together with technical problems, and isolation create barriers to teaching and learning alike. The evaluation of online teaching over the last two years is yet to be determined, however, the future of higher education is a return to traditional mainstream classrooms, with an additional back-up website for the majority of instructors and students.

Keywords: coronavirus, COVID-19, higher education, future

1. Introduction

In late 2019, just before the world succumbed to the COVID-19, I reported on the future of higher education, and questioned whether technology could be a solution to long-term declines in domestic student enrolments across the USA, UK and Australia (Archee, 2019a). My conclusion was that technology alone was not able to halt the declining popularity of university and college degrees in the English-speaking world, especially in the arts and humanities. The reasons included perceptions of the value of degrees, increasing costs of degrees, questions surrounding the quality of higher education, Brexit effects in the UK, and the use of technology to replace or augment traditional teaching methods. It was argued that technology was not a solution to attracting new students, and slowing high attrition rates. In fact, poorly designed courses that forced students to study online was considered to be a part of the problem.

Things have changed. The disastrous arrival of the coronavirus pandemic in 2020 has affected the lives of most people, in particular students who departed secondary education and would normally need to either 1. find employment, 2. commence a degree or 3. take a gap-year off from schooling to travel. All of those choices were impacted by national and state-wide lockdown laws, and worldwide border closures. High school students' choices were severely

handicapped by lack of available jobs, and the inability to travel, leaving higher education as the only reliable option.

At the beginning of 2020, higher education forecasting predicted major falls in enrolment numbers for 2020, and 2021 due to missing international students and anxious domestic students (Ahlburg, 2020; Thatcher, et al, 2020). While many institutions that relied on high international intakes have had to reduce staffing, some institutions saw increases in domestic enrolments and recorded less attrition because higher education became the less risky option during the pandemic. Given the rise and fall in case numbers over the last two years, unpredictable lockdowns, and recruitment sanctions across a range of industries, higher education will probably remain the most predictable option for most school-leavers (Hillman, 2020) as long as they can obtain entry to their choice of institution, and can afford to do so.

2. What happened to university staff during the coronavirus pandemic?

In Australia, being an academic became a highly risky proposition during the past two years. The higher education sector was decimated more than any other single industry with 40,000 jobs (20%) lost, mainly from public universities, not vocational training or private institutions. Contracted sessional staff were first affected, but during 2021, permanent staff have also been targeted, resulting in a greater number of courses now being staffed by casuals, downgrading the overall quality of education. The Australian government had decided to bailout the tourism, and airline industries in early 2020, with the racing industry given $16.6 million by the Victorian state government, and at the end of 2020, extra money (AU$70 billion) was given to 6 million employees in trades, hospitality, retail, and service in the form of JobKeeper subsidies. However, higher education employees were indiscriminately excluded from most forms of government assistance (Littleton & Stanford, Sept, 2021).

In the USA, Department of Labor figures from the beginning of 2021 showed job losses across America that amounted to 650,000 jobs or 13 percent of all higher education employees. This figure represented all staff associated with institutions, including administration, food supplies, on-campus services, and teaching staff (Findijis, 25 Feb, 2021). These statistics were even more extreme in certain states such as Colorado, Maine, New Hampshire, Ohio and Wyoming with over 20% of employees affected (Alaznick, 2020). The US two-tiered system showed an uneven spread of job losses across its higher educational landscape. Nearly a year later, Department of Labor figures show an improvement with 2-year, community colleges removing 11% of its staff, for-profit private colleges down 5.3%, followed by four year private colleges (-3.9%) and four year public institutions (-2.6%) (Lederman, Dec, 2021). Federal government aid for schools and colleges amounted to US$31 billion for 2020 (Rosewicz & Macing, 10 Nov, 2020).

The situation in the UK was not quite as bad with over 36,000 higher education staff members “furloughed” from UK universities during the first wave of lockdowns that began in Mar, 2020. Furloughing meant that staff were asked to leave the institution for a period of time, but re-instated when the situation allowed. Such staff were given a government subsidy of 80% of their salary, which was topped up to 100% by institutions themselves. However, over 3,000 redundancies were enforced, and hundreds of contracted sessional staff were dismissed during the same time period (Wooton-Cane, Jul, 2021).

The European Union fared much better than English-speaking countries mainly because its financial model was not reliant upon student tuition fees or endowment revenue. In most EU countries, only minimal domestic and international student fees are charged resulting in few forced redundancies during the first lockdown period from Mar, 2020. In 2020, Dutch academics were awarded a 3% pay rise to account for their extra online teaching duties (Matthews, 2020).

3. All education became (social) distance education during the pandemic

During March and April of 2020, the majority of Western countries worldwide replaced their entire education systems, including higher education with some form of distance education. Many universities gave their staff 2-3 weeks to transition from completely face to face tuition to completely online teaching. Lectures, tutorials, practicals and internships all had to be delivered online, using videoconferencing, or recorded and placed on websites. Assessments had to be revised, examinations completely re-written. The online teaching situation was of critical importance because many schools, colleges and universities were completely shut down during the subsequent lockdowns across the globe.

While funded by the federal government, Australian universities are autonomous organisations and were not obliged by any government to close their doors, however most universities followed state policies and prevented staff and students from visiting campuses unless absolutely necessary, and in many cases this situation lasted from April to December, 2020, and again from July to November, 2021 because of the Covid-19 Delta variant. The same situation was replicated across the world, even though many higher education institutions were not mandated to close their doors in the same way that airlines, sporting and entertainment venues, hospitality, restaurants and retail stores were directed. The danger was of a massive Covid outbreak occurring at a university because it ignored health recommendations. This distinct possibility would have caused immense reputational damage that no CEO or Vice-Chancellor could afford.

At most higher education (and secondary) institutions, mass videoconferencing became the replacement for face-to-face (FTF) instruction, with video recordings available to students who were absent from the live sessions. Use of textbooks, readings and notes were replaced with web-based materials. This situation was not a problem for my own school which had been hosting such online classes since 2016. All of my Communication department's lectures had already been converted to video pods, and we had been using Zoom for the past 5 or 6 years, usually with one online class per unit, taught every semester. The biggest issue with the online class was that of the 30+ students who enrolled in the online version, about one third either failed or withdrew every semester. My experience was exactly the same when I ran a first-year unit, entitled, Electronic Research Methods in 2000. At that time, students could choose to come to class or study online via my own purpose-built website. In 2000, one third of students did not submit all their assignments and thus failed the unit. Feedback revealed that these students forgot deadlines for mandatory assignments and simply gave up. I decided to abandon the earlier online option because the failure rate was embarrassingly high.

However, the pandemic made online teaching the only option for higher education institutions to stay open, and for students to be able to continue their studies, and my failure rates did not replicate past online classes. However, this was not due to some miraculous change in my curriculum design. When online teaching became the universal mode of delivery, then all

students became online students. In non-pandemic epochs, students chose this delivery method, and probably many such students chose online because they believed this method was more efficient than FTF classes, that involved extra travel to and from universities. Unfortunately, learning from videos and websites was not an easy task, and only suited those students who could devote more time than normal to the weekly sessions. When all students study online then the full range of students are present resulting in the same distributions of failure rates as seen in non-pandemic times. If students are allowed to choose their delivery mode, this often attracts students who are study time-poor and find that they cannot dedicate the appropriate amount of time to the content and assignments yielding much higher failure rates.

An evaluation of the entire Communication degree from 2017-2019 revealed that the majority of students chose just one or zero online units, and that less than 10% chose more than 8 units over their entire three year degree (Archee, 2019b). Anecdotal evidences suggests that most students eschew online delivery, and that only a few highly organised students will opt to study exclusively online.

4. What are some predictions for new learning and teaching?

At the beginning of 2022, with the new Omicron variant creating even more Covid cases around the world, higher education is still facing a crisis that is shared by all industries around the world. However, the main difference between 2020 and 2022 is that the world has an effective weapon against the worst symptoms of Covid-19, that is, vaccines. While hard lockdowns still exist in parts of Asia, South America and Canada, it looks likely that the higher education sector should go back to some form of normalcy for 2022. In Australia, this looks even more likely given there is a federal election this year, and a lockdown could prevent the current government from being re-elected.

Hyflex is the combination of blended learning, FTF teaching, and videoconference-enabled classrooms that allow any student to attend in any mode of delivery. *Hyflex* demands fast network speeds to cater for Zoom students outside a class, and to communicate with Zoom students and instructors inside a class. There is a huge technological outlay, maintenance support bill and staff training cost to implement this form of hybrid flexibility. Originally an American invention, *HyFlex* classrooms allow students to change modalities from day to day, but has significant problems with groupwork and collaboration. *HyFlex* also demands that instructors attend to two cohorts (FTF and online) of students simultaneously. My own university trialled *HyFlex* last year but the system proved highly problematic for a number of reasons (Archee, Gurney & Dawkins, 2021).

Times Higher Education (McKie, Jan 6, 2022) recently suggested that block teaching or intensive sessions of unit content might be the pedagogy of the future. The method removes parallel classes of different subject matter, and asks students to intensively study one subject at a time for 3 or 4 weeks. The aim is to develop deep learning of unit content without the distraction of other disciplinary concepts and assessments. While a number of UK and Australian universities have taken up the block teaching style in some form, intensive teaching is certainly not a new method of instruction, having been the norm for many distance education courses in the 20thC. Such block teaching has been challenging to evaluate unless students have been exposed to both traditional and intensive methods (Burton & Nesbitt, 2002). Re-organising even one year of a student's degree would be a major undertaking for any institution. The intensive method is also counter-intuitive to the notion that most skills take more than one

month to acquire, and that skills need to be practised in authentic situations that require development time, as opposed to just-in-time or fictional case study scenarios. Creating assessments for student learning in such brief blocks of learning is another obstacle.

5. What does the research literature say about the future?

A search of Google Scholar for the "future of higher education" reveals a history of continuous interest in this topic, going back at least 70 years. For example, writing after WW2, another world crisis, Newburn (1950) concluded that the future of higher education depended upon paying attention to quality – both student experiences and results – and that this required dedicated funding models by government to insure that obstacles were overcome in a considered fashion, without recourse to creating weak or mediocre institutions. The future of higher education as a topic of worldwide interest possibly begins in the 1970's when interest in higher education begins to become more relevant to educators and policy makers. Polish academic, Bogdan Suchodolski (1974, p. 331) stated that "higher education is no longer suited to contemporary needs." He criticized the need for higher education as being "socially inequitable" and pandering to an elitist class and asks if the workplace is a better training ground for many post-secondary students. Four years later an American "new renaissance" of higher education is recommended that recognises not only school leavers, but older adults, prison inmates, military personnel, working professionals, and bored citizens as possible new candidates for a range of higher degrees (Bergen, 1978).

The pandemic, supposedly, has changed teaching and learning in higher education forever, with various commentators identifying the transformed nature of the instructor and the student within a technological context as the norm for most universities and colleges (LaPlante, 2021; Kalimullina, Tarman, & Stepanova, 2021). The most popular replacement for FTF teaching was the combination of Zoom or some other form of videoconferencing plus the addition of a website for course materials and recordings, and perhaps the addition of a forum, email or chat system. In 2020, with little training or planning, instructors could cater for all their students' needs without ever having to meet face to face, or stepping foot on a perilous coronavirus-infected campus. Students and instructors could work from a place of safety, their homes, save travel time and the job of education was done.

Although the teaching was accomplished, the real effect of forced online teaching and learning is still being evaluated. It should be stated that there are very few evaluations of whole degrees or programs in the entire educational research literature. The same can be said for evaluations of whole institutions. The reason for this oversight is most probably the reputational damage that could occur if a whole degree or institution was to evaluated in the slightest negative manner. For this reason the most common form of student evaluation targets individual units or courses.

Amongst the negative aspects of forced online teaching found in Jordan were: distraction, forced multi-tasking, less commitment, poor connectivity, and lack of support from peers, and instructors (Maqableh & Alia, 2021). In Ecuador, nearly 64% of 1841 students sampled from 11 institutions wished to return to traditional FTF classes as soon as it was safe (Benalcázar, et al, 2022). In Australia, males and females were found to have different reactions to imposed lockdowns, but overall scores on a range of scales (care, control, clarity, challenge, motivation, consolidation, collaboration and attitudes) were seen to be lower during the lockdown, as opposed to afterwards (McLure, Koul & Fraser, 2022).

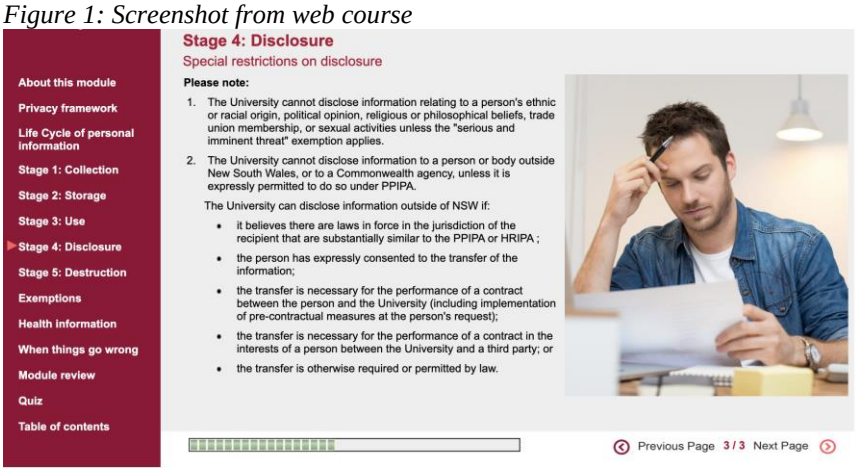
There is a major worldwide survey that needs comment, and that is the 2nd Pearson Global Learner Survey conducted by Harris Poll in June, 2020 (see https://plc.pearson.com/en-US/future-learning/global-learner-survey). This poll sampled 7 countries and 7,038 people aged 16-70 years old. The countries comprised all the major English-speaking countries plus India, Brazil and China, but omitted Europe. Unfortunately, like most polls, only descriptive statistics were collected, and no attempt was made to analyse or interpret why respondents answered the way that they did. This is a major feature of all forms of opinion polling that employ basic, sometimes leading questions (e.g. Who will you vote for?), and typical percentage agreement or disagreement used to polarise the results. In the real world, the conclusions of election polls and their basic questions are often incorrect, due to bias from sampling, item misunderstanding, and misleading/ambiguous question design. The results of the 2016 US election is probably the most recent example of mass erroneous polling.

One of the major trends from the Pearson survey was that "trust and confidence in education systems is on the rise nearly everywhere" (Key Trend #2). This is hardly a surprising finding given that nearly all aspects of society and personal liberties had been restricted due to the pandemic – curfews, loss of employment, restrictions on all kinds of travel, food shortages, and a missing range of supposedly non-essential services. Many people have felt like they were living in a prison embedded in an authoritarian state. With personal rights increasingly being lost as governments implemented more and more restrictions, the only stable institution in many countries has been education which was transformed but not lost. Educational institutions were not overwhelmed like the healthcare system, nor closed like retail outlets, and the entertainment industry. Education was not constrained from travel edicts surrounding borders, public transport or infectious locations. While suffering job losses, higher education kept its virtual doors open throughout the past two years.

The most problematic major trend from the Pearson survey is "If online is here to stay then learners want a better experience" (Key Trend #4). Online learning has been a feature of higher education for decades, ever since the Internet became universally available in the late 20thC. Online learning has been slowly introduced to certain degrees, but was never conceptualised as an effective delivery method for all students in all degrees. While the pandemic has accelerated online innovation by forcing instructors to re-design their teaching resources, both instructors and students are yet to be convinced that online learning is better than traditional FTF classes (Landrum, et al, 2021; Boyd, 2008; Dyrbye et al., 2009; Horspool & Lange, 2012; Waldman et al., 2009)

Two examples of professionally designed web page information can be seen in Figs 1. and 2. below:

Figure 1: Screenshot from web course



Source: Cornerstone OnDemand Privacy module

Fig. 2. Screenshot from web course

Source: Cornerstone OnDemand Privacy module

This is what our online students might view if they were undertaking a course on research ethics, or research policy. In fact the photographs could be seen as too user-friendly in terms of day to day information delivery – much instructor website content is just basic text, with much fewer accompanying visuals. If you can fully read the text just once, and understand it completely, then you are probably one of those fortunate people who can overcome the problems of online information delivery, such as technical issues, attention span, distraction, lack of motivation and isolation (Carr, 2008, 2010).

These two screenshots may look familiar to some of you because they come from a recent training module of 40+ pages that is mandatory for university staff in many parts of Australia. This module concerns privacy in higher education and must be completed by staff as part of their employment conditions. The module comprises several sub-sections and is accompanied by a 20-item compulsory quiz that must be passed at 80% level. If the reader finds these two screenshots challenging to understand then imagine a whole semester of such information, entirely devoid of an instructor, or fellow students to share your experiences, and that you need

to fully comprehend for an online examination. This is what many of our students have done over the past two years using various online systems. Many of my colleagues (including myself) find these training modules to be problematic, since we retain so little of the information that is posted, and tested. My heartfelt concern is that this negative opinion of online training is not shared by my online students when viewing my own website teaching materials. Perhaps, this is why the Pearson survey found that learners want "a better online experience".

6. Conclusion

The Pearson survey's mantra of "a better learning experience" needs to be extended to "a better teaching experience" because teaching online is restrictive, and minimises an instructor's existential presence. This concept, often ignored in educational debate comprises a live human being, who present in time and space interacting with a group of students. In a classroom, instructors and students are able to interact, utilising all the human senses. Instructors are able to garner attention and interest by use of story-telling, motivating anecdotes, and humour that entertains their students. Instructors can offer immediate feedback, encourage collaboration, and explain difficult concepts using exemplars and visuals. Instructors cannot be themselves when they appear as a rectangle on a celebrity squares board game, where some or all of the squares are blacked out (see Fig. 3).

Figure 3: A typical Zoom session

Source: original diagram

Not all videoconferencing systems allow participants to turn off their cameras, but it is a default choice in the Zoom start-up preferences. While there could be several reasons for these black screens: broken webcams, student illness, or privacy issues, the net effect is anonymity, a lack of human presence, an unwillingness to participate, or student boredom. Many students choose to be visually absent in class, and the black screens appear to be the norm, as opposed to the exception, unless instructors demand that students use their webcams.

Arguably, the most analogous use of videoconferencing to educational usage is what has come to be known as 'telehealth', whereby medical practitioners use video to meet and diagnose their patients, instead of meeting in a clinic. Research into telemedicine outcomes, in particular, from psychiatry and psychology services, which also had to transform during the past two years, shows an equivocal attitude towards technology for individual counselling. It should be noted that the norm of online counselling is for both counsellor and patient to always keep their web cameras on. While telemedicine allowed for professionals to keep working and for patients to continue their treatment during the pandemic, old-fashioned FTF counselling in a shared physical space was, and still is the most preferred mode of delivery for all concerned (Janca, 2000; Fernández-Álvarez & Fernández-Álvarez, 2021).

It might sound sentimental and anachronistic, but the optimal future for teaching and learning in higher education is a return to pre-pandemic normalcy, that is, traditional classroom teaching, but with the addition of a dedicated website for every course. This addition would function as a back-up location for course content and video recordings and also serve as an alternative for remote, or sick students who cannot attend class. If needed, such websites would also allow instructors to more easily perform their jobs if the government decided to announce new stay-at-home lockdowns for more risky Covid variants, which could threaten us at any time in the foreseeable future.

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