Post-COVID-19 and higher education[1]

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Abstract

The COVID-19 pandemic is a perfect storm to encourage higher education institutions (HEIs) to think differently, to price in risk and review their purpose of existence. This paper examines two thoughts as HEIs transition to a new normal life with COVID-19 – the first relates to the future of online education in higher education and the second pertains to the relevancy of degrees. It argues that transition to any model of cognition and enquiry, including online delivery of courses, needs careful consideration, and must be weighted with its limitation. Academic credentials serve as the foundation to determine if a decision is worth embarking. Devoting resources to strengthening the credentials of higher education qualifications will be essential in the post COVID period. For one, universities need to know that student centricity does not mean that the customer is always right in every aspect. Stepping up the effort to ensure that university degrees remain relevant will be one of the most significant challenges HEIs have to work on.

Introduction

The COVID-19 pandemic has created the largest disruption of education systems in history. Education is probably the second most impacted sector after health. Closure of schools is particularly painful in lower- and middle-income countries. Moving classes to online has been problematic due to poor infrastructure and lack of support to teachers in delivering their classes and tracking students' presence, leading to virtual dropouts and loss of learning[2]. As economies move to the new normal environment, it is timely to think about the way forward for higher education.

Two thoughts are put forward in this paper. First, many observers have predicted that higher education institutions (HEIs) will accelerate the effort to digitise learning. Online learning offers a personalised learning experience, moving away from the rigid curricula of the past where missing a lesson means great difficulty for students to catch up. For educators, we need to think carefully how technology can be integrated into our curriculum. While online learning may be suitable for some courses, it may not be suitable for other courses. Experimental courses require practical lessons and hands-on components to fulfil professional requirements. This may sound obvious, but with the current strong enthusiasm toward online learning, it is worth a reminder. The good news is that HEIs have gained valuable experience in online delivery. HEIs should reflect on their experiences and ask what they can do for academics and for students in the post COVID-19 era.

Second, it is worth reminding ourselves that the pre-COVID-19 challenges in higher education have not disappeared because of the virus outbreak. To take an example, HEIs have been accused of offering courses that are too theoretical, too specialised and that lack relevance to the job market. This continues to be a challenge. Increasingly, hiring companies are looking beyond education qualifications in deciding who to short-list and hire. Google, for example, does not hire people because of their educational credentials. What Google looks out for is the candidate's "learning ability"[3]. In computing, start-ups are much more interested in a 100 rating on GitHub than a programming degree from even one of the most prestigious universities in the world. Today, one's rating in GitHub is worth more than a college degree. HEIs would need to step up their efforts to ensure that the curriculum is relevant to meet 21st century expectations. This is particularly important as economies recover from the pandemic and companies prepare themselves for post COVID-19 recovery.

The analysis that follows is reflective and based on the analysis from various sources and practical grounds that the COVID-19 pandemic has forced the HEIs to embark to deal with a variety of problems. In other words, the paper is based on a combination of descriptive and analytical methods.

What is the future of online education for HEIs?

When COVID-19 hit in 2020, education institutions were compelled to make a rapid transition to online learning with little preparation or training. Instructors were unfamiliar with online teaching, adopting the same approach as in face-to-face delivery. Despite widespread use of digital tools, increased downtime and connectivity issues has raised concerns. Students failed to attend live synchronous lessons and were unable to complete the assigned tasks on time. Some students did not even own a laptop or a desktop and had to resort to learning via their smartphones. The negative mood was muted only because students were aware of the constraints faced by the institutions, but the loss of learning is unprecedented (see Whitley et al., 2021). As HEIs emerge from the pandemic, they will need to get more creative to prepare students for online learning with diversity and inclusivity in mind.

The issue of whether or not online education is the same level equivalent to face-to-face delivery remains controversial (see Table 1 which summarises the pros and cons of online education). The nature of the course matters. Some of the courses require greater engagement from students than others. While some students may want to have more online learning, they also do not want mere talking heads. They want interaction between instructors and students, and between students and students and debate issues in real time (see Sharma & Alvi, 2021 and Almendingen et al., 2021). Clearly, an acceptable transition to online learning does not mean that students and instructors are adapting to online format of teaching and learning, nor does it mean that online education is effective. Institutions and faculty may not have the knowledge of whether students' homes are safe and conducive for learning. Internet access, student learning support and good internet connectivity are not always possible. Studying and learning on the same device, which students use to play games and chat in the social media, leads to distraction and imposes challenge on the instructors to keep their students engaged. Students can get distracted

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2 COVID-19 has left many people, especially teens, depressed, anxious, angry and uncertain about their future. Unable to go out due to lockdowns, students turned to social media, which have triggered high levels of envy, stress, and depression. In support of mental health, some institutions have provided personalised grading options with the flexibility to choose between credit and non-credit bearing modules and between pass/fail grades and letter grades. Others have emphasised more on early intervention measures with revision in academic procedures and policies to suit online teaching and learning mode, student learning support, change in the way students are assessed and tested and provision of equipment and software to enable students to continue to learn. See also Guo et al. (2020), Treve (2021) and Mok et al. (2021). The graduates face a weak jobs environment. Historically, graduates who started their career in a recession tend to experience lower earnings for 10-15 years after graduation or longer (see Schwandt & Wachter, 2020). Lower earnings translate to higher mortality rates, driven by disease-related causes such as heart disease and lung cancer because of stress, depression and unhealthy ways of living. Indeed, the adverse economic effects of technology on jobs would be more painful as compared to past events of technological progress. Korinek and Stiglitz (2021, p. 2.) told us, "When the economy is expanding and progress is biased against labour, workers may still experience modest increases in their incomes even though the relevant share of output that they may earn is declining. However, at a time when economic output across the globe is failing because of the effects of COVID-19, a decline in the relative share of output earned by workers implies that their incomes are falling at faster rates than the rest of the economy. And unskilled manual workers who are at the lower rungs of the earnings distribution are likely to be most severely affected".

3 Friedman (2014). Others like Apple and IBM have shifted their focus from recruiting candidates with degrees to those with relevant skills.
4 Some countries are more prepared than others. Singapore, for example, has been on a journey for a Smart Nation, laying the foundation to implement a comprehensive digital teaching and learning environment. For some analyses of Singapore's higher education sector during the pandemic, see: Crawford et al., 2020; Wilson et al, 2020; Kefalaki et al., 2021; Rudolph et al., 2021; and Tan et al., 2022.

by family members, for example, caring responsibilities for children and older family members. Often, students resort to using smartphones which are less effective in performing certain functions as compared to desktops or laptops. There is also the temptation to visit websites on the Internet. The knowledge that the lectures are recorded for viewing later contributes to the problem. The question, then, is whether or not there is a learning modality that can bring out the best in students and teachers.

Table 1: Pros and cons of online education.

Pros	Cons
1. Less worry about finding classrooms to conduct small group discussion. 2. Generally easy to invite guests to deliver online lectures. 3. Offers personalised learning – as opposed to rigid in-person teaching where missing a class makes it difficult for students to catch up and follow in subsequent lessons. 4. Allows students to study on their own – no peer pressure, no classmates, no teacher. 5. Students can be given tasks in the mall, community centre and elsewhere and discuss them in class. Online materials in the form of websites for self-learning and self-discovery can be provided.	1. Absence of invigilators and supervisors to monitor assessment online could be a major issue, although preparation of question banks, randomisation of questions, set assessment questions to test students' problem-solving skills may help to minimise cheating. 2. Teachers replicate how they taught in-person classes when they deliver online sessions. Online teaching is new to teachers. Faculty have to revisit the basic teaching skills like how to deliver a lecture or how to engage the students. 3. Structured curriculum cannot be neglected. Watching a couple of documentaries on marine animals will not turn us into marine biologists. Likewise, we cannot learn a programming language by just watching a few YouTube videos. To be literate about the subject matter, students must learn the principles, practice often and receive feedback and guidance in a structured way which in-person classes can deliver more effectively.

Despite the challenges, the use of digital and online technology in education will only keep advancing[5]. The use of online games or computer-based entertainment software to promote learning in schools will intensify, simulating real-world scenarios. With 5G technology coming our way, the continuing advancement in online learning is not only going to be real, but will soon become the norm. HEIs which are wealthy and reputable will adapt easily to the digital technology revolution. But there are less wealthy and less distinctive ones which will experience disruption, and there is a danger HEIs that resist the power of technology will be replaced by those which understand the power. Before the HEIs make any decisions to retain or extend online provision, whether it is in hybrid mode or otherwise, they should take the following into consideration.

First, HEIs should give some thoughts on the impending limitations of online education, including the lack of a digitally skilled educator workforce to facilitate online learning effectively. When the coronavirus caught the attention of the HEIs, many HEIs merely moved the in-person classes online and moved readings on the website, resulting in poor user experience for many students and staff. Some faculty replicate how they taught before COVID hit when they deliver the same modules online. Online

teaching is after all relatively new to the teaching-learning community so there is no prior knowledge nor experience to rely on (see Selvaraj et al., 2021). Faculty members might have incorrectly assumed that their students would behave in a similar manner in the online learning environment as they would do in face-to-face learning – staying in the sessions the whole time, taking notes, and learning. But none of these behaviours remain the same under new and often challenging circumstances (Stafford, 2020).

Online learning should push educators to think about how they can deliver effective online lessons, for example, using strategies and techniques such as developing bite-sized lectures, utilizing the chat-box function on the Learning Management System (LMS) to encourage students to pose questions, delivering interactive lessons to capture the interest of the students, using analogies to make the contents easier for students to understand, encouraging group learning amongst students to build their confidence and using interactive displays and tablets to display mathematical expressions and equations. Virtual Learning Environments (VLEs) such as Canvas, Moodle and Blackboard can be used to provide individualised and generic comments. For written assignments, VLEs offer a useful platform to provide feedback and comments on individual work or generic feedback that can be posted in the chat group function for all students taking the module to read. Technological tools like Kahoot and Mentimeter can be effectively used to assess understanding of subject contents (see Yeo, 2019; Rudolph, 2018). Struggling students feel a sense of relief when they know there is help.

One of the factors contributing to the success of hybrid learning or blended learning in some institutions in the pre-COVID period was strong involvement of teaching staff in the process of combining teaching with technology. It was understood that the teaching faculty would lack the qualification and experience to deliver their lessons online. This was dealt with by providing intensive training and support to the educators. Santiago Iniquez de Onzono advised HEIs to conduct on-going training for the instructors as a way "to improve their ability to combine technology with educational delivery" and develop "new contents, formats, and network by making use of the growing number of new resources and relationships available through the Internet" (De Onzono, 2011, pp. 77-78). Educators who produced the teaching materials in the traditional setting should be assigned to work closely with technicians to develop online teaching materials. By teaching the materials they developed, there is greater accountability and familiarity, contributing to improved teaching quality.

Second, casting aside considerations of productivity and cost, quality of online education should translate into measurable desired outcomes such as learning gains of students through subject passing rates, on-time graduation rates and graduate outcomes. Collecting and analysing the data is key to improvement, to inform policy in the design, implementation and evaluation of institutional policies and regulations. Student outcome measurements like passing rates and on-time graduation rates provide an indication of the quality of course delivery and student and teacher support approaches, whereas graduate outcome data such

5 There has been a surge in interest in immersive virtual reality in education. For example, see Makransky et al. (2019), Tan (2019), Akinola et al. (2020) and Wu et al. (2020).

as employment rates and median wage salary measure the attractiveness of the students in the eyes of the hiring companies (see Bol & Van de Werfhorst, 2011; Rudakov & Roshchin, 2019). With regard to knowledge and skill acquisition, HEIs can measure the effectiveness of online education by comparing the preparedness of students in the first year of study who have enrolled into the HEIs during the COVID-19 period where classes and examinations were mainly held online and those who were enrolled in the pre-COVID 19 period where classes and examinations were conducted in-person.

Third, it is worth framing the issue around online technology as a tool to complement learning modalities. This way, the challenge is not so much about choosing between in-person and online classes but to ensure the best learning outcomes for our students. It is about finding ways to cope with technology and deal with its challenges so that our education system continues to do its job of imparting useful knowledge and skills to students. Maryanne Wolf (2018) suggests constructing a biliterate mind in our students, which is steeped in both traditional and digital mediums of communications. It is useful for students to be able to learn to think in each medium and develop and internalise the characteristics of the two mediums. Wolf illustrates with the example of a student who combines reading of stories and discussing about refugee children with online access to actual footage of migrant refugee children as one effective way to tap on both mediums to improve learning capacity. The Internet serves as a powerful tool to supplement traditional learning if it is used constructively.

Much effort is needed to alter the readings and assignments as well as style of teaching in the online setting to motivate and engage students. For one, teachers need to know how to use the online tools, gain an understanding of what learners do and how they learn online. The role of psychologists or counsellors is particularly important in this regard. They have the skill to facilitate communication and problem-solving procedures that are much needed in schools and in class. Psychologists/counsellors can work with school administrators, teachers and community leaders to plan and design an online learning environment, and as Carl Rogers (1995, p. 241) put it, to go beyond dealing with "the pains of the victims in the old system" but embarking "on the broadest tasks of building a flexible institution" with students "as the core and all others as the servants of the learners". Working through the approach may require giving substantial autonomy to the instructors to experiment with education practices including the nature of assessment suited for online delivery.

Relatedly, thinking about providing a purpose is essential. HEIs should ask, what is the purpose of the undertaking? Does transition to online or hybrid learning align with the institution's mission and vision? Does online education provide the necessary level of challenges to motivate students to learn and grow? Does the HEI want the students to learn passively by listening to lectures via online videos? Or do we want students to listen to the online videos to prepare before the classroom experience? Does online education and online assessment help the institution to better measure students' learning such as the ability to use what students

have learned so that we can move away from paper-based examinations which typically measure memory? Is teaching online about giving an account or an opportunity for exchange of viewpoints? How receptive are the instructors in dispensing with their authoritative stand in favour of active online learning through dialogue and networking? Unless the stakeholders can trust the institution's commitment to its vision and values, the project will soon self-destruct. In contrast, if the institution is clear about the goals and the reasons for adopting online education, and is committed to improving the student learning experience, the project is more likely to flourish.

What can we do about credentials of higher education qualification?[6]

Before COVID-19, relevance of higher education has been a subject of intense discussion[7]. Credentialism emerged in the 1950s in the United States when it dawned on the nation that the key to economic development was the population's knowledge pool (Jacobs, 2005). *Knowledge is power* became the mantra, prompting the universities to launch courses and embrace skills that seemed needed to fuel economic growth and meet the demand of the employers. As the student population grew, students noticed that they were not getting personalised attention from the instructors because of the large class size. Structured curriculum and assessment led to passive learning and greater discontentment among students and educators. In lectures, teachers typically out-talked the entire class of students; the bulk of the teacher-talking was to tell and instruct. Students come to develop a pattern of learning; wait for the teacher to ask questions, raise your hand, wait for the teacher to call you, share your response and wait for the teacher to tell you if your response is correct, appropriate or otherwise. Instructors took the easy way out by setting True or False questions and multiple choice questions, fit for graduate students to grade, and avoid asking questions in the examinations which stimulate and assess critical thinking and depth of understanding.

The fact is, HEIs operate in the trust market. Students trust the HEIs in doing the right thing and in awarding the marks or grades which they truly deserve[8]. At the same time, universities operate in a competitive environment. Branding and reputation matter to attract students. Universities pride themselves by achieving high graduate employment rates and good starting salaries for their graduates. When

6 Materials in this section are detailed in Sam (2021).
7Christopher Fynsk's The claim of language and Simon Wortham's Rethinking the university call for a rethinking of the university particularly in the humanities. Others like Kevin Carey (2015), Cathy Davidson (2017) and Bryan Caplan (2018) bring out the contemporary plight of the university and include analyses in a variety of contexts: globalization, onset of capitalism, growing commercialization of higher education and changing meanings of institutional practices and discourses.
8 Participants in the education market are involved in exchanges that are not frequent or repetitive. Once enrolled, the students are 'with the school' for many years, depending on the duration of the programme. Being a service industry, it is also difficult for the students and parents to know the true or genuine value of the transaction until the product is used, that is when the students are enrolled, and they begin to attend classes. The education providers know better than the students regarding the true learning experience and may not reveal all information, resulting in the students buying "lemons" – George Akerlof's (1970) terminology of a bad deal. As such, the higher education industry is highly regulated in most developed countries. This helps but regulations alone are unable to weed out incompetent agents and scandals involving HEIs.

the graduates are not employed, schools are blamed for ill-preparing the students and are undeservedly labelled as being of a lesser quality as compared to brand-named institutions. Hence, HEIs are in a hurry to secure employment for their graduates even before they graduate from the courses. Indeed, it is not uncommon for universities to make claims and promises.

Consider the following.

- Universities tell us that higher education appeals to students because it gets them to think about and deal with global challenges of today – poverty, climate change, global pandemic. Yet many universities still operate on a paradigm of compartmentalisation when we need a paradigm of diversity, relationships and multidisciplinarity.

- Often, students are trained to absorb a collection of facts to pass the exams. But they are of limited use the moment students walk out of the classroom and enter the labour force.

Trust and promise go together. When universities make promises they cannot keep and fulfil, people start to lose faith and trust in higher education. The result? Universities are at risk of losing their credentials[9].

Notably, more students are realising the reduction in the value of a degree (Levine & Pelt, 2021). The 2019 Gallup Poll reported 51% of the respondents in 2019 considered a college degree to be very important, down from 70% in 2013 (Marken, 2019). The APM Research Lab conducted a survey in 2018 to ascertain the value of a college degree in the United States. While 58% of the respondents believe that a four-year college degree is worth its price, the reasons given as to why a college degree is not worth it should be noted. 60% of the 36% of Americans who think a college degree is not worth the expense cited the lack of specific skills and a large amount of debt as the main reasons, while 36% feel that they can get a job without a college degree (Smith-Barrrow, 2019). The outbreak of the coronavirus has delayed any effort to improve the situation.

Today, many of the hiring companies still use education qualification and measurable smartness to assess a candidate's suitability in filling a job vacancy, particularly for earlier-career candidates. Education qualifications have become markers of excellence, exacerbating the desire for high marks and good grades. However, an increasing number of employers have announced that they will no longer require college degrees for employment, including Google, Penguin Random House, Hilton, Apple, Nordstrom, IBM, Bank of America, Ernst and Young's, Starbucks, Home Depot, Publix, Costco Wholesale, Lowe's and Chipotle

(Glassdoor Team, 2020). There are high-profile professionals who have done remarkably well without a degree, pointing to the irrelevancy of a degree, including Michael Dell (founder of Dell Computers), Daniel Ek (co-founder of Spotify), Bill Gates (founder of Microsoft), David Karp (creator of Tumblr), Evan Williams (co-founder of Twitter), Mark Zuckerberg (founder of Facebook) and Steve Jobs and Steve Wozniak (co-founders of Apple).

Why is this happening? Students take part of the blame. We know that learning is a self-administered lifelong mission which requires innate drives, commitment and motivation. The irony is that some of the students are not willing to work hard for it. Learning for the sake of grades has replaced learning for the sake of learning. This is attributed to a host of factors, including the lack of time (only to be filled by activities that do not always contribute positively to learning), risk aversion (scared of failing and the inability to recover from one) and avoidance of half chances (tendency to stick to comfort by signing up for easy-to-pass and easy-to-score subjects).

The drive for commercial objectives is also partly responsible for the weakening of the credentials associated with a university education. Leading the pack are the diploma mills. In a typical diploma mill, there are no classrooms. Faculty members are often untrained, non-existent and unqualified. The authority to grant degrees does not come from a generally accepted independent entity. Public education institutions are driven by market forces as well. In the United States, federal research spending has stagnated while demand for financial capital have risen, compelling universities to pursue market efficiency and alternative sources of funding through academic-industry ties and student enrolment.

Focusing on student enrolment is not wrong. The problem arises when academic rigour is sacrificed. The allegation of falling academic standards is associated with rising grades. In the United States, the mean GPA for both private and public colleges in the 1930s was 2.3, or a C+. In 2015, the average GPA at public colleges was 3.0 or a B, whereas the average GPA at private colleges was 3.3 or B+ (Katsikas, 2015). While some have pointed to the rise of average IQ of each successive generation as the reason behind rising grades, others have pointed to commodification of education as the cause of it.

How do we know if academic standards have declined? Kevin Carey quoted a study from the US Department of Education on adult literacy and found that many graduates could not compare and contrast viewpoints of newspaper editorials. "Fourteen per cent of college graduates scored at only the basic level of literacy; good enough to read grade schoolbooks but not much more. The results showed a sharp decline from the same exams given a decade before" (Carey, 2015, p. 9). In another study, Richard Arum and Josipa Roksa (2010) collected a large sample of more than 2,300 students at four-year universities in the United States. The authors found that 45% of students did not show any significant improvement in critical thinking, complex reasoning, and writing skills during the first two years of college, and 36% of students did not demonstrate any significant improvement

in learning over four years of college. Students who showed improvement tended to show only modest improvement. Nearly half would write just as badly in their junior years as when they started college. More recently, Jeffrey Denning and his colleagues (2021) documented the rising completion rates of college students in the United States over the last generation or so and rejected the explanation that the improved performance was a result of increased student quality. They see the phenomenon more as a result of the emergence of a student-as-a- consumer mentality and declining academic rigour and standards.

What can HEIs do about it? First, educational leaders need to reflect and think more deeply about moral issues. Why is it right to be truthful? What are the moral issues and challenges HEIs face right now that educational leaders ought to be thinking about? How are the courses delivered? How do HEIs treat the students? As customers or students? We need educational leaders who understand the need and have the capability to maintain and raise academic standard and rigor. Once this is in order, other reforms can be carried out.

Educational leaders may be aware of the danger of focusing on serving commercial interests and recognising commercially viable strategies and options as the only ones which merit actions. Other thoughts and ignorance of the consequences may have led them to mistakenly judge this as the right thing to do. They fail to use reason to explore options and reveal the inherent nature of the phenomenon in a holistic manner, downplaying academic rigour and standards in favour of profitability. External factors such as pressure from the shareholders can have considerable impact on decisions, especially for one whose internal mental capacity is not particularly strong. This could be a result of appointing an administrator with minimal academic and teaching experience to head the HEI. Accordingly, removing ignorance may require the appointment of a leader with extensive academic, teaching and managerial experience who would be in a better position to understand the very nature of the issues at stake[10].

Pursuance of profit is not wrong, even from an ethical point of view. But there is a need for some checks and balances to ensure that educational quality and rigour are not compromised. Profitability and academic integrity complement each other and keep each other in balance. The problem arises when administrators escape the intellectualism that forms the academic mindset. They lose contact with the academic demands. To them, more students are better. The academics, on the other hand, think that the administrators have not come down to the thinking level of students. They want smarter students who can grasp abstract theories and concepts the moment they step into the classroom. The facts are in. What students are experiencing is the reality, the personal experience

10 Despite a number of scandals that have rocked the higher education sector, there are still many educational leaders who care about the students, who are dedicated to maintaining and raising academic rigour and standards and in ensuring that their students are equipped with skills and knowledge which employers want. They understand that good business is more than making money. There will always be single-minded ambitious executives who think about almost exclusively about the commercial aspect, but they are not the kind of leadership we want.

of sitting in the classroom, trying their very best to make sense of the terminologies associated with the subjects. The picture painted is simplified but it proves to have its use. It is perfectly sound to reject the notion of 'the customer is king' in the education context when alternatives can be shown to generate superior practical outcomes. Alas, there are still many education institutions ignoring the practical aspect of the matter, seeking to pressure their academics to pass the students. Academics have stretched their minds to treat their students as students. Yet, we know that students deserve openness, quick responses to queries and full support in learning to get through the course.

Second, HEIs need to know that student centricity does not mean that the student, as a paying customer, is always right in every aspect. The idea of student centricity must align with the nature of service rendered in education. Riina Koris and colleagues have studied student-customer orientation and noted that students do not actually see themselves as customers on issues like curriculum design and classroom behaviour. However, students expect the education institution to treat them like customers in terms of communication and feedback. Student orientation needs to be informative and helpful (see Koris & Nokelainen, 2015; Koris et al., 2015). The implications on higher education institutions are twofold. First, the necessity to separate academic services and non-academic services and take a stand on what is the morally right thing to do. Second, universities should realise that students expect to be treated like customers in some areas, but not in all areas of educational experience. Schools trying to cater to their students' whims and wishes are doing more harm than good.

In dealing with ethical dilemmas, there is no such thing as a ready solution made in advance. We can refer to past experiences, case studies, theoretical underpinnings and consider the best practical experience that fit the collective needs and demands. We judge an idea to be acceptable because we can frame the idea to a favourable situation that is more valuable than other options. Whether we treat students as customers or students, colleges and universities must provide the necessary means fitted to facilitate the transformation of the students through the education process. The conditions must always be perfectly designed to ensure it.

Third, HEIs need to ensure that students are equipped with skills and knowledge that employers want. Although it is difficult to predict what the future may hold, one thing is clear; students must gain exposure to multiple perspectives and to develop the skill of creative problem solving to successfully navigate the increasingly complex and multidimensional nature of life and work in the twenty-first century. It is about problem-solving to a large extent, thinking about solutions to problems or even reframing the problems to move away from the mindset that there is one right answer. To become real intellectuals, Noam Chomsky called upon the teachers to help students discover the truth, "not through the imposition of an official truth" (Chomsky, 2004, p. 21). "It is the obligation of any teacher to help students discover the truth and not suppress information and insights that may be embarrassing to the wealthy and powerful people who create, design, and make policies about schools" (Chomsky,

2004, p. 21).

HEIs must understand that companies will not hire students because of what they know. Google or perhaps other platforms are more knowledgeable than anyone of us. University education is not about teaching specific knowledge and skills for a specific job (like website tracking using Google or managing operations on Alibaba cloud). That is the role of the employers and professional associations. But universities can work with the employers and professional associations to offer short courses or incorporate subjects in partnership with the employers and professional associations into the courses that they offer.

The traditional way of learning where the educator stands in front of the class, delivering a lecture and trying to transfer his/her knowledge into the students' minds, is passive and not the best way of learning. A rapidly growing body of data indicates that emphasis on deep learning produces better students, for example in medical schools (see Guskey, 1980; Kulik et al., 1990; Martinez & Martinez, 1999). Deep learning is a subset of application-based learning, which requires students to interact actively with course materials through discussions, case studies and problem-solving. Application-based learning encourages active engagement and an appetite to explore and to know. Active engagement encourages the brain to ceaselessly generate and test hypotheses with motivation and curiosity. In "Literacy and intrinsic motivation", Mihaly Csikszentmihalyi argued that the chief obstacle to literacy is not cognitive, but the drive and motivation to learn. "It is not that students cannot learn, it is that they do not wish to" (Csikszentmihalyi, 1990, p. 115). The key to success is to get students to experience 'flow', and to do so, Csikszentmihalyi told us that students need to merge actions and awareness, that is, to step into the situation where the actor and actions become one. Students ought to feel that their skills are fully engaged by challenges. This is when "the student feels when he thinks he has found the solution to a difficult problem" – a good match between the student's ability and skills and the challenge posed by the problem (Csikszentmihalyi, 1990, p. 128).

Sports offers a useful analogy. Athletes participate actively without rigidly adhering to the instructions from the coaches. The thing that excites participants the most is the opportunity to apply what the coach has taught them and improve on it. Sports is fun, and athletes routinely receive feedback, praise, applause and recognition. That is why they always give their best in games. Therefore, participation in sports and games is so motivating. Striving to achieve higher performance and motivate students requires higher education institutions to consider a whole new approach to teaching and learning. A great teacher teaches his or her students how to use and improve upon the knowledge. With this in place, students will be willing to learn and do more. Forcing students to study is never going to make it and they will see no value in it. The traditional mass-production factory model is becoming less relevant and must be replaced with a student-focused approach.

Concluding remarks

The COVID-19 pandemic has highlighted weaknesses of conventional ways of teaching and learning that we did not see before. It offers us the opportunity to review what and how we teach our students. This paper highlights only two of the many of the considerations which HEIs have to work on. It points out that transitioning to any model of higher education in the post COVID-19 period needs careful consideration. For example, the desire for online education must be weighted with its limitations. One can argue that the onset of the pandemic only shows what great human teachers can achieve with the use of educational technologies. Human teachers matter to offer a more superior, differentiated, personalised outcome as compared to standard delivery via the Internet.

We also argue for continuing the efforts to strengthen the credentials of higher education qualifications. For one, universities need to know that student centricity does not mean that the customer is always right in every aspect. The basic premise is that a student-centric education institution should not focus on making academic studies easy for students. To complete a degree, students are expected to think, complete assignments, read widely, write extensively and prepare for examinations. Education entails dealing with difficult concepts and solving challenging problems. What is needed is a conducive learning environment and experience. This means setting up systems and processes in ensuring the safety of students and availability of learning support to enhance the student learning experience.

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