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**Back to the Educational Future:
A Marketing-Oriented Approach to Promote Distributed Learning**

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ABSTRACT: The COVID-19 pandemic has been devastating in terms of the loss of human lives, damage to the economy, and upheavals in the fabric of society. It has also drastically impacted higher education and academic institutions throughout the world. This article analyzes the impact of the pandemic on the higher education industry and its stakeholders; namely, its institutions, faculty and students. Then, a marketing-oriented approach is applied to suggest remedies for some of the key pedagogical issues associated with distance learning that have plagued educators during this period. It is argued that higher education can recover and prosper if educators see this era as an opportunity for positive change. Implications for higher education and family science are discussed.

Keywords: Distance learning, online learning, distributed learning, higher education, pedagogy, marketing higher education, student engagement, storytelling, COVID-19.

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Back to the Educational Future: A Marketing-Oriented Approach to Promote Distributed Learning

COVID-19 has propelled the world into a dystopian future in the blink of an eye. In particular, the pandemic painfully exposed some of the archaic strengths of higher education which in recent decades had become its Achilles' heel. At the same time, it has revealed unorthodox bursts of innovation. The COVID-19 pandemic has forced the higher education industry to respond overnight to the challenges of shifting to distance teaching and learning in a state of emergency (emergency remote teaching, ERT). Institutions of higher education have had to rapidly tackle numerous hurdles including convincing students to continue pursuing their degree work (Baber, 2020), engaging students in the absence of social-physical proximity (Kohnke & Moorhouse, 2021), and evaluating students' performance without being able to enforce traditional proctoring (Kalantzis & Cope, 2020). An extensive interdisciplinary review of higher education challenges posed by the unique COVID-19 circumstances will be presented and a marketing-oriented approach will be utilized to discuss these concerns and several remedies will be proposed.

The next sections delineate the precarious state of academia prior to the outbreak of COVID-19 and attempt to explain its causes. These are then related to the COVID-19 pandemic in terms of its exacerbating impact. This is followed by a proposal for a marketing-oriented approach that can be adapted to higher education by exploiting interdisciplinary modes of thinking generated by responses to the pandemic.

The Industrial Evolution in Higher Education

Today's world is different from what it was 900 years ago, when Oxford University was founded. It is also different from 400 years ago when Harvard University first opened its doors. However, higher education has not changed that considerably. For many years, this was probably for the best, since many aspects of the system worked well.

For decades, in many and probably most markets around the world, college and university enrollments grew to respond to the new generations. However, even before the COVID-19 outbreak, the rate of growth of young people in this age range had been in decline (Busteed, 2020). In many markets, the number of institutions of higher education has grown sharply, which now poses a threat to the future of hundreds of colleges and universities, many of which are now struggling to survive (Pavlov & Katsamakos, 2020). In addition, students, parents and employers alike have expressed skepticism that the higher education system enables students to succeed (Wu et al., 2021). Nevertheless, family members still support students and encourage them to succeed academically in a range of educational settings. Hence, family-friendly settings that facilitate this involvement and participation are vital to encouraging academic rapport (Dove et al., 2019).

Transformations such as the industrial revolution emphasized the benefits of higher education. By contrast, numerous changes in the last few decades have undermined the advantages of higher education (Clark, 2013). Employers and visionaries outside the industry have identified these flaws and have warned that "the emperor has no clothes". They have noted that while elite universities do especially well because they carefully screen their candidates, most students waste their time in college. A notable example is the Thiel Fellowship that offers \$100,000 to young people who "want to build new things instead of sitting in a classroom"

(Kolodny, 2013), thereby transforming the concept of tertiary education (Williamson, 2017). To date, ten years after its founding, this fellowship has supported projects and companies that today are worth \$70 billion. Of the 226 recipients, 99% say they learned more through the program than they would have in a classroom¹.

Even before COVID-19, the higher education industry needed to examine whether its product would meet future consumers' needs (Chamorro-Premuzic & Frankiewicz, 2019). The mission statements of three leading institutions are exemplary in this regard:

- *“The mission of the University of Cambridge is to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence.”* (The University of Cambridge, 2020)
- *“Cornell’s mission is to discover, preserve and disseminate knowledge, to educate the next generation of global citizens, and to promote a culture of broad inquiry throughout and beyond the Cornell community.”* (Cornell University, 2020b)
- *“The mission of Harvard College is to educate the citizens and citizen-leaders for our society. ...Beginning in the classroom with exposure to new ideas, new ways of understanding, and new ways of knowing, students embark on a journey of intellectual transformation. ...From this we hope that students will begin to fashion their lives by gaining a sense of what they want to do with their gifts and talents, assessing their values and interests, and learning how they can best serve the world.”* (Harvard University, 2020)

These statements carefully omit the modus operandi of the higher education industry, the target audience it traditionally caters to, and do not emphasize the organization’s uniqueness and identity. This may be a problem, since these factors are essential for effective mission statements in the business sector (Alegre et al., 2018; Papulova, 2014). In private business enterprises, the mission statement of a company is the compass that indicates the direction the organization has chosen to pursue and constitutes a framework for major decisions. Recent research has suggested that mission statements are just as important for higher education institutions as they are for business (Kadhium et al., 2021).

It is difficult and premature to indicate what drives the target audience to shun the pursuit of higher education. However, the difficulty related to diagnosis does not mean it should be ignored. There is a slow yet vigorous and steady departure from higher learning. Being indifferent or complacent will not stop consumers' preferences from changing and will only make dealing with it more difficult in the future. When consumers start to reject an entire industry and not just a specific brand, this calls for further investigation.

Specifically, it raises the question of the ways in which knowledge is created and disseminated, and the recipients of this knowledge. Typically, students pursue a degree in higher education at a particular stage of life situated between high school and a professional career. In the current context, it remains unclear whether this trend will continue, since studies suggest that students are changing their career orientations and vocations at a much higher rate than their predecessors (Reaves, 2019). Are colleges and universities the proper places to support these

¹ Thiel Fellowship [@thielfellowship]. (2020, December 30). 10 years and 226 Fellows later, Thiel Fellowship projects and companies are worth \$70 billion and 99% say they learned more during their Fellowship than they would have in a classroom. [Tweet]. Twitter. <https://twitter.com/thielfellowship/status/1344395270545575936>

changes? Young people may want to explore the world and challenge their minds by reinventing it. Are colleges and universities equipped to receive them when they become students after this formative period? In the last 20 years it has become much easier for individuals to acquire and disseminate knowledge, including complex knowhow, than in the preceding 200 years (Harari, 2015). Are colleges and universities ready for such students who have had prior access to self-learning platforms? The vision, mission statements, and core values of a myriad of prestigious universities do not provide satisfactory answers (Cornell University, 2020a; Stanford University, 2020).

The key problem, however, is that the higher education industry was treating the first symptoms of the emerging predicament superficially, and by so doing forfeiting an in-depth analysis of the reasons for its decline. For example, in many schools, class attendance prior to COVID-19 was spotty and falling fast. The remedy seemed simple: make attendance mandatory. Some universities introduced digital class attendance tracking. However, unlike grade school pupils, students enrolled in higher education are consenting adults. If they choose to skip classes, especially if most of their peers are doing so, enforcement is not the solution, only a band aid.

Rapid advances in technology have made new learning platforms such as online learning, distributed learning, and distance learning widely available to the public. In a recent review, Singh and Thurman (2019) found 46 different definitions of online learning. They suggested that online learning should be defined as learning experienced through digital networks (e.g., the web) in synchronous or asynchronous environments where students engage with teachers and other students and do not need to be co-present in the same physical classroom. Distance learning refers to access to learning for those who are geographically distant (Moore et al., 2011). One of the main differences between distance learning and online learning is that the former preceded the latter and does not require digital telecommunication networks or technology devices to operate. Distributed learning entails a “spaced-out method of learning, with time intervals between study sessions” (Jost et al., 2021, p. 3098). Distributed learning is a broader concept that encompasses both online and distance learning methods.

Many academic institutions have adopted distance learning by providing education programs to students who are geographically distant, in which the pedagogical material is planned and prepared upfront (Kaplan & Haenlein, 2016). However, this format may not be ideal for every student. It also remains unclear why anyone would pay a large sum of money and commit to a specific place and brand for material that is readily available elsewhere. Thus, enforcing mandatory attendance and teaching online address the symptoms, but do not address the root causes of the decline in enrollment in higher education.

Higher Education: Vision or Myopia?

Why was the industry so blind to its dire straits? Prestigious colleges and universities with firm reputations for merit have long lists of eager candidates competing to be accepted. When circumstances worsen, the list gets a bit shorter, but still suffices to fill the slots (Ivy Coach, 2021). Lower-ranked, less prestigious institutions are better seismographs of future trends. While top schools merely screen fewer applicants, ordinary schools are already struggling to enroll enough candidates to remain open (Dickler, 2020). COVID-19 pushed many into closure. For instance, according to NYU’s vulnerability index developed by Dr. Scott Galloway, up to 20 percent of all colleges could close because of COVID-19 (Galloway, 2020). Furthermore, because presidents of top universities have a disproportionate share of the voice in

the media and in influential circles, their perception of a slight rather than a major earthquake echoes louder, thereby conveying a somewhat distorted and less harsh reality.

At the industry level, the issue corresponds to Abraham Maslow's *law of the instrument*: "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail" (Maslow, 1966, p. 15). The heavier the hammer and the more one is used to working with it, the more difficult it is to recognize its shortcomings; hence, addressing the shortcomings in higher education as a result of pre- and post-pandemic outcomes with conventional old-school solutions is not likely to suffice.

For many years higher education kept loyal to its traditional educational approach. This strategy yielded impressive results for high quality educational program, state of the art research, and top-notch academic institutions. Nevertheless, a significant change is required to successfully cope with today's major challenges. COVID-19, presumably introduced by bats or pangolins, made change inevitable (Turcios-Casco & Gatti, 2020). Higher education, with the rest of the world, has had to go on the defensive. By continually ignoring the red flags and changes in consumers' tastes, it is now experiencing the repercussions even more painfully. However, it can benefit from taking a holistic, new look at the world, and recognizing the need for a major transformation.

What can higher education do? How can it harness pedagogy and technology to engage students, be sure that they meet key performance indicators (KPIs), and motivate them to continue enrolling? Here, a marketing-oriented approach is proposed that focuses more on the needs of the students and less on perpetuating the *modus operandi* of the industry. It is argued that higher education can thus avoid 'marketing myopia' (Levitt, 2004). By no means does this approach suggest that students are customers, as this would assume that they are passive in their acquisition of an education. Rather, by exploring the fundamental learning needs of students and addressing them, the learning process during COVID-19 can be enhanced, and potentially contribute to the future, which in turn may increase the relevance of academic institutes overall.

Employing a Marketing Approach to Cope with Selected Distance Learning Issues

A marketing-oriented approach (MOA) makes addressing customers' needs and wants a top managerial priority, and constitutes a key factor to long-term organization success (Srivastava et al., 1999). More specifically, marketing-oriented organizations identify the needs and desires of their customers using basic or more advanced market research methods (e.g., artificial intelligence, Kühl et al., 2020), and then design products, services and processes that are aimed to satisfy these needs. While this may sound obvious when described as the preferred route to success, there are other, more conventional approaches (Kushwaha & Dubey, 2018; Zhou et al., 2005). Conventional approaches focus on the delivery of currently existing offerings. Proponents of MOA argue against this traditional line of thinking. While MOA centers on designing services that have the qualities *customers need*, the alternative traditional approaches focus on the *organization's needs* by establishing key selling points to promote existing services.

The marketing-oriented approach is versatile in that it can be applied across a wide range of industries and organizational contexts. These domains include charity fundraising (Saunders, 2013), agro-food production (Chiciudean et al., 2015), tourism (Line & Wang, 2017), healthcare (Slåtten et al., 2019), logistics (Gryshchenko et al., 2020), and higher education (Niculescu et al., 2016; Vaikunthavasan et al., 2019).

With respect to teaching and learning, a MOA focuses on learners' pedagogical needs. Marketing-oriented teaching can proactively *redesign* a teaching-learning process in such a way that students' (i.e., customers') learning is optimized, subject to constraints. In other words, teaching is guided by what learners' *really* need rather than by what is already available to teachers that can be conveniently taught under existing conditions, e.g., logistics, methods and facilities. The COVID-19 pandemic did not change much of the educational content that students are required to learn; however, the information era has transformed attitudes toward information and its acquisition (Xing & Marwala, 2017). Nevertheless, in terms of ways to acquire this content and learn effectively, needs have changed drastically and rapidly (Pakhomova et al., 2021).

Some learners' needs are transparent and well-known such as access to a basic learning infrastructure (a classroom, a pen and paper, a laptop). Other needs are covert, and at times can be counterintuitive; for example, the need to be engaged and immersed in the learning process. The next section proposes four remedies to such needs. They are by no means exhaustive, and this list is by no means complete. They demonstrate how a MOA that seeks to satisfy learners' diverse needs even when they are covert or poorly expressed can prompt teachers to employ methods that would otherwise appear implausible. Note that these suggestions are not related to the *content* taught but rather to the *learning process* and *mode of interaction*. Hence these suggestions can be generalized to various subject matters and domains.

These four needs were identified as major issues during the shift to distributed learning (e.g., Eringfeld, 2021; Neuwirth et al., 2020). They consist of the need for privacy, the need to engage students, the need to reduce attention overload, and the need to manage time. The four methods suggested here are cameras off, storytelling on, screens off and synchronous and asynchronous combined.

Cameras on/off – Addressing Privacy Issues

The need for privacy requires seeking conditions in which individuals feel free from surveillance or interference by others (Trepte & Masur, 2020). Privacy has been defined as “the selective control of information sharing, where control is key” (Trepte, 2020, p. 1). In online settings, however, control over access to one's information has become more difficult (Trepte, 2020). Research shows that people who are more concerned about their online privacy than others shared less personal information and had more negative attitudes towards information sharing in general (Dienlin et al., 2021).

There are multiple reasons for this reluctance to turn on cameras, including concerns about personal appearance or about being seen by other people or what appears in the background, embarrassment due to exposure of special conditions (e.g., in minority settings), and possibly social norms that also play a role in camera utilization (Castelli & Sarvary, 2021). This implies that requiring students to turn on their cameras may in fact impede equity and inclusion of marginalized populations, and possibly prevent these students from actively participating in synchronous lessons (Castelli & Sarvary, 2021).

Issues of student embarrassment and privacy concerns can become increasingly challenging for educators teaching courses in family science with sensitive content areas, including sexual behavior, diversity, racism, privilege, gender, prejudice, and discrimination (DiGregorio, 2018). Openly discussing such issues with students may create unproductive

emotional tension, which impairs students' learning (Niehuis & Thomas-Jackson, 2019). In such contexts the family science literature suggests that recognizing how students' educational and life developmental pathways influence learning can enhance both the learning and the teaching experience. Instructors' emotional management skills can also mitigate these tensions (DiGregorio, 2018). Nevertheless, the technological environment in which distance learning takes place can also have a significant effect on learning.

Web cameras that display a student's face and body may act as a double-edged sword since cameras facilitate real-time visual communication and hence contribute to creating a more realistic, although virtual, contact with classmates which may enable instructors to enhance students' learning experience.

However, online cameras also display students' facial expressions and body language. The consumer behavior literature has recognized the profound effects of embarrassment on people's behaviors in both public and private contexts, including various service encounters (Kilian et al., 2018) and the consumption of physical goods (for a recent review, see Krishna et al., 2019). Similarly, the marketing research has shown that alternative methods of communication that minimize the threat of public observation and appraisal can better satisfy consumers' need for privacy and prevent embarrassment (Kumar, 2008).

Students' tendency to turn off their web cameras during online classes (Nicandro et al., 2020) may be more challenging for instructors than for students. Typically, instructors ask students to turn on their cameras, and consider this to be a personal success (Stafford, 2020). However, from the students' perspectives, online class settings that allow students to "hide" their facial expressions while attending synchronous lessons may be beneficial. This may encourage more candid self-expression, motivate students to ask questions for clarification, and prompt them to actively participate during class time by answering teachers' questions without being embarrassed (Castelli & Sarvary, 2021). An enhanced sense of privacy is particularly beneficial for reducing potential student embarrassment when discussing topics in family science. All these, in turn, can promote learning.

For some students, the risk of embarrassment may make them uncomfortable enough to withdraw into themselves and avoid expressing their views in public. They may not express their *real* views in front of others and shun publicly asking questions about unclear issues. Therefore, from the students' perspective, turning off a web camera can *encourage* active participation and learning. Second, displaying students' facial expressions in online classes may raise students' concerns about a potential social bias. Teachers' assessments of their students' skills, intelligence, emotions, and competence can be assessed in numerous ways (for a review see Pereira et al., 2016). One is via class interactions: teachers ask their students questions about the material, invite them to solve problems, and ask for their opinions on lesson topics. Hence, interactivity and participation may be achieved without any visual contact, but rather for example, by applying notions from constructivist pedagogy that promotes collaborative learning (Park, 2015).

The feedback received can be used by teachers to evaluate their students. When students are not visible to teachers and classmates, this feedback is based mostly on the content of their responses, and their tone of voice. Conversely, when students' images are visible, the additional visual information may be used by teachers (consciously or unconsciously) as cues to students' emotional responses (Barrett & Bliss-Moreau, 2009), intelligence (Talamas et al., 2016) or

competence (Filkuková & Jørgensen, 2020). Visual cues that are related to gender, ethnicity, religiosity, race, and attractiveness (e.g., skin color, hairstyle, outfit, body language, and gestures) may signal a student's social status. The literature on social status has empirically demonstrated that perceived higher social status positively affects perceived competence (Oh et al., 2020). Thus, having online, distant classes with students' cameras off may reduce teachers' susceptibility to this undesired social bias.

Storytelling: Addressing the Need for Student Engagement

Some teachers may struggle to engage students in class. It has been hypothesized that students may find it difficult to learn abstract concepts (Borghi et al., 2017). Connected and concrete concepts are easier to remember than abstract and disconnected ones. Stories help learners connect these concepts. Storytelling is an approach to communicating information in a narrative form (Van Laer et al., 2019). This approach has been recognized by marketing researchers and practitioners as effective in engaging and transforming audiences (Harmeling et al., 2017). The extended transportation-imagery model, for example, states that storytelling engages consumers by heightening their empathy towards the characters and activating their imagination (Van Laer et al., 2014). Accordingly, this approach to teaching could address the needs of students who struggle with processing abstract concepts (Borghi et al., 2017) in a way that promotes "visualizing" theoretical models.

Storytelling has become a major trend in marketing in recent years (Yueh & Zheng, 2019). Marketing research shows that listening to a story in consumption contexts can cause changes in consumption behavior (Hultén, 2015); e.g., by increasing preferences for food products (Fenger et al., 2015). Moreover, storytelling can help address consumer needs for social relationships by portraying a shared sociocultural background with other members of peer-to-peer communities (Pera & Viglia, 2016).

Thus, in an era of distributed learning and teaching, storytelling can be used as a pedagogical tool to enhance student engagement and vigilance. When utilizing distributed learning, this pedagogical approach may also promote digital literacy (Chan et al., 2017). This may be an exceptionally challenging task for instructors who need to combat students' Zoom fatigue (Fosslien & Duffy, 2020). Research suggests that communicating content to listeners (e.g., consumers, pupils, and students) is more persuasive and may prod audiences into action, whereas traditional lectures "have a tendency to put listeners to sleep" (Woodside, 2010, p. 531).

A good story structure includes two critical elements: chronology and causality (Delgadillo & Escalas, 2004). From a practical point of view, this means that teachers should organize the content components of each class as "events" around some temporal dimension. This type of presentation can add drama to the class by engaging students emotionally and move away from the traditional format of vignette-like lectures (Escalas & Stern, 2003). In addition, storytelling can illustrate the cause-and-effect relationships of general or abstract concepts that are taught during a lesson. By demonstrating how employing the material learned in a class translates into desirable changes in terms of various factors (e.g., environment, wellbeing, Return on Investment (ROI)) students can more easily "connect the dots" and stay alert during online classes.

Screens off: The Pivotal Role of High-Quality Auditory Communications in Learning

Too much information or overly noisy information disturbs people and may even cause cognitive paralysis (Meister et al., 2018; Schwartz, 2015). The clarity and specificity of sound enables individuals to effectively process auditory information. Although this notion appears obvious, its importance may be overlooked but is crucial and addressable (Brewster, 1997).

A recent survey during the COVID-19 pandemic found that students were dissatisfied with the quality of online classes' audio/sound (İnce et al., 2020). Evidence shows that poor teacher-student audio communication quality has negative effects that go beyond student dissatisfaction. For example, medical students frequently reported audio quality to be a critical limitation that interfered with learning during online medical training (i.e., tele-simulation) (Patel et al., 2020).

Consumer behavior research suggests that high quality and clear audio communication is not only desirable but is crucial for effective online learning. Incorporating comprehensible audio-sensory cues into visual-only video advertisements enhances audiences' active attention and improves the storage of brand information in memory (Simmonds et al., 2020). This may be because the duration of echoic sensory memory is longer than that of iconic sensory memory; namely, four versus two seconds respectively (Lu, Z. L. et al., 1992). Simmons et al. (2020) posited that the underlying mechanism for this effect is the additional internal processing that takes place when individuals receive audio-visual messages. By contrast, auditory distractions are more influential than visual distractions in terms of their effect on the retrieval of implicit brand memory (Choi et al., 2013).

Compared to audio-only persuasive messages, audio/visual messages produce higher recall and recognition (Chaiken & Eagly, 1976). However, this holds for easy-to-understand messages (e.g., shorter, simple vocabulary). Interestingly, for more complex and difficult-to-understand messages (e.g., longer, sophisticated vocabulary) the audio-only modality was found to be more effective (Chaiken & Eagly, 1976). The significant advantage of using clear audio messaging, and its contribution to brand recognition, has also been documented in product placement marketing communication (Gupta & Lord, 1998). This may be why podcasts are receiving increased attention and their popularity for higher education is rising (Merhi, 2015).

Educational technology research has also highlighted how beneficial (high quality) audio is for learning because it lessens students perceived cognitive load (de Oliveira Neto, Jose Dutra et al., 2015). More recently, during COVID-19, empirical findings have indicated that the delivery of online lectures with audio voiceover enhanced students' learning and understanding (Hill & Fitzgerald, 2020).

Thus, teachers should try to establish high-quality, clear audio communication with their students. In many cases, this may have a more marked effect on learning effectiveness than top-notch visuals. Online instructors are advised to speak more slowly than in traditional classes, articulate clearly, and use proper intonation. The technical equipment also matters. Using a quality audio system such as a microphone, a dedicated sound card, and reasonable acoustics will help students cope with complex material, improve recall, reduce cognitive load and enhance overall learning. Although this is rather elementary, the basic needs for online learning are sometimes overlooked (Lee, 2017). Creating quality podcasts and incorporating them into online teaching may increase students' excitement, interest, enjoyment, and learning motivation (König, 2020).

To illustrate the joint effect of storytelling and audio quality, it is worth recalling what plotted articulated radiophonic narration did for nature movies, which originally were purely soundless videos. The opportunity to view and appreciate well-made, well-read narrative filmmaking can give even fear-of-missing-out- (FOMO) students the chance to fall in love with documentaries.

While there are advantages to the use of the audio modality as a learning facilitator, one major drawback has to do with its potential adverse effect on relations within the family. In an interesting paper, Rosenblatt and Xiaohui (2010, p. 84) suggest that "...there are reasons to think that cell phone usage while driving is also risky to the relationships of the parties involved in the phone conversation". In line with this perspective, family members who are present in a communal space while consuming external auditory content may appear detached and even alienated. When a family members work on a computer, for instance, they "display" a virtual "busy" sign. This type of sign is less conspicuous when a person merely *listens*, due to the lack of social cues; perhaps they are just listening to music and can be disturbed. Although this issue can be addressed through preemptive announces, it may interfere with family dynamics remains.

Balancing Synchronous and Asynchronous Classes for Better Time Management

The need to control and manage time has received ample theoretical and empirical attention (Loewenstein et al., 2003; Stolarski et al., 2015). Studies pertaining to higher education (Adams & Blair, 2019) have reported that effective time management was associated with stronger academic performance and lower levels of anxiety in students, and that students' perceived control of time correlated significantly with their cumulative grade point average. More recently, qualitative family research has shown that balancing synchronous and asynchronous videoconferencing in teaching family science courses helped satisfy learners' needs for effective time management (e.g., managing conflicting schedules) (Kennedy & Do, 2020).

It is thus clear that distributed learning should adapt synchronous and asynchronous learning to mitigate the potential conflict between them (Serdyukov, 2020). A major concern in distributed learning is enhancing social presence, which strengthens one's sense of belonging. This may be achieved through interactions with peers and instructors (Kennedy & Do, 2020). However, social presence may be compromised by insufficient adequate familial conditions for online synchronous learning (Lu, S., 2020). Employing the asynchronous mode alone may impair learning for reasons such as lagged teacher feedback, potentially incorrect learned topic ordering, and impeded human and social development. Synchronous classes offer students the opportunity to (virtually) socialize with other classmates and interact in real-time with students and teachers. Synchronous classes, however, are not flexible in terms of time, may involve distractions by classmates (Lin & Gao, 2020), require extensive time in front of the screen, impose a sense of fear or unnecessary stress regarding the handling of online assessment in "real-time", and may place pressure on students when (virtually) approached by their instructors (Dung, 2020). For some students, all these may undermine the learning process. Thus, finding the right balance between the two modes of online learning could generate more productive classes.

While this rationale appears obvious, its implementation is not, since it involves resolving the issue of institutional control, and the right tradeoff between each mode. The tension between synchronous and asynchronous modes of learning has been strikingly apparent during

the pandemic. The scant research to date shows that rather than primarily addressing learning, academic administrators aim to be sure that their staff conducted synchronous classes and taught their required quota (Adeeb, 2021).

While there are many excuses for this managerial behavior, it has no justification. There is no evidence that synchronous participation predicts better success (Nieuwoudt, 2020). What is also apparent since the pandemic broke out is that “those on the front lines” know better, and that empowerment works best (Adeeb, 2021). In most respects, education included those who allowed the ground forces to lead have achieved better success than those who attempt a rigid, top-down command tactic. This suggests that instructors should be given the latitude to determine their own balance, rather than be obligated to follow dictates from above (Amour, 2020). A recent study reported that 67% of the students surveyed preferred asynchronous 19% preferred synchronous, and 15% indicated had no preference (Ramo et al., 2021).

In a recent study, Gao et al. (2021) provided empirical evidence for the claim that student e-learning engagement is positively and strongly correlated with family support. Furthermore, e-learning normative consciousness was found to mediate this correlation. Asynchronous classes enable such support while synchronous classes get in its way. Hence, facilitating this support is beneficial for students’ academic success and effective learning. Moreover, flexible class schedules can better accommodate student families’ time constraints. Consequently, it is easier for parents and other family members to support learners’ needs, such that families’ wellbeing is enhanced.

Conclusion

COVID-19 has had a significant effect on academia across the world. Attempting to assess the impact of the current period for the world of the future would be presumptuous. Nevertheless, for academic stakeholders, the pandemic may have arrived just in time, if not shortly afterward. It is a wake-up call.

This paper took an interdisciplinary approach in discussing several implications for higher education. First, it proposed a clear typology of methods for remote learning. This typology can support educators' choices of the most effective method for a given situation. Second, MOA is advantageous in promoting successful learning. Third, it discussed the link between four students’ needs and four teaching schemes that address them to facilitate learning. Finally, regarding family science, the key takeaway message is students' need for privacy and the ways it can be addressed. This is because in some family settings, this need is omnipresent and can be exacerbated during a time of crisis.

This article promoted four strategies to better enable higher education to get through the current storm a little more smoothly and be a better fit with the new normal. The common thread is to restructure learning to better match students’ needs. This can be done by: a) allowing students to attend class at the level of exposure that suits them; b) helping students chart the scope of the academic material; c) addressing the growing impact of auditory information in remote settings; and d) finding the right balance between online synchronous learning and asynchronous, self-paced learning.

There are many other schemes to benefit from, and bigger changes that higher education could exploit. If variants of COVID-19 continue to exist, the academic industry will be compelled to invent and invest in such changes. It is everyone's hope that sooner rather than

later, COVID-19, like SARS-03, will be an episode relegated to the past. However, its presence can impact academia and thrust it into the future, or at least bring it up to date in a long-lasting, sustainable manner.

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References

- Adams, R. V., & Blair, E. (2019). Impact of time management behaviors on undergraduate engineering students' performance. *SAGE Open*, 9(1), 1-11. 10.1177/2158244018824506
- Adeeb, S. (2021). Letter to the Editor: In response to "Are asynchronous lectures laziness on the part of profs?" *The Gauntlet*. <https://thegauntlet.ca/2021/02/26/letter-to-the-editor-in-response-to-are-asynchronous-lectures-laziness-on-the-part-of-profs/>
- Alegre, I., Berbegal-Mirabent, J., Guerrero, A., & Mas-Machuca, M. (2018). The real mission of the mission statement: A systematic review of the literature. *Journal of Management & Organization*, 24(4), 456-473.
- Amour, M. S. (2020). The moment is primed for asynchronous learning. *Inside Higher Education*. <https://www.insidehighered.com/news/2020/09/16/dont-dismiss-asynchronous-learning-experts-say-improve-it>
- Baber, H. (2020). Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID-19. *Journal of Education and E-Learning Research*, 7(3), 285-292.
- Barrett, L. F., & Bliss-Moreau, E. (2009). She's emotional. He's having a bad day: Attributional explanations for emotion stereotypes. *Emotion*, 9(5), 649-658.
- Borghini, A. M., Binkofski, F., Castelfranchi, C., Cimatti, F., Scorolli, C., & Tummolini, L. (2017). The challenge of abstract concepts. *Psychological Bulletin*, 143(3), 263-292.
- Brewster, S. A. (1997). Using non-speech sound to overcome information overload. *Displays*, 17(3-4), 179-189.
- Busteed, B. (2020, September 25). Wake up higher education. The degree is on the decline. *Forbes*. <https://www.forbes.com/sites/brandonbusteed/2020/09/25/wake-up-higher-education-the-degree-is-on-the-decline/?sh=367bdcb57ecb>
- Castelli, F. R., & Sarvary, M. A. (2021). Why students do not turn on their video cameras during online classes and an equitable and inclusive plan to encourage them to do so. *Ecology and Evolution*, 11(8), 3565-3576.
- Chaiken, S., & Eagly, A. H. (1976). Communication modality as a determinant of message persuasiveness and message comprehensibility. *Journal of Personality and Social Psychology*, 34(4), 605-614.
- Chamorro-Premuzic, T., & Frankiewicz, B. (2019). 6 reasons why higher education needs to be disrupted. *Harvard Business Review*. <https://hbr.org/2019/11/6-reasons-why-higher-education-needs-to-be-disrupted>
- Chan, B. S., Churchill, D., & Chiu, T. K. (2017). Digital literacy learning in higher education through digital storytelling approach. *Journal of International Education Research (JIER)*, 13(1), 1-16.
- Chiciudean, G., Arion, F., & Mureşan, I. (2015). Marketing oriented and sales oriented companies in the agro-food industry. *Bulletin of the University of Agricultural Sciences & Veterinary Medicine Cluj-Napoca Horticulture*, 72(2), 476-482.

- Choi, Y. K., Lee, S. M., & Li, H. (2013). Audio and visual distractions and implicit brand memory: A study of video game players. *Journal of Advertising*, 42(2-3), 219-227.
- Clark, D. (2013, April 15). Grad school may not be the best way to spend \$100,000. *Harvard Business Review*. <https://hbr.org/2013/04/grad-school-may-not-be-the-best-way>
- Cornell University. (2020a). *Cornell University Core Values*. <https://president.cornell.edu/initiatives/university-core-values/>
- Cornell University. (2020b). *University Mission*. <https://www.cornell.edu/about/mission.cfm>
- de Oliveira Neto, J.D., Huang, W. D., & de Azevedo Melli, N. C. (2015). Online learning: Audio or text? *Educational Technology Research and Development*, 63(4), 555-573.
- Delgadillo, Y., & Escalas, J. E. (2004). Narrative word-of-mouth communication: Exploring memory and attitude effects of consumer storytelling. *ACR North American Advances*, 31, 186-192.
- Dickler, J. (2020). *COVID is making it harder to get into a top college*. CNBC. <https://www.cnbc.com/2020/12/29/covid-is-making-it-harder-to-get-into-a-top-college.html>
- Dienlin, T., Masur, P. K., & Trepte, S. (2021). A longitudinal analysis of the privacy paradox. *New Media & Society*, 1-22. <https://doi.org/10.1177/14614448211016316>
- DiGregorio, N. (2018). Survival tips for new family science professionals. *Family Science Review*, 22(2), 89-98.
- Dove, M., Walsh, B. A., & Sanchez, C. (2019). Exploring one school district's tool for assessing family-friendly schools. *Family Science Review*, 23(1), 78-98.
- Dung, D. (2020). The advantages and disadvantages of virtual learning. *IOSR Journal of Research & Method in Education*, 10(3), 45-48.
- Eringfeld, S. (2021). Higher education and its post-coronial future: Utopian hopes and dystopian fears at Cambridge University during COVID-19. *Studies in Higher Education*, 46(1), 146-157.
- Escalas, J. E., & Stern, B. B. (2003). Sympathy and empathy: Emotional responses to advertising dramas. *Journal of Consumer Research*, 29(4), 566-578.
- Fenger, M. H., Aschemann-Witzel, J., Hansen, F., & Grunert, K. G. (2015). Delicious words—Assessing the impact of short storytelling messages on consumer preferences for variations of a new processed meat product. *Food Quality and Preference*, 41, 237-244.
- Filkuková, P., & Jørgensen, M. (2020). How to pose for a professional photo: The effect of three facial expressions on perception of competence of a software developer. *Australian Journal of Psychology*, 72, 257-266. [10.1111/ajpy.12285](https://doi.org/10.1111/ajpy.12285)
- Fosslien, L., & Duffy, M. W. (2020). How to combat Zoom fatigue. *Harvard Business Review*, Available at <https://hbr.org/2020/04/how-to-combat-zoom-fatigue>
- Galloway, S. (2020). *USS University*. Prof Galloway Media. <https://www.profgalloway.com/uss-university>
- Gao, H., Ou, Y., Zhang, Z., Ni, M., Zhou, X., & Liao, L. (2021). The relationship between family support and e-learning engagement in college students: The mediating role of e-learning

- normative consciousness and behaviors and self-efficacy. *Frontiers in Psychology*, 12, 1-9. 10.3389/fpsyg.2021.573779
- Gryshchenko, I., Chubukova, O., Bilovodska, O., Gryshchenko, O., & Melnyk, Y. (2020). Marketing-oriented approach to evaluating the strategy of distribution management for innovative products in logistics. *WSEAS Transactions on Environment and Development*, 16, 371-383.
- Gupta, P. B., & Lord, K. R. (1998). Product placement in movies: The effect of prominence and mode on audience recall. *Journal of Current Issues & Research in Advertising*, 20(1), 47-59.
- Harari, Y. N. (2015). *Sapiens: A brief history of humankind*. Harper Collins.
- Harmeling, C. M., Moffett, J. W., Arnold, M. J., & Carlson, B. D. (2017). Toward a theory of customer engagement marketing. *Journal of the Academy of Marketing Science*, 45(3), 312-335.
- Harvard University. (2020). *Mission Statement*. <https://www.harvard.edu/about-harvard/harvard-glance#:~:text=The%20mission%20of%20Harvard%20College,liberal%20arts%20and%20sciences%20education>.
- Hill, K., & Fitzgerald, R. (2020). Student perspectives of the impact of COVID-19 on learning. *All Ireland Journal of Higher Education*, 12(2), 1-9.
- Hultén, B. M. (2015). The impact of sound experiences on the shopping behaviour of children and their parents. *Marketing Intelligence & Planning*, 33(2), 197-215.
- İnce, E. Y., Kabul, A., & Diler, İ. (2020). Distance education in higher education in the COVID-19 pandemic process: A case of Isparta Applied Sciences University. *Distance Education*, 4(4), 343-351.
- Ivy Coach. (2021). *2021 Ivy League Admissions Statistics*. <https://www.ivycoach.com/2021-ivy-league-admissions-statistics/>
- Jost, N. S., Jossen, S. L., Rothen, N., & Martarelli, C. S. (2021). The advantage of distributed practice in a blended learning setting. *Education and Information Technologies*, 26(3), 3097-3113.
- Kadhium, V. S., Betteg, S., Sharma, P., & Nalliah, R. P. (2021). Do mission statements matter? An evaluation of dental school mission statements. *Journal of Dentistry and Oral Sciences*, 3(1), 1-9.
- Kalantzis, M., & Cope, B. (2020). After the COVID-19 crisis: Why higher education may (and perhaps should) never be the same. *Access: Contemporary Issues in Education*, 40(1), 51-55.
- Kaplan, A. M., & Haenlein, M. (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster. *Business Horizons*, 59(4), 441-450.
- Kennedy, H. R., & Do, K. A. (2020). Synchronous videoconferencing: Social presence and the engagement of different learners in a blended family studies course. *Family Science Review*, 24(1), 43-65.

- Kilian, T., Steinmann, S., & Hammes, E. (2018). Oh my gosh, I got to get out of this place! A qualitative study of vicarious embarrassment in service encounters. *Psychology & Marketing, 35*(1), 79-95.
- Kohnke, L., & Moorhouse, B. L. (2021). Adopting HyFlex in higher education in response to COVID-19: Students' perspectives. *Open Learning, 36*(3), 231–244.
<https://doi.org/10.1080/02680513.2021.1906641>
- Kolodny, L. (2013, December 18). Why a nonprofit backs dropping out of school. *Wall Street Journal*.
<https://www.wsj.com/articles/SB10001424052702303330204579250142741126468>
- König, L. (2020). Podcasts in higher education: teacher enthusiasm increases students' excitement, interest, enjoyment, and learning motivation. *Educational Studies, Jan*(07), 1-4.
10.1080/03055698.2019.1706040
- Krishna, A., Herd, K. B., & Aydınoğlu, N. Z. (2019). A review of consumer embarrassment as a public and private emotion. *Journal of Consumer Psychology, 29*(3), 492-516.
- Kühl, N., Mühlthaler, M., & Goutier, M. (2020). Supporting customer-oriented marketing with artificial intelligence: automatically quantifying customer needs from social media. *Electronic Markets, 30*, 351-367.
- Kumar, R. (2008). How embarrassing: An examination of the sources of consumer embarrassment and the role of self-awareness. *Advances in Consumer Research, 35*, 1006-1007.
- Kushwaha, T., & Dubey, R. (2018). Multiple roles of sales executives in sales transaction: An exploratory study. *Journal of Management Research, 18*(1), 3-12.
- Lee, K. (2017). Rethinking the accessibility of online higher education: A historical review. *The Internet and Higher Education, 33*, 15-23.
- Levitt, T. (2004). Marketing myopia. *Harvard Business Review., 82*(7/8), 138-149.
- Lin, X., & Gao, L. (2020). Students' sense of community and perspectives of taking synchronous and asynchronous online courses. *Asian Journal of Distance Education, 15*(1), 169-179.
- Line, N. D., & Wang, Y. (2017). Market-oriented destination marketing: An operationalization. *Journal of Travel Research, 56*(1), 122-135.
- Loewenstein, G., Read, D., & Baumeister, R. F. (2003). *Time and decision: Economic and psychological perspectives of intertemporal choice*. Russell Sage Foundation.
- Lu, S. (2020). School+ family community learning model of PE course under COVID-19 epidemic situation. *International Journal of Emerging Technologies in Learning (iJET), 15*(18), 218-233.
- Lu, Z. L., Williamson, S. J., & Kaufman, L. (1992). Behavioral lifetime of human auditory sensory memory predicted by physiological measures. *Science (New York, N.Y.), 258*(5088), 1668-1670.
- Maslow, A. H. (1966). *The psychology of science a reconnaissance*. Harper & Row.

- Meister, H., Rählmann, S., & Walger, M. (2018). Low background noise increases cognitive load in older adults listening to competing speech. *The Journal of the Acoustical Society of America*, *144*(5), EL417-EL422.
- Merhi, M. I. (2015). Factors influencing higher education students to adopt podcast: An empirical study. *Computers & Education*, *83*, 32-43.
- Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). e-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, *14*(2), 129-135.
- Neuwirth, L. S., Jović, S., & Mukherji, B. R. (2020). Reimagining higher education during and post-COVID-19: Challenges and opportunities. *Journal of Adult and Continuing Education*, August <https://doi.org/10.1177%2F1477971420947738>
- Nicandro, V., Khandelwal, A. & Weitzman, A. (2020). Please, let students turn their videos off in class. *The Stanford Daily*. <https://www.stanforddaily.com/2020/06/01/please-let-students-turn-their-videos-off-in-class/>
- Niculescu, M., Xu, B., Hampton, G. M., & Peterson, R. T. (2016). Market orientation and its measurement in universities. *Administrative Issues Journal: Connecting Education, Practice, and Research*, *3*(2), 533.
- Niehuis, S., & Thomas-Jackson, S. (2019). Teaching emotionally charged cultural diversity topics in family science: The pivotal role of instructors' emotions. *Family Science Review*, *23*(2), 85-106.
- Nieuwoudt, J. E. (2020). Investigating synchronous and asynchronous class attendance as predictors of academic success in online education. *Australasian Journal of Educational Technology*, *36*(3), 15-25.
- Oh, D., Shafir, E., & Todorov, A. (2020). Economic status cues from clothes affect perceived competence from faces. *Nature Human Behaviour*, *4*(3), 287-293.
- Pakhomova, T. O., Komova, O. S., Belia, V. V., Yivzhenko, Y. V., & Demidko, E. V. (2021). Transformation of the pedagogical process in higher education during the quarantine. *Linguistics and Culture Review*, *5*(S2), 215-230.
- Papulova, Z. (2014). The significance of vision and mission development for enterprises in Slovak Republic. *Journal of Economics, Business and Management*, *2*(1), 12-16.
- Park, J. Y. (2015). Student interactivity and teacher participation: An application of legitimate peripheral participation in higher education online learning environments. *Technology, Pedagogy and Education*, *24*(3), 389-406.
- Patel, S. M., Miller, C. R., Schiavi, A., Toy, S., & Schwengel, D. A. (2020). The sim must go on: adapting resident education to the COVID-19 pandemic using telesimulation. *Advances in Simulation*, *5*(1), 1-11.
- Pavlov, O. V., & Katsamakos, E. (2020). Will colleges survive the storm of declining enrollments? A computational model. *Plos One*, *15*(8), e0236872.
- Pera, R., & Viglia, G. (2016). Exploring how video digital storytelling builds relationship experiences. *Psychology & Marketing*, *33*(12), 1142-1150.

- Pereira, D., Flores, M. A., & Niklasson, L. (2016). Assessment revisited: A review of research in assessment and evaluation in higher education. *Assessment & Evaluation in Higher Education, 41*(7), 1008-1032.
- Ramo, N. L., Hald, E. S., & Huang-Saad, A. (2021). Synchronous vs. asynchronous vs. blended remote delivery of introduction to biomechanics course. *Biomedical Engineering Education, 1*(1), 61-66.
- Reaves, J. (2019). 21st-century skills and the fourth Industrial Revolution: A critical future role for online education. *International Journal on Innovations in Online Education, 3*(1), 1-21.
- Rosenblatt, P. C., & Li, X. (2010). Hazards to family relationships from cell phone usage while driving. *Family Science Review, 15*(2), 84-93.
- Saunders, S. G. (2013). The diversification of charities: From religion-oriented to for-profit-oriented fundraising. *International Journal of Nonprofit and Voluntary Sector Marketing, 18*(2), 141-148.
- Schwartz, B. (2015). The paradox of choice. In S. Joseph (Ed.), *Positive Psychology in Practice: Promoting Human Flourishing in Work, Health, Education, and Everyday Life* (pp. 121-138). Wiley.
- Serdyukov, P. (2020). Asynchronous/synchronous learning chasm. *Exploring Online Learning Through Synchronous and Asynchronous Instructional Methods* (pp. 1-33). IGI Global.
- Simmonds, L., Bogomolova, S., Kennedy, R., Nenycz-Thiel, M., & Bellman, S. (2020). A dual-process model of how incorporating audio-visual sensory cues in video advertising promotes active attention. *Psychology & Marketing, 37*, 1057-1067. 10.1002/mar.21357
- Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988-2018). *American Journal of Distance Education, 33*(4), 289-306.
- Slåtten, T., Lien, G., Lupina, E., & Gravingen, K. A. (2019). Promoting an internal market-oriented culture (IMOC) in healthcare services. *Journal of Service Science Research, 11*(2), 157-182.
- Srivastava, R. K., Shervani, T. A., & Fahey, L. (1999). Marketing, business processes, and shareholder value: an organizationally embedded view of marketing activities and the discipline of marketing. *Journal of Marketing, 63*(Special Issue), 168-179.
- Stafford, V. (2020). EdTech review: Teaching through Zoom—what we’ve learned as new online educators. *Journal of Applied Learning and Teaching, 3*(2), 150-153.
- Stanford University. (2020). *Core values and policy*. <https://earth.stanford.edu/our-values/core-values>
- Stolarski, M., Fieulaine, N., & Van Beek, W. (2015). *Time perspective theory: Review, research and application*. Springer.
- Talamas, S. N., Mavor, K. I., Axelsson, J., Sundelin, T., & Perrett, D. I. (2016). Eyelid-openness and mouth curvature influence perceived intelligence beyond attractiveness. *Journal of Experimental Psychology: General, 145*(5), 603-620.

- The University of Cambridge. (2020). *The University's mission and core values*.
<https://www.cam.ac.uk/about-the-university/how-the-university-and-colleges-work/the-universitys-mission-and-core-values>
- Trepte, S. (2020). The social media privacy model: Privacy and communication in the light of social media affordances. *Communication Theory*, <https://doi-org.ezprimo1.idc.ac.il/10.1093/ct/qtz035>
- Trepte, S., & Masur, P. K. (2020). Need for privacy. In M. Wróbel (Ed.), *Encyclopedia of Personality and Individual Differences* (pp. 3132-3135). Springer.
- Turcios-Casco, M. A., & Gatti, R. C. (2020). Do not blame bats and pangolins! Global consequences for wildlife conservation after the SARS-CoV-2 pandemic. *Biodiversity and Conservation*, *29*(13), 3829-3833.
- Vaikunthavasan, S., Jebarajakirthy, C., & Shankar, A. (2019). How to make higher education institutions innovative: An application of market orientation practices. *Journal of Nonprofit & Public Sector Marketing*, *31*(3), 274-302.
- Van Laer, T., De Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *Journal of Consumer Research*, *40*(5), 797-817.
- Van Laer, T., Edson Escalas, J., Ludwig, S., & Van Den Hende, Ellis A. (2019). What happens in Vegas stays on TripAdvisor? A theory and technique to understand narrativity in consumer reviews. *Journal of Consumer Research*, *46*(2), 267-285.
- Woodside, A. G. (2010). Brand-consumer storytelling theory and research: Introduction to a Psychology & Marketing special issue. *Psychology & Marketing*, *27*(6), 531-540.
- Wu, S., Chang, D., & Hu, H. (2021). Detecting the issue of higher education over-expanded under declining enrollment times. *Higher Education Policy*, *34*, 747-770.
<https://doi.org/10.1057/s41307-019-00163-z>
- Xing, B., & Marwala, T. (2017). Implications of the fourth industrial age for higher education. *The Thinker*, *73*(3), 10-15.
- Yueh, H., & Zheng, Y. (2019). Effectiveness of storytelling in agricultural marketing: Scale development and model evaluation. *Frontiers in Psychology*, *10*, 452.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The effects of strategic orientations on technology- and market-based breakthrough innovations. *Journal of Marketing*, *69*(2), 42-60.