

Tracing the Intercultural Learning Experience during COVID-19: New challenges in the Design of Effective Online Learning

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As part of a larger project that aims to develop cultural intelligence (CQ) in undergraduates at a Japanese international university, this presentation reports some of the challenges encountered with online intercultural learning during the COVID-19 pandemic. Adjustments to course design and implementation, necessitated by sudden and/or shifting pandemic measures presented significant challenges but also resulted in some unforeseen successes. In particular, certain social elements that are presumed to be prerequisites for intercultural learning were impacted, requiring a redesign of the learning experience. From an instructional design perspective, the challenge of providing adequate and flexible learning support has posed new questions to traditional educational approaches and interventions. Selected observations related to the social elements of intercultural learning are presented to help further discussions on the design of effective online instruction in this area.

Keywords: Online learning, Cultural Intelligence (CQ), Intercultural learning, Instructional Design, Social Learning, Covid-19

Introduction

As the global COVID-19 pandemic finally appears to be receding, instructors in higher education institutions (HEI) once again must take stock and evaluate the designs, approaches and practices that impact effective learning. For the last 2 years, educational institutions at every level were severely challenged to adjust to an all-encompassing onslaught on almost every aspect of the traditional forms of learning. While many educational technologies that support learning were already widely in use, even well-established systems were stretched to accommodate and adapt to the suddenness and severity of the shift to a global online education. Calculations provided by the World Bank during the 2020-2021 period estimated, for instance, that between 93% and 100% of students in higher education globally were affected, amounting to more than 220 million students (Arnhold & Basset, 2021, p. 51). This unprecedented impact affected all countries, regardless of their level of income or status of development. In preparation for future educational management, a subsequent report by the World Bank provides a useful approach to assist HEIs and guide the financial and policy decisions to ensure the development of "... effective, equitable, efficient, and resilient education systems and institutions" (Arnhold & Basset, 2021, p. 5). Termed with the acronym "STEER", the guide sets out an approach toward optimizing equitable and green growth as follows: (1) build diversified *Systems*, (2) invest smartly in new *Technologies*, (3) ensure *Equity* in access and financing, (4) achieve *Efficiency* in resource utilization, and (5) acquire *Resilience* in service delivery (my emphasis in italics) (Arnhold & Basset, 2021).

Among the many elements of the educational experience affected by the shift to online learning, one of the preceding *STEER* dimensions is singled out for the current investigation: namely, *equity* in learning access. In this regard, instructional design, and technology (ID & T) as an intertwined approach have long encountered several challenges. A previous review of literature in this area (Roux & Suzuki, 2017; Roux et al., 2019) has drawn attention to the socio-cultural elements present in the learning process and the fact that culture is central to the construction of meaning in education. Although studies in this area have a long history in various disciplines, an integrated and interdisciplinary understanding remains incomplete. Research efforts to construct a more comprehensive and integrated ID&T framework is ongoing, but the fact remains that cultural elements remain vital in understanding and designing an inclusive learning experience (Roux et al., 2019, 2020). Even at the foundational level, the implication for learning design in this area is complex: culture in learning involves a recognition that ideas about race, ethnicity, nationality, religion, class, gender, traditions, values, language, lifestyle, age, as well as workplace and academic cultures and traditions, are all relevant when teachers and learners interact.

With the advent of international education, and the global trend towards adopting online learning formats, issues in the design of learning has further evolved. The existence of online teacher- and student populations have become the norm and helped to solidify the realization that the virtual educational world are likely even more diverse than the traditional educational systems, since the latter – at least before globalization in the 21st century – traditionally were separated by certain national, or in-country boundaries. The globalization of education, however, has brought about the existence of an online educational diversity that is likely to remain and therefore need to be incorporated as a design

principle in the creation and adaptation of current and future learning systems (LMSs). The implication is that the field of ID&T should directly consider, and verifiably incorporate socio-cultural aspects of teachers, learners, and their institutions in the very foundation of learning design to insure the equity and inclusivity of global educational systems.

Given this brief background, the current paper considers some of the challenges encountered with online intercultural learning during the COVID-19 pandemic. The sudden and unexpected changes to educational systems, followed by the required measures to accommodate the shifting pandemic, presented significant challenges to local educational systems, but also resulted in some unforeseen successes. The subsequent adjustments to course design and implementation, and the resultant effect on teachers and students, as well as the institutions they belong to, are therefore within the scope of the present study. In particular, certain social elements that are presumed to be prerequisites for intercultural learning were severely impacted, sometimes requiring a redesign of the instructional approach and a reconsideration of the desired learning outcomes. From an instructional design perspective, the challenge of providing adequate and efficient, yet flexible learning support has remained, but given the “new” reality, has also posed new questions to traditional educational approaches and interventions. This paper therefore attempts to organize some of the observed issues, accommodations, and successes around the central issue of equity in learner access. A selection of qualitative results is presented to understand the learner experience in terms of the following aspects: (1) situational factors; (2) access to learning; and (3) general adjustment to collaborative learning within culturally diverse groups. Selected observations related to the social elements of intercultural learning are presented to help further discussions on the design of effective online instruction in this area.

Research Design & Methods

Central to the current project is the development of intercultural competence, conceptualized as the skill of cultural intelligence (CQ). Ang & Van Dyne (2015) defines CQ as: “the ease and efficiency with which a person can adapt their views and behaviors cross-culturally” (pg. 3). Previous research that explored the development of CQ in the higher education context in Japan have focused on the adaptation of instructional methods in both blended and online environments to construct a framework that emphasizes equity, access and a basic recognition that learning always occurs in a cultural context (both broadly and specifically) and needs to be a central design element whether the course aims to specifically cultivate cultural competence or not (Roux & Suzuki, 2017; Roux et al., 2018, 2019, 2020, 2021). Findings from these studies confirmed the validity of the basic instructional framework as a potential tool for developing CQ and emphasized the value of experience-based learning through in-class and external activities that sought to build student competencies in socio-cultural and personal spheres. The instructional framework which includes the basic design and course elements is presented in table 1 below.

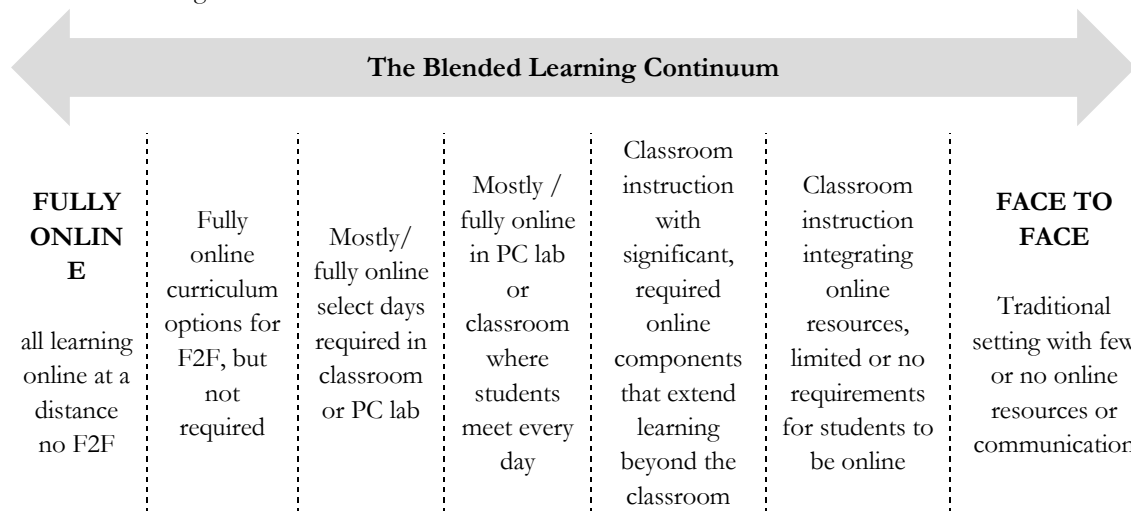
Table 1
A basic instructional framework for developing CQ in higher education utilizing blended learning

Theoretical models	Instructional approach	Instructional tools	Course Progress	Assessment	Evaluation
A synthesis of: <ul style="list-style-type: none"> ▪ ADDIE ▪ ARCS ▪ SAM ▪ CQ 	<ul style="list-style-type: none"> ▪ Blended learning (*Reference figure 1) 	<ul style="list-style-type: none"> ▪ EBL ▪ Online tools ▪ Group & Individual learning 	<ul style="list-style-type: none"> ▪ Weekly evaluation ▪ Online measures 	<ul style="list-style-type: none"> ▪ Pre- & Post-course assessment ▪ Learning checklist 	<ul style="list-style-type: none"> ▪ Feedback to main framework ▪ Learning design improvement

It is a basic assumption that building cultural competence and developing cultural intelligence would require social interaction during the learning process, and if student groups are richly diverse, further advantages can be attained by virtue of the variety in cultural and social attributes that students bring to the learning situation. Research that focuses on learning as a social system (Wenger, 1998) has gathered momentum and have demonstrated a positive relationship between collaborative learning and student motivation, effort, persistence, and achievement (Scager, Boonstra, Peeters, Vulperhorst & Wiegant, 2016). In addition, it is now generally accepted that a collaborative learning experience activates a sense of positive interdependence between students, which in turn, can facilitate the integration of students at university, build cohesion, enhance learning motivation and academic progress, and generally reduce study anxiety (La Rocca, Margottini & Capobianco, 2014).

Crucially, collaborative learning potentially promotes deep learning, since students can engage in guided, high-quality social interaction, discuss, and share thoughts and ideas among each other and with teachers and peers. The value of integrating and leveraging the inherent diversity through an effective learning design is therefore multifold and, if present, can be successfully harnessed to positively influence learning outcomes across a broad spectrum of learner development. Watson (2004) suggested a continuum for the blended learning experience, which was later adapted for use in the current project (Roux et al., 2019). It is replicated in figure 1 below.

Figure 1
The blended learning continuum



The setting for the current study is an international university in Japan, with student/faculty groups that come from very diverse backgrounds: approximately half of each group are comprised of domestic Japanese people, while the remainder represent more than 90 countries across the globe. Given the various stringent measures resulting from the pandemic however, all learning was conducted in an online format, using Zoom as the mode of instruction. For all groups, campus entry was impossible in the first year of the pandemic (until the latter half of 2020), and while entry became possible for local students during 2021, border measures meant that international students were unable to enter Japan for almost 2 years. The implications resulting from these measures for instruction and learning was multifold: a 100% shift from in-class to online learning, teacher and learner isolation, time-zone differences (in relation to JST), vast changes in the instructional approach, evaluation, and assessment, as well as numerous technological issues that had to be accommodated. While institutional technologies were gradually updated and improved (ranging from basic supplies in PCs, internet access through to finding appropriate online learning tools, etc.), the learning curve for these adaptations among faculty, staff and students was very steep and not always easily achieved. Enormous amounts of time, effort and finances were expended to meet the change in demands for equitable learning access, with varying degrees of success.

Mirroring some of these issues, a global study conducted by Aristovnik, Keržič, Ravšelj, Tomažević, & Umek (2020) (sample of 30,383 students from 62 countries), reveals that students were most satisfied with the support provided by their universities. However, deficient computer skills (and/or access to equipment) and the perception of a higher workload prevented a sense of improved performance in the online environment. Concerns further involved issues such as boredom, anxiety, frustration and worries about their future studies and career. Their findings further showed that certain socio-demographic characteristics (male, part-time, first level, applied sciences, a lower living standard, from Africa or Asia) were significantly less satisfied with their academic work/life. In contrast, female, full-time, first-level students, and students with financial problems were generally affected more in terms of their emotional life and personal circumstances (Aristovnik et al., 2020). Implications from this study confirm the understanding that equity and access correlate positively with student satisfaction, motivation, and hope.

Consequently, and with these issues and research trends in mind, the present investigation aimed to understand student engagement, seen as a function of access to, and participation in the collaborative learning experience. A survey was conducted among a group of students enrolled in an undergraduate course entitled “Peer Leader Training 1” during the 2021-22 academic year. Aside from the course aims of encouraging and developing cultural competencies, a better understanding of the learning experience during the pandemic was investigated, and, for purposes here, the following aspects were addressed in the analysis: access to learning, situational factors, and general adjustment to online collaborative learning with culturally diverse groups. The paper draws on the following data sources, namely pre- and post-course reflection surveys and a course completion learning checklist. Selected qualitative results from these sources are presented to understand the learner experience in terms of: (1) situational factors; (2) access to learning; and (3) general adjustment to collaborative learning within a culturally diverse group.

Results

Table 2

Summary of results based on 3 points of investigation: situational factors, access to learning and adjustment to collaborative learning

1. Situational factors: Reported issues & challenges	2. Access to learning: Student feedback/Reflection (beginning & during semester)	3. Effects: Adjustment to collaborative online learning within culturally diverse groups (end of semester)
<ul style="list-style-type: none"> ▪ Time zone differences (JST vs. global) 	<ul style="list-style-type: none"> ▪ Adjustments in class times ▪ Class recordings / On-demand ▪ Created 2 types of attendance within courses: online and recording-based (on-demand) 	<ul style="list-style-type: none"> ▪ Isolation due to online-only format prevented meeting and connecting with fellow learners & their respective diversities
<ul style="list-style-type: none"> ▪ Technical support, institutional support, & related issues 	<ul style="list-style-type: none"> ▪ Personal devices: availability of PCs, smart devices ▪ Internet access & WiFi availability varied significantly across learner groups – impact on access ▪ Contact with university increased as students needed technical support, increasing burden on technical, administrative, and other support staff ▪ Existent educational technologies could not provide adequate support or were in development phases 	<ul style="list-style-type: none"> ▪ Connectivity issues and device access (lack of, or variable internet service) compounded isolation, severely affected, or prevented simultaneous learning, social engagement for educational purposes ▪ Support services burden increased, mostly impacting non-domestic students due to lack of access to adequate support
<ul style="list-style-type: none"> ▪ Social & living environment – effects on learning and academic progress 	<ul style="list-style-type: none"> ▪ Campus entry impossible (became flexibly possible from 2nd semester 2021) – but only for domestic students. Japanese border measures were a significant factor affecting international student entry. ▪ Studying from home meant students had to adjust to usual family life ▪ Students abroad attended classes all time of night/day ▪ Students everywhere were affected by occurrence of natural disasters, in-country domestic issues, disruptions in family life ▪ On-campus life virtually non-existent, however, improved during late 2021- early 2022. Domestic students returned to campus starting late 2021, international students, mid-semester 2022 ▪ Restrictive social life for on-campus students even in latter phase of pandemic, some students are still abroad (mostly Chinese) 	<ul style="list-style-type: none"> ▪ Large discrepancy in access to simultaneous learning between domestic and international students ▪ Collaborative learning (study groups) possible in some instances, depending on time-zone and availabilities ▪ Family and social life disruption/adjustments impacted negatively on time available for study ▪ Formation of academic life connections with peers and faculty constrained, limiting learning progress
<ul style="list-style-type: none"> ▪ Personal life (based on anecdotal reports & issues registered with student affairs section at university) 	<ul style="list-style-type: none"> ▪ Physical health effects on self or family ▪ Mental health affected through adjustment to new learning formats ▪ Motivation for learning fluctuated because of external pressures, isolation ▪ Future (study & career) uncertainty, challenging goal formation, study persistence, etc. 	<ul style="list-style-type: none"> ▪ Listed issues had variable effects on attendance and participation in class groups ▪ Access to support at the appropriate times was constrained, affecting learners in different ways due to diverse circumstances
<ul style="list-style-type: none"> ▪ Impact of the online shift on faculty and resultant effect on 	<ul style="list-style-type: none"> ▪ Significant impact on family and private living arrangements during first phase of pandemic and/or coping with illness, home life changes, fatigue, etc.) 	<ul style="list-style-type: none"> ▪ Adjustments to basic instructional design for hybrid/blended learning meant traditional approaches

teaching & learning (based on anecdotal evidence)	▪ Steep learning curve regarding using educational technologies	for collaborative learning could not be accommodated
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Discussion

Situational factors

Situational factors were conceptualized as those that would impinge on the learning process and academic progress of learners. Reported issues and challenges in this area of the investigation included: (1) time zone differences (between Japan and various locations in the world), (2) the availability of, and access to technical support, institutional support and related issues, (3) the actual social and living environment (contextual factors) of learners at the time of study and the effects of these surroundings on learning and academic progress, (4) the impact of learners' personal lives on their academic performance, and finally, (5) the impact of the online shift on teaching faculty and the resultant effect on instruction. As indicated in the summary (table 2), time zone differences had a decisive impact on the delivery of instruction: adjustments to university timetables (where possible), and/or a shift to reliance on recorded lectures for on-demand learning, and various technical issues that ranged from the availability of adequate PCs/smart devices, access to reliable internet services and WiFi, and the ongoing technical support to ensure learner access. During the earlier phases of the pandemic, these issues appeared to be most pronounced but seemed to improve over time as adjustments were made by all the stakeholders involved. As the pandemic extended into a second year, situational factors in terms of impinging environmental factors became clearer. While institutional support remained stable, the gap in experience between local students in Japan and their counterparts abroad was evident mostly in terms of immediate (versus delayed) access to learning, university policies for local and international travel to campus (Japanese immigration barred or restricted international arrivals) and the concomitant allowances for timeous delivery of instruction.

Contextual and environmental factors that affected learners were multifold: students are traditionally expected to be in a learning environment provided by on-site study, student accommodations and private dwellings close to the university. Due to the pandemic, none of these traditional places of abode were available and almost all students were thus studying from home. The impact of this change is yet to be better understood since student experiences in this regard are unique, but it was clear from the qualitative analysis of the student reflections that several issues came to the fore: accommodating an online academic education among managing usual family life with parents and siblings was not easy, especially where different time zones were to be considered. In addition, local environmental circumstances affected learning in unexpected ways (reliable internet access, power shortages, occurrence of natural disasters, unforeseen family events, etc.). On the other hand, the availability and access to technological means made it possible for students to enroll and/or continue their academic career without having to be present on campus. It is undoubtedly true that this was made possible by the widespread use of educational technologies, perhaps allowing more students than ever before to continue their education no matter where they were placed in the world. Overall, many concur that digital technology was the "savior" of education during the global crisis (Tilak & Kumar, 2022), and is now irrevocably part of education. While the future of education seems very likely to include some form of blended learning, the measure and quantity (balance) of this with respect to conventional methods remain to be explored and tested out.

The findings regarding situational factors were corroborated with another study in this area that showed student preference for F2F education, student support for a blended learning situation but a student sentiment of resistance to a purely online education (Bajaba, Mandurah & Yamin, 2021). Finally, it is worthwhile noting that almost all the preceding issues affected faculty in their personal capacity in some way or form too. While faculty were arguably better prepared and had the institutional support, many faculty and their families were equally affected by pandemic restrictions and suffered illness or diminished capacity that impacted their ability to be present and involved in their students' learning.

Access to learning

With the preceding discussion in mind, the impact on access to learning should be clearer. Access to learning were most basically affected by access to stable, reliable, and consistent or continuous technological support. At its most basic, access to a smart device for remote students (referring to all students at the start of the pandemic) were a fundamental requirement for access. Once the extent and duration of the pandemic became clearer, more appropriate, and successful technological support could be put in place. It is at this point that a divergence between different learner groups became more apparent. When in-country, national educational systems and support services were in place in terms of infrastructure, planning and organization, users were most able to receive consistent and continuous access

(Bajaba, et al., 2021; Green, Anderson, Tait & Tran, 2020). In turn, governmental regulations further enabled/restricted access to educational services since academic institutions are bound by national strategies and requirements.

Global perspectives gained from the study by Aristovnik et al. (2020) show that students with certain socio-demographic characteristics (male, part-time, first year, applied sciences, a lower living standard, from Africa or Asia) were significantly less satisfied with their academic work/life during the pandemic. In slight contrast, female, full-time, first year students, and students with financial problems were generally affected more by the pandemic in terms of their emotional life and personal circumstances. Supplementing these findings with the current investigation further point to the necessity for giving priority to equipping universities (and broader education systems) with tools, skills, and capacity to face an unforeseen future. As Tilak & Kumar (2022) point out, this will require creative and innovative thinking for the restructuring of higher education institutions, but even more crucially, such a revitalization needs to be incorporated into policymaking on a global scale.

Effects: Adjustment to collaborative online learning within culturally diverse groups

The current findings list several observed effects in educational outcomes that were impacted during the pandemic. Perhaps most apparent in the initial phases of the global crisis was the social isolation that ensued: the online-only format prevented meeting and connecting (or re-connecting) with peers impacted learners and educators alike. In retrospect, the impact was profound and perhaps less noticeable since the effects of an enforced social isolation is only appreciated once it dissipates. In many respects, the effects are mental and is more slowly processed by society in general. In this regard, the observations by La Rocca et al. (2014) are especially relevant: they point to the fact that collaborative learning experiences activate a sense of positive interdependence between students, which in turn, can facilitate the integration of students at university, build cohesion, enhance learning motivation and academic progress, and generally reduce study anxiety. Collaborative learning further potentially promotes deep learning, since students can engage in guided, high-quality social interaction, discuss, and share thoughts and ideas among each other and with teachers and peers. The diversity of the student population in question for study is by far one of the most important features, since the university had the representation of global diversity built into its foundation, and most courses strive to harness, extend, and build on the intercultural exchange that is contained in its student residents.

It is therefore no surprise that connectivity issues and access to learning tools and -devices (or the lack thereof, and/or variable internet service provision) further complicated and compounded the enforced isolation among students. In the initial stages of the pandemic, these circumstances severely affected, or prevented simultaneous learning, collaboration for project work and other social engagement generally associated with educational interactions. Further compounding factors during the initial stages of the pandemic were that the burden on support services suddenly increased sharply, mostly impacting non-domestic students due to lack of access to real-time support. The result was therefore most visible in the large discrepancy in access to simultaneous learning between domestic and international students. The impact of this on collaborative learning in its many forms should be easily grasped since this was directly dependent on access to the learning system as a holistic system. Consequently, the creation and foundation for first-year education, and the continuation of learning for the more senior students' academic life, and the valuable connections with peers and faculty associated with university life were severely constrained. Although the most severe restrictions have now been eased and societal life has been restored to some form of "normality", research is only now beginning to catch up with the myriad of effects that all these challenges have had on the learning process.

Given that the circumstances for each institution of higher learning were different, responses and concomitant adjustments also followed unique paths. Responses and adjustments were also contingent on the learning systems already in place in each institution, which, with respect to individual faculty responses, were further key factors that influenced instructional decision-making. It is observable from the available data that once reasonably effective educational access was ensured, the choice of tools (educational technology) and methods for delivery (such as online-only format, followed by various adaptations as shown on the blended-learning continuum) were further key factors impacting on educational outcomes. In this sense, the online learning experience could be equalized for all learners. This is an important realization, since the main concern raised here was the pandemic's impact on the achievement (or at least, the maintenance of) educational equity across local and international student groups. It has been more than two years since the first serious pandemic restrictions were put in place and much has been achieved to address all the challenges faced by institutions and their faculty, staff, and students. While the findings here underscore a significant effort to achieve and manage equity in educational access for students at our university, the result is mixed: work is still ongoing, structural changes need to be made, and the necessary innovations and creative problem-solving for future contingencies are not clear yet. Most importantly, while equity in educational access was seemingly re-established for our student population, this achievement did not come without sacrifice. It is particularly noteworthy that educational technology and the various online tools available came to the fore as the potential equalizer (savior) but was only thus enabled once access to basic infrastructure was ensured.

Conclusion

As part of a larger project that aims to develop cultural intelligence (CQ) in undergraduates at a Japanese international university, this study reported some of the challenges encountered with online intercultural learning during the COVID-19 pandemic. To obtain a more comprehensive understanding of the learning experience during the pandemic the investigation obtained anecdotal evidence during instruction and utilized pre- and post-course reflection surveys and a course completion learning checklist. Selected qualitative results from these sources were analyzed to understand the learner experience in terms of: (1) situational factors, (2) access to learning, and (3) general adjustment to collaborative learning within a culturally diverse group. Social elements that were seen to be prerequisites for collaborative intercultural learning were presumed to be severely impacted, and in some cases (dependent mostly on issues related to accessibility to learning) required a redesign of learning with regards to the online format. Findings point toward a key conclusion that once the most serious restrictions of the global pandemic were lifted during the latter part of academic year of 2021, going into 2022, equitable access to education for all student groups in this study improved. However, the availability and reliability of infrastructure (basic internet service and access to PCs and/or smart devices to access learning systems) emerged as key constraints that resulted in different learner experiences for domestic students in contrast to their international counterparts. While educational equality appears to be attainable for higher education, future incentives need to focus on prerequisites for access to the basic sufficiency of infrastructure that would support educational technology. For now, this goal remains outside the sphere of influence for higher education, but it seems vital that this agenda for the achievement of educational equality becomes part of national policymaking globally.

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