

Learning Accessibility during the COVID-19 Era: An Overview

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Abstract

As face-to-face teaching-learning modality was not both feasible and adequate to continue the learning process during COVID-19, instructors resorted to flexible distant learning options. They used digital as well as print-based multimodal texts to ease teaching-learning activities and minimize learning loss during the period. The use of flexible modes of teaching like Universal Design (UD), multimodality, closed captioning on video programs, accessible assessment, and ways of using chat boxes for additional and meta-conversation helped address problems of dis/ability in both desperate and/or more normal times. This article reviews the attempts to ensure learning accessibility, and basically draws on secondary resources and data, to extract the relevant data and information to support its claim. The article concludes that, though it was a compulsion, as a lesson of the COVID-19 pandemic, instructors and learners learned ways to cope with challenging times in academia. Their knowledge on utilizing new tools and strategies helped minimize the gaps exacerbated by the pandemic in issues like equity, access, and engagement and will be a valuable lesson for any possible hard times in the future.

Keywords: COVID-19, accessibility, disability, flexible modes of teaching, digital divide

Introduction

The COVID-19 pandemic became an unexpected and unprecedented challenge for everyone who was continuously attempting to ensure quality learning. Though the entire world worked hard to manage learning continuity while protecting the safety and well-being of learners, there were some groups of learners, especially learners with disabilities, who suffered much during such desperate times and stood at the risk of further marginalization (Phoenix, 2020). According to U. S. Department of Education (2021), it worsened the existing inequities and inadequacies across a range of social structures of every nation's education system.

In the early days of the COVID-19 pandemic, many countries started emergency remote learning programs and heavily relied on technology as a bridge to minimize learning loss (Lennox et al., 2021). In many low-income countries, the distance learning approach was supported by radio and broadcast media and online digital learning portals. However, the digital divide—“systemic differences in technology access” (Banks, 2006, p. 12)—between learners related to access to equipment, electricity, the internet, and teacher ability severely affected the pedagogical process in every country, especially for learners with disabilities who have the additional barrier of inaccessible learning content. As per the estimation of the World Bank (2020), the exclusion from education compounded during the COVID-19 pandemic, causing 40 percent of disadvantaged learners in low- and lower-middle-income countries to be left entirely unsupported in their education.

Students with disabilities are always at a higher risk of exclusion in these circumstances (Kahn et al., 2015). For example, many remote learning options are not accessible to blind and deaf learners (Illinois State Board of Education, 2020). Students with disabilities may need additional support, depending on their disability—for example, simplified messages and sign language support to understand health and safety measures. In some instances, parents and families cannot support their children using sign language or Braille texts.

Like many other students, those with disabilities depended on school meals for nutrition, which ceased to be accessible in many countries (UNICEF, 2021). Further, students may have behavioral support needs and may be particularly sensitive to changes in routines. As schools reopened, children with disabilities had the risk of being discriminated against and isolated (Daygirl, et al. 2021). The ‘new normal’ required children and teachers to accept, adjust, and apply new social and classroom norms, where personal safety was pivotal and support for learning was not easily available. Even in such circumstances, the key point is that with the right planning and policies, all stakeholders could utilize the crisis as an opportunity to build more inclusive, efficient, and resilient education systems.

In this background, this paper reviews the literature on the issue of accessibility, discusses how accessibility or more subtly “meaningful access” (Banks, 2006, p. 7) or “transformative access” (p. 2) was obstructed for the students during the pandemic. More importantly, it attempts to bring into discussion the different multimodal tools that are useful to practice to ease the teaching-learning activities for those students, and tries to make stakeholders aware of the challenges, and suggests possible strategies to rebuild systems that are better and accessible to all learners including the students with disabilities.

Education Accessibility during the Pandemic

The outbreak of the COVID-19 pandemic in December 2019 spread and created unprecedented challenges economically, socially, and politically across the globe (Dayagbil, et al. 2021). As mentioned in the UNESCO Learning Portal (2020), more than a health crisis, it impacted the academics so severely that during lockdowns and quarantines, 87% of the world's student population was affected and 1.52 billion learners were out of school, and related educational institutions. The suddenness, uncertainty, and volatility of COVID-19 left the education system in an urgency to address the changing learning landscape.

Importantly, students with disabilities are among the most vulnerable, facing multiple forms of exclusion linked to education, health, gender equity, and social inclusion. They require easy access to accommodations, widespread

accessibility, and a community that enhances their ability to thrive, "furthering their competency to complete their education, enter into their careers, and close the achievement gap" (Nolan, 2021, p. 152). As per the condition of the disability, instructors can design and develop productive learning modules so that each learner is exposed to most of the learning opportunities. Considering that face-to-face modality is not feasible during the pandemic, instructors started using flexible distant learning options like radio and television broadcast keeping the types of disability of the students in mind. In the places with internet connectivity, computer-assisted instruction, synchronous online learning, asynchronous online learning, and collaborative e-learning became the alternatives. In addition to digital multimodal texts that include slide presentations, animation, book trailers, digital storytelling, live-action filmmaking, (music) videos, born-digital storytelling (digital texts constructed through a mix of modes including print, still image, moving image, sound, and sometimes interactive gameplay), and various web texts media, print-based multimodal texts like comics, picture storybooks, graphic novels, posters, newspapers, can be useful to ease teaching-learning activities in challenging time like this for all students.

Accessibility to Online Teaching

As I mentioned earlier, though online was almost a substitution during the early days of the pandemic, it was not devoid of challenges. Researches highlight the issues like— the weakness of online teaching infrastructure, teachers' limited exposure to online teaching, the information gap, a non-conducive environment for learning at home, equity, and academic excellence in terms of higher education. Dayagbil, et al. (2021), for instance, asserted the sudden migration resulted in problems, especially for learners without access to technology. When online learning modality was used because of the pandemic, the gap between those who had connectivity and those without widened. Continuing academic engagement became a challenge for teachers and students due to access and internet connectivity.

Online pedagogy is often associated with its challenges related to accessibility, affordability, flexibility, learning pedagogy, lifelong learning, and policy (Murgatroid, 2020). There are opinions in favor and against it; however,

it is said that the online mode of learning is easily accessible and can even reach rural and remote areas, so it can be equally helpful for students with disabilities. It is considered a relatively cheaper mode of education in terms of the lower cost of transportation, family-work-student life balance, accommodation, and the overall cost of institution-based learning (Renes, 2015). One of the best features that is highly assistive for the students with disability is its flexibility; a learner can schedule or plan their time for completion of courses available online. Combining face-to-face lectures with technology gives rise to blended learning and flipped classrooms; this type of learning environment can increase the learning potential of the students be they are able-bodied or with disabilities. Students can learn anytime and anywhere, thereby developing new skills in the process leading to lifelong learning.

Accessibility through Universal Design

The twentieth century not only observed the changes in scientific development and information technology, but it was also the witness of remarkable changes in social issues, including human rights and social justice. Universal Design (UD) in relation to education is such a concept that provides a variety of strategies and resources to help meet diverse learning needs, improve accessibility to learning opportunities, increase student success, and safeguard the rights of education. In Dolmage's (2015) words, UD "offers a much more proactive, useful, and capacious approach to the design of physical/intellectual space than the academic ableism that has structured meaning for all" (PAGE). But importantly enough, with the change in time, UD's reach has extended to digital spaces like the internet and audiovisual media and has extended its scope. This shift from the physical to the digital world has motivated people working in this field because UD can work as a timely substitution for traditional course design.

I agree with both Dolmage and Hitt, who agree on the significance of UD in higher education classrooms. UD can be a valuable framework for "better understanding the value of disabled composing processes and rhetorical expression, and for rewriting overcoming narratives about disabled student writers" (Hitt, 2021, p. 44). And for Dolmage (2008), it is "a matter of social justice" (p. 132). Dolmage (2008) acknowledges the "emergence" (p. 5) of

disability studies in academia as taking a critical approach to disability, understanding its origin as a socially constructed identity as opposed to a medical, genetic disorder. In the same vein, Hitt (2021) critiques “disability *only* as something that must be cured” (emphasis original, p. 123). But, in my opinion, the story during and after the COVID era is something more intense. COVID-19 that affected and is still affecting the entire world for about three years now, and it has impacted the academic world. Now we can (re)think about students' engagement; how can we engage them? What about their grading, their learning, their agency, their accessibility, and their engagement? As a classroom can be a setting of diversity with respect to the background, cultural and gender identity, socioeconomic status, age, abilities, language, and learning preferences, and various other characteristics, we have to contemplate upon the issues stated earlier. Moreover, they can have an intersecting identity made up of a variety of these unique facets. Some of them may have characteristics considered by many to be 'disabilities,' including people who are blind, are deaf or hard of hearing, are on the autism spectrum, and have mobility impairments, attention deficits, learning disabilities, and health impairments. In my opinion, addressing these all is a responsibility of universities or institutes both in a physical setting and/or in the virtual world.

I agree with Hitt (2021) that UD and learning through UD “can transform our pedagogical practices” (p. 123). The meaning is—though UD's initial aim was to go against exclusion, it has become so impressive these days that we have been offering multiple means of representation for our course content with the expectation that students can access the same information in various modes, such as visual, auditory, or textual. This is not only a key component of accessibility, but it improves the course experience for the entire class (not limited to a specific group or category). While accessible design is imperative for people with disabilities, all learners take advantage of accessibility features depending on the situation. For this purpose, we can provide captions for all videos and offer transcripts of all audio recordings and podcasts and include audio descriptions for visual examples. Similarly, confirming text and documents' accessibility for screen readers and using alternative text or captions to explain important images, graphs, and figures help enhance accessibility.

Thus, every instructor must be mindful that, as Hitt (2021) argues, "instead of relying on retrofitting our teaching through accommodations, we need to prioritize accessibility in the design of classroom spaces and practices" (p. 42). She also suggests something more radical than accommodations; that is a version of accessibility that is rooted in students' material experiences, that is collaborative and reflective—accessibility driven by social justice and student agency rather than accessibility driven by obligation.

Despite its benefits, learning through UD is not beyond criticism even in a normal situation. After all, full accessibility for all learners sounds like an impossible task. Some educators may feel overwhelmed or unsure 'of how to start', while others may fear that it will sacrifice the quality of the whole for the benefit of a few (Dolmage, 2015). But in practice, it can streamline instructor labor by providing an intentional framework for course planning and by reducing the need for later remediation. Moreover, this modality of teaching-learning goes beyond providing equitable access to marginalized students to enhancing the learning experience for everyone. Mindful tactics such as sharing study resources, an "engagement-based grading contract" (Carillo, 2021, p. 56), and providing assignment options offer all students meaningful support and ownership in their learning.

One of the goals of UD is "multiplicity in teaching, learning, and composing practices" that includes brief lectures accompanied by slides or videos, collaborative work, large-class discussions or paired discussions, and interactive workshops (Hitt, 2021, p. 45). However, I wonder how many of the instructors have adopted them and importantly, in how many places/countries in the world. How do they test the students with learning disabilities and mental-health-related disabilities? As Carillo (2021) suggests labor-based grading contracts (that places 'normative body' at the center) are "harmful" for them because these contracts do not take the students with disabilities into consideration.

As disability is an "embodiment" (Hitt, 2021, p. 123) and as Berube believes, it "can happen to anyone" (cited in Hitt, p. 3), we have to think of developing pedagogical practices to address the problems not only for the students with disabilities but of everyone, not only for a normal situation but

also for exceptional circumstances like a pandemic. As a lesson learned from COVID-19, we must think about what we want to change permanently about education now; COVID has offered us a chance to reevaluate our priorities. If on-site classrooms revive in their previous forms, there is the need to develop UD that fits to all; if classes only run online, as that had been the 'new normal' in academia after COVID crippled the world, we have to modify ourselves as per the need of the time. But, the present trend shows that academic institutions have been practicing both online synchronous and asynchronous classes based on their convenience sometimes and mostly as per the demand of the situation. It has altered the role of the instructors and has encouraged them to appropriate themselves, or else they will be left behind. Learning through UD is also a justice-oriented approach for needy people because it creates “greater opportunities for success for broader swaths of the lifelong learning population” (Rogers-Shaw, Carr-Chellman & Choi, 2018, p. 18).

Accessibility through Multimodality

“Accessibility is integral to learning, composing, and teaching” (Hitt, 2021, p. 87), and “agency . . . comes from access, (Womack, 2017, p. 500) but during the pandemic, the goals of accessibility are disrupted and have become 'inaccessible' at times. However, it is the responsibility of institutions/universities, and teachers to think of developing pedagogical practices and making teaching-learning accessible to the students with disability, intersectional identities, multiple marginalization, neurodivergent conditions including anxiety and depression, psychological problems, and even the able bodies because even the able bodies have been suffering in the pandemic and as the effects of 'pandemic trauma' or 'post-COVID stress disorder' can remain for years, for the social justice to all students; both able-bodied and with disabilities (including students with neurodivergent conditions, anxiety, and depression), multimodal tools; both digital and beyond, is obviously a timely thought.

The use of multimodal tools, though not beyond challenges, does social justice to a majority (if not all) because they are inclusive and can address the problems even of the desperate time. Zahneis (2022) argues, "Despite hopeful signs that the worst of the pandemic is behind us, there is a growing

understanding that remote and hybrid work, at least in some form, is here to stay" (para. 1). I agree with her argument because online classrooms were substitutions in the early days of the pandemic and as the ongoing practices across the world indicate that they will remain as intelligent supplements for traditional on-site learning. COVID has taught us that rather than making unsatisfactory modifications and retrofitting, we, the instructors, can pre-plan accordingly to make our teaching accessible to all students.

Multimodality is valuable in any communicative situation, either in a classroom or the beyond, either in normal conditions or in a pandemic because it provides opportunities for everyone (including those with disabilities) to have engaged participation in the conversation. It is also valuable as it has the extensive potential of involving multiple senses of the participants in classroom activities. In the classroom context, multimodality can be thought of as an appropriate tool to immerse students by amplifying the communicative resources of a classroom environment. It also offers opportunities to the teachers to enhance the accessibility of the learning platform by way of juxtaposing alphabetical text, visuals (image, color), sounds, etc. Kress (2010), for instance, demonstrates various examples of how multimodality can be a technique for enhancing communicative access even beyond the classroom. He analyzes a map in the very beginning of the text that includes an alphabetical text, image, and color where he argues:

Each mode does a specific thing: the image *shows* what takes too long to *read*, and writing *names* that would be difficult to *show*. Color is used to *highlight* specific aspects of the overall message. Without that division of semiotic labor, the sign, quite simply, would not work. Writing names and image *shows*, while color *frames* and *highlights*; each to maximum effect and benefit. (p. 1, emphasis in original)

This example shows that multimodality is a tool that helps to enhance meaning (showing, reading, highlighting, and framing) to a communicative act that also contributes to extending access to the participants. Moreover, this idea defies the concept that multimodality has been invented to substitute verbal or alphabetical text, but it is the extension of the alphabetical text. Because it does

not replace but juxtaposes diverse modes of exchanging messages (by invoking senses) that ultimately contribute to equitable and participatory learning. It provokes a key idea in the discipline that there are no universal and fixed methods and approaches for successful classroom practices for teaching students with disability.

As a lesson learned from the COVID-19, we must think about what we want to change permanently about education now; COVID offered us a chance to reevaluate our priorities. Instructors now should (re)think about different means to get connected with students, resource sharing, testing criteria, grading contracts, assignment options, and the like. As Boothe et al. (2018) argue, learning through multimodality is a reform initiative and as it has changed some forms of accessibility, we can utilize them as frameworks for making education accessible to all through multiple means of engagement, representation, and expression.

Some of the often-discussed alternate modes that can be useful for disabled students during the pandemic include transcription and captioning, audio recordings, sound recording (either old-fashioned audiotapes or newer MP3 files) for blind or visually impaired students, students with dyslexia, or other students having difficulties in the processing written language, Blackboard, WebCT, and class and teacher Websites (for multiple forms of access), web pages with descriptions for all images, screen-reading programs, high contrast color helps those with visual impairments, etc. Whatever the multimodal tools, teachers should be extremely mindful of making classes most accessible to address the needs of the students on the one hand and make them engaged considering the 'context' in which they are in on the other. Some of the useful ways to help the students in such desperate times can be like:

Transcription and Captioning

A single mode pedagogy is not appropriate and just oriented because they limit the possibilities for expression and engagement. Podcasts, these days, for example, have become “a popular genre for circulating disciplinary knowledge in alternative formats” (Hitt, 2021, p. 91). Even podcasting is difficult for deaf students or hard-of-hearing audiences, be it at a normal time

or during a pandemic, or at any desperate time, but it can be made accessible through other modes. For example, by providing transcription, we are not only doing justice to disabled students but also giving a learning opportunity to those who do not or cannot focus on or process the audio well, or those who enjoy skimming the transcript due to time crunch, or those who have unstable or limited internet service, and those who benefit more by viewing PDF than streaming audio. Teachers can utilize this mode of multimedia by asking students to write or compose something keeping 'accessibility' at the center while producing them because rather than podcasts some disabilities benefit from transcriptions, text descriptions, or captions. She further argues, "Just as transcription is necessary for making audio accessible, captioning is an integral practice for enabling the accessibility of visuals—specifically, videos and images" (p. 100). It contributes an additional meaning to spoken words and embodied communication. Zoom captioning and messaging, for instance, has proved to be useful in such a challenging time.

Auditory and Visual Channel

Not only for any challenging time like this, an outstanding sub-field in Audio Visual Translation (AVT) that also fits any time is audiovisual accessibility. It deals with the translation of audiovisual products aimed at those with a sensory disability; audio description, for instance, for the blind, and subtitling for the deaf and the hard-of-hearing students (Neves, 2005).

As a form of the audio channel, music may not only be a healing source for anyone but also a tool of multimodal approach specifically relevant for students with severe or multiple disabilities in special education. In the Netherlands, for instance, a multimodal music method "Beleven in Muziek" (BiM) is in practice, which can be translated as "Experiencing in Music" (Bremmer et al., 2021, p. 260). As research reveals, the music activities in the BiM-lessons appealed to the senses, hearing, seeing, feeling, smelling, tasting, proprioception, and the vestibular system. The dimensions of embodiment, narrativity, and materiality for the students of disability and especially during a challenging time like the pandemic can be useful (p. 270). The framework of embodiment, as Bremmer et al. (2021) refer to is an ensemble of sensory modes in which touch is central; narrativity refers to a story that can glue

musical activities together, and materiality encompasses all kinds of materials (not just musical instruments) that can be used as an entry point for understanding music in physical ways and as a means for establishing contact. Moreover, it is through the intertwining of these dimensions that different modalities can be connected and integrated, making the process of musical meaning-making an embodied and multimodal process.

Non-digital Multimodal Texts

As discussed in the previous sections, multimodal digital texts are and will be useful in academia for students of all types of identities. They should be accessible or can be made accessible to the students with disabilities by captioning the videos, describing the images, and transcribing the audio to name a few techniques. Additionally, the other modes such as infographics, podcasts, websites, and visual essays that are categorized under the same rubric always help in pedagogic practices. But to be multimodal they do not need to be digital every time, even non-digital multimodal tools like picture books, textbooks, graphic novels, comics, and posters and live multimodal texts, for example, dance, performance, and oral storytelling, convey meaning through combinations of various modes such as gestural, spatial, audio, and oral language. Hitt (2021), for example, discusses how abstract painting was made accessible using both image descriptions and braille (p. 119). She is also much concerned about the issue of social justice as she argues, "teaching students to create multimodal texts without attending to accessibility is unethical, limits students' understanding of audience and meaning-making, and results in the production of potentially interesting but ultimately inaccessible information" (p. 121). Here, she means to say that when we are preparing for multimodal texts, we always should keep in mind how just the production is, if that production is doing justice for the students with all kinds of identities.

Even gestures can perform as multimodal tools as the body's relationship to space, time and other bodies and objects mark something embodied. Deaf students, for example, "communicate through visual, spatial, and gestural modes to welcome different ways to compose meaning" (Butler, 2017, p. 74). Butler opines that even seemingly unthought ideas / method / instruments / techniques can be useful in making the classes accessible. As instructors, our

responsibility is to be open enough to utilize any of those alternatives to make just-filled accessible classes.

Accessibility through Flexibility

Well-implemented multimodal tools can give students access to opportunities they would otherwise lack—for example, a virtual lab that the school cannot fund physically, or using video for acquiring or representing knowledge (Nouri, 2019). Furthermore, these tools offer new opportunities for learners to navigate their impairments or disabilities. Basic challenges like those faced by a dyslexic student, for example, requiring a diagnosis, letter, application, and then provision of a reader for a paper-based exam, can be replaced by seamless and destigmatized experiences, such as being able to launch an immersive digital reading tool for any digital content throughout an assessment. These equity and access opportunities should be identified and pursued as future learning strategies. This kind of accessibility can encompass those who cannot take classes during the day, or who cannot be on campus like workers, caregivers, and parents of young children in addition to the students with disabilities.

Accessible Assessment

Assessment is an integral component in any pedagogical practice throughout the world. It is not and should not be an absolute category with rigid rules; rather, it should be a flexible practice that changes along with the changes in time and circumstances. Because of the same reason, it has attracted “widespread attention” after the outbreak of the COVID-19 pandemic (Carrillo, 2021, p. 3). Many universities and schools, after the outbreak of the pandemic, changed their teaching-learning modes and adopted flexible approaches to evaluation procedures. The reason is that the existing grading systems may not be equally ‘pragmatic’ in every circumstance and to the students with multiple identities.

As Carrillo (2021) argues, engagement-based grading contracts are more advantageous than labor-based contract grading because these contracts “recognize students’ intersectional identities and are inclusive of students with various disabilities” (p. 8). While proposing labor-based grading contracts,

Inoue postulates that instead of a 'quality' based grading system that only favors a "racialized group in power, a White, middle-class group" (*Labor-Based* 46), it is quantifiable 'labor' that does justice to the students. Students with disabilities are essentially excluded from his model, which privileges able-bodied students. But Carillo (2021) asserts that Inoue's model is appropriate for "structural injustices perpetuated on some students" and favors "normative, ableist and neurotypical" (p. 11) students but cannot do justice to the students from certain socio-economic classes, and students with disabilities (including students with neurodivergent conditions, anxiety, and depression) because 'time' and 'labor' operate differently in their lives.

According to Carrilo (2021), engagement-based contracts offer multiple ways of student engagement and multiple forms of knowledge creation (p. 57). They are "more flexible than labor" and welcome multiple forms of engagement that include discussion board posts, oral participation in discussions, simulations, collaborative notetaking, and the choice between alphabetic and multimodal responses to assignments (pp. 56-7). After all, these inclusive assessments embrace disability issues of every kind and address intersectional identities at odd times like the one that we have been facing. Even the policy of "strict attendance" (Hitt, 2021, p. 34) can be a barrier for the students with mental and psychiatric disabilities, chronic illness, and autoimmune disorders, so the policy of flexibility is a better solution to combat with the odd situations because standard university construct of time may not be feasible for every student, especially for the students with disability. Thus, adopting flexible assessment policies like managing extended time on assessments, extended time on exams, absence accommodation in classes, oral participations in classroom discussion, tape recording of the lectures, managing note takers in case of someone's absence etc. can help the students in several ways.

Conclusion

Though it is difficult to find one-size-fits-all solution to accessibility, sometimes videos with captions become easier means of accessibility, maybe transcripts from another context, other times a cartoon, comics, a map, or a chart and sometimes the combination of two or more. To reflect upon, in the

early days of pandemics, education itself became inaccessible, though luckily for a short time; when online became the substitution and later a supplement then again education was inaccessible for many, and students with disabilities were affected more than others. But, efforts were made in the past and are finding more multimodal tools to normalize the academic world by addressing the problems encountered by students with disabilities. In the situation when face-to-face classes are not possible or even in the on-site classes if videos are played, captioned videos with turned-on captions can help everyone. To make it easier for the students who cannot see all of what is being shown—an instructor before pressing 'play,' it is better to tell students what they are about to see; and after stopping, recap what was seen. It is significantly useful to provide audio or video along with transcripts. This increases accessibility, but interestingly many students like to read transcripts and watch or listen at the same time. At the same time by accommodating the needs of students who use adaptive technology such as closed-captioning, personal frequency modulation (FM) systems, teletypewriters (known as TTYs), amplified phones, closed-circuit television (CCTVs), large print computers, and materials, Braille, and magnifiers, the accessibility for the students with disabilities can be increased. By utilizing both digital and non-digital multimodal tools, the instructors and administrators not only can keep the academic world vibrant and living but also help the students with disability to be a part of social justice.

During the pandemic, the academic world invented some tools to be in touch with students; whatever has been invented can become equally significant in future, be it during a pandemic era or even after it leaves us behind. With this, I conclude, learning through multimodal tools leaves a blueprint for innovative learning experiences that seek richer, deeper, and more expansive education in the long run. These tools allow educators to address gaps exacerbated by the pandemic, such as equity, access, and engagement, of people of various identities and to meet a growing range of educational needs from students.

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