

Boise State University

ScholarWorks

Educational Technology Faculty Publications
and Presentations

Department of Educational Technology

11-2022

Higher Education Leaders' Perspectives of Accessible and Inclusive Online Learning

Amy Lomellini
Molloy University

Patrick R. Lowenthal
Boise State University, patricklowenthal@boisestate.edu

Chareen Snelson
Boise State University, csnelson@boisestate.edu

Jesús H. Trespalacios
Boise State University, jesustrespacios@boisestate.edu

Follow this and additional works at: https://scholarworks.boisestate.edu/edtech_facpubs



Part of the [Educational Technology Commons](#), and the [Instructional Media Design Commons](#)

Publication Information

Lomellini, Amy; Lowenthal, Patrick R.; Snelson, Chareen; and Trespalacios, Jesús H.. (2022). "Higher Education Leaders' Perspectives of Accessible and Inclusive Online Learning". *Distance Education*, 43(4), 574-595. <https://doi.org/10.1080/01587919.2022.2141608>

This is an Accepted Manuscript of an article published by Routledge, an imprint of Taylor & Francis Group, in *Distance Education* on November 2022, available online at <https://doi.org/10.1080/01587919.2022.2141608>.

Preprint of “Higher Education Leaders’ Perspectives of Accessible and Inclusive Online Learning” to appear in *Distance Education*

Cite as:

Lomellini, A., Lowenthal, P. R., Snelson, C., & Trespalacios, J. (2022). Leaders' perspectives of accessible and inclusive online learning. *Distance Education*, 43(4), 574-595

Higher Education Leaders’ Perspectives of Accessible and Inclusive Online Learning

Amy Lomellini, Patrick R. Lowenthal, Chareen Snelson, and Jesús H. Trespalacios

Abstract

Online learning can potentially meet increasingly diverse students’ needs in higher education, including disabled students. However, institutions have historically struggled in providing accessible and inclusive online learning. Higher education online learning leaders, those who manage instructional designers, are in a unique position to help institutions strategize and create accessible and inclusive online courses. In this qualitative study, we interviewed nine higher education online learning leaders to understand leaders’ perceptions about how institutions provide accessible and inclusive online learning. Results demonstrated that despite varying conceptualizations of accessibility and inclusivity, online learning leaders perceive an insufficient but growing emphasis in higher education. Overall, participants described instructional designers as the most knowledgeable and skilled in this area. Participants described a lack of agency for instructional design teams and a need to advocate for buy-in from senior leadership. They also described strategies (e.g., faculty development, quality standards, and accessibility checkers) to support faculty.

Keywords: *disability, higher education, online learning, leaders, instructional design*

Enrollments in online higher education courses and programs have continued to grow over the last two decades. This has resulted in an increasingly diverse student body taking online courses. In particular, a growing number of disabled students¹ are choosing to learn online these days (Roberts et al., 2011; Satterfield et al., 2015). The flexibility of learning online can help disabled students mitigate the effects of symptoms, medications, and physical barriers on campus (e.g., poor acoustics in lecture halls for students with hearing disabilities or long distances between buildings for students with mobility issues) (Bartz, 2020; Kent, 2016). However, online learning also has the potential to present barriers to student learning outcomes (Kent, 2016; Nieminen & Pesonen, 2020). For instance, inaccessible digital materials (e.g., documents that are

¹ The authors of this paper use disability-first language (i.e., ‘disabled students’) to celebrate disability pride (Andrews et al., 2022), to align with the disability community’s movement of reclaiming historically dehumanizing terms as a means of empowerment (Vivanti, 2019), and to reflect certain group’s (i.e., ‘Deaf students’ and ‘autistic students’) cultural preferences (Dunn & Andrews, 2015; Sarrett, 2017). We recognize that language is continuously evolving and that preferences vary in the diverse disability community.

not designed for compatibility with assistive technologies) and the unorganized presentation of content can halt academic progress for students who rely on assistive technology or who have learning, attention, or focus disabilities (Bartz, 2020; Fitchen et al., 2009). The COVID-19 pandemic, and the rush to move courses online, further exposed barriers like these (Anderson, 2020; Burgstahler, 2022). On the other hand, courses intentionally designed for accessibility help disabled students meet their academic goals (Burgstahler, 2015).

Confronted with the reality that online learning might not be meeting the needs of disabled students, institutions of higher education and online learning leaders—that is, those in charge of managing online learning on campuses—in particular, have recently increased their attention on providing accessible and inclusive online courses (Fenneberg, 2022; Lewicki-Townley et al., 2021; Oyarzun et al., 2021). However, questions remain about what institutions of higher education and online learning leaders are actually doing to provide accessible and inclusive online learning and whether it is enough (Linder et al., 2015; Garrett et al., 2021). Given this and the importance of helping all students succeed in learning online, we set out to explore online learning leaders' perspectives on accessible and inclusive online learning in higher education. In the following paper, we present the results of our inquiry and its implications for research and practice.

Background

Traditionally, institutions of higher education have thought of disability in medical terms. A medical model of disability conceptualizes disability as a person's lack of ability to do something due to a health concern (WHO, 2011). Thinking of disability in this way led institutions to adopt the practice of requiring students to disclose their disability before any accommodations of support could be identified (Dolmage, 2017). Accommodations often include extra time on tests, separate testing locations, alternative formats of instructional materials, and/or the use of assistive technology (Ketterlin-Geller & Johnstone, 2006). This approach though can be confusing and stigmatizing to disabled students who may face doubt, suspicion, and a lack of understanding from faculty and their peers (Cook et al., 2009; Harris et al., 2019; Sarrett, 2017), as well as time-consuming and costly (Harris et al., 2019). For reasons like these, many students prefer not to disclose their disability at all, leaving institutions of higher education struggling to understand and meet their needs (Izzo et al., 2008; McAndrew et al., 2012; Roberts et al., 2011; Schelly et al., 2011).

More recently society and institutions of higher education specifically have begun to conceptualize disability and diversity differently. Among other ideas, institutions are now seeing value in approaching accessibility proactively rather than retroactively (Lomellini & Lowenthal, 2022; Seale, 2020). However, there is still considerable debate about the best ways to do this and whose job it is to ensure online courses in particular are designed with accessibility in mind (Linder et al., 2015; Singleton et al., 2019). Faced with this, online learning leaders have begun looking for scalable institutional investments, including faculty development initiatives and instructional design support, to support campus-wide cultural shifts toward proactive accessible

and inclusive course design strategies (Burgstahler, 2022; Westine et al., 2019). Cultural shifts never happen easily. Research suggests that a collaborative approach among students, faculty, instructional designers, disability services providers, administrators, and leaders is needed to improve accessibility at institutional levels (Burgstahler, 2016; Gladhart, 2010; Oyarzun et al., 2021). Resources and training can help increase faculty and instructional designers' awareness and skills while policies and procedures can identify clear responsibilities and support structures (Gladhart, 2010; Izzo et al., 2008; Linder et al., 2015; Xie & Rice, 2021).

Online learning has the potential to improve access to higher education for all learners, including disabled students (Black et al., 2015; Burgstahler, 2022; Satterfield et al., 2015). However, reducing barriers for disabled students in online learning involves buy-in from leadership and an institutional paradigm shift to support proactive accessible and inclusive course design initiatives (Burgstahler, 2022; Seale, 2020). Previous studies about accessible and inclusive online learning have examined the perceptions of faculty (Westine et al., 2019), students (Bartz, 2020), and to a lesser degree, instructional designers (Singleton et al., 2019; Xie et al., 2021b), but few studies have addressed online learning leaders' perceptions (Garrett et al., 2021). Leaders are uniquely situated between instructional designers doing the hands-on work with faculty and administrators setting institutional priorities and planning. Thus, this study sought to address the gap in the literature by exploring how online learning leaders perceive the challenges and opportunities related to accessible and inclusive online learning at their institutions.

Method

While many online learning leaders acknowledge that online accessibility needs to be a priority (Linder et al., 2015; Garrett et al., 2021), research has shown that a lack of clear policies, responsibilities, professional development, and stakeholder buy-in can hinder effective accessibility and inclusion efforts (Burgstahler, 2022; Linder et al., 2015; Singleton et al., 2019). What remains unclear is how online learning leaders are addressing these issues and how they perceive the barriers and strategies related to inclusive online course design at their institutions. Given the aforementioned problems and the lack of literature on this topic, the purpose of this qualitative study was to understand online learning leaders' perceptions of providing an increasingly diverse student body accessible and inclusive online learning experiences. This study sought to answer the following research questions:

RQ1: What are leaders' perceptions of the current state of institutions' ability to provide accessible and inclusive online learning?

RQ2: How are institutions providing accessible and inclusive online learning experiences?

Research Design

We used a qualitative research design with semi-structured interviews to answer the research questions (see Appendix A). Qualitative research is helpful to understand complex

stories of individuals' lived experiences (Creswell & Poth, 2018). Additionally, qualitative research can help challenge traditional assumptions (Creswell & Poth, 2018). In this case, digital accessibility issues are often assumed to be the concern of disability services and faculty (Tobin & Behling, 2018). This study investigated this assumption by exploring the role of online learning departments in accessible and inclusive online learning.

Positionality

It is important to note that the first author identifies as a disabled person, researcher, student, instructional designer, and more recently, associate director of online learning at an institution of higher education. This study was conducted using the theoretical lens of disability inquiry studies, which empowers disabled people rather than focusing on biological constraints (Creswell & Poth, 2018). In particular, the study was informed by the diversity model of disability, which celebrates disability pride and the social model of disability, in which accessibility is viewed as a shared social responsibility instead of an individual's problem. Through this lens, meeting the needs of disabled students can shift toward a proactive, collaborative venture to address barriers in online learning instead of attempting to "fix" students' bodies. To counteract potential bias in this study, the researcher used strategies such as member checking, remaining neutral during interviews, collaborating with other researchers, and reporting all views, including dissenting opinions.

Sample / Context

Nearly every college or university offers some courses and programs online (Garrett et al., 2021). However, the resources and support available to create online courses and programs vary by institution in the U.S. (Garrett et al., 2021). On one end of the continuum are institutions like the University of Central Florida and Arizona State University that have dozens of staff dedicated to offering courses and programs online; on the other end of the continuum are small liberal arts colleges that might not employ any instructional designers. Given the lack of literature and the exploratory nature of this study, we employed a maximum variation sampling strategy to gather data and perspectives from a diverse sample (Creswell & Poth, 2018). We were interested in identifying common themes despite variation (Patton, 2002).

To maximize sample variation, the first author used LinkedIn and institutional websites to search for the titles "Director of Online Learning" and "Director of Instructional Design." She recorded institution size according to the Carnegie classification of institutions of higher education: small (FTE enrollment of 1,000–2,999), medium (FTE of 3,000–9,999), and large (FTE of at least 10,000) (American Council on Education, 2022). After obtaining IRB approval, the first author sent recruitment emails to leaders. Ultimately, nine participants, representing three large institutions, four medium-sized institutions, and two small institutions of higher education responded and were interviewed. Participants had an average of four years of experience in their current role (range: 2–9.5 years) and an average of nearly 18 years of experience in additional roles in education including management, instructional design, and

teaching (range: 10–30 years). Three participants held doctoral degrees (PhD/EdD), five held master's degrees, and one participant's degree is unknown.

Data Collection

The semi-structured interviews were conducted via Zoom. Research has shown that participants in virtual interviews report positive feedback because visual cues from researchers remain similar to face-to-face interviews (Mirick & Wladkowski, 2019). The researcher followed a semi-structured protocol to ensure consistency throughout the different interviews. This protocol was originally tested and refined during a pilot study with an online learning leader. The interviews included questions such as “What barriers do institutions face with providing accessible and inclusive online learning experiences?” and “What strategies is your institution, or other institutions, using to provide accessible and inclusive online courses?” (See Appendix A for the full protocol.) The researcher also maintained a journal to take notes during and after the interviews to reflect on the themes that arose.

Data Analysis

The interviews were transcribed, edited for accuracy, and imported into NVivo for coding and qualitative analysis. To analyze the interview data, the first author read the transcripts several times to become familiar with the data presented. Then, she used NVivo to organize the data and coding process. While it can be difficult to decide what constitutes a piece of data to analyze when coding, ultimately we allowed the data to tell the story (Chenail, 2012). We focused on the themes and natural chunks that emerged from the data as opposed to a line-by-line analysis (Elliot, 2018). The first author used Miles et al. (2020) iterative, cyclical qualitative data analysis model to analyze the data. During the first cycle of coding, chunks of data were summarized. Then, during the second cycle of coding, the summaries were grouped together to create themes or pattern codes to demonstrate relationships and meaning. The first author frequently consulted with the other researchers to discuss themes.

Reliability / Validity / Trustworthiness

The interviews were semi-structured and followed a consistent protocol to increase reliability (Fowler & Cosenza, 2009). Transcripts were presented to participants to verify accuracy and help maintain credibility and increase trustworthiness (Creswell & Poth, 2018). Member checking in this way helped to ensure that participants felt the transcript was an accurate representation of their thoughts on the topic. The use of leaders from various institutions helped provide alternative perspectives (Creswell & Poth, 2018). The first author also reflected on her role and positionality throughout the interviews and data analysis to further ensure transparency and trustworthiness. The authors collaborated to discuss the emergent themes and reflect on the research process to minimize potential bias and increase credibility. We included the interview protocol in this report to increase transparency.

Results

It became clear from interviewing online learning leaders that from their perspective, institutions are making progress toward providing students with more accessible and inclusive online courses, however institutions still remain hindered by varying conceptualizations of terminology, lack of clear responsibilities, and a lack of support from senior leadership. At the same time, online learning leaders felt positioned as advocates to fight for the necessary buy-in, resources, and tools to support accessibility and inclusion initiatives. The central theme that emerged from the data was a sense of urgency to capitalize on growing awareness, but frustration with current barriers preventing a cultural shift to fully supporting accessible and inclusive online learning. We identified five themes, see Table 1, that we discuss in greater detail as they relate to the research questions in the rest of this section.

Table 1

Themes and descriptions of higher education leaders' perspectives of accessible and inclusive online learning

Theme	Description
1. Varying Conceptualizations of Accessible and Inclusive Online Learning	Participants understand accessible online learning as the technical requirements that meet standards and laws but see inclusive online learning as a newer idea of creating a learning environment that is accessible but also welcoming to all learners.
2. Insufficient but Growing Emphasis on Accessibility and Inclusivity	Participants felt that institutions do not currently place enough emphasis on providing accessible and inclusive online learning, but it is becoming more of a priority. They generally felt that the field is doing better in this area, but there is still room to grow.
3. Instructional designers possess the knowledge and skills, but lack the agency to enact change	While participants generally viewed instructional designers as being the most knowledgeable and skilled, they felt hindered by a lack of agency because faculty were ultimately responsible for online course content.
4. Online Learning Leaders are Advocating for Buy-In and Support	Participants positioned themselves as advocates who need to obtain buy-in and prioritize accessibility and inclusivity. When speaking with senior administrators, participants emphasized retention, recruitment, and litigation. With faculty, participants focused on student experience and relied on top-down support.
5. Instructional Designers use Faculty Development, Quality Standards, and Accessibility Checkers to Support Faculty	Given IDs' consultative role, participants focused efforts on faculty training, quality assurance standards, and accessibility checker tools to support faculty in designing accessible and inclusive online courses.

RQ1: What are leaders' perceptions of the current state of institutions' ability to provide accessible and inclusive online learning?

Theme 1: Varying Conceptualizations of Accessible and Inclusive Online Learning

We began the interviews by asking participants about their definition of “accessible and inclusive online.” Generally speaking, participants viewed accessible and inclusive online learning as designing learning experiences and instructional materials for the widest possible audience to meet educational objectives regardless of disability, preference, need, or background. When discussing accessible and inclusive online learning, participants frequently mentioned Universal Design for Learning (UDL). In fact, they discussed the need for institutions to take a proactive approach to course design (e.g., using UDL) to meet the needs of students who do not disclose their disabilities or needs but also highlighted the importance of reducing barriers for all learners. For instance, one person stated,

“... [if] everything is built with Universal Design in mind, then you're not going to have to do too much if someone like needs a special accommodation, or they may not even need a special accommodation.”

Online learning leaders, though, differentiated between *accessibility* and *inclusivity*. They viewed accessibility as the “nuts and bolts” or technical requirements (e.g., captions, transcripts, alt text, etc.) related to course design. Meeting accessibility requirements was also viewed as “overwhelming,” “daunting,” and “very challenging.” Accessibility was described as an older, more established, and defined topic, but less “sexy” and more challenging to get faculty engaged. Inclusivity, on the other hand, was described as “intriguing,” “interesting,” and a more broad but less clearly defined way of meeting the needs of all students. The differentiation between the terms is illustrated with the following quotes:

“[They are] two separate but kind of related things. So, I see an accessible course as one where students with learning disabilities would be able to fully participate in the course. And I see that as a subset of inclusive courses. So, an inclusive course is one that's fully accessible, but also welcoming to students from all different types of backgrounds.”

We asked participants if they believed that accessibility and inclusivity were included in diversity, equity, and inclusion (DEI). Some felt that the underlying principles were aligned, but accessibility and inclusivity may not be receiving enough emphasis due to the broader focus of DEI.

“I believe it has been something that has really been a focus for a long time, and so I think as DEI has kind of become more prominent in higher ED institutions and education in general, I think it was an easy success for a lot of departments to say, “oh yeah we're being inclusive because we're providing captioning on videos” or whatever that like that's an easy kind of a thing. But um, but I see those initiatives pushing things to a lot more broader audience.”

Overall participants talked about how accessibility and inclusivity strategies are essentially ways to meet the needs of “all” learners. Participants described accessibility as being specifically for disabled students but helpful for all students. Inclusivity was perceived as a broader term including ethnically and racially diverse students, non-traditional students, first-generation students, etc., but often less focused on disabled students.

Theme 2: Insufficient but Growing Emphasis on Accessibility and Inclusivity

We were interested in better understanding what online learning leaders thought about institutions, both their own and others, ability to provide accessible and inclusive online learning. Three key themes emerged from the data. The overall sentiment from participants was that while interest and support are growing, whether that be due to recent lawsuits and/or the COVID pandemic, institutions are not currently placing enough emphasis on providing accessible and inclusive online courses. One participant expressed, *“I think that's getting better and I think the spotlight has been shone on this issue with this move to remote learning. Because I think it's become very clear that for many students, some of these accessibility features are critical for them to continue learning.”*

Participants expressed a desire to improve accessible and inclusive online learning strategies at their institutions but described how administrative barriers prevent widespread adoption. One participant noted, *“I think we need to do more, but don't have administrative support or not the right tools to actually do it more broadly.”* They went on to say, *“So I think there's an emphasis in the instructional design field. It's just getting it down to faculty and administration.”*

Participants felt that the accessible and inclusive online learning is more of a priority within the field of instructional design. They even talked about inclusivity being an increasingly listed desired knowledge and skill area in instructional design job postings, unlike five years ago.

“I've noticed that more and more job postings specify inclusivity as like knowledge and skill ability area that somebody should have when they applied for the job. That didn't exist years ago. That definitely was not on there. I don't even know if it was five years ago, but it's becoming more and more common to see that listed on job postings.”

Despite perceptions of progress, participants expressed that there is more work to be done in the instructional design field as well. One participant noted that only six out of twenty recent people interviewing for online learning related jobs *“sounded like they knew something about [accessibility and inclusivity].”* One leader pushed for more from the field by emphasizing the opportunity to support all students in their desire to learn by setting the expectation in the field that *“every person might need to do this a little bit differently and that's okay because...there's no straight path to the answer.”*

Overall, participants felt that the growing emphasis presented an opportunity to capitalize on the momentum by investing in the instructional designers' knowledge and skills in this area, while advocating for increased buy-in and support from senior leadership.

Theme 3: Instructional designers possess the knowledge and skills, but they lack the agency to enact change

When we asked participants to describe the knowledge and skills of the faculty and instructional designers at their institution, participants noted the challenge that while faculty are responsible for the content, their knowledge and skills in providing accessible and inclusive online learning were relatively low. They described how there were some “rock stars” who understood the importance and could do the work, but that there were other faculty in which accessibility and inclusivity were not “on their radar” and would need a lot of “hand holding” to do the work. Participants described the challenge to help faculty see beyond their own experiences when they would say things like, “I don’t have any students like that,” “My students have never needed this before,” and “No student has ever asked me for this.” Participants described the difficulty in convincing faculty to learn about and implement effective accessible and inclusive practices in their online courses because faculty were often faced with competing priorities and a lack of time and resources.

Instructional designers were viewed as having the most knowledge and skills with creating accessible and inclusive online learning on campuses, but their lack of agency created a barrier to the implementation of accessible and inclusive design strategies. Participants were confident in their instructional designers’ ability to design accessible and inclusive online courses. However, many talked about how their instructional designers could use more training on the “newer” concept of inclusive course design. Many participants described how they had at least one accessibility “guru” on their team. The following quotes illustrate this theme:

“My instructional designer is way above and beyond my skills and knowledge in accessibility, specifically. She’s our guru and she can look at something and tell me what’s wrong with it and what needs to be fixed and I have to dig a little bit.”

“I think the team is very strong right now in terms of foundational [accessibility] principles, but then we’re always looking for ways to improve and learn new ways of integrating some of these ideas into our work.”

All participants expressed that instructional designers were critical in supporting the success and implementation of accessible and inclusive course design strategies regardless of official responsibility or titles. In fact, one participant described investing in one team member to become the institutional guru in this area despite accessibility not being an official part of their role.

“And so, we’ve actually kind of invested heavily in one of our staff to get a lot of training and be the main accessibility person, even though she does not have that in her title.”

Participants described how the instructional designers were doing the day-to-day work because of their knowledge and skills in this area despite not having the official responsibility or authority over the course content. Ultimately, most participants perceived accessibility and inclusivity in online courses as the faculty’s responsibility. Some participants described

institutional policies and procedures (e.g., official digital accessibility policies and/or requirements in faculty's contracts) that designate faculty as responsible, while other participants described an unofficial perception that faculty should be responsible because they control the course content. Overall, most participants felt that the instructional designers at their institutions were simply there to support the faculty. One participant stated,

"We're not the content experts. ...we can't go in and make their document how they want it, but we can help them make it accessible to their students. So, at the end of the day, it's the faculty's course, the faculty is responsible for that, but we want to make the job as easy as possible."

Another participant, though, expressed that accessibility and inclusivity should be everyone's responsibility, while yet another one felt that without a policy it was nobody's responsibility. Others felt the Provost was ultimately responsible for providing accessible and inclusive online learning but that an institution's instructional designers and Office of Disability Services were responsible for making it happen as illustrated in the following quote:

"It probably ultimately falls on our VP of Academics. That's probably where the buck would stop when it came to an audit. It's probably between me and the Disability Services Director on like the day-to-day things."

Amid the confusion about who is actually responsible, instructional designers were generally perceived as the go-to experts for accessibility and inclusivity on campus; however, participants felt that instructional designers' lack of agency prevented them from enacting effective strategies. One participant noted,

"For the most part, learning designers and faculty developers are in a service role and have limited purview to do more than advise and consult."

Participants believed increasing the utilization of instructional design teams across the institution would better serve students. One participant described,

"Our group should be partnered with the Provost and they should be constantly turning to us and saying ... "Hey, all these faculty need you." And "hey all you faculty, you need them. And we're not going to be okay if you don't use them.""

Participants felt instructional design teams were doing the work because they possess the required knowledge and skill; however, instructional designers lack the official responsibility or agency to enact the desired institutional culture shift to more accessible and inclusive online courses.

Overall, online learning leaders described accessibility as challenging and felt that it may get lost in broader inclusivity initiatives. Participants perceived the current state of accessibility and inclusivity in online higher education as an area that is gaining attention but hindered by a

lack of clear responsibilities.

RQ2: How are institutions providing accessible and inclusive online learning experiences?

After we had a better understanding of participants' perceptions, we wanted to know more about how their institutions were actually providing accessible and inclusive online learning.

Theme 4: Online Learning Leaders are Advocating for Buy-In and Support

Online learning leaders expressed that part of their role is to communicate the importance of creating accessible and inclusive online courses to their teams, faculty, and leadership at their institution. Participants described strategies to convince stakeholders to make accessibility and inclusivity a priority and to provide ongoing support to accomplish this work. One participant stated,

"I'm probably the only person at the university who is tuned in to it. So, I need to be knowledgeable enough to then communicate out what we need to do as an institution."

Participants expressed that the broad range of requirements, standards, and best practices related to accessibility and inclusivity combined with diverse student needs often paralyzed institutions and faculty and left them not knowing where to begin. To combat this, participants described strategies to convince administrators and faculty to prioritize this work.

Administrative buy-in. Participants described how administrators often would take an all-or-nothing approach. For instance, making all documents accessible was deemed impossible, so some administrators thought that they should not even attempt it. A participant described needing to be the "*voice of reason*" to get administrative buy-in and help them understand how to take smaller steps. Others noted that institutions generally want to do the right thing, but they are unclear how and instead wait until the problem presents itself.

Participants talked about how they leverage the mission, retention, recruitment, and litigation when talking with senior leadership in efforts to get administrative buy-in to prioritize accessible and inclusive online courses. The following quotes illustrate this theme:

"The mission of my unit is to increase access to educational experiences and if you want to [recruit] more and different types of people, [accessibility and inclusivity have] to be a part of what you think about and what you do."

Participants leveraged senior leadership to motivate faculty to accomplish the work. They talked about how with high-level support, they are better able to plan, prioritize, and meet their goals related to accessible and inclusive online courses. For instance, one school's Provost disseminated a statement about the importance and expectations of accessible online courses at the request of the online learning leader.

“...we asked the interim Provost, could you just send a letter out laying down the law and like ‘this is what’s expected?’ And you know, we gave him the language [to send out]. But he really added to it. So, I mean it came down like ‘This is like what needs to happen.’”

Another Provost required faculty to caption their own videos and take mandatory accessibility training.

“We had an amazing Provost ... she backed us up. She actually put it in their contracts ...they had to sign a piece of paper saying they would take the [accessibility training] class.”

On the other hand, one participant cautioned the top-down approach and favored *“creating a parade that people would like to join versus saying you have to do this.”*

Faculty buy-in. Participants believed that faculty generally want to support students, but often feel overwhelmed by the scope and technical abilities required to design accessible and inclusive online learning. To obtain faculty buy-in, participants described the *“delicate balance to be a change agent...[and how] getting folks to change depends on the person you’re working with.”* Conversations with faculty focused less on legal aspects of accessibility and more on the student experience. *“It’s not just the law, it’s the right thing to do”* was a common talking point for participants in this study.

Overall, online learning leaders felt compelled to advocate for buy-in at all levels and believed it was within their role to advance accessibility and inclusivity at the institution.

Theme 5: Instructional Designers use Faculty Development, Quality Standards, and Accessibility Checkers to Support Faculty

Given that faculty were generally perceived by participants as responsible for online course content (either officially or unofficially), participants described how instructional design teams provide faculty development, leverage quality course design standards, and utilize accessibility checkers to facilitate the implementation of accessible and inclusive online course design strategies.

Faculty Development Offerings. Participants described offering drop-in hours, courses, webinars, workshops, “lunch and learns,” tutorials, and even presenting at faculty meetings about accessibility and inclusivity; however, it was difficult to ascertain the effectiveness of these strategies. One participant stated,

“[The training offered] wasn’t well attended, so I’m not sure how effective they were. I probably would be a little blurb on a compliance audit that says, ‘this is what we tried to work towards compliance,’ but beyond that, I don’t think they were very effective.”

Course Design Quality Assurance Frameworks. Participants also mentioned how they leverage quality course design standards (e.g., Quality Matters Rubric, Online Course Quality

Review Rubric (OSCQR)) to discuss and increase accessibility, consistency, and quality of online courses. However, they described that they often had mixed success with this approach because without support from deans, chairs, and the Provost, some faculty simply resist quality assurance frameworks. One leader stated, *“there's little to no appetite for [quality assurance programs]...unless a college or department chair or head says, ‘I need all the courses in my program to be certified.’”* Participants even cautioned the reliance on standards because they may not actually meet individual students’ needs. One leader described standards as the minimum bar. In their view, *“there's the right thing to do, what's required by law, and then there's going the extra mile to find out if those things are actually meeting [students’] needs.”*

Accessibility Checker Tools. Participants talked a lot about accessibility tools such as Blackboard Ally and the Universal Design Online Content Inspection Tool (UDOIT). Both tools scan content and files in a learning management system (LMS) for accessibility issues, flag potential barriers, and provide feedback to help content creators improve the course’s accessibility. Participants talked about how using these tools can initiate conversations with faculty by highlighting accessibility issues and helping them learn how to remediate the problems. The following is an example of a participant’s perspectives on tools like these:

“Definitely Ally has been a good strategy....To me what it does, it brings it to the forefront right? Instead of you just putting a document up and getting no indication whatsoever what's going on, that little gauge helps people see that something's going on in the background.”

Some noted that Ally was useful to intrigue faculty when it was first adopted but interest dwindled. One participant noted,

“...I felt like Ally served a big purpose in the first few semesters that we had it and then it did its job in terms of like getting people to where they needed to be. So, for every faculty member who is going to be swayed by that red mark, was swayed by it and now it's kind of like it's helpful for new faculty...”

Others questioned the validity of the accessibility scores provided by these tools. They described how they had found through their own testing that some low-scoring content was not as inaccessible as the tool made it seem. What started as a strategy to help faculty learn to remediate their content, shifted into a way for instructional designers to provide faculty with ongoing assistance. One participant stated,

“I think it's been helpful for our instructional design staff even more so than the faculty. Because our instructional design staff is very much focused on making sure those course sites initially are fully accessible, and this is just another tool to help them double-check what they're doing and how things are working.”

Online learning leaders perceive their role as advocates to obtain buy-in from senior administrators and faculty alike. Given the consultative role of instructional designers and their

lack of agency to enact change, participants developed initiatives such as providing diverse faculty development offerings, leveraging quality assurance standards, and using accessibility checkers to support an institutional shift toward further awareness and prioritization of accessible and inclusive online learning.

Discussion

This study investigated leaders' perceptions of the current state of institutions' ability to provide accessible and inclusive online learning and the strategies they used to do the work in this area. The results of this study align with previous studies that demonstrated that accessibility and inclusivity are becoming increasingly more of a priority for institutions of higher education (Garrett et al., 2021; Lomellini & Lowenthal, 2022; Rao, 2021). Yet, as evidenced by this study and others, there are still barriers to overcome.

Developing Shared Understandings of Accessible and Inclusive Online Learning

One key finding from our study was the need to develop a shared understanding of accessible and inclusive online learning. Leaders in this study described accessibility and inclusivity as interconnected but separate entities, which aligns with well-established definitions (Microsoft, 2018; W3C, 2022). Accessibility is often defined as the technical application of standards and legal requirements aimed at supporting disabled users (W3C, 2022). However, while intended to meet disabled people's needs, accessibility principles are often beneficial for all learners (Henry et al., 2014; Microsoft, 2016).

Inclusivity is a methodology to design ways for everyone to access, participate, and have a sense of belonging in the experience (Bonitto, 2021; Microsoft, 2016). Participants in this study often cited Universal Design for Learning (UDL) as a guiding framework for opening conversations with faculty and providing related training. While UDL can be a helpful conversation starter for proactive design (Meyer & Rose, 2014), research has also shown that the broad scope and competing definitions of UDL can cause ambiguity of implementation and evaluation in research studies and in practice (Fornauf & Erickson, 2020). More research needs to be conducted to clarify concrete UDL strategies and understand the effectiveness in terms of recruitment, student experience, and retention (Fornauf & Erickson, 2020; Roberts et al., 2011).

There is also a growing interest in diversity, equity, and inclusion (DEI) due to the diversification of students with access to higher education, recent political events, and the inequities highlighted during the COVID pandemic (Burgstahler, 2022; Fenneberg, 2022). Institutions are increasingly developing programs and hiring administrators to help accomplish this important work. Participants in this study perceived inclusion in broader terms and felt that accessibility may get lost in DEI initiatives. It is important to consider accessible and inclusive design alongside other strategies that challenge inequity (Xie & Rice, 2021). Thus, questions remain on how accessibility and disability fit into DEI work (Fenneberg, 2022).

Barriers Institutions Currently Face

As seen in this study and in other research, many of the barriers hindering institutions' ability to provide accessible and inclusive online learning stem from external demands on faculty (e.g., their available time to dedicate to course design), a lack of support from senior administration, and the challenge of shifting institutional cultures toward a social model of disability (De Los Santos, 2019; Singleton et al., 2019).

Faculty often have limited time, competing priorities, and narrow perspectives when it comes to accessibility and inclusivity (Oyarzun et al., 2021; Xie et al., 2021a). Some accessibility requirements, such as captioning videos, can be time-consuming and overwhelming (Morris et al., 2016). Participants in this study discussed struggles with requiring and/or supporting faculty to caption their multimedia content when faculty believe they do not have students who require captions or believe that since they never needed captions during their own education, that it was less important. These findings align with previous research demonstrating that some faculty may rely on teaching methods learned from their own educational experiences and struggle to think of diverse learners' needs (Singleton et al., 2019). Research suggests that when faculty embrace the social model of disability that puts a shared onus of accessibility on the curriculum and content creators instead of the individuals, they are more likely to engage with inclusive course design strategies (Ginsberg & Schulte, 2008; Meyer & Rose, 2014). Training to help faculty see past their own learning experiences can help institutions obtain the necessary faculty buy-in to do this work and seek out assistance from other departments. The delegation of responsibility remains a persistent barrier to the implementation of accessibility strategies and policies (Linder et al., 2015). While faculty are often ultimately responsible for course content, the results of this study align with previous research in that faculty are content matter experts who may need additional support and training to design accessible and inclusive online learning (Lowenthal & Lomellini, 2022; Singleton et al., 2019; West et al., 2016; Xie et al., 2021a). There is often no designated point person for online accessibility. Instead, responsibilities are split among faculty, instructional designers, and additional offices supporting faculty who operate on different timetables with different priorities (Linder et al., 2015; Mancilla & Frey, 2020). Participants in this study described institutional silos and the paralysis institutions face without a responsible party. Instructional design teams are in a unique position to lead the charge by leveraging their knowledge and skills in this area, their relationships with faculty, and faculty development initiatives (Xie et al., 2021a). Participants in this study reported that instructional design teams are doing the work, whether they are officially responsible or not. However, instructional designers also have varying levels of knowledge and commitment to inclusive design strategies (Lowenthal & Lomellini, 2022; Singleton et al., 2019; Xie et al., 2021a). Participants in this study emphasized the need to invest in their team's knowledge in this area to continue to be able to meet the needs of diverse online learners. Additionally, resources including time, money, and staff to assist in this area are generally scarce (Oyarzun et al., 2021). This makes planning and prioritizing accessibility and inclusivity all the more important to create the most effective pathways to removing barriers to student success

(Rao, 2021; Tobin & Behling, 2018). It can often be difficult to change longstanding processes and ways of thinking in higher education, including a reliance on a reactive model of accommodations that help individual disabled students but fail to address the underlying barrier (Burgstahler, 2022). Online learning leaders are challenged to help institutions and faculty see the value in proactive models of accessible and inclusive online course design (Seale, 2020).

Strategies to Get Buy-In and to Provide Ongoing Support

Online learning leaders need to find strategic means to encourage buy-in and provide ongoing support to better serve diverse students in online environments. Based on our results and other studies, leaders and institutions need to advocate for a proactive approach and find ways to recruit buy-in from senior leadership and faculty to continue to advance accessible and inclusive course design initiatives (Seale et al., 2020). However, senior leaders often need to be convinced to make providing accessible and inclusive online course design a priority worth investing in. When speaking with administrators, research suggests appealing to recruitment, retention, and satisfaction (Linder et al., 2015; Tobin & Behling, 2018). Interestingly, participants in this study also leveraged legal requirements and recent litigation in conversations with administrators. The literature tends to suggest shifting the focus away from legal terms and toward more student-centered approaches (Izzo et al., 2008; Tobin & Behling, 2018; Xie & Rice, 2021).

Research suggests reframing accessibility by focusing conversations with faculty on how accessible and inclusive design can help improve learning experiences for all students (Singleton et al., 2019; Xie & Rice, 2021). Aligning with previous research (Izzo et al., 2008), participants in this study found appealing to faculty's desire to improve the student learning experience to be the most effective, especially when senior leadership supported accessible and inclusive course design initiatives (Oyarzun et al., 2021). Strategies from the literature include identifying specific areas for improvement and setting measurable goals in collaboration with instructional designers and other support staff to respect faculty's limited time and experience in this area (Seale et al., 2020; Singleton et al., 2019; Tobin & Behling, 2018). Mirroring previous research (Linder et al., 2015), participants in this study emphasized the importance of making the work doable by suggesting faculty take small, proactive steps towards more inclusive course design. Research suggests that faculty want training in this area and training can result in increased implementation of accessible and inclusive design strategies in their courses (Dallas et al., 2014; Izzo et al., 2008; Lombardi et al., 2011; Schelly et al., 2011; Wynants & Dennis, 2017). Yet, prior to the COVID-19 pandemic in the spring of 2020, only 17% of institutions had faculty development related to making content accessible (Garrett et al., 2021). Instructional design units have the opportunity to fill this gap with focused, effective faculty development initiatives (Xie et al., 2021b). However, the knowledge and skills of instructional designers can also vary (Lowenthal & Lomellini, 2022; Singleton et al., 2019). Participants in this study relied heavily on one "accessibility guru" in many cases to lead the team and faculty in furthering initiatives in this area. This aligns with previous research demonstrating that instructional designers may be informally taking on this responsibility regardless of their level of training (Linder et al., 2015).

Participants in this study and previous research also emphasized leveraging course design quality assurance programs that include accessibility and inclusivity standards (e.g., Quality Matters) for additional training in this area (Lowenthal et al., 2021). Participants in this study mentioned using accessibility checker tools such as Ally or UDOIT as a means of providing data and starting and guiding conversations with faculty. More research needs to be conducted to determine the effectiveness of such tools on the implementation of accessible course design strategies.

Opportunities For Future Growth

As institutions become more aware of the importance of accessibility and inclusivity, there is an opportunity to integrate best practices from the start and maintain them in the process of designing online courses (Xie et al., 2021b). Educating administrators and training faculty in this area can help ensure that future content is developed to meet the needs of diverse learners, including those with disabilities (Tobin & Behling, 2018). Once administrators have a better understanding of the importance, there is an opportunity for them to clarify responsibility to streamline effective implementation of the strategies already mentioned (Linder et al., 2015). Additionally, the lack of utilization of instructional design teams and their consultative role can also hinder institutions' ability to provide online learning that meets the needs of diverse learners (Garrett et al., 2021). Some participants in this study also struggled with whether centralizing instructional design units would provide more control or authority to implement best practices. Regardless, increasing utilization of instructional designers has led to increased engagement and accessibility (Garrett et al., 2021).

Conclusion

This study was limited by self-selection bias, small sample size, and a variety of institutional barriers that may impact strategies to support accessible and inclusive online course design. Another possible limitation could be participants' concerns about social norms and wanting to be seen as doing the "right" thing in terms of addressing the needs of diverse learners. To counter these concerns, the researcher attempted to minimize any perceived judgment by remaining impartial throughout the interviews. The researcher assured participants that their answers were confidential and that their identities would not be compromised.

A better understanding of online learning leaders' perspectives is an important step in national and global initiatives to ensure online courses are accessible to all students (Linder et al., 2015). The results of this study are intended to add to the understanding of challenges, successes, and opportunities for improvement in inclusive online education. Online learning is full of potential to meet diverse learners' needs, yet it can also be full of barriers. This is especially true for disabled students when online courses are not designed proactively with accessibility and inclusivity in mind. For institutions to rise to the challenge of fully engaging disabled students in online learning, leaders will need to advocate for and implement clear visions accessibility and inclusivity (Burgstahler, 2022). Online learning leaders

are in a unique position to advise stakeholders in the creation of policies, responsibilities, and support structures while leading instructional design teams in the implementation of accessible and inclusive online course design practices. However, research in this area is nascent and questions remain about how to effectively address the issues of full inclusion and engagement of disabled students in online higher education.

References

- American Council on Education. (2022). *The Carnegie classification of institutions of higher education: Size & setting classification description*.
https://carnegieclassifications.acenet.edu/classification_descriptions/size_setting.php
- Anderson, G. (2020, April 6). Accessibility suffers during pandemic. *Inside Higher Ed*.
<https://www.insidehighered.com/news/2020/04/06/remote-learning-shift-leaves-students-disabilities-behind>
- Chenail, R. J. (2012). Conducting qualitative data analysis: Reading line-by-line, but analyzing by meaningful qualitative units. *Qualitative Report*, 17(1), 266–269.
<https://nsuworks.nova.edu/tqr/vol17/iss1/12/>
- De Los Santos, S. B., Kupcznski, L., & Mundy, M. -A. (2019). Determining academic success in students with disabilities in higher education. *International Journal of Higher Education*, 8(2), 16–38. <https://doi.org/10.5430/ijhe.v8n2p16>
- Elliott, V. (2018). Thinking about the coding process in qualitative data analysis. *The Qualitative Report*, 23(11), 2850–2861. <https://nsuworks.nova.edu/tqr/vol23/iss11/14/>
- Bartz, J. (2020). All inclusive?! Empirical insights into individual experiences of students with disabilities and mental disorders at German universities and implications for inclusive higher education. *Education Sciences*, 10(9), 223.
<https://doi.org/10.3390/educsci10090223>
- Black, R. D., Weinberg, L. A., & Brodwin, M. G. (2015). Universal Design for Learning and instruction: Perspectives of students with disabilities in higher education. *Exceptionality Education International*, 25(2), 1–26. <https://doi.org/10.5206/eei.v25i2.7723>
- Burgstahler, B. (2022). Leveling the playing field for students with disabilities in online opportunities. In M. Bonous-Hammarth (Eds.), *Bridging marginality through inclusive higher education. neighborhoods, communities, and urban marginality* (pp. 235–250). Palgrave Macmillan. https://doi.org/10.1007/978-981-16-8000-7_11
- Cook, L., Rumrill, P. D., & Tankersley, M. (2009). Priorities and understanding of faculty members regarding college students with disabilities. *International Journal of Teaching and Learning in Higher Education*, 21(1), 84–96.
<https://www.isetl.org/ijtlhe/pdf/ijtlhe567.pdf>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE.
- Dolmage, J. T. (2017). *Academic ableism: Disability and higher education*. University of Michigan Press. <http://dx.doi.org/10.3998/mpub.9708722>

- Fenneberg, L. (2022). Student affairs-academic affairs collaborations to support diverse communities. In M. Bonous-Hammarth (Ed.), *Bridging marginality through inclusive higher education* (pp. 19–41). Palgrave Macmillan. https://doi.org/10.1007/978-981-16-8000-7_2
- Fichten, C. S., Ferraro, V., Asuncion, J. V., Chwojka, C., Barile, M., Nguyen, M. N., Klomp, R., & Wolforth, J. (2009). Disabilities and e-learning problems and solutions: An exploratory study. *Educational Technology & Society*, 12(4), 241–256. <https://drive.google.com/file/d/1bpOvrlQLZ2D7TRQQqADi-EQ4QZNcfMdj/view>
- Fornauf, B. S., & Erickson, J. D. (2020). Toward an inclusive pedagogy through Universal Design for Learning in higher education: A review of the literature. *Journal of Postsecondary Education and Disability*, 33(2), 188–199. <https://files.eric.ed.gov/fulltext/EJ1273677.pdf>
- Fowler, F. J., & Cosenza, C. (2009). Design and evaluation of survey questions. In L. Bickman, & D. J. Rog (Eds.), *The SAGE handbook of applied social research methods* (pp. 375–412). SAGE. <https://dx.doi.org/10.4135/9781483348858.n12>
- Garrett, R., Simunich, B., Legon, R., & Fredericksen, E. E., & (2021). *CHLOE 6: Online learning leaders adapt for a post-pandemic world*. Quality Matters & Encoura. <https://www.qualitymatters.org/sites/default/files/research-docs-pdfs/QM-Eduventures-CHLOE-6-Report-2021.pdf>
- Gladhart, M. A. (2010). Determining faculty needs for delivering accessible electronically delivered instruction in higher education. *Journal of Postsecondary Education and Disability*, 22(3), 185–196. <https://files.eric.ed.gov/fulltext/EJ906692.pdf>
- Ginsberg, S. M., & Schulte, K. (2008). Instructional accommodations: Impact of conventional vs. social constructivist view of disability. *Journal of the Scholarship of Teaching and Learning*, 8(2), 84–91. <https://files.eric.ed.gov/fulltext/EJ854849.pdf>
- Harris, P. S., Gould, R., & Mullin, C. (2019). *ADA research brief: Higher education and the ADA* (pp. 1-6). ADA National Network Knowledge Translation Center.
- Izzo, M. V., Murray, A., & Novak, J. (2008). The faculty perspective on Universal Design for Learning. *Journal of Postsecondary Education and Disability*, 21(2), 60–72. <https://files.eric.ed.gov/fulltext/EJ822094.pdf>
- Kent, M. (2016). *Access and barriers to online education for people with disabilities*. National Center for Student Equity in Higher Education. <https://espace.curtin.edu.au/bitstream/handle/20.500.11937/55588/55669.pdf>
- Ketterlin-Geller, L. R., & Johnstone, C. (2006). Accommodations and Universal Design: Supporting access to assessments in higher education. *Journal of Postsecondary Education and Disability*, 19(2), 163–172. <https://files.eric.ed.gov/fulltext/EJ844632.pdf>
- Levicky-Townley, C., Garabedian Stork, M., Zhang, J., & Weatherford, E. (2021). Exploring the impact of Universal Design for Learning supports in an online higher education course. *Journal of Applied Instructional Design*, 10(1). <http://dx.doi.org/10.51869/101/clt>
- Linder, K. E., Fontaine-Rainen, D. L., & Behling, K. (2015). Whose job is it? Key challenges

- and future directions for online accessibility in US institutions of higher education. *Open Learning*, 30(1), 21–34. <https://doi.org/10.1080/02680513.2015.1007859>
- Lombardi, A., Murray, C., & Gerdes, H. (2011). College faculty and inclusive instruction: Self-reported attitudes and actions pertaining to Universal Design. *Journal of Diversity in Higher Education*, 4(4), 250–261. <https://www.doi.org/10.1037/a0024961>
- Lomellini, A., & Lowenthal, P. R. (2022). Inclusive online courses: Universal Design for Learning strategies for faculty buy-in. In J. E. Stefaniak and R. Reese (Eds.), *The instructional designer's training guide: Authentic practices and considerations for mentoring ID and ed tech professionals* (pp. 101-111). Routledge.
- Lowenthal, P. R., & Lomellini, A. (2022). *Creating accessible online learning: A preliminary investigation of educational technologists' and faculty's knowledge and skills* [Manuscript submitted for publication].
- Lowenthal, P. R., Lomellini, A., Smith, C., & Greer, K. (2021). Accessible online learning: A critical analysis of online quality assurance frameworks. *Quarterly Review of Distance Education*, 22(2), 15–29.
- Mancilla, R., & Frey, B. (2020). A model for developing instructional design professionals for higher education through apprenticeship. *The Journal of Applied Instructional Design*, 9(2). <https://doi.org/10.51869/92rmbf>
- McAndrew, P., Farrow, R., & Cooper, M. (2012). Adapting online learning resources for all: Planning for professionalism in accessibility. *Research in Learning Technology*, 20(4), 345–361. <https://doi.org/10.3402/rlt.v20i0.18699>
- Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. CAST. <http://udltheorypractice.cast.org/login>
- Microsoft. (2018). *Inclusive 101*. <https://www.microsoft.com/design/inclusive/>
- Miles, M. B., Huberman, A. M., & Saldana, J. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). SAGE.
- Mirick, R. G., & Wladkowski, S. P. (2019). Skype in qualitative interviews: Participant and researcher perspectives. *Qualitative Report*, 24(12), 3061–3072. <http://dx.doi.org/10.46743/2160-3715/2019.3632>
- Morris, K. K., Frechette, C., Dukes, L. III, Stowell, N., Topping, N. E., & Brodosi, D. (2016). Closed captioning matters: Examining the value of closed captions for “all” students. *Journal of Postsecondary Education and Disability*, 29(3), 231–238.
- Nieminen, J. H., & Pesonen, H. V. (2019). Taking Universal Design back to its roots: Perspectives on accessibility and identity in undergraduate mathematics. *Education Sciences*, 10(12). <https://doi.org/10.3390/educsci10010012>
- Oyarzun, B., Bottoms, B. L., & Westine, C. (2021). Adopting and applying the Universal Design for Learning principles in online courses. *Journal of Applied Instructional Design*, 10(1). <https://doi.org/10.51869/jaid2021105>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.
- Roberts, K. D., Park, H. J., Brown, S., & Cook, B. (2011). *Universal Design for Instruction*

- in postsecondary education: A systematic review of empirically based articles. *Journal of Postsecondary Education and Disability*, 24(1), 5–15.
<https://files.eric.ed.gov/fulltext/EJ941728.pdf>
- Sarrett, J. C. (2017). Autism and accommodations in higher education: Insights from the Autism community. *Journal of Autism and Developmental Disorders*, 48, 679–693.
<https://doi.org/10.1007/s10803-017-3353-4>
- Satterfield, D., Lepage, C., & Ladjahasan, N. (2015). Preferences for online course delivery methods in higher education for students with autism spectrum disorders. *Procedia Manufacturing*, 3, 3651–3656. <https://doi.org/10.1016/j.promfg.2015.07.758>
- Schelly, C. L., Davies, P. L., Spooner, C. L. (2011). Student perceptions of faculty implementation of Universal Design for Learning. *Journal of Postsecondary Education and Disability*, 24(1), 17–30. <https://files.eric.ed.gov/fulltext/EJ941729.pdf>
- Seale, J. (Ed.). (2020). *Improving accessible digital practices in higher education: Challenges and new practices for inclusion*. Springer Nature.
- Seale, J., Burgstahler, S., & Havel, A. (2020). One model to rule them all, one model to bind them? A critique of the use of accessibility-related models in post-secondary education. *Open Learning*, 37(1), 6–29. <http://dx.doi.org/doi:10.1080/02680513.2020.1727320>
- Singleton, K., Evmenova, A., Jerome, M. K., & Clark, K. (2019). Integrating UDL strategies into the online course development process. *Online Learning*, 23(1), 206–235.
<https://doi.org/10.24059/olj.v23i1.1407>
- Tobin, T. J. & Behling, K.T. (2018). *Reach everyone, teach everyone: Universal Design for Learning in higher education*. West Virginia University Press.
- Vivanti, G. (2019). Most appropriate way to talk about individuals with a diagnosis of autism? *Journal of Autism and Developmental Disorders*, 50, 691–693.
<https://doi.org/10.1007/s10803-019-04280-x>
- W3C Web Accessibility Initiative (WAI). (2022). *Accessibility, usability, and inclusion*.
<https://www.w3.org/WAI/fundamentals/accessibility-usability-inclusion/>
- West, E. A., Novak, D., & Mueller, C. (2016). Inclusive instructional practices used and their perceived importance by instructors. *Journal of Postsecondary Education and Disability*, 29(4), 363–374. <https://files.eric.ed.gov/fulltext/EJ1133764.pdf>
- Westine, C. D., Oyarzun, B., Ahlgrim-Delzell, L., Casto, A., Okraski, C., Park, G., Person, J., & Steele, L. (2019). Familiarity, current use, and interest in Universal Design for Learning among online university instructors. *The International Review of Research in Open and Distributed Learning*, 20(5), 20–41.
<https://doi.org/10.19173/irrodl.v20i5.4258>
- World Health Organization. (2011). *World Report on Disability*.
<https://www.who.int/publications/i/item/9789241564182>
- Wynants, S. A., & Dennis, J. M. (2017). Embracing diversity and accessibility: A mixed methods study of the impact of an online disability. *Journal of Postsecondary Education and Disability*, 30(1), 33–48. <https://files.eric.ed.gov/fulltext/EJ1144611.pdf>

- Xie, J., A. G., & Rice, M. F. (2021a). Instructional designers' roles in emergency remote teaching during COVID-19. *Distance Education*, 42(1), 70–87. <https://doi.org/10.1080/01587919.2020.1869526>
- Xie, J. A. G., Rice, M. F., & Griswold, D. E. (2021b). Instructional designers' shifting thinking about supporting teaching during and post-COVID-19. *Distance Education*. <https://doi.org/10.1080/01587919.2021.1956305>
- Xie, J. & Rice, M. F. (2021). Professional and social investment in universal design for learning in higher education: Insights from a faculty development programme. *Journal of Further and Higher Education*, 45(7), 886–900. <https://doi.org/10.1080/0309877X.2020.1827372>

Appendix A

Interview Questions

The following interview protocol was used during the semi-structured interviews.

1. How long have you been working in the field of instructional design and technology?
2. What is your role at your university?
3. How did you gain the knowledge and skills needed to do your job? (e.g., Do you have a degree or coursework in instructional design and technology?)
4. What does accessible and inclusive online learning mean to you?
5. How would you describe your knowledge and skills on designing accessible and inclusive online? And your team? What about the faculty at your institution?
6. What challenges or barriers do institutions face with providing accessible and inclusive online learning experiences?
7. What strategies is your institution, or other institutions, using to provide accessible and inclusive online courses?
8. Do you think institutions are placing enough emphasis on providing accessible and inclusive online courses? Please explain.
9. Do you think the field, in general, is focused enough on accessible and inclusive online learning?
10. How can leadership improve an institution's ability to deliver accessible and inclusive online learning experiences?
11. Are there any factors that influenced your team's ability to provide accessible and inclusive online learning experiences?
12. Do you have any additional comments?