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Accessible Online Learning: A Preliminary Investigation of Educational Technologists' and Faculty Members' Knowledge and Skills

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Abstract

Colleges and Universities have a more diverse student body than ever before—this includes a growing number of students with disabilities. Many of these students are attracted to the flexibility and anonymity of learning online. However, research suggests that students with disabilities often face barriers learning online. Given this, we set out to investigate how faculty and educational technologists are prepared to design accessible online courses and instructional materials. We surveyed 95 educational technologists, directors, and disability access personnel in this exploratory study. In the following paper, we report the results of our inquiry into these professionals' perspectives on faculty and educational technologists' knowledge and skills in creating accessible courses and instructional materials. We conclude by discussing the implications for research and practice.

Introduction

Institutions of higher education are faced with supporting an increasingly diverse student body in ways like never before (Chen, 2017). With this comes a need to find effective ways to help these diverse students complete their coursework, feel a part of the larger university community, and ultimately graduate. Each institution has created various support systems (e.g., disability services, veteran services, writing centers, tutoring, etc.) to help this diverse student body succeed (Remenick, 2019; Rotar, 2022; Smith, 2018); however, questions remain unanswered on how well services like these are helping students persist in online courses and programs (Brown et al., 2020; McManus et al., 2017; Roberts et al., 2011; Seal, 2013). We contend that one untapped group of university support personnel that can help this growing diverse student body in unprecedented ways is educational technologists.[1]

The role of educational technologists varies by institution and context (Larson, & Lockee, 2009; Lowenthal & White, 2009). At some institutions educational technologists oversee designing online courses (and to a lesser extent other instructional materials) by themselves or with a team of fellow designers, often with minimal interaction with faculty; at other institutions, educational technologists take on more of a consultant role where they might advise, consult, train, and support faculty as the faculty design and develop online courses (Legon & Garrett, 2018). Regardless of their role, research suggests that educational technologists are uniquely positioned to help institutions design accessible and inclusive online courses and instructional materials (Edyburn, 2015; Halupa, 2019; Seale, 2013; Xie & Rice, 2021) that might in turn help this ever-growing diverse student body persist. Research suggests, though, that educational technologists may not be adequately prepared to create, or help faculty create, accessible and inclusive online courses and/or instructional materials (Lomellini & Lowenthal, 2022; Poore-Pariseau, 2010; Singleton et al., 2019). This is not surprising given the minimal emphasis on accessibility in previous lists of standards and competencies of the knowledge and skills needed by those tasked with designing instruction (e.g., IBSTPI, 2012; Klein & Kelly, 2018; Kumar & Ritzhaupt, 2017; Lowenthal et al., 2021; Ritzhaupt et al., 2021). However, more

[1] We use the term "educational technologists" as a general shorthand term to include a variety of positions or job titles such as academic technologists, instructional technologists, instructional designers, etc.

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research is needed to know if and to what extent educational technologists and faculty might develop and acquire these skills later while on the job. Given this, we set out to investigate how prepared university personnel thinks educational technologists and faculty members are at designing accessible and inclusive online courses and instructional materials.

In the following paper, we report the results of a survey of educational technologists, directors of educational technology[2], and disability access staff about their perceptions of the knowledge, skills, and professional preparation needed to design accessible and inclusive online courses and instructional materials. We conclude by discussing the implications of the results for online learning professionals and the graduate programs that educate them.

Background

Diversity in Higher Education

Diversity in higher education is critical to preparing learners for the modern, global society in which we all work and live (Chen, 2017). The changing student body now includes larger numbers of students from historically underrepresented groups. For instance, students identifying as Black, Native Hawaiian and other Pacific Islander, Hispanic, and multiracial reported a 20 to 30 percent increase in bachelor's degree attainment from 2005-2009 to 2015-2019 (U.S. Census Bureau, 2021). The population of adult learners (those over the age of 25) is growing substantially as well (U.S. Census Bureau, 2021; EAB, 2021). This increasing diversity is challenging the traditional systems and strategies in higher education (Chen, 2017).

In particular, data suggests that there might be more students with disabilities enrolling in higher education than ever before. For instance, over 19% of undergraduate students reported one or more disabilities in higher education in 2016, a figure that is nearly double the amount reported in 2006 (Gladhart, 2010; National Center for Educational Statistics, 2019). The numbers of students reporting disabilities are even higher in veterans, students over 30 years old, and multiracial students (National Center for Educational Statistics, 2019).

This trend of an increasing number of students with reported disabilities may not be telling the entire story because only 20-40% of students with disabilities choose to disclose that they have a disability (Izzo et al., 2008; McAndrew et al., 2012; Roberts, et al., 2011; Schelly et al., 2011). The current process to apply for accommodations requires students to present medical documentation to prove that they have a disability. This process is rooted in the medical model of disability, which implies that disability is an individual's problem with their body that needs to be fixed (Thornton & Downs, 2010). With the blame of inaccessibility on the students' bodies, something out of their control, many students often do not feel comfortable self-identifying and asking for accommodations (Roberts et al., 2011). In fact, students have expressed concern over initiating conversations with faculty about their disability because they do not want to be viewed negatively or feel like they are asking for special treatment (Roberts et al., 2011). They also want to avoid being stigmatized by their peers, shedding labels they had dealt with in earlier educational settings (Roberts et al, 2011).

Barriers in Online Learning

Research has shown that most students with disabilities have taken an online course (Roberts et al., 2011). However, despite this, students with disabilities continue to have lower participation, retention, and graduation rates compared to their peers without disabilities (Izzo et al., 2008; Gladhart, 2010). In an online environment, the very technology intended to provide increased access and flexibility can instead prevent access for students with disabilities, thus contributing to these lower rates (Gladhart, 2010). For instance, online content presented solely in text formats may be completely inaccessible to blind students but also difficult for students with dyslexia or any number of processing issues (Coombs, 2010; Rose et al., 2006). On a broader level, presenting content in one format may also be difficult for students with varying types of language proficiencies, cognitive strategies, and even cultural norms (Rose et al., 2006). While there is no one way to create accessible learning materials, there are strategies and techniques that reduce barriers for diverse learners (Lowenthal et al., 2020). As technology improves and online learning becomes even more prevalent, students with and without disabilities are demanding higher-quality online courses (Black et al., 2014).

[2] We use this general term to include directors of online learning, directors of academic technology etc.

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Educational technologists often report varying levels of knowledge of and commitment to accessibility strategies, such as Universal Design for Learning (Singleton et al., 2019). Likewise, faculty, who are often hired and promoted for their scholarship, are rarely trained on how to design accessible online courses (Linder et al., 2015; Izzo et al., 2008). Thus, research suggests that educational technologists and faculty alike require training in how to design accessible and inclusive online learning courses (Tobin & Behling, 2018).

Universal Design for Learning

Universal Design for Learning (UDL) is a conceptual framework intended to reduce barriers and optimize teaching and learning (CAST, 2021). UDL is centered around three principles: multiple means of engagement, representation, and action and expression (CAST, 2021). The idea was born out of the architectural concept of Universal Design in physical spaces. By designing spaces in anticipation of a diverse group of users, there is less need to self-identify or ask for anything different. In addition, it is more effective to design education with accessibility in mind from the start (Rose et al., 2006; Tobin & Behling, 2018).

Implementing UDL strategies can help facilitate shifting attention away from the students' bodies as the problem and towards creating learning environments accessible to all. As David Rose and other researchers from CAST stated, UDL "puts the tag 'disabled' where it belongs – on the curriculum, not the learner. The curriculum is disabled when it does not meet the needs of diverse learners" (as cited in Tobin & Behling, 2018, p. 24). However, for this shift to happen, educational technologists and faculty need to have the background knowledge and skills to design online courses using strategies such as UDL.

Educational Technologists and Accessible and Inclusive Online Courses

The increased use of technology in the classroom and the growth of online learning in general helped spawn the growth and development of faculty development and elearning centers during the 2000s (Tobin & Behling, 2018). Universities began hiring more educational technologists to help support faculty to integrate technology into their teaching, whether through training and development or through collaborative course design efforts. During the last decade, educational technologists found themselves faced with the need to design or help faculty design online courses and instructional materials that could be accessible by all learners. At the same time, these same educational technologists have reported varying levels of knowledge about UDL and accessible and inclusive course design (Singleton et al., 2019). Some have also reported that even mentioning accessibility or UDL can scare faculty away and put their important and complicated relationships in jeopardy (Singleton et al., 2019). To complicate matters further, there is uncertainty across many campuses about who is responsible for creating accessible and inclusive online learning (Linder et al., 2015).

Method

Given the aforementioned problems and the lack of literature on this topic, the purpose of this study was to investigate educational technologists' and faculty members' knowledge and skills in creating accessible courses and instructional materials. More specifically, we set out to answer the following research questions:

1. How well prepared are educational technologists to select and/or create accessible instructional materials?
2. How do educational technologists, directors, and disability resource leaders' perspectives differ on this topic?
3. What knowledge and skills do educational technologists need to be able to select and/or create accessible instructional materials?
4. What areas are educational technologists missing or needing further education on?

Data Collection

Three short surveys were constructed to answer the research questions:

1. Educational technology survey;
2. Director survey; and
3. Disability resource survey.

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The surveys were intentionally designed to be short but also to align to the research questions as well as the specific audiences; thus, some questions were asked to all three groups while other questions were only asked to one specific group (see Table 1). The surveys included 5-point Likert-style questions as well as open-ended questions.

The first author identified a list of colleges and universities in the Pacific Northwest in the United States. He then searched each university website to identify educational technologists, directors of online learning or academic technology, and disability access personnel. He created a spreadsheet with each person's name and email.

He then emailed the surveys to the participant pool during the end of the spring 2020 semester (during the COVID-19 pandemic). The surveys were sent to 145 educational technologists, 52 directors, and 131 disability access personnel. Overall, 54 educational technologists (37.2% response rate), 14 directors (27% response rate), and 27 disability access personnel (21% response rate), or a total of 95 out of 328 possible participants (29% response rate) completed the survey.

Table 1

Overview and Comparison of Surveys

Question	**Educational Technologist**	**Director**	**Disability Access**
Rate the knowledge and skills of educational technologists in selecting and/or creating accessible instructional materials at your institution.	✓	✓	✓
Rate your own knowledge and skills in selecting and/or creating accessible instructional materials	✓	--	--
Rate the knowledge and skills of faculty at your institution in selecting and/or creating accessible instructional materials.	--	✓	✓
At your institution, how much emphasis is placed on educational technologists being able to select and/or create accessible instructional materials?	✓	✓	✓
At your institution, how much emphasis is placed on faculty being able to select and/or create accessible instructional materials?	--	✓	✓
What main knowledge and skills do educational technologists need to select and/or create accessible instructional materials?	✓	✓	✓
What main knowledge and skills do faculty need to select and/or create accessible instructional materials?	--	✓	✓
How did you acquire your knowledge and skills to select / create accessible instructional materials? (select all that apply) co-workers, online resources, professional development workshops, conferences, books & articles, college/university course work, other	✓	--	--
What accessibility knowledge and skills do educational technologists at your institution need further education on? In other words, what topics / knowledge / skills (whether that be courses, training, workshops) are most needed?	✓	✓	✓
What are the biggest challenges with selecting and/or creating accessible instructional materials on your campus?	--	--	✓

Note: The educational technology survey was created first; after administering it, we decided to create the two additional surveys to get different perspectives; in hindsight, more of the questions would have been the same across all of the surveys.

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Data Analysis

The data was downloaded from Qualtrics. Descriptive statistics and frequencies were calculated for the quantitative data in excel. We analyzed the qualitative data from the open-ended questions using a constant comparative technique (Leech & Onwuegbuzie, 2007), which involved using a multistage coding process of descriptive and pattern coding to code and analyze the open-ended responses (Saldana, 2016).

Results

We report the results below separated by the main parts of the surveys.

Knowledge and Skills in Selecting / Creating Accessible Instructional Materials

We set out to investigate educational technologists' and faculty members' knowledge and skills in selecting and creating accessible online learning and instructional materials. We first were interested in better understanding how educational technologists self-assess their knowledge and skills to select and create accessible online courses and instructional materials. The educational technologists in this sample rated their own knowledge and skills on average at 3.93, or above average, on a 5-point scale, with 5 being excellent and 1 being poor (see Table 2).

We then asked the educational technologists, directors, and disability access personnel to rate the knowledge and skills of all of the educational technologists on their campus. The directors rated the knowledge and skills of educational technologists--though they might have hired or directly reported to them--the highest (M=4.14), followed next by disability access personnel (M=3.89), and then educational technologists rating their colleagues (M=3.80).

Finally, we asked the directors and disability access personnel to rate the knowledge and skills of faculty on their campus in selecting and creating accessible online learning and instructional materials. The directors (M=2.79) and disability access personnel (M=2.74) rated the faculty members' knowledge and skills lower than educational technologists.

So, when comparing, educational technologists rated themselves (M=3.93) as having higher knowledge and skills than their peers (M=3.80). This suggests that educational technologists generally think that educational technologists across their campuses have close to above-average knowledge and skills in selecting/creating accessible courses and instructional materials. And all three seemed to agree that educational technologists have higher knowledge and skills in selecting/creating accessible courses and instructional materials than faculty.

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Table 2

Ratings of Knowledge and Skills in Selecting/Creating Accessible Courses and Instructional Materials

	Excellent 5	**Above Average** 4	**Average** 3	**Below Average** 2	**Poor** 1	***M***	**SD**
Rate your knowledge / skills of selecting/creating accessible instructional materials							
Educational Technologists Perspectives	12(22.2%)	28 (51.9%)	12(22.2%)	2(3.7%)	0(0%)	3.93	.77
Directors Perspectives	--	--	--	--	--	--	--
Disability Access Perspectives	--	--	--	--	--	--	--
Total	12(22.2%)	28 (51.9%)	12(22.2%)	2(3.7%)	0(0%)	3.93	.77
Rate knowledge / skills of educational technologists selecting/creating accessible instructional materials							
Educational Technologists Perspectives	7(13%)	32(59.3%)	13(24.1%)	1(1.9%)	1(1.9%)	3.80	.76
Directors Perspectives	5(35.7%)	7(50%)	1(7.1%)	1(7.1%)	0(0%)	4.14	.86
Disability Access Perspectives	8(29.6%)	10(37%)	7(25.9%)	2(7.4%)	0(0%)	3.89	.93
Total	20(21.1%)	49(51.6%)	21(22.1%)	4(4.2%)	1(1.1%)	3.94	.85
Rate the knowledge / skills of faculty selecting/creating accessible instructional materials							
Educational Technologists Perspectives	--	--	--	--	--	--	--
Directors Perspectives	0(0%)	1(7.1%)	10(71.4%)	2(14.3%)	1(7.1%)	2.79	.70
Disability Access Perspectives	1(3.7%)	4(14.8%)	11(40.7%)	9(33%)	2(7.4%)	2.74	.94
Total	1(2.4%)	5(12.2%)	21(51.2%)	11(26.8%)	3(7.3%)	2.77	.82

Emphasis Placed on Selecting and Creating Accessible Instructional Materials

Next, we set out to investigate how much emphasis is placed on educational technologists being able to select and/or create accessible instructional materials. Educational technologists and directors in this sample rated the emphasis on average at 2.85 and 2.86 respectively, or slightly less than "just enough." Disability access personnel rated the emphasis on average at 2.63, slightly below educational technologists' and directors' ratings.

We then asked directors and disability access personnel about how much emphasis is placed on faculty being able to select and/or create accessible instructional materials. The directors in this sample rated the emphasis on faculty on average at 1.71 while the disability access personnel rated the emphasis on faculty on average at 1.92. The ratings reflect that both groups perceive there being "slightly too little" or less emphasis placed on faculty being able to select and/or create accessible instructional materials.

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Table 3

Emphasis Placed on Being Able to Select and/or Create Accessible Instructional Materials

	Too much 5	**Slightly Too much** 4	**Just enough** 3	**Slightly too little** 2	**Far too little** 1	**Avg**	**SD**
How much emphasis is placed on educational technologists selecting and/or creating accessible instructional materials?							
Educational Technologists Perspectives	2(3.7%)	7(13%)	30(55.6%)	11(20.4%)	4(74.1%)	2.85	.88
Directors Perspectives	0(0%)	2(14.3%)	9(64.3%)	2(14.3%)	1(7.1%)	2.86	.77
Disability Access Perspectives	3(11.1%)	1(3.7%)	9(33.3%)	11(40.7%)	3(11.1%)	2.63	1.11
Total	5(5.3%)	10(10.5%)	48(50.5%)	24(25.3%)	8(8.4%)	2.78	0.92
How much emphasis is placed on faculty selecting and/or creating accessible instructional materials?							
Educational Technologists Perspectives	--	--	--	--	--	--	--
Directors Perspectives	0(0%)	0(0%)	0(0%)	10(71.4%)	4(28.6%)	1.71	.47
Disability Access Perspectives	0(0%)	3(11.5%)	3(11.5%)	9(34.6%)	11(42.3%)	1.92	1.02
Total	0(0%)	3(7.5%)	3(7.5%)	19(47.5%)	15(37.5%)	1.82	0.75

Accessibility Knowledge and Skills Educational Technologists and Faculty Need

We then explored the accessibility knowledge and skills that educational technologists and faculty need. Respondents highlighted four key areas: (1) the ability to select, create, and evaluate accessible content, (2) knowledge of laws, standards, and organizations, (3) the ability to apply principles of UDL to benefit all learners, and (4) the need to understand what it is like to try to access inaccessible material, to have empathy for students with disabilities, and to advocate the ethical reasons to focus on accessibility. Respondents stressed the importance of understanding both the legal and ethical rationale for accessibility. In addition, respondents indicated that it is important to know how to leverage the technical skills (e.g., structuring a document for compatibility with assistive technology) and the conceptual frameworks (e.g., UDL) to create inclusive learning materials and environments. The knowledge and skills identified were similar across all three groups when asked about what knowledge and skills educational technologists and faculty need.

Ways Educational Technologists Learn to Select / Create Accessible Instructional Materials

When educational technologists were asked how they acquired their knowledge and skills to select and create accessible instructional materials, they reported learning from co-workers (87%), online resources (80%), and professional development workshops (74%) most frequently. College or university coursework (31%) was rated the lowest after other (28%). Other was an option where they could list other ways that they aquired the knowledge and skills needed to select/create accessible instructional materials. They mentioned things like friends, side jobs, and being self-taught.

Topics / Knowledge / Skills Educational Technologists Need Training and Education on

We asked respondents to identify the knowledge and skills that educational technologists need the most at their institution. Respondents reported needing guidance on best practices for creating, evaluating, and remediating instructional materials. Specifically, they wanted to know how to make PDFs, mathematical equations, HTML, and videos (including captions, transcripts, and audio descriptions) more accessible. They also wanted to know more about emerging and assistive technologies including how students use them and their impact on student learning. UDL was another area where educational technologists reported needing additional training. Educational technologists in the study also reported a need for proactive strategies to obtain buy-in from faculty before content is created. For instance, one respondent stated, “Right now, many faculty think [accessibility] is a minor issue that is very rarely a problem in their course. They need to understand that it is a bigger concern and more prevalent than they realize.” Educational

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technologists in the study mentioned a need for clear institutional policies and responsibilities for accessibility. Other emergent themes included a need for knowledge related to accessibility guidelines (e.g., WCAG) and laws (e.g., ADA) and a need for vendors to take more accountability for creating accessible products.

Challenges with Selecting/Creating Accessible Instructional Materials

We investigated disability access personnel's perceptions of the institutional barriers and challenges with selecting and creating accessible instructional materials. Three themes emerged from the data: (1) a lack of time, funding, and resources; (2) a lack of clear policy on who is responsible for inclusive instruction; (3) a lack of knowledge, motivation, interest, and technical skills of faculty. For instance, respondents noted a lack of time, resources, and personnel to update courses and remediate existing inaccessible content. Respondents discussed that leaders did not have enough understanding of accessibility and the need for accessibility policies. Other responses included a lack of attendance at training opportunities and the common "it doesn't apply to me/my course" syndrome.

Discussion

In this study, we set out to conduct a preliminary investigation of educational technologists' and faculty members' knowledge and skills in creating accessible courses and instructional materials by surveying educational technologists, directors, and disability access personnel. The results of the study align with previous research in that accessibility is a growing area of concern for institutions of higher education, but as evidenced in our data, there remains a need for training educational technologists and faculty (Singleton et al., 2019) and clearer roles and responsibilities at the institutional level (Linder et al., 2015).

Knowledge and Skills in Selecting and Creating Accessible Instructional Materials

The participants in this study perceived faculty members' knowledge and skills in selecting and creating accessible materials to be slightly lower than "below average." This aligns with previous research emphasizing that faculty are subject matter experts who are hired and promoted for their scholarship; they are not typically trained in how to create accessible online courses and/or instructional materials (Izzo et al., 2008; Linder et al., 2015; Lomellini & Lowenthal, 2022). Researchers have noted that educational technologists believe faculty members rely on traditional means of accommodating individual learners after they disclose a disability instead of proactively creating accessible materials (Singleton et al., 2019). Educational technologists, who tend to be protective over their relationships with faculty, fear overwhelming faculty by adding another new skill to their already growing list of responsibilities (Singleton et al., 2019).

If faculty are not expected to be knowledgeable and skilled in creating and selecting accessible materials, the question remains how educational technologists could help fill this need? In this study, educational technologists rated their own knowledge and skills in creating and selecting accessible educational materials at nearly "above average." This finding mirrors other research where instructional designers felt confident in their own accessibility knowledge (Singleton et al., 2019; Rogers & Gronseth, 2021). Interestingly in this study, directors and disability access personnel rated educational technologists' knowledge and skills even higher than they rated themselves. When we asked educational technologists about their peers' knowledge and skills, they rated other educational technologists lower than themselves, which was still only slightly below "above average." This finding is similar to previous research in which instructional designers described how their peers' lack of knowledge of accessibility and inconsistent approaches created challenges (Singleton et al., 2019). These findings may indicate that some educational technologists have the skills and knowledge required to create and select accessible instructional materials, but that they would still benefit from additional training and institutional support to be able to make the required process changes. Or it could also suggest that only those well versed in creating accessible courses and instructional materials are the ones who agreed to complete the survey.

Training for Educational Technologists and Faculty

Respondents in this survey highlighted the need for training in best practices of selecting/creating/evaluating accessible materials, knowledge of laws and standards, application of UDL principles, and empathy training to truly understand students with disabilities' experiences with inaccessible materials. They emphasized a need to understand the human, moral, and ethical side of accessibility as well as the technical skills and conceptual frameworks involved in creating accessible and inclusive learning experiences that support all learners. Previous research has demonstrated

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a similar desire for faculty training in inclusive design strategies (Westine et al., 2019). Research has found that even short faculty training about accessibility and inclusive design can lead to implementation in their courses (Izzo et al., 2008; Wynants & Dennis, 2017).

Most educational technologists in this study gained their related knowledge through informal means such as learning from co-workers, online resources, and professional development workshops (74%) most frequently. Only a third described formal ways, such as college or university coursework, of acquiring the needed knowledge and skills. This aligns with previous research such as Rogers and Gronseth (2021) where they found that the main ways instructional designers in their sample learned "were reading on their own, learning from colleagues, participating in workshops, and watching videos" (RQ1 section). Questions remain, though, whether the reason only a third acquired some or all their knowledge and skills through coursework could be because so few programs offered courses or certificates in accessible course design even five years ago—which could also be due to the overall lack of emphasis in the field as a whole until recently.

Leadership, though, seems to be recognizing the importance of training faculty and staff in making content accessible (Garrett et al., 2021). Prior to spring 2020, only 17% of chief online officers (COOs) reported that their institutions had well-established faculty development related to accessibility (Garrett et al., 2021). In 2021, COOs recognized disability and accessibility as areas needing attention and improvement (Garrett et al., 2021). COOs reported between 24-37% of institutions provide accessibility training for faculty, depending on the type of institution (Garrett et al., 2021). The training for educational technologists in this area remains unclear and should be further explored but increasingly we find institutions with larger online programs and enrollments and in turn ecampus centers, hiring at least one accessibility specialist in their team.

Institutional Challenges

While training in this area has shown to be beneficial and there remains a need for much more of this, institutional barriers remain a challenge. The directors, educational technologists, and disability access personnel in this study all agreed that there is less than "just enough" and less than "slightly too little" emphasis on educational technologists and faculty (respectively) being able to select and create accessible instructional materials. This lack of clear roles and responsibilities in selecting and creating accessible materials was echoed when disability support personnel were asked about the biggest challenges faced in this area. Institutions that seem well-equipped to manage accessible online content often report collaboration and shared responsibility across departments including centers for teaching and learning, offices of disability support, and IT departments (Linder et al., 2015).

Another institutional challenge noted in this study was a lack of resources including time, funding, and policies. Previous research has echoed these concerns as well (Linder et al., 2015; Singleton et al., 2019). Simply put, training faculty and staff takes time and resources. By setting resources aside for training and incentives, institutions can help emphasize the importance of designing accessible and inclusive online courses that can help all learners succeed.

Conclusion

We set out in this preliminary exploratory study to get a better understanding of educational technologists' and faculty members' knowledge and skills in creating accessible and inclusive online courses. We also wanted to better understand what other topics, knowledge, and skills they might need to develop and what challenges they might be facing doing so on their campuses. We were also interested in understanding to what degree educational technologists, educational technology leaders (i.e., those in charge of teams of educational technologists), and disability access personnel might have differing perspectives, which in the end we found were minor at best. Our results should not be generalized to apply to all campuses. We created an adhoc survey and had a small sample size. Further, the results could suffer from socially desirable response bias as well as simply attracting those with an interest and/or background in accessible and inclusive education, or even it could suggest that educational technologists themselves might overestimate their own knowledge and skills in this area.

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With that said, a better understanding of the required accessibility knowledge, skills, and professional preparation for educational technologists will lead to improved practice by informing instructional design preparatory programs and professional development opportunities. Further, it points to a need to continue to work on creating campuses that embody a welcoming and inclusive culture that helps identify campus-wide solutions to improve their ability to offer accessible and inclusive online courses.

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