Conversations With Open Textbook Authors

The Factors That Help and Hinder Accessibility

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Abstract

For Open Educational Resources (OER) to truly be within the reach of all who want or need them, OER must be made accessible to disabled learners. This is often a time- and resource-intensive endeavor. Accessible open textbooks rely on diverse teams of experts and advocates, funding and access to resources, and a supportive institution or scholarly community. This study involved semi-structured interviews with the creators of eight accessible open textbooks who were identified during a previous research project. A handful of themes emerged that illuminated several common resources and barriers these authors and their allies faced when trying to ensure their works were accessible to disabled learners. A lack of both time and access to, or familiarity with, easy-to-use technology created challenges. Additionally, tools for making content accessible, as well as long-term staffing and continued maintenance issues also emerged as themes in the study. These findings highlight the ways in which academic institutions, funders, and open education proponents might support faculty authors of OER struggling with accessibility, such as by providing funding and resources, and by advocating for more robust platforms and tools.

Note: The authors use the phrase "disabled learners" and "disabled students" throughout this article. They recognize that there are ongoing discussions over the language of disability and using person-first language (people with disabilities) versus disability-first language (disabled people) when writing about disability and accessibility. The authors referred to the National Center on Disability and Journalism's *Disability Language Style Guide* when writing this article (National Center on Disability and Journalism, 2021).

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Introduction

The rise of the open education movement has led to the development, promotion, and adoption of Open Educational Resources (OER). This, among other benefits, allows for streamlined adaption and redistribution of open content. However, to be truly open, OER must be accessible to disabled learners, including those with visual, auditory, and various cognitive and physical impairments. One in four adults in the United States has some kind of disability (Okoro, 2018). According to a 2017 study from the National Center for Educational Statistics, 19% of undergraduates in the United States from 2015-2016 had a disability (National Center for Education Statistics, 2017). Taken together, these figures indicate that disabled learners make up a significant portion of the population who deserve equitable access to educational materials like OER. In fact, the Americans with Disabilities Act of 1990 and Section 508 of the Rehabilitation Act of 1973 require that such educational content be made accessible ("Americans with Disabilities Act of 1990, As Amended," 2009; "Section 508 of the Rehabilitation Act," n.d.). Thus, accessibility is a shared interest and key concern of OER creators, advocates, and users alike. Even so, due to the lack of resources required to ensure OER are accessible, including time and expertise, much more work needs to be done to make accessibility a reality.

This study expands upon previous research the authors conducted on OER and web accessibility. Starting in 2020, we evaluated a random sample of about 350 open textbooks using a custom-made rubric based on the World Wide Web Consortium's Web Accessibility Content Guidelines (WCAG), version 2.1 (Word Wide Web Consortium, 2018). The majority of the textbooks in our study failed to adhere to basic accessibility best practices, such as providing alternative descriptive text for any images, properly formatting tables, and appropriately using headings (Azadbakht et al., 2021). As noted above, all educational material must be made accessible to comply with existing laws and policies, but our previous research illustrated how many educators and institutions are not complying with these laws. Advocates often promote how OER helps support equity. But, so far, many OER fail to meet the needs of disabled learners. OER are made to be shared and disabled students should be able to use them without requesting remediation from the author or a third party. It is therefore imperative that we find ways to encourage the production of accessible OER.

In order to do so, OER advocates need to gain a better understanding of the factors that both help and hinder accessibility work. Prior studies have looked at the challenges of making content accessible, but there is a dearth of research focusing on what worked from the perspective of most compliant authors. Moreover, we, being librarians who advocate for OER, know firsthand how much time and effort goes into creating a truly accessible resource and wanted to identify some ways our institutions and the greater OER community can support authors. To that end, we conducted nine semi-structured interviews with 11 participants, all of whom were heavily involved in creating eight of the most accessible texts evaluated in the previous study.

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Literature Review

An uptick in lawsuits brought against college or universities in recent years that have failed to make their content accessible has brought the issue of OER accessibility to the forefront (McKenzie, 2018a, 2018b). Ensuring equal access to education to vulnerable learners, like disabled people, is also an aim of organizations like the United Nations (United Nations, 2020). Morina (2017) notes, however, that merely setting goals and policies are not enough; disabled students need sufficient support if they are to succeed in higher education contexts. Morina's literature review outlines the numerous barriers disabled students face, such as the "negative attitudes displayed by faculty members" and "inaccessible information and technology," and the need for greater faculty awareness and training (Morina, 2017, p. 6-11). Zhang et al.'s (2020) systematic review of accessibility and OER highlighted how this area of research is still in its infancy. The review noted how this area of research is limited to just a handful of countries. What's more, only two studies mentioned authoring tools. The authors speculated that tools are one reason OER are not more accessible and recommended that such tools and platforms begin including more features that support accessibility. Zhang et al. also discussed how current research focuses on assessing the accessibility of OER themselves rather than how effective they are at reaching disabled students or how they impact learning. Finally, they advocated for more educator support and training so that they are better prepared to make use of OER and ensure accessibility standards are upheld (Zhang et al., 2020).

There has also been an effort to address the needs of disabled students within higher education more broadly, as part of a desire to make various educational policies and practices more inclusive to such students. However, expecting faculty to acquire the skills needed to provide inclusive educational experiences, such as those needed to remediate OER for accessibility, presents a major challenge (Bong & Chen, 2021). Several studies have found that faculty report various barriers to using OER, including technology (Belikov & Bodily, 2016; Hong Xu, 2018; Iniesto et al., 2021; Jung et al., 2017; Martin & Kimmons, 2020; Taylor & Taylor, 2018; Zeichner, 2020). A lack of both time and money are the biggest issues would-be OER adopters face. Although, a lack of expertise with technology tools and copyright were also concerns. For example, Martin and Kimmons (2020) conducted interviews with eight faculty members, four of whom were adjuncts, at a large, private university in the Western United States. The participants cited technical issues, funding, and time as barriers to adopting OER. Gaining the skills needed to successfully modify an existing open textbook is both time and resource-intensive. The authors note, "only the most committed" are likely to do so. Belikov and Bodily (2016) analyzed over 200 responses to a survey of faculty on OER and identified similar barriers to adoption including a cited lack of time to search for, evaluate, and modify resources.

The authors discussed above, notably Martin and Kimmons (2020) and Belikov and Bodily (2016), as well as others have proposed ways of mitigating the aforementioned barriers and streamlining OER creation and/or discovery and adoption. Some specifically focus on ensuring the accessibility of OER. Most recommendations center around educating or training and heavily supporting potential faculty authors and adopters, but other strategies have also been put forward (Bong & Chen, 2021). Two specific examples include the creation (and subsequent assessment) of a learning analytics tool (Avila et al., 2020) and the development of a new workflow for library publishing, or other campus publishing units, that place accessibility at the forefront (Thomas et al., 2021). Reed and Turner (2018) illustrate the benefits of bringing in students to help gauge the accessibility of OER. They describe how the University of Texas at Arlington Libraries partnered with the Disabilities Studies department at the

doi:10.13001/joerhe.v1i1.7157   214   Journal of Open Educational Resources in Higher Education

institution to create an internship project for a student in that program that was focused on the development of a set of processes and best practices for the evaluation of open textbooks that the Libraries could use going forward. Navarrete and Lujan-Mora (2018) likewise describe a user profile/persona authors and developers can use to make their web content and sites more accessible. To gauge the usefulness of this profile, they used it to create an OER site and then conducted usability tests of the site with several disabled learners.

Other notable examples include BCcampus' Accessibility Toolkit and the work of Affordable Learning Georgia (Coolidge et al., 2021; Gallant, 2021). BCCampus supports the development of teaching and learning best practices at institutions of higher learning throughout British Columbia (BCcampus, n.d.). Its toolkit is a collection of resources, including templates and guides, aimed at authors and their collaborators seeking to create accessible open textbooks (Coolidge et al., 2021). Affordable Learning Georgia, whose aim is to reduce the financial burden textbooks represent to students in the state, recently developed a plan for making both existing and future OER adopted and created by the faculty and staff it supports accessible (Gallant, 2021). The plan contains several components, including a complete audit and remediation of extant materials conducted by the Center for Inclusive Design and Innovation, a partner organization, as well as extensive faculty accessibility training and the creation of accessibility guides. Additionally, Affordable Learning Georgia's program manager is creating accessible templates that faculty can use and working with other partners on a new open-source publishing platform called Manifold that will host Georgia's OER (Gallant, 2021).

To help address the gap in the literature of OER and accessibility, we set out to answer the following research questions:

1. What factors help OER authors and those who support OER creation ensure their products are successfully born accessible?
2. What factors hinder the creation of born-accessible OER?

Methods

In order to answer our research questions, we opted to pursue semi-structured interviews with the authors and people who helped support the creation of accessible textbooks on our campus. We wanted to include both authors and their on-campus supporters as we assumed that the authors were not always responsible or even aware of the accessibility work that went into their textbooks but that, at least in some cases, support staff provided this labor.

We created our interview protocol (Appendix A) based on our knowledge of accessibility work garnered from prior research, including the barriers that people face such as lack of time, money and knowledge, as well as difficult-to-use tools that support accessibility in creation. We worked with an accessibility expert on our campus to develop the interview protocol. Questions focused on the role participants and others played in the open textbook's creation, at what point did they begin to consider accessibility or, if they never did, and why not; what prompted them to consider accessibility; any tools they used that supported accessible creation; and what helped and hindered their accessibility work (see Appendix A).

We tested the interview protocol on two colleagues at our institution: one who taught a class using OER, and a library staff member who had helped them gather the material. We made changes to our protocol

based on their feedback and submitted it to our University's Institutional Review Board which granted the project exempt status.

We created our participant pool by using a study sample from our previous research study (Azadbakht et al., 2021) that determined the accessibility of open textbooks. We looked for books that had three or fewer fails (only two books had no fails, and neither of those books had an identified individual as an author). We also looked for books published since 2015, assuming their creators and supporters would be more likely to remember details, and also tried to include a mix of organization types (from community colleges to large research universities) as well as disciplines and authoring platforms. We then searched for contact information for authors and/or supporters connected to these books, removing some as we went because we discovered the authors had since retired or had no public contact information. This resulted in an initial list of 30 people associated with 15 books to contact. We opted to contact the first person listed for each book beginning in September 2021 and sent a follow up email if that person did not respond. If we still did not hear from them, we then moved to the next person on the list for that book. We did not offer incentives for participating.

We heard back from and scheduled interviews with 11 people connected to eight out of the 15 books. In three cases, we interviewed one author as well as one person who helped support the book; for two of the books, we interviewed the two people involved at the same time. For the third, we interviewed them separately. Interviews took place from late September through early November 2021 using the Zoom webinar platform and were recorded. Both researchers took part in all interviews except for two due to scheduling conflicts, with one acting as note taker and the other as the interviewer. After reviewing the interviews, we decided we had reached saturation and thus concluded this portion of the project.

Based on notes from our interviews, we created an initial list of themes that we used to code our interviews, along with Taguette, an open-source coding program for qualitative research. We each coded one interview and discussed any discrepancies. We then each coded half of the remaining interviews and discussed any questions with each other at the end.

Our final study sample represented one community college; five large, research-focused public universities; one smaller public university; and one not-for-profit group. Six out of the eight open textbooks came from U.S. organizations, and two came from Canadian institutions. Disciplines included: water treatment, business, journalism, linguistics, storytelling, open education, and nursing. In the Results section, we will refer to our participants by pseudonyms suggested by an online random name generator; however, one participant, Apurva, informed us she did not wish for anonymity and thus we will use her real name. Apurva also spoke as both a creator of an OER and as someone who supports their creation with her work for the Rebus Foundation. The Rebus Foundation is not-for-profit that promotes and supports the development of new and open digital publishing models and related technologies (Rebus Foundation, n. d.). In order to ensure our other participants remain unidentifiable, we will refrain from providing too much demographic or institutional information about them here.

Results

Who Performs the Work

When it came to who performed the work to make the textbooks accessible, a number of people in various positions were involved. However, the two most prominent were student employees and instructional designers. Several interviewees noted that student employees worked to format the books and ensure they were accessible by adding appropriate alternative text and using proper editing features for lists and headings. One participant, Harmony, noted that their office employed a student who actually used a screen reader and was able to thus conduct reviews of the textbooks to help ensure there were no issues: "I mean her skill set and the value that she adds to our team is incredible beyond just her ability to screen for accessibility, but she's also able to be really an important member of the team in terms of ensuring the document is all formatted in a way that's consistent."

Instructional designers (ID) also often provided important assistance, from just reminding the OER creators to keep accessibility in mind, to helping creators understand the accessibility standards a book needed to follow. Cornelia noted that the ID they worked with had the technical knowledge to oversee the accessibility work, which was knowledge that this author-participant lacked.

Other people who performed accessibility work included librarians, a university's accessibility office (often by providing guidance and help in answering accessibility questions), other university staff personnel, the faculty themselves, and outside OER groups such as the Rebus Foundation. Apurva, from The Rebus Foundation, said her office both tries to remind OER creators about accessibility as well as also performing accessibility checks, something that another participant, Bernard, noted they received help with from the Rebus Foundation. Yet another participant hired an outside consultant to conduct a review of specialized material in their book for accessibility.

Regardless of who ultimately made the book accessible, a major theme from the study was the importance of teamwork and the privilege of having a support system made up of experienced individuals to lean on. Finding the right mix of partners was key; many teams were comprised of members with different skill sets. "I don't think I could have done this book on my own. I teach full time. I'm so busy," Aina said. Another participant, Leandra, admitted that "[w]e could have created it, but it just wouldn't have been a usable, user-friendly, accessible resource" without the team. Along the same lines, a few participants said that this team-based approach made for a better final product. "What actually emerged was this really rich tapestry…it was really cool," observed Aina. As noted above, these teams more often than not included students, if only as reviewers or user testers. However, some students did create content and helped to evaluate or remediate content for accessibility.

Knowledge of Accessibility

Another theme that emerged was the creator's knowledge—or lack thereof—of accessibility best practices. While some of the participants displayed some level of knowledge for what to look for when it came to accessibility, some expressly admitted they knew nothing. Cornelia in her interview said "I

couldn't have done it all myself. I didn't have the knowledge, I didn't have the tools I didn't...Right?" In contrast, Apurva, whose role focuses on supporting authors, discussed how she knew nothing about accessibility when she first started working with OER but has since learned a great deal. Some participants said they were not aware of using any tools for accessibility, even though in other areas of their interviews they discussed using platforms for this purpose. This seems to indicate that OER creators work to make OER accessible without always realizing it. Some participants also discussed a broader view of accessibility than this project took on, noting that they considered financial and technological barriers also an issue of accessibility.

Of those who did express knowledge of accessibility issues, most were not the creators themselves, but those supporting the creation of the book. This makes sense when considering many of the people working on a book's accessibility status are in these positions and are expected to have some expertise.

Support for Accessibility

Another theme we explored was the factors that helped authors make their books accessible. Subthemes in this area included planning for accessibility from the start of a project, financial support, community help, institutional culture, and setting realistic goals.

Most of the participants discussed how they included planning for accessibility at the start, or near the start, of a project. One participant, Ruthi, noted they had learned this as a lesson from prior projects where they knew they wanted to make it accessible but did not focus on it, noting, "it came down to the very last minute [and] we don't have time to do the accessibility work, and that really bothered me." Ruthi also suggested creating a plan for accessibility at the start by considering what types of content a book will have and what will be needed to make them accessible. Meanwhile, Apurva suggested slowly addressing it throughout the project so that it's also not left until the end.

Financial support also appeared as a major need. About half of the participants discussed the role it played in their project. For instance, Harmony, whose role involves supporting faculty authors at their institution, noted that "We can't do it without any, you know, funding," while Ursula, a faculty author who Harmony supported, noted how Harmony's office relied on financial support to pay their student workers who perform much of the accessibility work. Apurva argued that they didn't want accessibility work to become yet another thing that people are expected to provide for free. Participants noted the money paid for Pressbooks, staff to work on the project including freelancers, and stipends for faculty creating the books. Participants said the money came from their institution, a local regional OER group, and grants.

Some of the discussion related to the importance of institutional culture included the need for the institution to make accessibility a priority. For instance, Harmony noted that their institution has "embraced" accessibility, while both Ursula and Aina discussed how their institutions have provided training in support of accessibility. However, others discussed the importance of their role and how their institution defined it. These participants' positions were focused on teaching. Meaning, that research was not a priority while excellence in teaching was. Therefore, they saw OER – and working to make them

accessible – as something that fit their position and, in some cases, as something that could help them advance. Conversely, Bernard noted that in order to receive credit for their work, they needed it to be considered peer reviewed, which is what led them to the Rebus Foundation's support program which helped them make the book accessible. In fact, Rebus has made accessibility one of its priorities (Rebus Foundation, 2017).

Some participants also said that having modest ambitions and setting realistic expectations while working on their projects helped to ensure their final product's accessibility. Primarily, this meant limiting an OER's scope, choosing content types (e.g. text) that are simple and easy to make accessible, and prioritizing some content and features over others. For example, a few discussed identifying must-haves and nice-to-haves at the start of the project. Then, focusing on the former first and only turning to the latter if they had the time to do so. Others articulated a "perfect is the enemy of the good" approach and set about creating imperfect but usable first versions of their textbook. They then used these first versions as a foundation to build upon. This allowed content creators to "put off" working on more complex content or features until they had the time and resources needed to make them accessible.

Barriers to Accessibility

Staffing issues of various kinds were a major barrier to creating accessible open textbooks. As noted above, none of the open textbooks discussed during the course of this study were the work of a sole author. However, the support type and support level available to each of the "core" authors varied. Some were fortunate enough to have a specific unit or team on campus they could essentially hand their projects to and who would make their books ready for publication, with accessibility remediation and evaluation included. Others had to identify and cultivate relationships with partners from all over campus and the greater OER community, or had to figure out how to solve certain accessibility issues on their own. Turnover and precarious employment situations also impacted a team's ability to efficiently produce an accessible OER. For example, part-time employees or adjuncts could not devote as much time to the creation of these OER as they would have liked and sometimes left the institution before an OER had been completed.

Determining who is ultimately responsible for the textbook going forward was also sometimes an issue. OERs are living documents and need to be maintained and updated. Several participants mentioned needing to fix broken links after publication or having to respond to questions from other instructors wanting to adopt or adapt their works. At some institutions, this maintenance falls under the purview of the "publisher," which is often the library, the instructional design team, or funding body. At others, the faculty authors and/or their departments had to step into this role.

A related challenge was time, or lack thereof. Time and time management issues made it difficult to take on an OER project in the first place, complete the OER, and ensure that the OER is truly accessible. Faculty authors and their collaborators are perpetually busy and are juggling many competing responsibilities. "[Y]ou're teaching, you're spread thin, you're teaching four different, five different topics across six different courses," Bernard explained. Several participants also noted that deadlines were imposed by others, such as grant funders, or constrained by factors such as a semester start date.

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Good project management strategies sometimes helped authors overcome the challenge of a shortage of time, such as planning for accessibility in advance, regular team meetings, and ongoing communication between team members. However, several participants admitted that some content had to be cut if they or their collaborators could not find a way of making this content accessible before key deadlines. "….We were just racing against the clock, and so… some things you have to say no to," said one participant, Reuben.

Some participants discussed issues with discipline-specific or special content such as linguistic notation (i.e., tree diagrams), mathematical expressions and equations, and test banks. There was often a lack of an established set of standards or best practices for this discipline-specific content. Cornelia explained how "there's no existing standard" in their field for making certain key notation accessible to blind or visually impaired learners. In response to a question asking how colleagues at other institutions are addressing this issue, Cornelia answered, "Everyone's just making up their own solutions." Even subject and accessibility experts admitted that they could not always identify easy solutions to the questions that would arise.

Tools

Technological tools were cited as a major frustration when doing accessibility work but were simultaneously necessary to produce the level of accessibility found across this study's OER. Relatively easy-to-use platforms, tools, and resources played a role in facilitating accessibility. For instance, many of the authors began their OER in Microsoft Word or Google Docs and relied on these tools' built-in functions for ensuring the content they were creating was accessible. Several used Pressbooks as their publishing platform and depended on its accessibility aids and checks when uploading their work. A few participants discussed turning to BCCampus' Accessibility Toolkit and resources like it when needing to evaluate whether what they were producing was accessible or to find the answer to a particular question they had.

However, technology caused a lot of heartache. Some authors and teams lacked access to specific tools. "We just weren't always sure that, individually, we had the full set of tools to make it happen by ourselves," said Ursula. Others cited their insufficient knowledge of or training in specific tools and how it sometimes led to frustration and wasted time and effort. "There were times that I wanted to throw the computer at this thing, because in a lot of ways, again, ignorance is bliss, right? Why am I getting this flag, why is it not accessible, right?…. I don't know what I don't know, in some cases," said Reuben. And still others bemoaned the dearth of multipurpose tools or a "one and done" checker. Many teams had to rely on several different tools to assess the accessibility of various content types, including WebAIM or other, similar extensions for checking HTML code, Adobe Acrobat for checking PDFs, Grackle for checking Google Docs, two different color contrast checkers, and more. "It's always been tricky with recommending tools to faculty because there isn't that magical click a button here and it'll test on Pressbooks whether your book is good to go or not," said Apurva.

Discussion

The results from our semi-structured interviews can begin to provide a picture of what works – and what doesn't – when making accessible OER. These include: having the support of a team, planning for accessibility from the beginning of an OER project, tools that make accessibility easy to do, and support from the OER community.

Team Work

Perhaps the most important factor is having some kind of support, whether in the form of a team, helpful tools and guides, or an active community that authors can go to with questions. Not everyone will come into an OER project as an accessibility expert – and, frankly, many will not leave as one either. Yet, our project shows it is still possible to achieve accessibility even without this prior knowledge.

Some types of support do appear to be more important than others, however. Having a team in place that assists in the creation of OER can help ensure that an author thinks about, plans for, and actively implements accessibility. Many OER authors might not have thought much about accessibility before, especially if their institution has not made it a priority, but staff that regularly oversee the creation of OER can implement accessibility best practices into their work, making it easier to perform at scale as these staff members do not need to constantly relearn the necessary skills.

However, it will always require some effort and time to oversee and complete this work. Several of our participants highlighted how hiring and training student workers to perform much of this labor is a successful strategy, but staff and librarians will likely need to grow their own accessibility knowledge in order to train and help manage the work. Staffing does need funding, however. As our participants noted, much of their work would have not have been possible if someone had not provided the money to pay for it. Funding is thus crucial to ensuring accessible OER.

We recognize that having the funding and staffing to support OER creation is often a privilege. However, accessibility should not be a privilege. Therefore, we argue that when providing these resources and support for faculty creating OER, libraries and universities need to ensure that accessibility is considered a core service that receives early support and is not treated as an additional benefit.

Planning

The participants also demonstrated the importance of considering and planning for accessibility at the start of an OER creation project. The longer a team waits to begin this work, the harder it will be as more remediation will ultimately be needed. Tools such as the accessibility checklist and Word template from Affordable Learning Georgia and BCCampus' toolkit can help teams with this planning. But, based on the interviews we conducted, we also recommend the following when planning for accessibility:

- Consider what content types will be included in the OER. Some content will require more work than others. For instance, text and images are fairly easy to make accessible, but videos will not only need closed captions but may also include iframes that can create other accessibility issues.
- Create a list of goals for the project and categorize them into "must have" and "would like to have."

- Consider the timeline for the project. You might not be able to accomplish all of your goals in this time frame. Therefore, it is important to prioritize.

User-Friendly Tools

Assisting authors as much as we, as OER advocates, can to use the tools and other resources available to them can ease the work of OER support staff. Many of the authors we interviewed did not consider that using tools such as Pressbooks helped make their books accessible, but it was also clear to us that they did indeed use these tools and their features. Building accessibility into platform training for OER authors can help ensure that accessibility is part of OER creation from the very beginning. That being said, trying to provide too much accessibility training, as Affordable Learning Georgia found (Gallant, 2021), might not always be worth the time. Instead, those who support the creation of OER should continue to work with the companies and organizations that provide authoring tools and platforms to ensure accessibility is built into their products and make accessibility a top consideration when choosing which tools and platforms to work with. This can include pushing OER-related organizations to prioritize accessibility as well as insisting on accessible platforms and other tools from vendors – and refusing to work with them if their products are not accessible. In particular, work done by the Rebus Foundation exemplifies the kind of advocacy needed to continue to ensure the platforms and tools authors and institutions rely on have robust accessibility features.

Community Support

Until all Colleges and Universities are staffed to fully support the creation of OER, the broader OER community will remain essential for creators who lack such support. Webinars and other resources can help creators who find themselves alone and unsure of how to proceed. That said, we note that several of our study participants did not seek accessibility help from the OER community but from their own discipline's community. Although outreach of this kind can only go so far, OER advocates should continue to promote and share resources with current and future authors and to engage with them regularly to ensure, at the very least, that existing accessibility issues do not go unnoticed.

Conclusion

Accessibility is imperative to making OER truly available to all learners. Thus determining what factors help or hinder OER creators' ability to adhere to best practices and standards, like WCAG, is crucial. Our study found that accessible OER depend on collaboration and the expertise and the effort of diverse teams, as well as the wider OER community. Financial support, especially to pay staff or students and afford faculty creators more writing time, and following project management best practices, like planning for accessibility at the start of the project, are also factors that helped make OER in the study accessible. A lack of time and resources, as well as competing priorities and issues with platforms and tools, did create some challenges for the authors. Institutions, organizations, and funding bodies can support the creation of accessible OER by developing units and/or hiring staff with the knowledge and skills to assist potential authors, provide needed resources and training opportunities, and advocate for the continued development of the platforms and tools that help facilitate the production of accessible content. Members of the open education community can likewise offer their support and promote accessibility – and its related skill sets – more broadly. To that end, future research should dig deeper

doi:10.13001/joerhe.v1i1.7157   222   Journal of Open Educational Resources in Higher Education

into OER authors' experiences, their creative processes and practices, and the challenges they face using various platforms and tools to illuminate the work that still needs to be done to make learning open and accessible to all.

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Conflict of Interest Statement

We have no conflict of interests to report regarding this research.

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Appendix

Appendix A
Accessible OERS: Conversations with Creators Interview Protocol

Introduction

Hello! Thanks so much for agreeing to talk with us today. As you already know, we're interested in learning more about open textbook authors' experiences adhering to web accessibility standards, and we identified your work as one that successfully adhered to such standards. We have prepared [number] questions but may ask some additional follow-up questions as we go along. I will ask the questions, while my colleague here will take notes.

We'll record our conversation for later review. However, anything you share with me will be kept strictly confidential. You will not be personally identified in any of the presentations or publications that might result from this interview. Also, participation is voluntary, so you may choose to discontinue this interview at any time. Just let me know.

Do you have any questions before we begin?

[Pause for response]

Okay, great. I'm going to start the recording now.

Questions

1. Could you tell us a little about yourself (job title, institution, academic background, research interests, etc.) If your position has changed since you wrote the textbook, could you tell us about your position at the time?
2. Let's talk about the project that led to your open textbook.
   a. Can you tell us the role you played in creating the open textbook in question?
   b. What inspired or motivated you to write it?
   c. Who else was involved? Please include anyone involved in its publication, not just your fellow editors and authors
   d. How long did it take you to write and publish it, start to finish?

3. At what point in the project did you start thinking about accessibility (provided that you did)?

   a. Who or what prompted this?
   b. Which standards or best practices did you look to and why? Were there any specific to your institution?
   c. If you didn't consider accessibility when writing your book, is there a reason why?

4. What tools did you use to make your book accessible or to assess your compliance to accessibility standards/best practices?

5. What were some challenges you faced in making your book accessible?

    a. Prompts if needed: Did you have challenges finding or using technology to assist in making your book accessible? What about guidance for what to focus on in making the book accessible? How much did money (or lack thereof) affect this?

6. What helped (i.e., do you have any recommendations for other authors)?
    a. Prompts if needed: Were there tools that you particularly liked? Why did you like them? Was there support from specific groups/people, and if so, why was it helpful?

7. What advice would you have for authors wanting/needing to make their open textbooks accessible?

8. Do you have any other comments you would like to share?

Closing

Okay, I'm going to stop the recording now. It's been wonderful hearing about your experience creating an open textbook. If you're interested, we'd be happy to share the final report with you when it's ready?

You have both of our email addresses, so feel free to reach out if you think of any other questions.