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Creating, Resisting or Neglecting Change: Exploring the Complexities of Accessible Education for Students with Disabilities

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Creating, Resisting or Neglecting Change: Exploring the Complexities of Accessible Education for Students with Disabilities

Abstract

Recent teaching and learning scholarship has documented the importance of uncovering and removing barriers to learning experienced by students with disabilities (e.g., Cook, Rumrill, & Tankersley, 2009). At the same time, in Ontario, new legislation is making this issue especially pronounced. The Accessibility for Ontarians with Disabilities Act (AODA, 2005), mandates universal access for persons with disabilities, requiring the removal of barriers to their full participation in all aspects of society, including higher education. This article reports on the first phase of a larger project designed to collect qualitative data about the effects of the AODA legislation on the teaching and learning environment at one University. Building on previous work that investigates students with disabilities' experiences of tertiary learning (e.g., Healey, Bradley, Fuller, & Hall, 2006), it reports on the results of semistructured interviews that explored the ways in which students with and without disabilities, instructors, administrators, and staff perceive the relative accessibility and inclusiveness of teaching and learning at this institution, with an eye to ultimately enhancing learning for all students.

Results from this first phase suggest a number of areas in which both barriers to and facilitators of educational accessibility exist at the study University, including: attitudes; knowledge; disciplinary features; pedagogical choices; and, institutional practices. We suggest that these findings may be of relevance to others in different constituencies and contexts, and provide recommendations for enacting change related to teaching and learning accessibility and thereby improving the student learning experience.

L'avancement récent des connaissances en enseignement et en apprentissage a permis de documenter l'importance de dévoiler et de surmonter les obstacles à l'apprentissage des étudiants ayant des incapacités (p. ex., Cook, Rumrill, & Tankersley, 2009). En même temps, en Ontario, une nouvelle loi rend ce problème particulièrement évident. La Loi de 2005 sur l'accessibilité pour les personnes handicapées de l'Ontario (LAPHO, 2005), rend obligatoire l'accès universel pour ces personnes, ce qui nécessite l'élimination des obstacles à leur pleine participation à tous les aspects de la société, y compris à l'éducation supérieure. Le présent article traite de la première phase d'un grand projet visant à recueillir des données qualitatives sur les effets de la LAPHO sur le milieu d'enseignement et d'apprentissage dans une université. Les auteurs s'inspirent des études antérieures auprès des étudiants handicapés afin d'étudier leur expérience de l'apprentissage dans un établissement d'enseignement supérieur (p. ex., Healey, Bradley, Fuller, & Hall, 2006). L'article rapporte les résultats d'entrevues semi-structurées concernant la perception qu'ont les étudiants handicapés, les autres étudiants, les professeurs, les administrateurs et le personnel de l'accessibilité relative et du caractère inclusif de l'enseignement et de l'apprentissage dans cet établissement. L'objectif est d'améliorer l'apprentissage de tous les étudiants. Les résultats de cette première phase révèlent plusieurs domaines où il existe à la fois des obstacles et des éléments facilitant l'accessibilité aux études dans l'université qui participe à la recherche : les attitudes, les connaissances; les caractéristiques de la discipline; les choix pédagogiques et les pratiques institutionnelles. Les auteurs suggèrent que ces résultats sont pertinents pour différents contextes et institutions. Ils formulent des recommandations afin de procéder à des changements liés à l'accessibilité à l'enseignement et à l'apprentissage et ainsi améliorer l'apprentissage des étudiants.

Keywords

accessibility, teaching and learning; AODA legislation

Cover Page Footnote

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The importance of creating inclusive and equitable educational experiences for *all* college and university students has been recognized with increasing frequency of late. Recent teaching and learning scholarship, for example, documents the necessity of acknowledging the increasing diversity of the student population and of uncovering and removing barriers to learning experienced by students with disabilities in particular (Burgstahler & Cory, 2009; Waterfield & West, 2006). While this paper focuses on a range of stakeholders' experiences of educational accessibility at one university in Ontario, Canada, it suggests elements that could be of great value to others in different constituencies and cultures.

According to the Council of Ontario Universities (COU), the total number of students self-identifying as persons with disabilities at Ontario universities' disability services offices grew from 4,045 in 1991-1992 to 17,002 in 2007-2008, which represents an increase of 320% (COU, 2010). The rise in the number of students identifying with mental health issues has been particularly pronounced, increasing 128% in 4 years between 2003-2004 and 2007-2008 (COU, 2010). While higher education has thus become more available to students with disabilities, many would argue that educational practice has not made a significant shift towards addressing the learning needs of this group (Healey, Bradley, Fuller, & Hall, 2006; Jacklin, Robinson, O'Meara, & Harris, 2007).

In Ontario, current legislation is bringing these issues into even greater focus. The Accessibility for Ontarians with Disabilities Act (AODA), which became law in 2005, mandates universal access for persons with disabilities, requiring the removal of barriers to their full participation in all aspects of society, including higher education (Government of Ontario, 2005). Recognizing the history of discrimination against people with disabilities in Ontario, the Act was developed largely in response to the insufficiencies of previous legislation and to pressures from groups such as the Ontarians with Disabilities Act Committee – a coalition of persons with disabilities, advocates and allies – to address these legislative shortcomings (Beer, 2010). In line with current understandings, disability is defined inclusively in the AODA; physical, sensory, learning, developmental, and mental health disabilities, as well as other invisible and episodic conditions, are positioned as examples of disablement (Government of Ontario, 2005). The Act calls for the development and implementation of five mandatory standards, which are being developed and rolled out in stages. The first of these – the customer service regulation – was implemented in January 2008 and establishes a series of regulations pertaining to the accessible provision of goods and services (Government of Ontario, 2007). The next three standards – information and communications, employment, and transportation – were combined into one harmonized standard that was enacted on June 3, 2011. These standards set out protocols for increasing access to information (e.g., on websites and in libraries), for recruiting, hiring and retaining employees with disabilities, and for enhancing the usability of public transit, respectively (Government of Ontario, 2011). The final standard, pertaining to built environment, will work to identify and remove barriers in newly constructed buildings and public spaces; development of this standard is ongoing and an implementation date has not been identified.

The information and communications portion of the integrated standard is particularly significant for teaching and learning in higher education as it sets out requirements to remove and prevent barriers to persons with disabilities when creating, conveying, receiving, or distributing information (Government of Ontario, 2011). This standard also requires all Ontario educational institutions to provide their educators with training related to accessible program or course delivery and instruction by January 1, 2013. Given the immediate potential impact of the

information and communications standard on the teaching and learning environment, the study described here focuses heavily on this portion of the AODA legislation.

In spite of the number of converging factors pushing towards increased educational accessibility in Ontario, significant barriers to access for students with disabilities remain. Existing research (largely from the UK and the US) documents a number of challenges and inequities experienced by this student group (Healey et al., 2006; Jacklin et al., 2007; Tinklin, Riddell, & Wilson, 2005b), many of which can be observed in Canadian institutions as well. While, in Ontario, the AODA may help to alleviate some of these barriers in coming years, its success is far from certain, particularly since the literature documents cases wherein legislative change in other countries has not generated the results for which people with disabilities, advocates, and allies might have hoped (Tinklin, Riddell, & Wilson, 2005a).

In order to create inclusive and equitable educational experiences, existing barriers to teaching and learning accessibility in Canadian educational institutions must be fully enumerated and strategies must be developed to eliminate or reduce these barriers. Surely this will require talking more with students with disabilities in order to understand their unique experiences. At the same time, however, some recent scholarship underlines that a true understanding of student access to education requires input from other members of the teaching and learning community, including students without disabilities (Madriaga, Hanson, Heaton, Kay, Newitt, & Walker, 2010), instructors (Cook, Rumrill, & Tankersley, 2009), and administrators and members of staff (Riddell et al., 2007). Nonetheless, no one study to date has brought together and examined the perspectives of all of these groups of stakeholders. Furthermore, the staff perspective in particular remains drastically under-explored, as none of the above-mentioned studies address the experiences of staff groups such as teaching assistants, instructional assistants, or academic advisors, all of whom can play a considerable role in students' educational experiences.

With this in mind, the present research attempted to examine diverse perspectives on teaching and learning accessibility at McMaster University on the eve of the implementation of the harmonized AODA standard. As stated above, the information and communications portion of this standard seeks to address and improve educational accessibility directly; any sense of its relative efficacy at meeting these goals requires a clear sense of the accessibility of educational environments prior to its realization and enforcement. As such, we set out to answer the following research question: How do instructors, administrators, staff, and students with and without disabilities perceive and experience the relative accessibility of teaching and learning at McMaster University before the harmonized AODA standard is implemented on campus? We anticipate that by understanding these stakeholder perspectives we can begin to understand the effects of the AODA legislation and ultimately improve the student learning experience.

Methods

Research Context

McMaster University is a research-intensive university in southern Ontario. Academically, the institution is organized into six faculties – Business, Engineering, Health Sciences, Humanities, Science, and Social Sciences. Like many educational institutions, McMaster has a stated commitment to accessibility, naming the building of “an inclusive community with a shared purpose” as one of its three institutional goals (McMaster University, 2003/2008, p. 5). Nonetheless, there is little systematic, cross-institutional information currently

available about how successfully we are realizing this goal. The question of how accessible teaching and learning are at McMaster has not been adequately addressed.

Participants and Data Collection

Since our research question was designed to elicit an in-depth understanding of the perceptions and experiences of various stakeholders at McMaster (i.e., students with and without disabilities, instructors, administrators, and staff), we employed a case study methodology, with a qualitative approach to data collection (Mack, Woodsong, MacQueen, Guest, & Namey, 2005). One-on-one, semi-structured interviews were chosen as our preferred method, due to the potentially sensitive nature of the subject and the fact that participants might not be comfortable sharing personal experiences and challenges in larger focus group settings (Mack et al., 2005). Interview guides containing a variety of open-ended questions (as well as some demographic prompts), and based on a review of the literature and consideration of domains important to the study, were developed by the research team. Specific questions asked participants to consider elements of the teaching and learning environment that they believed helped to increase educational accessibility, as well as factors that militated against access. Others asked for participants' perceptions of the AODA legislation and the Information and Communications standard specifically, or provided a broad opening for participants to detail striking experiences they may have had pertaining to the accessibility of teaching and learning at McMaster. These protocols were pre-tested by project research assistants not involved in the initial creation of the guides, and the interview questions refined to enhance clarity as required.

After receiving approval from the McMaster Research Ethics Board, we recruited participants by placing posters on bulletin boards across campus, advertising on university websites, and distributing email invitations via ten university list-serves. We secured and conducted interviews with 32 participants during the spring of 2011. One interview was conducted via email at the participant's request due to scheduling difficulties. Participants varied widely in terms of campus affiliation, representing all six faculties, the Arts & Science program, the University Libraries, the Museum of Art, the Centre for Continuing Education, Student Affairs, and Human Resources. The group also included individuals from each of the five stakeholder categories (administrators, instructors, staff, students with disabilities, and students without disabilities). Participants in the staff, administrator, and instructor categories were not asked if they identified as having a disability given that our ultimate focus in this project was on understanding and enhancing the accessibility of the educational environment for students; while some participants in these categories might well identify as persons with invisible or episodic disabilities, we do not have data pertaining to this factor. Representation was fairly evenly spread within the five stakeholder categories with the exception of gender, which was notably skewed with 26 female participants and only six male participants. (See Table 1 for further demographic information about our participant pool.)

Table 1
Demographic Breakdown of Participants

Demographic Factor	<i>n</i>
A. Participant Category/Role	
Administrators	4
Manager	1
Director/Assistant Director	2
Associate Dean	1
Instructors	7
Staff	9
Teaching/Instructional Assistant	2
Education/Research Coordinator	4
Advisor	2
Student Records Supervisor	1
Students with disabilities	6
Undergraduate	6
Graduate	0
Students without disabilities	4
Undergraduate	3
Graduate	1
Dual position: Staff & Student without disabilities	2
Teaching Assistant & Graduate Student	2
B. Disability Type (Students with Disabilities only)*	
Vision	2
Hearing	1
Mobility	1
Learning	2
Mental Health	1

Note. One student identified as having disabilities of two different types (mental health & learning).

Data Analysis

All of the face-to-face interviews were audio recorded with each participant's permission. The audio recordings were then transcribed manually and each transcript was sent via email to corresponding participants for member checking (Creswell & Miller, 2000). The textual record generated by the single interview conducted via email functioned as a transcript. Four participants chose not to participate in the member checking process or did not respond to requests to verify their transcripts; thus, transcripts of their interviews were used in their original form. This is also true of the interview conducted via email.

Analysis proceeded using a brand of inductive, qualitative content analysis (Merriam, 2009). Transcripts were scrutinized independently by the principal investigator and by a project assistant with extensive experience in qualitative analysis. This project assistant completed an initial open coding phase, noting and highlighting relevant units of meaning presented in the data, before subsequently grouping and collapsing these into preliminary, higher order categories. After revisiting the transcripts to ensure that this initial code tree was consistent with the data, the principal investigator, in tandem with a second project assistant, worked to further

abstract and synthesize the category structure, eliminating redundant categories, collapsing related categories into larger groups, and creating sub-categories as appropriate. The resulting structure was shared with the project team, who suggested additional points of abstraction and synthesis, and was refined accordingly. Finally, the principal investigator re-read the initial transcripts once more, checking the category structure against the data gathered.

Results

Overall, data analysis revealed significant variation existing among stakeholders in terms of both opinion and experience of teaching and learning accessibility. While this speaks simply to the complexity of a large organization such as a university, it also underlines more precisely that individual actors within an organization have the capacity to create change within their institutional contexts, to actively resist such change, or to operate unaware of, uncertain about and/or ambivalent to the very prospect of change. Our initial analysis of the interviews suggested participants' comments about the current accessibility of teaching and learning in this environment could be sorted into a number of themes, including the five described below: attitudes; knowledge; disciplinary features and norms; pedagogical choices and factors; and, institutional practices and characteristics. Within each of these themes, participants' comments revealed both current barriers to accessibility and current factors that foster access and equity. While other themes were also reflected in the data, including ideas related to learning spaces, student adaptations, and cost and time, the five areas described here were selected as especially salient for one of two reasons. Four of these five themes (attitudes; knowledge; pedagogical choices and factors; and institutional practices and characteristics) were reflected in the experiences and perspectives of the vast majority of our participants, each being mentioned by at least 28 of our 32 stakeholders. The final theme described here, disciplinary features and norms, was not as frequently discussed, but seemed essential to include given its striking implications for teaching and learning and its interesting relationships to the existing literature.

Attitudes

Attitudinal barriers are understood here as those beliefs, opinions and views that, ultimately, prevent students with disabilities from participating fully and equitably in the learning experience. As in previous research (e.g., Cook et al., 2009; Riddell et al., 2007; Shevlin, Kenny, & McNeela, 2004; Tinklin et al., 2005a), several negative attitudes were either described or expressed by our participants. For example, individuals in the administrator, instructor, and staff categories (n=4) espoused the idea that accessibility may not be worth the effort or the cost, while participants from the instructor, staff, and student without disabilities groups either argued that accommodations for students with disabilities are unfair to non-disabled others (n=3), or attributed this view to others on campus (n=2). A related attitudinal barrier was the idea that accessibility might detract from or otherwise water-down the learning experience. This particular barrier was identified by participants in the administrator, instructor, staff, and student without disabilities categories. As expressed by an instructor:

If [a teaching strategy] is going to be very helpful to 99% of the students, but it is not universal design, what does that mean for me? ... Does it mean that I have to water everything down, so that I lose a lot of the ... value that I have created? ... I don't know if there is a trade off between the quality of instruction and the accessibility. (Instructor 1)

Another commonly noted attitudinal barrier was the notion that students – with and without disabilities – are self-serving or strategic individuals who manipulate the system. One instructor, one staff member and three students with disabilities reported others expressing this attitude, while two instructors, two staff members and a student without a disability evinced it directly.

[S]ome of them will kind of abuse the system a little bit, and then that reflects, I think, on the system in a negative way; which is unfortunate because most people don't abuse the system. But those ones that do—it casts kind of a suspicion on the whole process. Instructor 2)

[A]t what point are you being accommodating in a way that it should be, and at what point are you, to be frank, being taken advantage of? (Student without disabilities 1)

This notion that students cannot be trusted and that some of them will attempt to take advantage of the accommodation system constitutes a powerful attitudinal barrier to educational accessibility. The expressions of resentment and frustration in the above quotations suggest that this belief may have significant implications for the social climate at the university such that, even if accommodations are provided, *how* they are provided may remain problematic and impinge upon meaningful inclusion and learning experiences for students with disabilities. One participating student with a disability made this point rather directly, noting:

I had a professor tell me that he would give me the notes, but a couple of weeks after the classes ... so I would attend. But you're giving them to me a week before your midterm. That doesn't give me a lot of time to study. I find that that is the attitude – they want to make sure attendance still happens in class, which I can understand. But not every student is going to skip your class with access to notes. (Student with a disability 1)

To the extent that attitudinal barriers such as a presumption of untrustworthiness exist, questionably effective accommodations such as those reported above remain a troubling possibility.

In contrast to these attitudinal barriers, and again echoing existing literature (e.g., Fuller, Healey, Bradley, & Hall, 2004; Jacklin et al., 2007), several of our participants also referred to, or exemplified, attitudes that might be seen as facilitators of accessibility, such as being sensitive to disability and willing to accommodate students. The “flipside” of each of the attitudinal barriers noted above were also found in our data. In opposition to the notion that accessibility may dilute the quality of teaching and learning, some participants in the instructor, staff, and student without disabilities categories expressed the rather different belief that inclusive teaching approaches can enhance learning for *all* students:

[Universal Instructional Design] is designed to make the learning environment and instruction as beneficial for the student as possible through relaying information in as straightforward of a manner as possible for EVERYONE. (Student without disabilities 2)

Likewise, while the opinion that students, as a group, seek to manipulate and take advantage of the system was rather common in our data, a subgroup of instructors, staff, and students with disabilities displayed the opposing belief that some students at least should be trusted and treated as honest, well-meaning individuals.

I don't track whether you're answering your phone or going to the washroom or why you're getting up and going out as long as you do so relatively silently; We're big boys and girls and I'll just trust you to do it for whatever reason you have. (Instructor 3)

In addition, counter to the contention that students attempt to manipulate the accommodations system to their advantage, some participating students with disabilities told stories that underlined a strong desire to *avoid* abusing the system in any way.

[S]ometimes, the night before [a deadline], I will be editing an assignment, tying up some loose ends, and then I'll hit a mental block that's part of my disability, and I literally can't do it. ... [W]hen it comes to writing [the instructor] an email, I personally feel like I'm overstepping—because it is the night before, and even though I have spent the past week and a half to two weeks working on the assignment, its not something I personally like to do. (Student with a disability 2)

While this type of desire to “avoid overstepping” might itself be seen as a potential barrier to accessibility, it nonetheless provides a striking counterpoint to the contention that all students are out to manipulate the system for their own gain.

Knowledge

As in previous research (Cook et al., 2009; Fuller et al., 2004; Tinklin et al., 2005b), a general lack of knowledge about disabilities and differences was a barrier mentioned by individuals across all participant categories. Administrators, instructors, staff members, and a student without disabilities displayed this knowledge gap or attributed it to themselves in their interview comments, while representatives of all five stakeholder groups suggested that others on campus were lacking knowledge in this regard.

[P]rofs sometimes just don't understand. ... Even if you tried to explain things to them, if they... don't necessarily understand where you're coming from, that's a barrier. (Student with a disability 5)

We have no awareness of what the issues might be out there in the population that is going to come in. How do we accommodate unless we know what we are supposed to be accommodating to? (Administrator 1)

In some cases, participants suggested a connection between these knowledge barriers and the kinds of attitudinal barriers described above. The following quotation, for instance, points to the idea that a fundamental lack of understanding of invisible and episodic disabilities might be connected to the opinion that students are untrustworthy people who manipulate the system.

I would like to think that most professors are at least thoughtful about these issues, but my guess is that some don't know, and you know don't understand, and I worry more about students with invisible and episodic conditions, because they are more, they sort of invite that disbelief, right? (Instructor 4)

In this respect, some of our participants at least appeared to agree with the contention that a lack of knowledge of disabilities contributes to and solidifies attitudinal barriers that may impinge on teaching and learning.

Many participants (n=20) (predominantly but not exclusively from the administrator, instructor, and staff categories) noted or expressed a similar lack of knowledge about designing inclusive and accessible learning environments, suggesting that, even if faculty and staff are informed about disabilities, they often do not have a good idea of how to translate this knowledge into inclusive teaching and learning experiences.

I didn't really know what the hell I was supposed to do! Somebody who has difficulty in a classroom... making accommodations for them to hand their work in late or to leave the classroom when they need to is one thing, but really understanding the best way to teach that student is something completely different. And I just don't have the training for that. ... I've taught at all levels – I've taught kindergarten, I've taught high school, I've taught junior high and I've, I've TA'd here at the university; but when it comes to somebody who has a difficulty, uh... (Staff & Student without a disability 1)

The converse of these barriers was also noted as administrators, instructors, staff members, and one student with a disability suggested that some individuals on campus *do* have a strong understanding of disabilities and differences, and that this knowledge contributes positively to the creation of an accessible learning environment.

Some professors have said, "I understand that all disabilities are different, so if you email me the night before, that's perfectly okay." (Student with a disability 2)

Making sure that all levels of ability are accommodated for, and speaking and acting in a manner that is respectful of difference. I think that is just ingrained in us. (Staff 1)

Some of the participants in the administrator, instructor, staff, and student without disabilities categories themselves also demonstrated an awareness and understanding of inclusive design principles and suggested that this knowledge of inclusive design had a positive effect on teaching and learning.

I certainly know of examples within our Faculty ... where there are multiple ways for students to access the material from the course [and] multiple ways of being assessed or evaluated, ... which I think then allows students who are different learners ... to take in the information in different ways, but also to demonstrate their understanding of information. (Administrator 2)

Disciplinary Features and Norms

Another interesting theme that emerged was that the norms and features of the academic discipline itself might constitute potential barriers to access in some cases. For instance, instructors, staff members, students with disabilities, and an administrator noted that some fields have components (for example, visual components or professional practice requirements) that are understood as being essential to the discipline or degree program, but that are simultaneously difficult or potentially impossible to make truly accessible.

As you can imagine, some of our courses are very visual. One of them ... involves creating 3D objects in a computer program, and understanding those. Now that was a very big discussion because to get an engineering degree this was one of the basic skills. If you're a geographer you usually have some cartography, you should know how to read a map – in this case [the student] couldn't do the visualizations. (Staff 2)

Theoretically [my disability] would affect the choice [of degree program] ... because if I wanted to go into science or biology ... I couldn't necessarily do the labs and that sort of thing. (Student with a disability 3)

[T]hroughout our curriculum we have points where there is one-on-one evaluation, so I might observe a student doing [a] mock clinical interview ... I think the social and anxiety issues actually come up a lot, and we can often put in accommodations ... but we often have to have discussions about [it], because we are doing two things at the same time in a professional faculty. We are preparing students for practice, and they have to meet some essential requirements from a professional level, and from an academic level. So we can accommodate, but we also have to think how much can we accommodate before it becomes something different. (Instructor 4)

The issue of perceived disciplinary barriers, which has also been raised in previous research (e.g., Fuller et al., 2004; Riddell et al., 2007; Shevlin et al., 2004; Tinklin et al., 2005a), is especially interesting to consider, as it suggests that – in some cases – accessibility is understood to conflict with elements of disciplinary and academic identities that are seen as fundamental.

At the same time, there were also initial indications in our data that some features and characteristics of certain disciplines might actually contribute to enhancing accessibility more broadly across campus. A faculty member in the Health Sciences, for instance, suggested that the therapeutic background and health care focus of instructors in his/her department allowed these people to “‘get’ disability perhaps a little bit more” than those in other disciplines (Instructor 4). While this type of argument was raised by just two participants (one instructor and one staff member), and is comparatively absent from the extant literature, it did nonetheless provide a striking and suggestive counterpoint to the more commonly noted idea that disciplinary factors can constitute a barrier to access.

Pedagogical Choices and Factors

Our participants also noted several pedagogical barriers to access – that is, elements of course/program design and implementation that prevented students from participating fully and equitably in the learning experience. Insofar as they figure directly and immediately in the educational experience, these pedagogical choices constitute especially important barriers to accessible teaching and learning. As in previous studies (e.g., Fuller et al., 2004; Jacklin et al., 2007; Madriaga et al., 2010), individuals from all five stakeholder categories noted that course materials, from videos without captions, to electronic materials that are not compatible with screen readers, to poorly designed PowerPoint slides, created barriers for some students:

I think you'd be surprised with how many instructors actually handwrite their class lecture notes ... Handwritten notes may or may not work. So for somebody who's blind, a set of handwritten notes provides little or no function whatsoever. For somebody with a visual perceptual learning disability, handwritten notes can be a real problem. (Administrator 3)

[F]or some assignments we require the use of some statistical software ... In that situation we would have to think of some solution, because its clear that some students would not be able to see anything because ... developers of the software don't think about it. (Instructor 5)

Similarly, nearly all of our participants (n=30) noted that particular teaching and learning strategies employed by instructors can pose problems for some students. Strategies that were named as potential barriers included writing on the blackboard, certain kinds of discussion, and lecturing without visual/textual support; these last two strategies were described as barriers by participants in the instructor, student with disabilities and student without disabilities categories, while blackboard usage was named by an administrator and by two students with disabilities. Corroborating and expanding upon findings reported by Fuller et al. (2004), all of the students with disabilities (as well as one instructor) also mentioned group work as a barrier, positioning it as a technique that created both direct obstacles for some students and a context in which attitudinal barriers were likely to surface in problematic ways.

The other thing that I personally find difficult, because I have an anxiety disorder, is that whenever group work is assigned it causes more stress and anxiety and because my anxiety-related symptoms sometimes cause physical symptoms and that's when they spike – as soon as group work is assigned ... I usually end up getting sick and not being able to attend classes, so that's really difficult. (Student with a disability 1)

[I]n group work ... There seems to be either this social stigma, “Oh poor you, you have this going on, you have this issue, I'll just do everything,” or there's this – “Oh they won't do anything so I'll just do it all” and your work is... undervalued, and when you come up with something, people are like “Oh, that's so brilliant, I can't believe you did that!” Its like, “I'm in the same class as you, I've been learning all of the same things as you all semester, I am no less capable than you are, I just have a different obstacle than you”. (Student with a disability 2)

Just as some pedagogical choices were positioned as creating barriers to access, so were others named as factors that contributed to the creation of an accessible learning environment. In contrast to the inaccessible course materials described above, participants in each stakeholder category described cases in which course content was designed with inclusivity in mind.

When designing presentations and slides and multimedia, I developed over the course of years the schemes – the colour schemes – that everybody, the elderly and whoever has some vision problems, will actually be able to read and see the diagrams. (Instructor 5)

In a related vein, the majority of our participants (n=28) also named teaching strategies and choices that they believed to be facilitators of accessibility. As one example, participants in all five stakeholder groups referred to the value of using a variety of pedagogical modalities over the duration of a course, suggesting that this approach allows all students, regardless of their abilities, a wide range of means and opportunities to learn the course material (see also Cook et al., 2009; Fuller et al., 2004). Extending this idea, students with and without disabilities and one instructor, like participants in previous work (Healey et al., 2006; Jacklin et al., 2007), also suggested that the practice of making class notes or slides available is a powerful support for the learning of all students, which also renders the courses in question more accessible to students with disabilities.

My political science prof puts [notes] up before class, about 2 or 3 hours before class so I actually download them onto my computer then I have them up when I go to class, then I add in my thoughts or something that he said that maybe he didn't put in the notes. I find that makes learning way easier. (Student with a disability 1)

Interestingly, most of the students with disabilities who advocated this approach (n=5) noted that many of their professors would not make notes available in this way, making plain

their belief that these instructors were concerned about issues of intellectual property and academic freedom, and also about the potential risk that students would stop attending classes if notes and slides were widely available. As articulated by two students with disabilities:

[T]he biggest thing I find with professors is getting their notes. ... [S]ome professors have said, ... “I don’t give out my notes, my intellectual property and that sort of thing”. ... I understand that but at the same time, like, it’s hard if I have to write everything down during class, it’s hard to pay attention and write everything down at the same time. (Student with a disability 3)

[P]utting notes online – they think students aren’t gonna come to class, and I just feel like if that’s what they believe then they should at least still benefit the students that are going to make that effort to come to class and take the additional notes. (Student with a disability 4)

These contentions echo claims made in previous research (Shevlin et al., 2004; Tinklin et al., 2005b), and were, in fact, corroborated by two of the instructors in our study. These instructors stated emphatically that they were not willing to make class materials available for precisely the reasons students suggested:

I don’t put my notes online for a variety of reasons—that might be useful for some people, but I will not do it. ... I don’t like the idea of someone else owning my lecture notes ... and I also don’t like the surveillance that can happen. I think it’s an infringement of academic freedom to be honest. (Instructor 2)

I don’t use [the University Learning Management System]. I’m actually not a big believer in those things. ... in part because I, I want the students to be in the class, and there’s something that happens in the class; I don’t lecture but we have an experience in the classroom which you cannot recreate at a distance. And thus, I am not trying to enable them to not come to class.... I haven’t really seen the value of that infrastructure. (Instructor 3)

Institutional Practices and Characteristics

Institutional features – that is, the characteristics, processes and procedures of the university as an organizational unit – were also identified frequently as barriers. As in existing work (e.g., Fuller et al., 2004; Jacklin et al., 2007), problems with the accommodations system in place at McMaster were noted by individuals in all five stakeholder categories, as were breakdowns in communication between members of the campus community. Participants described not knowing where to go or who to talk to about accessibility issues on campus, recounted stories in which institutional actors unknowingly undermined accessibility efforts as a result of failures in communication, and expressed frustration about the fact that, as one instructor put it, “this campus likes to have eight thousand departments doing similar things” (Instructor 2).

Problems with training offered by the institution for faculty and staff were also described as barriers (predominantly by administrators, instructors, and staff members). For example, the

online training provided following the implementation of the AODA customer service standard was mentioned with particular disdain.

Mandatory on-line training I don't think is effective. ... [M]y response to the customer service on-line training was, "It is silly", and then what that does is that it makes people not value it, right? ... If you think the training is silly, then you start going down the road thinking this whole thing is silly, which it is not. But the way the training was set up, it didn't feel like training. (Instructor 1)

I thought the module itself was good. It was very well presented, but there was no follow up, and no introduction to it, so it was "Do this, and do it by this date", but we haven't seen anything since...I can't really find fault in the module. I think it was more the way it was communicated, and even what we were expected to take, or what the hope was that we would glean from all of that information, rather than go through it quickly, so you can say that you did it. (Staff 3)

While participants commonly mentioned barriers created by institutional features and practices, some of these individuals also pointed out a number of ways in which procedures and processes in place at McMaster often worked to increase accessibility. Just as failures in institutional communication were described as creating impediments to accessibility in some cases, so too were there examples provided by administrators, instructors, and staff members in which accessibility was seen to be enhanced via successful communication and collaboration across units, departments, and faculties. Participants detailed cases in which departments and faculties worked closely and communicated effectively with student support units and other departments on campus in order to find what one administrator called "ways to meet the unique needs of individual students" (Administrator 2).

Several administrators, instructors and staff members described the positive impact (or potential for positive impact) of existing training opportunities provided for faculty and staff on campus. For example, a small number of administrators and staff (n=4) disagreed with those who suggested that the AODA customer service training module was ineffective and counterproductive:

You know, I, since I've done my AODA training, I think about that a lot more. I try to ask people whether they need my help instead of assuming it. (Staff 4)

At the same time, these participants and others (largely from the administrator, staff and instructor groups) noted a number of additional training opportunities that exist on campus beyond the specific modules emerging from the AODA legislation. The training opportunities mentioned, including workshops, resources, and one-on-one consultations, were framed as opportunities to develop important knowledge and skills that will, ultimately, enhance the accessibility of teaching and learning on campus.

Discussion

This initial investigation has yielded a number of insights into the ways in which a range of participants experience the current accessibility of teaching and learning at one institution.

Participants described both successes and failures in terms of making the educational experience accessible to students with disabilities on our campus, pointing out that, while there are certainly a number of effective and inclusive strategies and procedures in place, there are also a number of areas at which significant barriers still need to be broken down.

Furthermore, the diverse stakeholders with which we spoke did much to indicate the complexity of this issue, underlining that different factors are emphasized by different segments of the population, and that, in some cases, different individuals or groups of people can perceive practices and procedures in widely discrepant ways. While this is not surprising, the specific areas of similarity and difference described by our participants might be taken as an initial indication of some of the many issues and perspectives that need to be negotiated if substantive organizational change is to occur. For instance, while creating additional, meaningful training for educators might help to address knowledge barriers, how might this course of action be reconciled with instructor, administrator, and staff comments that accessibility is not worth the effort or cost? Likewise, how might widespread student demands for increasing access to online notes be counterbalanced with instructors' very real concerns about academic freedom and about the potential for students to take advantage of the system? Such conflicts need to be considered and planned for proactively.

These conflicting claims and perceptions also need to be reconciled with the existing teaching and learning literature. While much research corroborates our student participants' sense that providing class notes can be a valuable learning tool, other studies suggest that this technique can have a negligible or even an adverse affect on student learning (see Kobayashi, 2006 for a review). Similarly, the clear sense in our data that group work and other collaborative learning strategies may create compelling barriers for students with disabilities is at odds with a large body of pedagogical literature demonstrating the efficacy of such techniques (e.g., Yamarik, 2007), and, indeed, with Healey et al.'s (2006) finding that students with disabilities reported *less* difficulty with group work than did their non-disabled peers. These points of distinction are striking, suggesting either that various stakeholders might benefit from exposure to scholarship that contradicts their perspectives, or, more provocatively, that existing pedagogical findings may not always generalize to students with disabilities. Further research in this area is required.

In bringing together a range of perspectives and points of view, our data also emphasize and underline the importance of considering what organizational theorists call the "deep" and "apparent" structures of a system in tandem with one another. Foster-Fishman, Nowell, and Yang (2007) write, "deep structures include the *normative elements* of a system such as the attitudes, values, beliefs, expectations, and tacit assumptions that drive the behavior of its members" (pp. 204-205). The "apparent" level of an organization, on the other hand, "refers to the system's visible elements and can include all that can be observed by others that might explain how and why a system operates as it does", including policies and procedures, facilities, available resources, methods of work and existing power structures (ibid, p. 205).

In this study, many of the barriers and facilitators noted by our participants, such as elements of the accommodation system and the traditional methods of teaching in a course or discipline, might be understood to be elements of the apparent organization of the university. At the same time, however, our data also document a number of deep-seated patterns of thought and belief that contribute to and militate against educational accessibility on our campus and beyond. In this respect, our findings encourage the development of change strategies that will target foundational attitudinal issues in addition to more obvious, and perhaps easier to address,

apparent factors. As Foster-Fishman, Nowell, and Yang (2007) suggest, “only by altering the underlying beliefs and values that direct daily practices and behaviors will significant system change efforts take hold and be sustained over time” (p. 205). Without shifts in the sorts of attitudinal barriers described here, for instance, change connected to more “material” issues such as time, resources and pedagogical practices remains unlikely. This is not a novel contention, but it is important to consider in light of the AODA legislation, which promises sweeping changes and might be faulted for failing to address underlying attitudinal issues sufficiently.

Perhaps most interestingly, this work suggests that one potentially effective way to begin working towards incremental change on both the apparent and deep levels of a university system is to conduct and disseminate localized research about the accessibility of the educational environment. In addition to contributing to the burgeoning scholarship in this field, such research can also have a number of demonstrable effects in terms of working towards effective organizational change. In our case, we believe that the study outlined here has not only confirmed and/or uncovered the existence of many barriers to and facilitators of accessible teaching and learning, and filled a gap in the literature by bringing together the diverse perspectives of numerous stakeholders, but has also helped to begin shifting individual perspectives and teaching and learning practices at McMaster in meaningful and important ways. For example, the very process of asking questions of research participants can contribute significantly to change on an individual level. One of our participants pointed to this fact in discussing the ways in which s/he attempts to engender change, though admittedly in a non-research context. This individual said, “By my asking [instructors] questions, they come to a realization that they could do things just slightly different [and make] it more accessible for everybody” (Administrator 3). Simply asking people to consider the relative accessibility of their practices, that is, often prompts them to striking realizations that are more persuasive than recommendations imposed on them by others. Indeed, similar kinds of realizations could often be seen taking place over the course of our interviews. In discussing an attempt to make materials accessible, for instance, a staff participant from the Faculty of Health Sciences said, “Now that you mention it, I have to say I haven’t given as much thought as I possibly could have to making [a document] more accessible...” (Staff 1).

In addition to planting the seeds of change in the mind of interviewees in this manner, the act of asking questions also has the potential to lead to shifts in the thinking and practices of the individuals doing the questioning. This has certainly been the case for many members of our research team, who have reported changes to their everyday activities and understandings as a result of being involved with this project. One of our research assistants, for example, stated, “I am noticing myself make small changes to the way in which I present in order to make it more accessible” (personal communication). S/he goes on to say, “I am also more aware of how difficult it is to make materials accessible and so sympathize with responses from participants, particularly in the instructor category” (ibid). In this case, helping to conduct localized research both transformed individual teaching and learning practices towards accessibility and improved understanding and acceptance of other perspectives (Foster-Fishman, Nowell, & Yang, 2007).

Importantly, small scale, individual changes of this nature also have the potential to blossom into larger scale effects by percolating throughout an institution. As one of our participants described, change ultimately requires information about and endorsement of accessibility to come from multiple sources rather than from just one department. This person stated, “If an instructor employs [an accessible strategy] and one of their colleagues is resistant, then maybe they can discuss how great this was and learn from other people’s experience. That’s

often a very motivating factor” (Administrator 3). Again, this idea underlines the potential significance of securing a diverse research team and a diverse group of participants for this type of work. Direct participation in this kind of study can set the stage for change for a broad spectrum of people immediately involved, who might then carry their experiences and activities back to colleagues and others in diverse areas across campus, thus facilitating further change.

With all this in mind, one important insight arising from this work is a sense of the transformative potential of having conversations about accessible teaching and learning with a variety of different stakeholders on university campuses. Based on this finding, we recommend that institutions and individuals interested in enhancing educational accessibility not only conduct localized research of the sort described in this paper, but also provide venues such as communities of practice or open forums at which questions and experiences relating to accessible teaching and learning might be exchanged and discussed. The change to result from such processes is not assured, nor is it rapid or sweeping, but given the complex and multifaceted set of barriers and facilitators involved, this small scale, accumulating effect may be the best we can hope for. There are no simple solutions for obstacles to accessibility, and assuming that there are denies the complexity of the situation and will lead to momentary, surface level change in apparent structures at best. Instead, we need to look to the broad range of people and perspectives in our institutions and to attempt to enumerate and subsequently address the overlapping barriers and facilitators they experience. Often, this very process will not only generate data to fuel large scale advocacy programs, but can also stimulate compelling shifts on an individual level.

Limitations

This work did not measure student learning directly, focusing instead on stakeholder perceptions and experiences. Given that our recruitment procedures required self-selection, our data may also be subject to a volunteer bias (Thompson, 1999). Our interviewees represent a small portion of the university community and thus our results may not generalize to the population as a whole. The large majority of our interviewees were female, and far more undergraduate students chose to participate than did graduate students. The underrepresentation of students with mental health disabilities is also a limitation, particularly since the disabilities most commonly reported at our campus Disability Services office are those pertaining to mental health (Centre for Student Development, 2011). While we intend to address some of these shortcomings in subsequent phases of this research, we believe that the richness and detail of our present data contribute significantly to an understanding of the experiences of a broad group of stakeholders, which is far more important for a qualitative study than conventional generalizability in any case (Thompson, 1999).

Conclusion and Future Directions

The results from this qualitative study suggest a number of areas in which both barriers to and facilitators of accessibility exist, including: attitudes; knowledge; disciplinary features; pedagogical choices; and, institutional practices. Enacting change related to teaching and learning accessibility is challenging and may be best accomplished through addressing the apparent and deep levels of organization within our university. We intend to continue with this study in order to enhance our data further, to address some of the limitations noted above and to

build on the insights arising from this initial work. We have recently recruited and interviewed an additional group of students with disabilities, with the intent of adding to our pool of graduate student participants and students with mental health concerns. Subsequent phases of the research will gather participants' perspectives (through a journaling activity and through follow up interviews) about how, if at all, things are changing in the wake of the implementation of the harmonized AODA standard. Ideally, future work will consider how to measure directly the impact of AODA legislation on student learning. By such means, we will continue the processes of exploration and change that we have begun in this first phase and also consider more directly the extent to which the AODA legislation is producing demonstrable changes it promises at McMaster.

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