Teaching Students with Disabilities in Post-secondary Landscapes: Navigating Elements of Inclusion, Differentiation, Universal Design for Learning, and Technology

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Abstract:

High school graduates with disabilities—many now accustomed to assistive technology and learning accommodations—are moving on to higher education, comprising approximately 10% of the student body. Although post-secondary classroom demographics are becoming increasingly diverse in terms of abilities and learning needs, educators' methods of teaching are not keeping pace. They often have good intentions to sustain the use of technology in the classroom, but, over time, its use decreases because of waning commitments of time and to training. There is little research revealing how educators navigate their changing roles within these classrooms and how they embed inclusion, differentiated instruction, universal designs for learning, and technology to address not just the learning needs of students with disabilities, but of all learners. This article reports on these issues, arguing the importance of seeking professional development in teaching methods and narrowing the gap between desired and actual use of effective tools to engage learners who need learning accommodations at the post-secondary level.

Key Words:

Universal Design for Learning (UDL), post-secondary, disabilities, teaching, learning, higher education, inclusion, technology.

Introduction

The cornerstone of today's post-secondary classroom is diversity in terms of student population. Post-secondary educators will inevitably encounter a myriad of students in their practice — each with unique learning strengths and challenges. As a microcosm of society at large, the students in our face-to-face and virtual campuses and classroom spaces present a range of challenges, both physical and otherwise, that impact their educative progress, and in turn, our pedagogy and instructional practice. Some of these students have been diagnosed with a disability.

While recognizing the complexity inherent in defining such a multi-dimensional phenomenon, we use the World Health Organization's definition, also used by Human Resources and Skills Development Canada (HRSD, 2013):

> *Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. (p. 2)*

Specifically, a disability emerges when the individual's ways of thinking, moving, and interacting are limited because of particular barriers in the physical surroundings and/or societal structures. Some students with disabilities graduate from secondary education having been provided with learning accommodations and adaptations. An *accommodation* involves minor changes that assist a student's functioning in the classroom by offering alternate ways of handling a task; for example, providing photocopied notes to a student with muscular dystrophy who has difficulty with writing. "The most common types of accommodations provided by postsecondary institutions include extended time on exams, alternative exam formats, and assistance with note-taking, study skills, and learning strategies" (Lombardi, Murray, & Gerdes, 2011, p. 250). An *adaptation* reflects moderate changes to instructional methods or to instruction or student materials that enable students to learn or do something they would not otherwise be able to easily accomplish. For example, educators who use visual aids when facilitating a lesson have adapted the learning process to include multiple intelligences.

In a post-secondary setting, some accommodations and adaptations are not always accepted or accessible to students with disabilities by the very nature of the required task. Furthermore, there is little research revealing how educators navigate their own knowledge about incorporating pedagogical practices that address the diversity of learning needs within these classrooms. The purpose of this article is to briefly explore student disability in higher education and identify some of the issues facing post-secondary educators as they work to accommodate the learning needs of their students. With the intent of raising awareness and motivating further discussion, mention is made to how differentiated instruction and universal design for learning and technology can be tools

for educators to implement in their planning and delivery of course content. We do this based on Kell's (2012) research on student self-advocacy and its role in the academic success of students with disabilities in post-secondary education contexts and also from our experiences as special education teachers, teacher educators, and advocates for inclusive learning opportunities.

Who Are In Our Classrooms?

As more children are diagnosed with disabilities and receive appropriate academic accommodations in elementary and secondary school, the number of students with disabilities attending post-secondary institutions is increasing (HRSD, 2013; Katsiyannis, Zhang, Landmark, & Reber, 2009; Russell & Demko, 2005; U.S. Department of Education's National Centre for Educational Statistics, 2006). Since 2001, education rates of Canadian individuals with disabilities have also increased by 12.3%, with 74.6% of working-age adults with disabilities obtaining a high school diploma or higher educational certification (HRSD, 2013).

According to Orr and Bachman Hammig (2009), "one out of every 11 postsecondary undergraduates report having a disability" (p. 181). Among the more common disabilities that students in post-secondary contexts have self-disclosed are learning disabilities, accounting for approximately 46–61% (Orr & Bachman Hammig, 2009). Other disabilities include, but are not limited to, autism spectrum disorder, mental health conditions, and medical disorders (see Figure 1).

Figure 1.   A sample of the range of disabilities post-secondary students have disclosed (Kell, 2012; Orr & Bachman Hammig, 2009).

The challenge of accommodating students' learning needs in terms of appropriate accommodations is made even more complex by the comorbidity of some disabilities.

On post-secondary campuses, various planned and structured activities are designed to promote social inclusion and friendship development, and students without disabilities are supported in welcoming students who have disabilities. For many individuals transitioning to post-secondary institutions, the natural inclination is want to fit in; to some extent, this is possible. But sometimes, even when a mildly visible disability is present, a student is often not seen as "normal" compared to peers in the classroom or other campus settings, whether it be, for example, because of assistive devices used during class or an alternate test location.

Further complications arise when students are expected to self-identify and provide recent medical documentation of their disability and the recommended accommodations required for academic success. For many students with disabilities, this will be the first time they are responsible for the disclosure of their disability and explaining their academic needs to others; until this point, they have had family or teachers speak on their behalf and may have never been their own advocates. Often it is not until students receive results from their first assignments and tests that they are motivated to disclose their disabilities and seek support from academic specialists and their course instructors. They may even be reluctant to employ technology or request accommodations for fear of standing out as "different."

Research results from Lynch and Gussel (1996) confirmed students' lack of training in self-advocacy skills upon entering post-secondary study. Most respondents stated that they struggled with how to approach educators, how to describe their learning style and how to effectively put forth their academic needs in a way that educators understood. More recently, Orr and Bachman Hammig (2009) reported a connection between students' willingness to seek assistance and their perceptions of faculty support. In fact, educators may not be aware there are students in their classes who may require accommodations if those students choose not to disclose their disability, and they may also lack the knowledge of how to implement recommended accommodations into their existing teaching practice.

Hearing the Voices of Students with Disabilities

Recent research conducted by Kell (2012) on student self-advocacy revealed the challenges some students with disabilities have encountered on one post-secondary campus. We present a sample of results here in order to reveal a student perspective of challenges in learning with a disability and in navigating the post-secondary institutional milieu. Their words reveal how their lack of communication, confidence, and self-advocacy manifests in their attitudes and interactions with educators and other institutional advisors.

One participant acknowledged a fear of how to approach professors, stating:

I didn't know what to say to them. I didn't want them to get mad at me because I heard that you had to be very formal with them.

Two other participants also faced challenges in dealing with faculty, especially in relation to acceptance and approachability. Nancy[1] expressed her frustrations in dealing with faculty in the beginning of her academic career:

Some professors treated me like I was globally delayed and kind of ignored me because of my learning disability and I was older and I was a woman.

Lori discussed mixed reviews from faculty:

The educators here are sometimes very accepting of it and other times they are like you have to fight for everything and that is really annoying.

Ruth had a similar experience as Lori's:

In high school, teachers are more approachable. Some instructors … are not approachable; some of them are.

Lori felt it was because of her disability that she was able to have more contact with her instructors. She noted how she made "sure [to] see [her instructors] once a week," but constantly had to fight for accommodations:

There is also that aspect that you do have to fight for what you want and need. Especially older instructors who …don't understand how to help you or understand what a learning disability is. Sometimes you end up getting in a big argument with them because they want it one way but that is just not your learning style. …if I was to go to the instructor and have a verbal test my marks would be a lot higher.

Both Nancy and Lori were frustrated by the amount of print they faced daily. Nancy noted:

Everything is in print. …Every time I needed help or wanted to ask a question or get information, everybody presented me with print. And I felt that was overwhelming and frustrating, and I didn't want to keep telling everyone all the time, just talk to me.

For Nancy, the process of developing as a learner was a difficult one because of her need to develop and test new learning strategies that worked with courses that were delivered and assessed differently compared to her experience in secondary school. She was quite critical of the education system:

[It] does not support the students; they want the students to meet the needs of the system, and it should be the other way around. I think all learning styles should be the instructor's responsibility and the school's responsibility to help them figure out what they need to promote their learning.

Ruth needed technology in order to navigate her post-secondary landscape:

I need a computer to define the knowledge itself and break it down. I use Kurzweil or an online dictionary or anything that will break the material down. Drawing it out if I have to. Even if it is not in words. Picture format. Paper, graphs.

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[1] All participant names in Kell (2012) are pseudonyms.

I think that's about it and sometimes a middle person. Someone else to explain it if I can't do it.

The perspectives presented above reveal how important it is for students to feel comfortable and confident in disclosing their disabilities and, importantly, to communicate with their course instructors about what is needed for their academic success. It also provides insight into implications for post-secondary educators' pedagogical practices.

Implications for Practice

Navigating the growing diversities in students' ways of learning can be a challenge for some post-secondary educators, many whom have not had the benefit of learning instructional strategies for students with disabilities during their own trajectories to their academic positions (Muller, 2006). In a review of the literature, Lombardi et al. (2011) found research to suggest "that faculty generally endorse positive attitudes towards students with disabilities, including a willingness to provide accommodations, but often report feeling underprepared to provide such supports" (p. 252).

Although educators remain a crucial component in fostering an inclusive learning environment, real student engagement rests on a multi-partite structure involving the synchronicity of several moving pieces (see Figure 2).
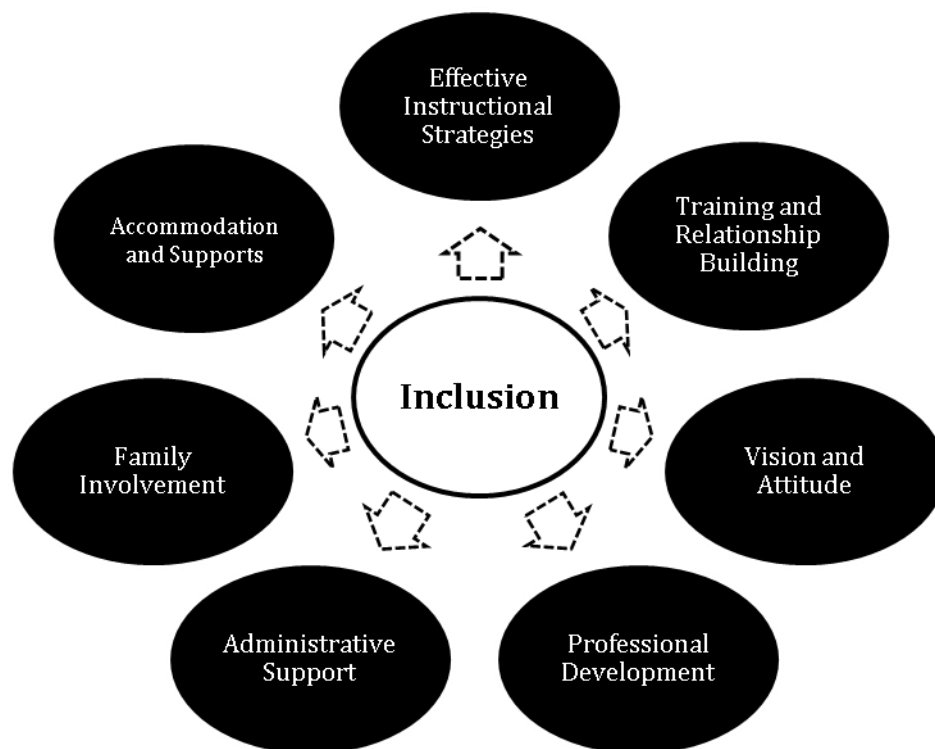

Figure 2. The components required for effective inclusion at the post-secondary level

Effective inclusion involves these multiple components working in tandem, but how smoothly these components work together is dependent on shared responsibilities for students' academic success. Two common components — universal design for learning

(Effective Instructional Strategies) and assistive technology for learning (Accommodations and Supports) — are explained briefly in order to contextualize implications for pedagogical practice and to stimulate further reading and discovery.

Universal Design for Learning

Universal design for learning (UDL) has its roots in architecture as an approach to the design of products and learning environments to be usable by as many people as possible, regardless of age, ability, or situation. The classic example of UDL is the practice of integrating curb cuts at crosswalks. The sloped path is easier for an individual with mobility impairment to navigate, but it can benefit all sidewalk users too.

In an educational context, UDL involves critically examining courses, texts, schedules, and other aspects of teaching and learning, calling for multiple means of representation to give students various ways of acquiring information and knowledge; multiple means of expression to provide students alternatives for demonstrating what they know; and multiple means of engagement to tap into students' interests, offer appropriate challenges, and increase motivation (CAST, 2008). By increasing student choice and making connections with students' prior knowledge, student motivation to participate and to learn is also increased (Lombardi et al., 2011; Orr & Bachman Hammig, 2009).

Assistive Technology for Learning

Assistive technology for learning (ATL) is one important component of UDL and is directly related to the delivery of learning outcomes in the student's program of study. ATL refers to the devices, media and services used by students with physical, sensory, cognitive, speech, learning or behavioural disabilities to actively engage in learning and to achieve their individual learning goals (Alberta Education, 2006). As a subset of a broad range of technologies that enhance students' learning, ATL assists students in performing functions that would otherwise be difficult or impossible to accomplish independently.

What the student requests to use is dependent on the student's abilities and needs and the resources available to meet those abilities and needs. As one example, a discussion forum held in a learning management system rather than in class can be a safer environment for a student with social communication and social participation issues. The student can take the time to think critically about the content to include in the response, craft its content carefully, and then send it out to all participants. In this way, the student is not forced to think on the spot.

Arguably, all technology can be described as assistive technology — it assists us in doing something better, easier or faster. Like other technologies, ATL ranges from simple tools to complex systems. It could be as simple as a pencil grip for writing or as complex as a computer with screen reading software for reading and learning. "For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible. (Radabaugh, as cited in University of Alberta, n.d., p. 1). The issue is that many educators in post-secondary contexts are not familiar with the tools many students with disabilities require to be successful, nor how to design learning

experiences that incorporate not only technology, but also other ways of teaching and representing learning. By coupling differentiated instruction with a focus on UDL and an appropriate integration of technology, it is possible that only a small minority of students will need accommodations or adaptations.

Final Thoughts

The current reality is that enrolment in post-secondary institutions is becoming increasingly diverse as the number of individuals with disabilities, both diagnosed and undiagnosed, continues to rise. In academic settings, inclusion must be broadly construed to foster open communication with the educator about the student's academic progress and any accommodations needed. It is incumbent upon those involved in educational settings to recognize disabilities and to provide an optimal environment to maximize student engagement.

An inclusive lens requires educators to transform their content and delivery practices with a focus on student-based pedagogy that meets the needs of students with differing interests, learning profiles, and levels of functioning (Bonk, 2008). Further, this requires a cooperative learning environment that encourages communication with the best interests of the student in mind while maintaining the academic rigor of the course. Students need to be strong self-advocates, and institutions and its educators need to accept responsibility for providing inclusive learning environments. Institutional policy should be written to promote awareness, advocacy, and learning partnerships among students with disabilities and the whole of the post-secondary community.

Educators' commitment of time to the process and their willingness to embrace change was linked to the amount of training they received (Vannatta & Fordham, 2004). Technology is only a tool for learning, not a guaranteed solution. Additionally, "Most are passive about seeking professional development in technology or finding time to learn new strategies and tools. A major gap exists between…desired use versus actual use" (Yerrick, 2010, p. 4). Educators often have good intentions to sustain the use of technology in the classroom, but, over time, its use decreases. As Orr and Bachman Hammig (2009) argued, "institutional support is essential for pedagogical improvement. Universities need to offer opportunities for faculty improvement with regard to [disability instruction] techniques. More-over, effective implementation of course enhancement strategies will require some degree of institutional change" (p. 194).

Using effective instructional strategies, educators can meet the needs of post-secondary students, yet those educators require the knowledge and skills needed to select and adapt curricula and pedagogical methods according to individual student needs. A missing piece of Kell's (2012) research was how educators change their pedagogical practice to create educative spaces for those who require accommodations and adaptations. Further study into the ways in which educators navigate the changing technological and pedagogical post-secondary landscapes is warranted. Encouraging student self-advocacy, embedding technology into effective pedagogical practice, and incorporating universal designs for learning can address not just the learning needs of students with exceptionalities, but of all learners. More research to inform practice at the post-secondary level is needed.

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