Supporting Faculty in Transforming the Online Environment to Accommodate the Needs of Students with Disabilities

B. Lynn Hutchings, Ph.D., MFA[1]; Erin O'Hora, Ph.D.[2]; Terri Peters, Ph.D.[3]; Patricia Richards, ABD[4]; Christine S. Fryer, Ed.D.[5]; and Helen Battisti, Ph.D.[6]

Abstract

Background: This study was implemented following recent court cases that alleged universities violated antidiscrimination laws by failing to provide closed captioning in their online courses [1]. We examined faculty perceptions of their participation in a year-long program designed to increase their knowledge of teaching online, with a primary focus on accessibility of web content for students with disabilities.
Objective: To determine faculty training needs to effectively accommodate the needs of students with disabilities
Design: Eight full-time Marywood University faculty participated in online training workshops on best practice for online teaching (provided by the Online Learning Consortium). After completing all workshops, participants presented a panel discussion available to all university faculty. Program participants served as peer mentors to colleagues who do or expect to teach online courses. After the conclusion of the panel presentation, individual interviews with each of the eight participants were conducted. Participants responded to open-ended questions related to: (1) Online course design related to accessibility and student engagement; (2) Students' learning outcomes; (3) Characteristics of effective online instructors; (4) University support for online faculty; (5) Effectiveness of training on awareness of the educational needs of students with disabilities; (6) New information; and (7) Desired continuing education about online courses. Responses were audio recorded and transcribed verbatim. Data were analyzed using a constant comparison method [2] to identify common themes.
Results: Faculty reported limited experience with students with disabilities in their online classes. Some faculty may have taught students with non-documented disabilities and been unaware of the students' disability-related needs. Prior to participating in the workshops, faculty also reported limited awareness of teaching technologies and other online tools available to increase their effectiveness in teaching students with disabilities. After workshop participation, faculty reported increased knowledge of technologies, methods and techniques to help students with disabilities achieve better learning outcomes in online courses.
Conclusion: Faculty training is effective in raising awareness and increasing knowledge about designing and implementing online courses for students with disabilities using available technologies, methods and tools.
Keywords: education, new technologies, e-learning, students with disabilities

Introduction

Legislative changes, technological advances, and viewing disability from an inclusive, diversity perspective have enabled students with disabilities to enroll in post-secondary education in increasing numbers [3,4]. Universal Design for Instruction of Learning (UDI or UDL) reflects the evolving societal effort toward inclusion of diversity [5]. Adopting UDI principles in order to create online course content supports both students with disabilities, and students who are increasingly using mobile devices to connect to campus and to each other [6]. Applying these principles to post-secondary curriculum provides tools that address disability access by removing barriers and promoting engagement, resulting in increased learning for all students [5].

Students, including those with disabilities, are finding online learning a viable option to address learner variability [7]. UDL provides a blueprint for creating instructional goals, methods, materials, and assessments that have the flexibility to respond to individual needs [8].

Faculty members who have incorporated UDL within their programs often utilize online tools and

practices, such as holding virtual meetings, providing audio and video files along with written transcripts and accepting assignments in a variety of formats. This encourages students to grasp key concepts while absorbing this new information independently [9]. Finally, equal access for students with disabilities is required by the Americans with Disabilities Act of 1990. Advocates for the deaf recently filed federal lawsuits against Harvard University and Massachusetts Institute of Technology saying both universities violated antidiscrimination laws by failing to provide closed captioning in their online lectures, courses, podcasts and other educational materials [1], underscoring the immediate need for colleges and universities to make online courses accessible to all students.

The Marywood University Office of Disability Services surveyed Marywood faculty in February 2015 to assess their need for training and support. Results indicated that faculty self-reported low levels of preparedness in helping students with assistive technology and an overall need for additional training to appropriately accommodate students who have disabilities and/or accommodation in online portions of classes. In response to this need, Marywood University implemented a two-year, online training, funded by a grant from the Philadelphia Foundation's Charp-Wiggins fund, to support faculty teaching students with disabilities in online classes. Now, at the end of its first year, this paper reports on the outcomes to date as assessed during individual, face-to-face interviews.

Methods

The purpose of this study was to investigate changes in faculty awareness and understanding of online instructional needs of students with disabilities after participation in an online training program, and to explore the self-reported impact of faculty support for online teaching of students with disabilities. The program (intervention) consisted of online workshops provided by the Online Learning Consortium. Twenty faculty members were self-selected or identified by their Deans to participate in the program. Eight faculty were selected to participate in six workshops during the 2015-16 academic year, and twelve additional faculty will participate during the 2016-17 academic year. All faculty participating in the online workshops are required to serve as peer mentors on the topics they studied through the program, and to participate in a panel presentation, open to all University faculty, discussing online learning tools.

After participating faculty completed the online workshops and shared their experience during the panel presentation, the researchers conducted semi-structured in-person interviews with each of the participating individuals. Interviews were digitally recorded. Respondents were asked about their prior experience teaching students with disabilities in online environments. After describing the tools and techniques they found most useful and planned to implement, participants also detailed how changes could be used to support accessibility, promote learner engagement, and improve student outcomes. They were also queried about the efficacy of the training and their ongoing instructional needs.

The interviews were transcribed verbatim, and coded to reflect recurring themes and ongoing threads. The researchers shared perspectives to ensure comprehensive and reliable theme documentation, as well as consistency in interpretation.

Results

Five major themes emerged from the interviews. First, faculty reported minimal experience with, and awareness of, students with disabilities. Most participants were unsure of how many online students actually had disabilities. Participants noted that some students had documented disabilities and had reported them through the University's Office of Disability Services in order to request reasonable accommodation. Other students revealed a disability in conversation with the instructor. Still others may have had an undocumented disability. "[I] definitely have to set up something that will make a student feel comfortable enough to state they have some type of disability so that I can be more accommodating," one respondent observed.

Second, interviewees observed an association between level of student comfort and learning outcomes. A respondent noted that, "One of the themes that was threaded throughout the workshops … was keeping your students engaged so they don't feel disconnected… having students feel more comfortable taking online courses as a result." Related to this second theme, respondents repeatedly stated that more information does not always translate into improved outcomes. "I've learned that more is not necessarily better, so I think eliminating some of the things that I thought would be added resources for the students has helped clarify and gotten rid of things that have gotten in the way or distracted them," observed one respondent. Third, course design that incorporates segments or "chunks" of relevant

content helps students maintain focus on specific topics or areas of study within a course, allowing them to more fully engage with the material. Further, segmenting the course content appeared to enhance student ability to manage time effectively, and lessened the temptation to complete course assignments in advance. Fourth, adding personalized feedback between sections helped provide students with individualized direction. Fifth, participants stated that variance in the types of assignments and details of assignments have a strong effect on student expression and academic success. "…you have to give people the opportunity to learn differently and … there has to be a diverse array of assignments where students can be successful," one interviewee observed. Participants also noted a perceived association between the inclusion of group projects and enhanced student engagement.

All faculty respondents reported learning about methods, techniques and technologies that were new to them. Participants welcomed the opportunity to continue learning more about online course design, particularly for students with disabilities. They agreed that flexibility and diversity among assignment types allow students to express themselves using the skill sets that best reflect their abilities. Faculty view the involvement of online course delivery experts as a benefit and cited a need for input from instructional designers.

Finally, faculty unanimously expressed gratitude for the opportunity to participate in the program, and felt that it was beneficial to their online teaching, as well as their general teaching.

Discussion

Most participants reported limited or no known experience with students with disabilities when teaching online courses. Following training, faculty acknowledged that they may have taught students with non-documented disabilities of which the faculty were unaware, which is consistent with experiences of other higher education instructors [5,10]. Research shows that students with specific disabilities most often have learning disabilities or mental illness/emotional disabilities [5], which may be less visible disabilities to instructors, particularly in online courses [10]. Most participants were initially unaware of the scope of assistive technologies, methods and techniques to assist students with disabilities in helping them achieve maximum learning outcomes with online courses, and all participants expressed an interest in continuing training. These technologies and methods prove to be crucial in that many students with disabilities do rely on similar tools [11]. Participating faculty reported increased awareness in their role of retaining students with disabilities by enhancing student engagement and improving accessibility. Support services and inclusive environments have been associated with higher graduation rates for students with disabilities [5, 10].

Although little research exists on disability-focused training as related to changes in faculty perceptions and attitudes, previous studies correlate faculty support using disability-related training with more positive attitudes toward interacting with students with disabilities [9]. Similarly, faculty who participated in this study reported gratitude for the opportunity to learn more about online course design for students with disabilities and planned specific changes to their online course design and delivery in order to improve accessibility and student engagement for all students.

Limitations

This study includes some limitations which must be noted. The sample of participants is small and was gathered from one university. Faculty who participated in the disability-themed training were appointed to the role by a superior and/or volunteered to participate. Therefore, the possibility exists that faculty with positive attitudes in accessible online instruction were more likely to become involved. Another limitation is that all data were collected through participant self-reporting, which is subject to inaccuracy at times. Additionally, data were gathered shortly after participants completed training. Participants' remarks and attitudes may or may not be predictive of behaviors and attitudes in the future. For this reason, additional research is recommended on the short- and long-term benefits of faculty training for online instruction of students with disabilities.

Implications and recommendations

It is beneficial for researchers to continue to examine several elements related to online instruction of students with disabilities, including: the effectiveness of various types of faculty training; retention rates and learning outcomes of students with disabilities who received online instruction from faculty who have received disability-themed training versus faculty who have not; longitudinal recall by faculty of major themes, methods, and techniques related to online instruction of students with disabilities; faculty perceptions of their effectiveness as an online instructor both pre- and post-training; and faculty

use of assistive technologies both pre- and post-training. Online instruction remains an emerging field and is a challenging endeavor based on increased enrollment and increased diversity among students.

Conclusion

Faculty training is effective in raising awareness about designing and implementing online courses for students with disabilities using available assistive technologies, pedagogical methods and online course design techniques. Further, by applying best practices of universal design in the education of all students, the potential to stigmatize and segregate students with disabilities is decreased [11]. Faculty support in teaching online courses for students with disabilities is associated with more positive attitudes toward interacting with students with disabilities and higher levels of faculty satisfaction with online instruction.

References

[1] Lewin, T. (2015). Harvard and M.I.T. Are Sued Over Lack of Closed Captions. New York Times, 2015.
[2] Miles, M. B., Huberman, A. M., & Saldana, J. "Qualitative Data Analysis: A Methods Sourcebook (3rd ed.)," London, Sage, 2014.
[3] Scott, S., Mcguire, J., & Shaw, S. "Universal Design for Instruction – A New Paradigm for Adult Instruction in Postsecondary Education," Remedial and Special Education, 2003, 369-379.
[4] Pollock, W. "The Impact of On-Line Training on College Faculty Atitudes and Knowledge of Students with Disabilities," Doctoral Dissertation, Old Dominion University.
[5] Dell, C. A., Dell, T. F., & Blackwell, T. L. "Applying Universal Design for Learning in Online Courses: Pedagogical and Practical Considerations," Journal of Educators Online, 2015, 166-192.
[6] Tobin, T. "Increase Online Student Retention with Universal Design for Learning," The Quarterly Review of Distance Education, 2014, 13-24.
[7] Smith, S. J., & Basham, J. D. "Designing online learning opportunities for students with disabilities," Teaching Exceptional Children, 2014, 127-137.
[8] Rodesiler, C. A., McGuire, J. M. "Ideas in Practice: Professional Development to Promote Universal Design for Instruction," Journal of Developmental Education, 2015, 24-31.
[9] Ratliffe, K., Peter, J., Rao, K., & Skouge, J. R. "Navigating the currents of change: Technology, inclusion, and access for people with disabilities in the Pacific," Information Technology for Development, 2012, 209-225.
[10] Higbee, J. L., Katz, R. E., & Schultz, J. L. "Disability in Higher Education: Redefining Mainstreaming," Journal of Diversity Management, 2010.
[11] Coombs, N. "Making Online Teaching Accessible: Inclusive Course Design for Students with Disabilities," PB Printing, 2010.

_____

[1]*Marywood University, United States, hutchings@marywood.edu*

[2]*Marywood University, United States, eohora@marywood.edu,*

[3]*Marywood University, United States, peters@marywood.edu*

[4]*Marywood University, United States, triciarichards@maryu.marywood.edu*

[5]*Marywood University, United States, csfryer@marywood.edu*

[6]*Marywood University, United States, battisti@marywood.edu*