Universal Design in Postsecondary Education: A Review of the Literature

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Introduction

Universal Design frameworks are being increasingly utilized in postsecondary environments as more students with disabilities are attending institutions of higher learning (Scott, Thoma, Puglia, Temple, & D'Aguilar, 2017). However, the body of research investigating its effectiveness in postsecondary education is small. Roberts, Brown, Park, and Cook (2011) conducted a systematic review of the literature on the use of Universal Design for Instruction (an adaptation of Universal Design) in postsecondary settings but did not specifically look at outcomes for students with disabilities. Therefore, a systematic review of the literature was conducted both to update the field on current practices as well as to examine the effectiveness of Universal Design in improving outcomes for students with disabilities.

Research Questions

1. What is the impact of the application of Universal Design principles in postsecondary education on outcomes for students with disabilities?

2. Are there distinct differences between Universal Design frameworks in outcomes for students with disabilities in postsecondary education?

UNIVERSAL DESIGN
Making design accessible to everyone in society

References

Roberts, K. D., Park, H. J., Brown, S., & Cook, B. (2011). Universal design for instruction in postsecondary education: A systematic review of empirically based articles. *Journal of Postsecondary Education and Disability, 24*, 5–15.

Scott, L. A., Thoma, C. A., Puglia, L., Temple, P., & D'Aguilar, A. (2017). Implementing a UDL framework: A study of current personnel preparation practices. *Intellectual and Developmental Disabilities, 55*, 25-36.

Methods

Inclusion Criteria:
(a) features the use of any Universal Design framework in postsecondary, college, university, or higher education setting
(b) addresses outcomes for students with disabilities
(c) must be published in a peer-reviewed journal dated January 1990 or later

Primary Search Terms:
disab*
autism
attention deficit
ADHD

Secondary Search Terms:
UD
Universal Design

Limiting Terms:
post-secondary
postsecondary
post-school
postschool
college
university
IHE
higher education

Databases Searched:
Academic One File
Academic Search Premier
Business Source Complete
Education Abstracts
Education Research Complete
ERIC
Masterfile Premier
PsycNET
Education Research Complete
Psychology and Behavior Sciences
Vocational and Career Collection

79 articles returned

Secondary Criteria:
Articles must use one of the following methods:
(a) Experimental design
(b) Correlational of descriptive statistical design
(c) Mixed methods design
(d) Qualitative design

21 articles included

Quality Indicator coding using checklists designed by NTACT for:
(a) Experimental research
(b) Correlational research
(c) Qualitative research

11 articles included in analysis

Results

Table 2
Universal Design Literature Review Results

Authors (year)	IV	DV	Sample	Research Design
Dallas, McCarthy & Long (2016)	UD	Composite information recall score	206 students (study 1); 257 students (study 2)	Experimental
Dallas, Upton & Sprong (2016)	UDI	Faculty attitudes toward academic accommodations	381 faculty	Survey
Davies, Shelly & Spooner (2013)	UDL	Student perception of faculty implementation of UDI principles	386 faculty (intervention); 204 faculty (control)	Quasi-experimental
Hartsoe & Barclay (2007)	UDI	Faculty knowledge in the principles of UDI	60 faculty	Survey
Izzo, Murray & Novak (2008)	UDL	Faculty perspective on the use of UDL	Faculty and TAs; 271 (surveys), 92 (focus groups), 98 (study 2)	Mixed methods
Lombardi & Murray (2010)	UD	Faculty attitudes toward disability and inclusive teaching practices	288 faculty	Survey
Lombardi, Murray & Dallas (2013)	UD	Faculty attitudes toward disability and inclusive instruction	381 faculty (university 1) 231 faculty (university 2)	Survey
Lombardi, Murray & Gerdes (2011)	UD	Faculty perceptions of SWD and inclusive instruction based on UD	233 faculty	Survey
Lombardi, Vukovic & Sala-Bars (2015)	UD	Faculty attitudes toward disability-related topics and inclusive teaching practices	231 US faculty, 315 Canadian faculty, 649 Spanish faculty	Survey
Schelly, Davies & Spooner (2011)	UDL	Students' perceptions of faculty implementation of UDL	1,223 students	Survey
West, Novak & Mueller (2016)	UDL	Faculty perceptions of most important components of inclusive instruction on student success	52 faculty	Survey

Implications for Practice

- All studies reported preliminarily positive implications of the use of UD.

- Common themes included the importance of training, the effectiveness of disability awareness, and the importance of administrative support.

- The basic principles of UD may be the driving force of successful implementation as opposed to one specific framework.

- The ITSI (Inclusive Teaching Strategies Inventory) has utility for students, instructors, disability service providers, and administrators in improving implementation of inclusive teaching strategies.

Limitations and Future Directions

- Limitations included lack of rigor in research design, small sample sizes, and lack of high quality evidence.

- More rigorous designs, including experimental and quasi-experimental designs, should be employed in future studies.

- Future studies should examine the differences in structure and implementation of UD frameworks to determine whether one framework has more efficacy over others.

- Future studies should entertain all perspectives, including those of students, instructors, disability service providers, and administrators.