



More Information on the Research in Disabilities Education Synthesis Project is available at: <http://oeie.ksu.edu/rde-sp/>

"This program has been a great resource not purely in terms of research funding but primarily in terms of creating a community of researchers focused on supporting the needs of students with disabilities."

RDE Principle Investigator

Research in Disabilities Education Synthesis Project (RDE-SP).

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**Kansas State University
College of Education**



Students with disabilities in STEM education

Lessons Learned:

A Decade of NSF Research Funding

Research in Disabilities Education Program

[2001-2011]

The Research in Disabilities Education Synthesis Project (RDE-SP) looked at a decade in NSF RDE studies to determine common challenges and their solutions, best practices and the lessons learned for students with disabilities (SWD) in STEM education.

Resources

- Association for Higher Education and Disabilities (AHEAD) www.ahead.org
- *Beyond Rigor* Website www.beyondrigor.org
- Brown, Steven E. (2008). Breaking barriers: the pioneering disability students services program at the University of Illinois, 1948-1960. In Tamura, E. (Ed.), *The history of discrimination in U.S. education: marginality, agency, and power*. New York: Palgrave Macmillan, 165-192.
- Campus Access Centers
- Council for Exceptional Children www.cec.org
- DO-IT at the University of Washington
 - www.washington.edu/doit/RDE/
 - www.washington.edu/doit/Faculty
- Institute for Accessible Science www.stemedhub.org/groups/iashub
- *Journal of Postsecondary Education and Disabilities* (JPED)
- McGuire, J.M. & Scott, S.S. (2006). Universal design for instruction: extending the Universal Design paradigm to college instruction. *Journal of Postsecondary Education and Disability*, 19:2, 124-132.
- National Center on UDL <http://www.cast.org>
- Sevo, R. *Basics about Disabilities in Science and Engineering Education*. Free at www.lulu.com
- Special Education / disability studies faculty
- The Center for Assistive Technology and Environmental Access (CATEA) <http://catea.gatech.edu/>
- University of Connecticut, Center on Postsecondary Education and Disability (2010) www.facultyware.uconn.edu



Common Challenges and Effective Strategies

Challenges

- Bias toward SWD capabilities
- Establishing, maintaining, and respecting collaborations and other relations with target communities
- Lack of authentic lab experiences
- Lack of institutional support for projects
- Lack of structural and pedagogical accommodation
- Providing effective training
- Recruiting and identifying from a small population
- Too few resources publically or easily available

Effective Strategies

- Accommodations benefit all
- Contact and maintain relations with your student access or disability services center
- Create and maintain collaborative relationships with the community
- Develop intervention programs
- Develop mentoring programs
- Incorporate inclusive tools and activities for lab experiences
- Provide disabilities training (socio-cultural model)
- Provide inclusive social support
- Provide professional development and support for Universal Design for Learning
- Provide self-advocacy training for students with disabilities
- Provide quality STEM lab, field, and internships