Research in Disabilities Education for STEM

A student's guide to a decade of NSF research

"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

Computer science and engineering student Johanna Lucht pilots a plane simulator to test the collision avoidance on the Android phone app during her internship with NASA this past summer.

By courtesy of Tom Tschida

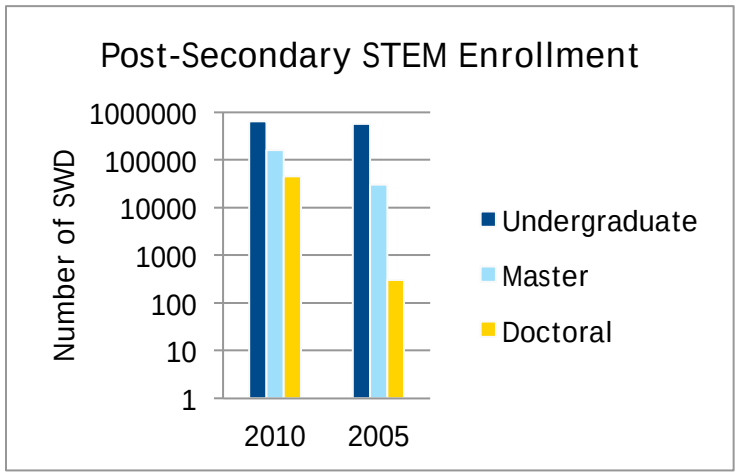
Kronberg, A (2013, November 26). U Student's Flight to NASA. *Minnesota Daily.* Retrieved from: www.mndaily.com

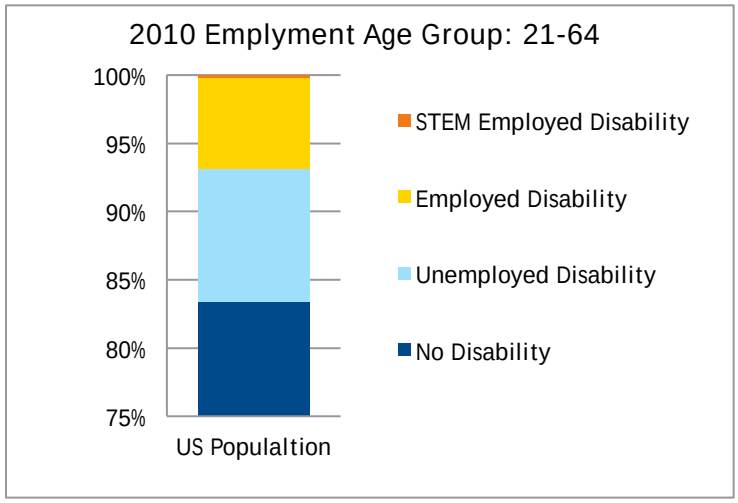
The Research in Disabilities Education Synthesis Project (RDE-SP) was a four year evaluation of 10 years of the NSF RDE funded programs dedicated to broadening participation, research, technology development, and teaching methods in Science, Technology, Engineering, and Mathematics (STEM) fields for people with disabilities (PWD). Ultimately the goal was to help create an environment and culture that supports PWDs to learn, research, and work in STEM fields.

The NSF foresaw the need to further the research and technology base for PWDs in STEM fields as about 14% of the US population that is school aged has a disability, which only increases as people age. Projections also show that by 2018, 10 of the top 30 fastest growing occupations are in STEM fields requiring a baccalaureate or graduate degree.

Ultimately, the program has been fairly successful in increasing retention and graduation of students with disabilities (SWD) in STEM fields, however only about 3% of the US population were working in STEM fields with a disability in 2010. It is anticipated that these figures will continue to increase as the community of practice, accessibility technology becomes more readily available, and suggested practices and supports become more widespread.

There are suggestions for employers, educational institutions, and to be found in this document, things students can do to increase their success in STEM.





There are some helpful strategies and practices collected as a result of an analysis of the Principal Investigator Survey. The tips here are useful for all students, but they are especially of use for those students with disabilities who seek to participate and excel in STEM fields.

Self-Advocate

This is effectively standing up for yourself, your views, and your needs. Ultimately you must take an active role in your education and advocate when necessary for your benefit and the benefit of those around you.

Register

Student Access Centers and Student Disability Services are great sources of information and assistance. They offer a variety of services to help you along your educational goals, however you do have to register.

Confront

There is still bias toward the capabilities of students with disabilities. If instructors or peers are not creating a rigorous academic environment due to fears of capability of students with disabilities, push the envelope and demand more rigor in a professional manner.

Communicate

Create relationships and a community of practice around inclusion and universal design. Locate services and research to bolster the social discourse. Outreach is a good way to do this.

Ingenuity

If your program lacks the proper means for you to participate in labs and field experiences, search for or create a means to participate safely. Work with your instructors so that you are sure to get the same level of education.

RDE-SP

More information on the Research in Disabilities Education Synthesis Project at:

www.oeie.ksu.edu/rde-sp

Research in Disabilities Education Synthesis Project
Principal Investigators: Cynthia Shuman & Jan Middendorf

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KANSAS STATE UNIVERSITY
College of Education
1100 Mid-Campus Drive
17 Bluemont Hall
Manhattan, KS 66502

www.coe.ksu.edu