BreakThru: A STEM mentoring Community in Avatar-Based Virtual Reality for Students with Disabilities

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April 14, 2012
A Virtual Learning Experience
What is BreakThru?

• Avatar-based online learning community
  – Connects students and mentors virtually
• Social Media e-Mentoring
• Promotes accessibility achievement in Science, Technology, Engineering, and Math (STEM) courses
Why BreakThru?

• Critical need for educating a diverse workforce in STEM fields.

• Students with disabilities (SwDs) chronically underrepresented in STEM fields.
  – Among the most marginalized of these groups.
  – Face significant barriers to accessing higher education STEM programs.
Research Goals

1. Increase the number of secondary students with disabilities enrolling in STEM postsecondary classes and majors
2. Increase the retention and graduation of postsecondary students with disabilities in STEM majors
3. Increase the successful entry of postsecondary students with disabilities into graduate programs or the workforce enrolling in STEM postsecondary classes and majors
Creation of BreakThru

- Digital media has changed the way young people learn, play, and socialize.
- Researchers at the University of Georgia and Georgia Institute of Technology developed an innovative learning environment that combines elements of social networking and virtual communities.
- Encourages secondary and postsecondary students with disabilities to pursue STEM majors.
How BreakThru Works

• BreakThru’s digital media model is an innovative approach to teaching and learning which will revolutionize access to learning for students.

• Integrates virtual mentoring and training, social networking, video analysis, and student learning communities.

• Emphasizes Universal Design for Learning principles to help remove barriers to STEM
  – UDL topical guides that emphasize understanding and implementation of principles
BreakThru Mentor Island

• BreakThru’s most distinctive feature: Mentor Island located in the world of Second Life;
• The core resource for BreakThru mentoring and training activities.

http://www.secondlife.com
Avatars

• Avatars represent users three-dimensionally.
• Provides an “embodied” sense of space.
• Provide access to:
  – Virtual mentoring and teaching
  – Social networking
  – Academic support
  – Transition assistance
  – Research participation.
Mentors-Mentee Relationship

• Students and mentors work together to achieve BreakThrus

• From making an A on a science test to graduating with a degree in molecular biology

• Efforts of mentors are forever changing the lives of students

BreakThru is funded by the National Science Foundation Research in Disabilities Education Program (NSF-RDE) award #1027655.
Mentor Roles

• Provide:
  – Support
  – Guidance
  – Opportunities for social & academic development
  – Link to resources
  – Role model planning, decision making, problem solving, and solution finding
Mentees

• Learn techniques to overcome accessibility barriers in STEM education to improve **academic success**.

• Develop **self-advocacy skills** and the confidence to put them into practice.

• Attend workshops designed to bring **students** and **educators** together.

• All **undergraduate and graduate** students are eligible to apply for the mentee program.

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BreakThru Island Demo

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BreakThru Contacts

www.georgiabreakthru.org

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Questions?