Striking a Match: Developing a Remote-Mentoring Program for College Students with Disabilities

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Deaf and Hard of Hearing Virtual Academic Community (DHHVAC)

Rochester Institute of Technology/National Technical Institute for the Deaf (RIT/NTID), Center on Access Technology

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Session objectives

- You will learn about the:
  - Deaf and Hard of Hearing Virtual Academic Community (DHHVAC), and why it includes mentorship functions
  - Basic functions of mentorship, with a focus on matching

Who We Are

- Deaf STEM Community Alliance
  - Only Alliance specifically for D/HH students
- Supported by the National Science Foundation, HRD #1127955
- Multi-year project (Sept 2011- Aug 2017)
  - Now in our 5th year

Campus Partners

RIT is the lead institution for this project, with Camden County College and Cornell University as partners.

Goal and Objectives

- Goal:

  Create a *model* virtual academic community to increase the graduation rates of postsecondary D/HH STEM majors in the long term

  - Iterative and incremental (Cockburn, 2008)
    - Iterative – testing what works and revising what doesn't
    - Incremental – building model in stages instead of all at once

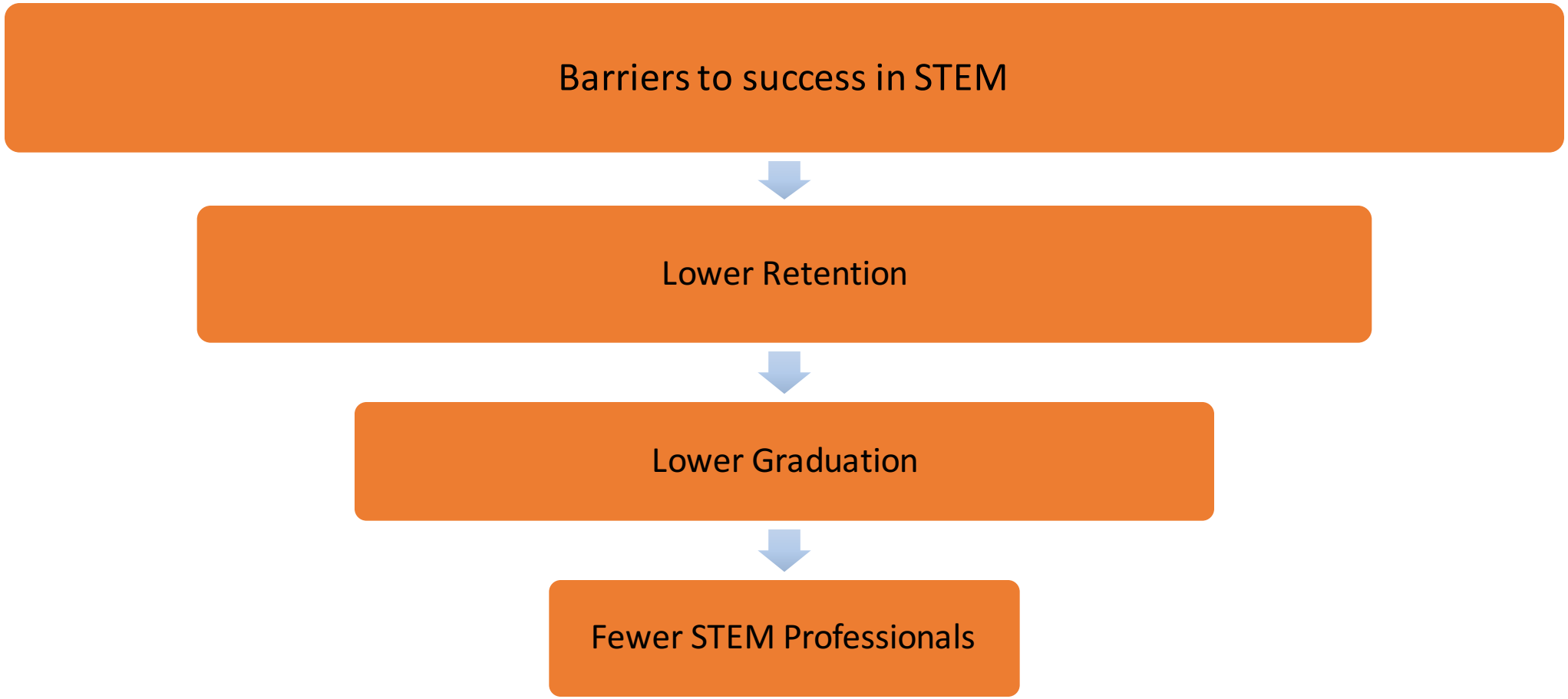
Goal and Objectives

Objectives

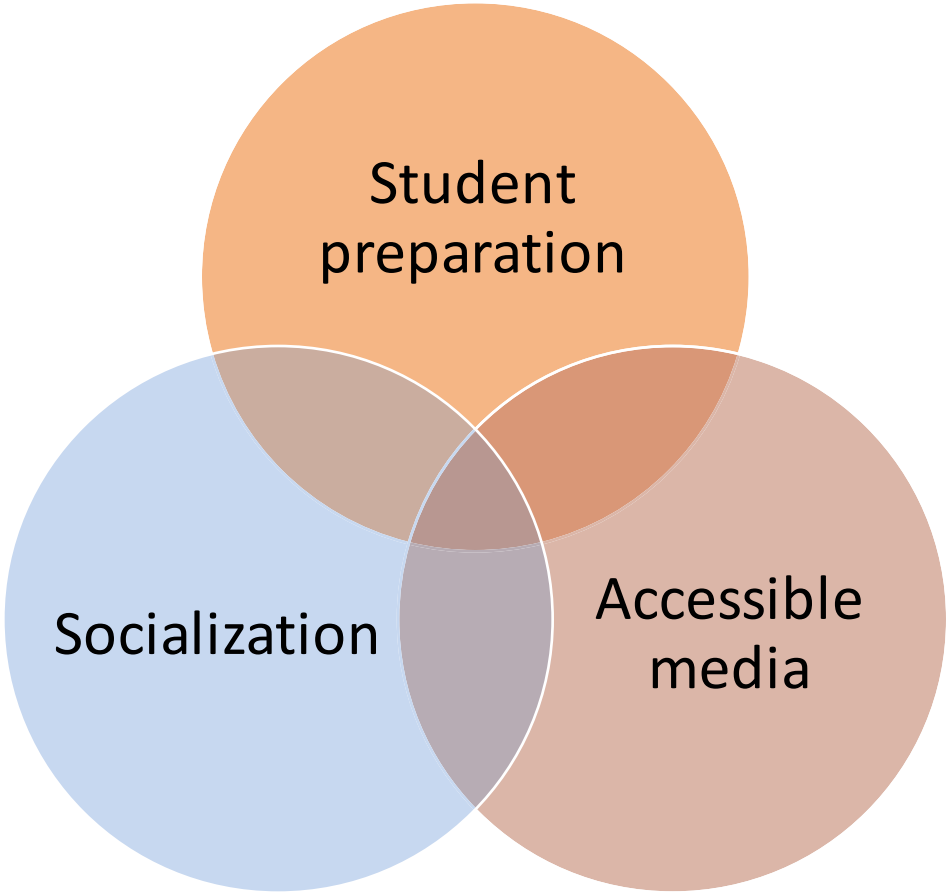
1) Document and disseminate a description of the process of creating a model VAC for replication

2) Increase the GPAs and retention rates of D/HH students in STEM majors

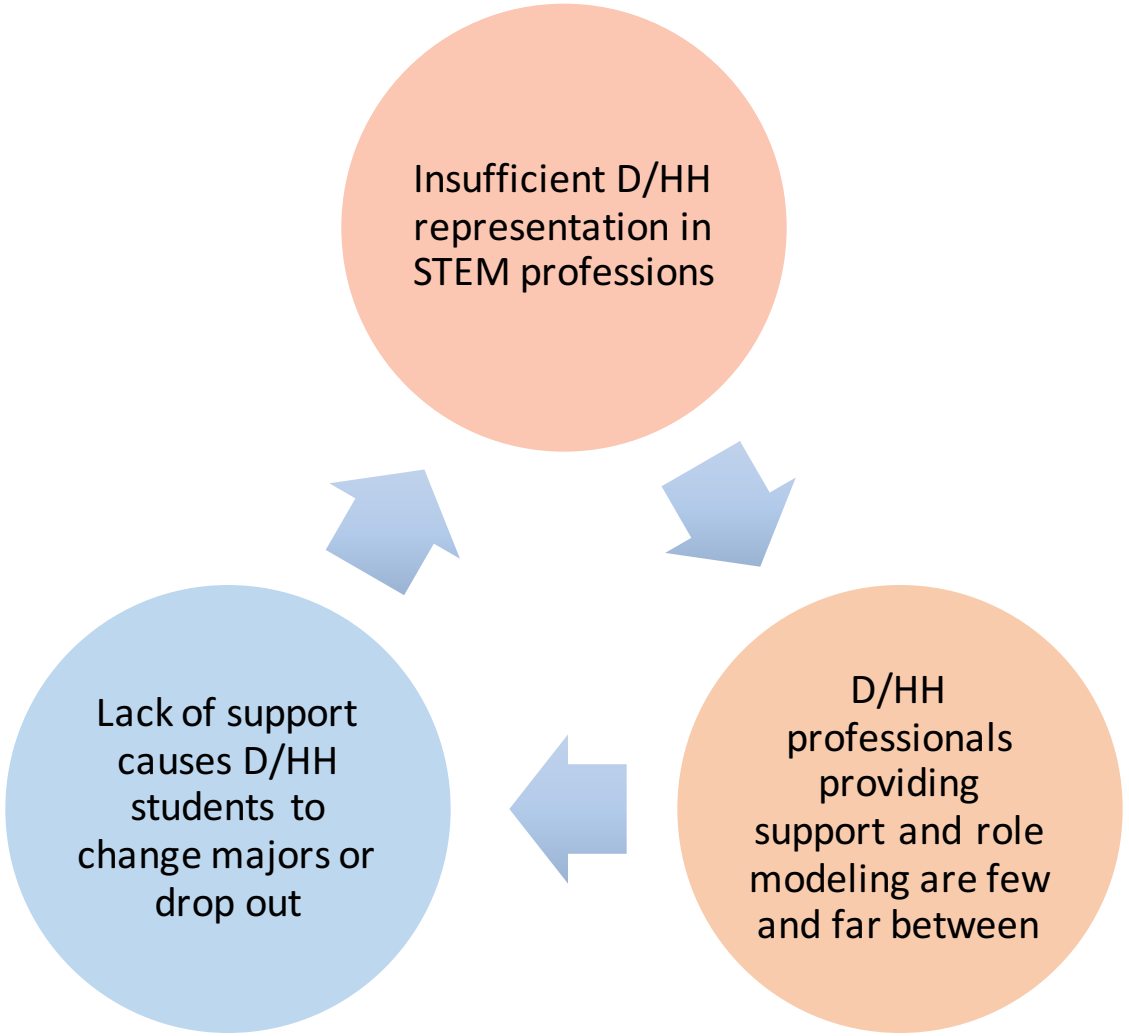
What are the challenges?



Barriers to success



A vicious circle

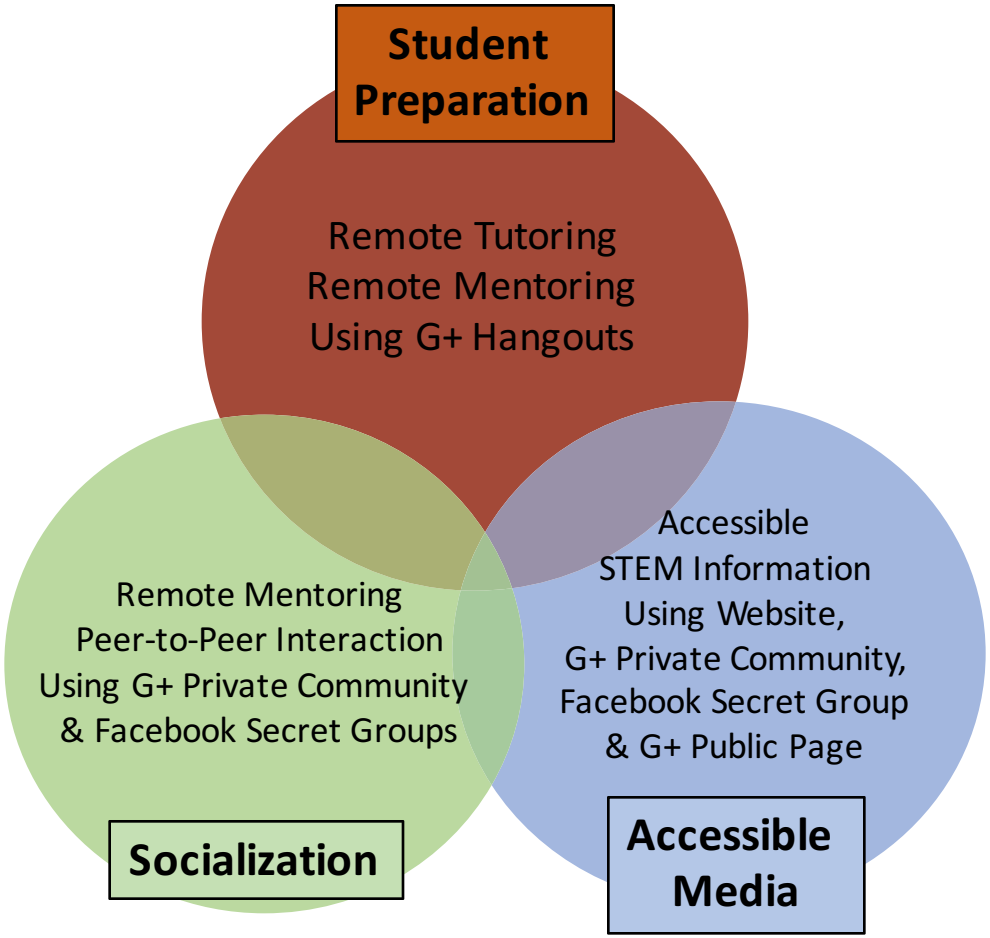


How DHHVAC is helping

- This model that offers academic and vocational support by:
  - Facilitating remote tutoring and mentoring
  - Developing an online community of practice between students, tutors, and mentors

- Mentoring in the DHHVAC: From published literature to practical application

DHHVAC Model
Barriers & Strategies



DHHVAC e-mentoring model

- Mentors are few, far between, and busy
  - Solution: remote mentoring (de Janasz & Godshalk, 2013)
  - ‘Go where the mentees are’: online (Evans & Forbes, 2012)

- Scalable, affordable, and adaptable
  - Modular, open-source, and applicable to a wide variety of population groups and organizational structures

Mentorship functions

- Support (Ensher, Heun, & Blanchard, 2003)
  - Career development (academic/vocational)
  - Personal development
- Role modeling

Career development in the DHHVAC

- Both school- and job-related
- Case-specific
  - Assignments; projects; documents
- Successful cases tend to be related to this type of support
- Occasionally blurs into role-modeling
  - Interaction with co-workers and colleagues

Personal development in the DHHVAC

- More likely in informal, spontaneous mentoring relationships
- Culture of professionalism
- ‘Weak-tie’ relationships presents an additional challenge in e-mentoring (Shpigelman, Weisee, & Reiter, 2009)
  - More like neighbors or service providers (e.g., doctors or bank tellers) than friends

Role modeling in the DHHVAC

- Effect on mentoring relationship
  - Student may be overwhelmed or hesitant
  - Student may be proud to correspond
- Effect of computer-mediated communication (Ensher, Heun, & Blanchard, 2003)
- Traditional mentors as role models have a positive effect on eventual job satisfaction for mentees (Ensher, Thomas, & Murphy, 2001)
  - As opposed to peer or step-ahead mentors

The DHHVAC mentors

- Selected from a broad range of disciplines
  - Accounting, animal science, architecture, biology, biochemistry, biophysics, bioengineering, biotechnology, civil engineering, ecology, industrial engineering, information technology, materials science, structural engineering, user-experience design, Web development
- Recruited through a variety of channels
  - Professional Facebook group for deaf and hard of hearing (D/HH) STEM professionals
  - Alumni Association
  - Word of mouth
  - Previous participants in other roles (e.g., participating student)
- About half are RIT/NTID alumni; all are volunteers

Mentorship coordinator

- Recruits mentors and mentees
- Matches mentor/mentee dyads
- Develops and documents program structure and processes
  - Roles
  - Expectations
  - Facilitation (Single & Single, 2005)
- Adapts to new technological solutions and implements as needed
- Responds to mentor/mentee concerns and seeks solutions

From greeting to welcome

- Application
  - Basic demographic information, academic background, work history, consent
- Background check
  - RIT's HR department investigates suitability for working with students
- DHHVAC account and profile setup
  - Google Apps for Education—Custom domain
  - Gmail, Google+, Google Drive
  - Invitations to Google+ private community and Facebook group

From greeting to welcome

- Mentors are automatically assigned to new student participants
  - Considers student's major and mentor's occupation
- Student request
  - Often a result of a change in academic focus, or for specific projects
- Growing a pool
  - Accepting volunteers to hedge against future requests/new participants

Striking a match

- Two components (Dawson, 2014)
  - Selection
    - Mentors: Self-selection; interpersonal; mentee request
    - Mentees: Self-selection; instructor recommendation; tutor recommendation
  - Matching
    - Mentee choice
    - Vocational similarity
      - Fine-grained within engineering-related fields
    - Demographic similarity

Vocational similarity in the DHHVAC

- Importance varies; affected by mentee choice
  - Case study: Student declines mentoring
  - Case study: Student shops for mentors
- Cross- or multidisciplinary mentoring
  - Second case study above
  - Mentors for undeclared students

Demographic similarity in the DHHVAC

- A new wrinkle: Communication preference
- Another new wrinkle: Technology adoption (Williams, Sunderman, & Kim, 2012)
  - Case study: Glide
- Suggests cross-cultural competence may be a strong indicator of successful matches (Merriweather & Morgan, 2013)

Introductions

- First contact facilitated by DHHVAC staff, ideally
  - Basic information about each party
  - Suggestions for initial and future discussions
  - Request for reports of contact

Maintenance

- Monthly check-in
  - E-mail to all mentors with requests for feedback or reports of contact
  - Suggestions for discussion
  - Encouragement to keep lines of communication open

- Communication methods
  - E-mail strongly preferred by mentors/mentees
  - Video chats via Google Hangouts and Skype

Maintenance

Ongoing: Contact log

	A	B	C	D	E	F
1	**Mentor Name**	**Student Name**	**Date of Contact**	**Method of Contact (E-mail? Hangout? Text? Other?)**	**Synchronous length of contact**	**Topic(s) of Discussion**
2	Smith Jones	Robert Joseph	1/16/2016	Skype	45 minutes	Discussion of space analysis for Bushwick building lobby redesign

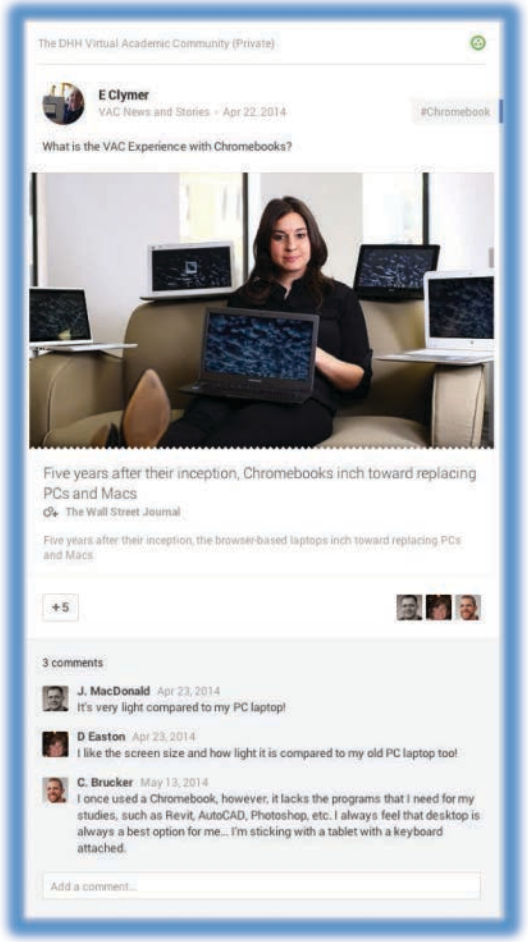
Collaborations and accomplishments

- Architecture
  - Architect and student corresponded on redesign of NTID lobby and associated spaces
- Engineering
  - Student corresponded with two mentors (industrial design and biotechnology) to develop a project for an annual innovation competition
- Biology
  - Mentor named one of NPR's "50 Greatest Teachers"

From One to Many

This is an example of a post within the private community.

+1's



Post

Additional comments

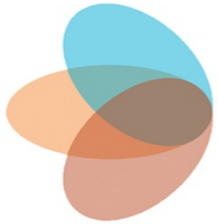
Benefits

- Individual
  - Intergenerational continuity
  - Future collaborative relationship development
  - Number of colleagues in the field increases

- Institutional
  - Alumni maintain relationship with alma mater
  - Increased academic performance within a cohort
  - Increased retention rates within underrepresented populations
  - Increased graduation rates

Conclusions

- Underrepresented populations need effective role models
- Individual students may need individual support
- Mentorship is one solution
- The DHHVAC is a model that attempts to implement this solution
- Matching is key to the program's success
  - Far more complicated than it appears
- Intergenerational cooperation and support can further personal and institutional progress



Questions? Comments?

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