Creating an Online Community of Practice: The Deaf and Hard of Hearing Virtual Academic Community

Lisa B. Elliot, Donna Easton, James McCarthy, Rebecca Murray, & Annette Tavernese
Rochester Institute of Technology • National Technical Institute for the Deaf

Problem Statement
Students who are deaf or hard of hearing (D/HH) and who are STEM majors face 3 critical barriers to educational success:

- Student Preparation (Basic skills, Experience or Background Knowledge)
- Socialization (Role Models; Other D/HH with Common Interests)
- Accessible Media (Visual Emphasis; Captions; ASL)

Project Design
The DHHVAC is part of a larger iterative and incremental model for an online community. The project is intended to increase retention and GPAs of student participants and to create a model that can be used by other organizations, especially with students with other disabilities.

Research Questions
Can we use social media technology to help students overcome these barriers? When do posts make the most impact? What posts make the most impact? How does this closed group’s activity differ from open mainstream social media?

Methods
Materials. The DHHVAC uses a Google+ Private Community as its platform to promote socialization and share accessible media with project participants. Posts reflecting participants’ interests are shared 3-5 times weekly within the community.

Participants. D/HH and hearing individuals from RIT, Camden County College, and Cornell University and national and international community members:
- Students: D/HH Students (n=48)
- Tutors: D/HH & Hearing Faculty, Graduate Students, & Upperclassmen (n=19)
- Mentors: D/HH STEM Professionals (n=13)
- Staff: D/HH & Hearing Staff (n=12)

Conclusions
It is possible to create a community of practice using social media technology. Timing of posts does make a difference. Certain types of posts generate more reaction from the community than do others. Reactions to posts differs somewhat from mainstream social media. While Tuesday remains the most impactful day, our community tends to respond better to posts that occur later in the day.

Results
Lifetime Community Activity

<table>
<thead>
<tr>
<th>Posts</th>
<th>Comments</th>
<th>+1s</th>
</tr>
</thead>
<tbody>
<tr>
<td>809</td>
<td>992</td>
<td>1594</td>
</tr>
</tbody>
</table>

High Impact Posts (Most +1s, Comments) February 2013-2015

<table>
<thead>
<tr>
<th>Most Impactful Day</th>
<th>Most Impactful Times of Day</th>
<th>Most Impactful Themes by # of +1s</th>
<th>Most Impactful Themes by # of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday</td>
<td>1-3pm; 4-7pm</td>
<td>Community (110)</td>
<td>Community/STEM (90)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEM Humor (81)</td>
<td>STEM Humor (76)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community/STEM (41)</td>
<td>Community (39)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEM (17)</td>
<td>STEM (29)</td>
</tr>
</tbody>
</table>

This project is made possible with the support of the National Science Foundation HRD #1127955