Closed Captioned Videos in Online and Hybrid Courses:

Does captioning really make a difference in student’s learning?

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Introduction

- EdD in Higher and Post Secondary Education with emphasis on accessibility.

- Dissertation topic:
  “Analyzing the implementation of open captioned videos in online developmental Math courses and the impact on Success of community college students”

- LMS Administrator (Blackboard, eCollege and D2L), online academic advisor, instructional designer/technologist, and online student (BSBA, MBA, EdS and EdD) at for-profit and public academic institutions.
Presentation

- Outline overview of research project
- Explain process for captioning
- Compare captioning costs
- Outline legislation on captioning
- Describe learner variability
Overview and Background of Project

- Research study was based on a product of an Accessibility Task Force recommendation at Inver Hills Community College.
- Open/closed captions in video of online courses are not widely researched nor is data available.
- Open captions are similar to subtitles and cannot be turned off.
- Closed captions gives the viewer to turn subtitles on or off.
Accessibility Task Force

- Campus self-assessment using GOALS Project (The National Center on Disability and Access to Education).
- GOALS Project is acronym for Gaining Online Accessible Learning through Self-study.
- Benchmark and planning tool.
- Three month assessment and final recommendation on web accessibility which included captioning of videos on campus website as well as videos in courses.

**GOALS**

*Gaining Online Accessible Learning through Self-Study (GOALS)* will capitalize on the products of an existing GOALS project and focus on motivating top administrators to improve web accessibility for their institution. During this project, a national consortium will strengthen the work of GOALS with blueprints useful for both institutions and regional accreditation entities.
Requests and Contracts

- Formal request from faculty member to have videos professionally captioned. This request was because of the recommendation from the Accessibility Task Force.

- Funds were provided from a “year-end funds” approval.

- Detailed contract written between MnSCU and Automatic Sync.

- Prepaid purchase of video transcription service.
Project

- Videos were already recorded in Camtasia and saved on a My MediaSpace server.

- Courses were Introduction to Algebra and Intermediate Algebra online with two face-to-face exams.

- Analyzed the viewing of videos before captioning (academic year 2012-2013).

- Analyzed the viewing of videos after captioning (academic year 2013-2014)
Videos were recorded in Camtasia Relay.

Videos were uploaded into Kaltura Management Console (KMC).

System integration setup between KMC and Caption Sync.

Setup Playlist in KMC for Caption Sync.

Tagged videos in KMC for Caption Sync.

Caption Sync gets videos electronically and transcribes them.

Videos placed back into KMC by Caption Sync when finished.

Videos placed back into D2L from KMC by instructor.
Save video for captioning on media server

Request captioning from media server

Videos are captioned within three days

Captions automatically pushed back to media server

Captioned videos then inserted in LMS courses
Course Analytics

- Export data to MS Excel from D2L and see how many and how long students viewed videos

<table>
<thead>
<tr>
<th>Video Lectures</th>
<th>Views</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Fractions Video</td>
<td>13</td>
<td>0:13:27</td>
</tr>
<tr>
<td>II. Adding and Subtracting Real Numbers Video</td>
<td>12</td>
<td>0:07:56</td>
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<tr>
<td>III. Multiplying and Dividing Real Numbers Video</td>
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<td>IV. Order of Operations Video</td>
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<td>0:28:52</td>
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<td>MyMathLab Login</td>
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<td>0:00:51</td>
</tr>
</tbody>
</table>

- A total of 51 videos were captioned and used in courses with 6 videos overlapping between Introduction to Algebra and Intermediate Algebra.

- Final analysis was student success defined by passing grades from before open captioned videos and after open captioned videos.
Discovery

- No difference in grades between before and after captioned videos.

- Significant difference in video clicks and time watching videos.

- The sample size was 204 students with 132 successfully completing the course.

- Demographics were post-traditional white females who are Pell Grant eligible.
Total clicks before captioning: 1074
Total clicks after captioning: 402

Total time viewed before captioning: 67 hours 13 minutes and 32 seconds.
Total time viewed after captioning: 37 hours 29 minutes and 24 seconds.

Reference:
Why does this matter?

- Un-researched field of study

- Research lead to the discussion on campus regarding what needs to captioned and a process that was not in existence.

- Research lead to an assessment of all captioning processes throughout MnSCU. Recommendation to be completed in Summer of 2015.
Current Process At Inver Hills

- Disabilities Coordinator identifies all students who have a disability that might need captioning services.

- Disabilities Coordinator documents and defines what courses and instructors will receive ADA reasonable accommodation notification.

- Disabilities Coordinator sends notification to instructors requiring that they meet with the Instructional Designer regarding captioning requirements or instructional material to meet accessibility needs. A list of ADA reasonable accommodations will be included in the notification. Instructional Designer is cc’d on email.

- Instructor meets with Instructional Designer to talk about course design and whether videos need to be captioned or any content needs to be changed for accessibility needs.
Implications: What needs to be captioned?

- Policy should cover at a minimum:
  - Academic content shown to a known student population when there is an accommodation request
  - Academic content shown to an unknown population (distance learning), regardless of whether there is an accommodation request
  - Publicly presented content (e.g. video on public website)
Types of captioning services

- **In house**
  Camtasia Studio, iMovie, program at Riverland Community College and Central Lakes Community College.

- **YouTube**
  Automatically captions videos often times incorrectly.

- **Professional caption services**
  Automatic Sync Technologies
  3Play Media
  Amara
Cost Comparison

In house (faculty, instructional technologists, or student workers)

- Estimated cost: $200 - $800 per hour of content, sometimes with long turnaround
- Does not include software, hardware, or training on how to caption

Professional captioning company:

- $156 per content hour for 3 day turnaround
- 100% accuracy
- Top-quality support
Advocacy Groups and Legislation:

- NAD vs Netflix (September 2014)
- NAD and Apple iTunes (December 2014)
- NAD and VUDU (January 2015)
  (streaming owned by WalMart)
- NAD and MOOCs (MIT, Harvard and edX, Inc.)
What the legislation means for Higher Education

- Individuals with disabilities must have an **equal opportunity** to participate in and benefit from the goods and services of a college or university (public or private).

- The opportunity to participate must be equal to other students.

- Students with disabilities must be provided aids or services to provide equal opportunity.

- Effective and Equal communication.
Learner Variability

- Personal example
- “Invisible disabilities”
- Captioning addresses all cognitive learning styles
  - Visual
  - Audio
  - Kinesthetic
Ask yourself this…

- What is the population of students who need captioning for ADA compliance?
- What process is in place for requesting captioned videos?
- How are videos being used in the classroom (face-to-face as well as online)?
- Are transcripts already available for a video imported from an outside source?
- What is the cost? Is it more effective to do caption in house or use a professional vendor?
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Links to References

- http://www.3playmedia.com
- http://www.amara.org
- http://www.automaticsyn.com
- http://www.brightspace.com/solutions/higher-education/online-blended/
- http://ncdae.org/goals/