USG | TCSG
Accessibility Symposium

A Georgia Statewide ICT Technical Assistance Center

Tuesday November 1, 2016
Christopher M. Lee, Ph.D. | Department Head
AMAC Accessibility Solutions and Research Center
USG | Georgia Institute of Technology
What We Know

– USG Students Annual Report on Access and Services for Students with Disabilities
  – Student Accommodation Manager (SAM)
  – Digital Textbook Content Accessibility

What We Don’t Know

– USG and TCSG | ICT campus policy, policies and best practices
  – Facility, staff and campus visitors disability numbers and accommodations
What We Know | Georgia's Post Secondary Institutions

Colleges and Universities

USG Disability Types

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Attention-Deficit/Hyperactivity Disorder</td>
<td>3,581</td>
<td>3,788</td>
<td>3,838</td>
</tr>
<tr>
<td>Psychological Disorder</td>
<td>2,319</td>
<td>2,586</td>
<td>2,810</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>2,366</td>
<td>2,498</td>
<td>2,219</td>
</tr>
<tr>
<td>Systemic Disorders</td>
<td>1,768</td>
<td>1,816</td>
<td>2,084</td>
</tr>
<tr>
<td>Mobility Disorders</td>
<td>530</td>
<td>433</td>
<td>515</td>
</tr>
<tr>
<td>Temporary</td>
<td>NA</td>
<td>NA</td>
<td>355</td>
</tr>
<tr>
<td>Other</td>
<td>220</td>
<td>335</td>
<td>343</td>
</tr>
<tr>
<td>Deaf &amp; Hard of Hearing Students</td>
<td>349</td>
<td>368</td>
<td>340</td>
</tr>
<tr>
<td>Visual Disorders</td>
<td>377</td>
<td>362</td>
<td>327</td>
</tr>
<tr>
<td>Asperger's Disorder</td>
<td>307</td>
<td>377</td>
<td>316</td>
</tr>
<tr>
<td>Acquired Brain Injury</td>
<td>286</td>
<td>310</td>
<td>309</td>
</tr>
<tr>
<td>Autistic Disorder</td>
<td>75</td>
<td>111</td>
<td>193</td>
</tr>
<tr>
<td>Pervasive Developmental Disorders</td>
<td>382</td>
<td>488</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,560</strong></td>
<td><strong>13,472</strong></td>
<td><strong>13,649</strong></td>
</tr>
</tbody>
</table>

USG | TCSG | Independent | Private/Other | Total

- USG
- TCSG
- Independent
- Private/Other
- Total
Figure 1. Students Eligible for Services According to Disability Type

[Bar chart showing the number of students eligible for services by disability type over different years.]
A Personal Snap Shot  | Meet Lakisha

**Academic Challenges**
- Inaccessible electronic information (i.e. textbooks and e-forms)
- Inaccessible web/database applications (LMS and websites)
- Instructional and resource video’s
- Writing notes and completing e-forms
- Building navigation access (Beacon technology)

**Solutions | Accommodations Access**
- Accessible Digital Content (i.e., textbooks)
- Text-to-speech software (i.e., JAWS/NVDA)
- Braille (i.e. STEM)
- Accessible web applications (i.e., 508 and WCAG 2.0 compliance)
- Video descriptions
- Refreshable braille reader
- Beacon navigation technology

Environment is the barrier, not Lakisha

https://www.youtube.com/watch?v=EkqtisOpe_k
Accessible Digital Content Formats

• **PDF** - files retain the same layout as the print textbook and includes bookmarks for navigation, synchronized highlighting of text and audio. Good option for student who zooms in on the text or needs to change contrast.

• **PDF Enhanced Tagged** - files have renumbered pages and bookmarks, manual tagging of heading levels, paragraphs, lists, and tables. Alternate text descriptions are provided for images. Section 508/ADA Compliant.

• **MS Word Doc** - is best for students who use screen reading software such as JAWS and also need alternative text descriptions added to images.

• **HTML** - files have three levels of headings that provide navigation, reading order is determined, and alternate text descriptions are provided for images.

• **MathML** - files include all the features of our accessible HTML files, plus all equations and symbols are pronounced according to MathSpeak guidelines.

• **PowerPoint** - each slide has a unique descriptive title, all images and tables are fully described, and the reading order is determined for all objects on the slide.

• **Daisy** - files are read by Dolphin EasyReader, which has a wide range of voices. These files have three levels of headings, correct reading order, and alternate text descriptions are provided for images.

• **ePUB** - is a format that can be downloaded and read on devices like smartphones, tablets, computers, or e-readers. It is a free and open standard published by the International Digital Publishing Forum (IDPF).
### Table 5. Accessible Material Produced Internally

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Textbooks</td>
<td>Exams</td>
<td>Other</td>
<td>Textbooks</td>
</tr>
<tr>
<td>Electronic Text</td>
<td>177,318</td>
<td>2,887</td>
<td>1,510</td>
<td>272,590</td>
</tr>
<tr>
<td>Braille</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Audio</td>
<td>23,673</td>
<td>403</td>
<td>0</td>
<td>17,806</td>
</tr>
<tr>
<td>Large Print</td>
<td>1,435</td>
<td>4,920</td>
<td>115</td>
<td>3,605</td>
</tr>
</tbody>
</table>

Figure 5 shows the numbers for all accessible materials produced internally in 2012-2013, 2013-2014, and 2014-2015 academic years.
Table 6. Accessible Material Outsourced

<table>
<thead>
<tr>
<th></th>
<th>Estimated Number of Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Textbooks</td>
</tr>
<tr>
<td>Electronic Text</td>
<td>919,003</td>
</tr>
<tr>
<td>Braille</td>
<td>4,647</td>
</tr>
<tr>
<td>Audio</td>
<td>52,402</td>
</tr>
<tr>
<td>Large Print</td>
<td>199</td>
</tr>
</tbody>
</table>

Figure 6 shows the numbers for all accessible materials outsourced in 2012-2013, 2013-2014, and 2014-2015 academic years.
During the 2014-2015 academic year, 69 eligible students were enrolled in distance learning through E-Core and 349 students took E-Core courses who also took campus-based courses.

Compared with the 2013-2014 results, the number of students taking E-Core and Campus-Based courses increased 46.6%.

<table>
<thead>
<tr>
<th>Enrollment Type</th>
<th>2012-2013</th>
<th>2013-2014</th>
<th>2014-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusively E-Core</td>
<td>NA</td>
<td>NA</td>
<td>69</td>
</tr>
<tr>
<td>E-Core and Campus-Based</td>
<td>316</td>
<td>238</td>
<td>349</td>
</tr>
</tbody>
</table>

Figure 7. Students Taking E-Core and Other Distance Learning Courses by Disability Type
What We Don’t Know, and Why We Need A Statewide ICT Technical Assistance Center

What We Don’t Know

• **What We Don’t Know**
  – USG and TCSG | ICT campus policy, policies and best practices
  – Facility, staff and campus visitors disability numbers and accommodations

• **Touch Points**
  – Academic and Online Courses
  – Web-based Applications
  – Videos
  – Electronic Documents
  – Library Service
  – Video and Web Conferencing Systems
  – Web-based Applications

Solution | A Statewide Center

• Support stronger linkages to K-12 and Vocational Rehabilitation
• Collect better data
• Highlights of best practices
• Recommended accessibility guidelines and vetted tools
• Access to QA user experience testers
• Supports ICT procurement
• Manage joint ICT initiatives
• Network training and technical assistance resources
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