Accessibility and Inclusive Teaching

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http://www.sjsu.edu/cfd/teaching-learning/accessibility
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What do these schools have in common?

- Montana School for the Deaf and Blind
- Arizona State University
- University of Montana
- Atlantic Cape Community College
- Harvard University
- MIT
- Princeton University
- Case Western Reserve University
- College of the Siskiyous
- University of California, Berkeley
- Reed College
- South Carolina Technical College System
- Florida State University
- Youngstown State University
- edX
- University of Colorado at Boulder
- Louisiana Tech University
- University of Phoenix
- Miami University (Ohio)
- Penn State University
- University of Cincinnati
Litigation Cases and Risks

- 2016 Office of Civil Rights (OCR) web accessibility cases from across the nation.
  - Miami University’s web content & LMS – DOJ decree
  - MIT/Harvard edX’s lack of captioning MOOCs – settlement agreement
  - Berkley’s inaccessible online content – DOJ Letter

- 2017 - 2018
  - A few CSU campuses received OCR complaint letters and dismissed.
  - One campus was informed that their case will be reopened.
  - One campus received a new OCR complaint.

- Risks from External Sources
  - Ms. Lipsitt – thousands of complaints from this civil rights activist
  - 50 Colleges Hit With ADA Lawsuits by Jason Camacho, a blind resident of Brooklyn, N.Y.
The Laws

- **Americans with Disability Act (ADA) of 1990**

- **Section 504** of the Rehabilitation Act of 1973
  - "No otherwise qualified individual with handicaps in the United States . . . shall, solely by reason of her or his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance...."

- **Section 508** of the Rehabilitation Act of 1973
  - Provides standards and guidelines to ensure all information and communication technology (ICT) supports accessibility for people with disabilities

- **Title II** of the ADA: (State and local governments)
  - “…prohibits discrimination on the basis of disability in all services, programs, and activities provided to the public by State and local governments…”

- **California Government Code 11135**
Who are Our Students?

- Individuals bring in different culture background, skills, experiences, learning preferences, needs, interests, and other characteristics to learning. View [Variability Matters](#) video. Is there an average student?

- According to [SJSU Fall 2018 ethnicity statistics](#), our students include Asian (40.4%), Latinx (27.1%), White (19%), Two or more (4.5%), Not specified (5.2%), Black (3.2%), Pacific Islanders (0.4%), native Americans (0.1%) ethnic background with foreign students (10.3%).

- Diversity also includes a wide range of physical, visual [sensory], hearing, learning [cognitive], attention, and communication abilities.

- In Education, does one size fit all?
Disability Demographic Information

According to the US Census Bureau report, about 56.7 million people — 19 percent of the population — had a disability in 2010.

The percentage of undergraduates who reported having a disability was 11.1 percent in 2011–12. The percentage of undergraduates having a disability:

~ Fast Facts from National Center for Education Statistics
AEC Student Registration Data at SJSU

Data of students registered with Accessible Education Center (AEC) at SJSU from 2005 to 2018.

- An increase from 3% in Fall 2005 to 3.8% in Spring 2018

<table>
<thead>
<tr>
<th>Semester</th>
<th>AEC Registered Students</th>
<th>SJSU Student Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2005</td>
<td>890 (3%)</td>
<td>29,975</td>
</tr>
<tr>
<td>Fall 2006</td>
<td>933 (3%)</td>
<td>29,604</td>
</tr>
<tr>
<td>Fall 2007</td>
<td>1073 (3%)</td>
<td>31,906</td>
</tr>
<tr>
<td>Fall 2008</td>
<td>1124 (3%)</td>
<td>32,746</td>
</tr>
<tr>
<td>Fall 2009</td>
<td>1127 (3.6%)</td>
<td>31,280</td>
</tr>
<tr>
<td>Fall 2010</td>
<td>1058 (3.6%)</td>
<td>29,076</td>
</tr>
<tr>
<td>Fall 2011</td>
<td>1127 (3.7%)</td>
<td>30,236</td>
</tr>
<tr>
<td>Spring 2012</td>
<td>1102 (3.9%)</td>
<td>28,002</td>
</tr>
<tr>
<td>Spring 2013</td>
<td>1125 (4.1%)</td>
<td>27,503</td>
</tr>
<tr>
<td>Spring 2015</td>
<td>1142 (3.8%)</td>
<td>29,954</td>
</tr>
<tr>
<td>Spring 2016</td>
<td>1069 (3.6%)</td>
<td>29,594</td>
</tr>
<tr>
<td>Spring 2017</td>
<td>1096 (3.75%)</td>
<td>29,200</td>
</tr>
<tr>
<td>Spring 2018</td>
<td>1175 (3.8%)</td>
<td>30,727</td>
</tr>
</tbody>
</table>
...a gap between the reported national disability statistics (11% of undergraduates) and our campus data (3.8%)

Only about 35% of students choose to disclose their disability in college...

Sources:
- Getzel, E., 2014
Issues of Not Disclosing

- Adjustment to a college environment (Colleges/Universities are not required to develop Individualized Educational Plan (IEP). **Students must learn to self-disclose their disabilities**

- Lack of acceptance, responsibility of managing accommodations

- **Difficulties accessing the necessary services & supports** such as, academic planning, learning communities & seminars, peer-to-peer instructional support or faculty mentoring, learning and practicing goal setting

- Find the process to disclose to each faculty & each class and every semester **humiliating and stigmatizing**

Sources:
- Getzel, E., 2014;
- Izzo, M., Murray, A., Novak, J, 2008,
SJSU AEC Student Distribution

Type of disabilities registered at AEC in Spring 2018

- ADD = 23 (2%)
- ADHD = 130 (11.1%)
- Autism = 119 (10.1%)
- Communication = 7 (0.6%)
- DHOH = 39 (3.3%)
- Functional disability = 327 (27.8%)
- Learning disability = 290 (24.7%)
- Medical = 89 (7.6%)
- Mobility = 32 (2.7%)
- Visual disability = 18 (1.5%)
- Other = 101 (8.6%)

Total = 1175 (as of 4/20/2018)
### Types of Disabilities

<table>
<thead>
<tr>
<th>Disabilities</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visual</strong></td>
<td>Blindness, low vision &amp; color blindness</td>
</tr>
<tr>
<td><strong>Auditory</strong></td>
<td>Degree of hearing loss, deaf-blindness</td>
</tr>
<tr>
<td><strong>Motor</strong></td>
<td>• Traumatic Injuries: Spinal cord injury, Loss or damage of limb(s)</td>
</tr>
<tr>
<td></td>
<td>• Diseases &amp; Congenital Conditions: Cerebral palsy, Muscular dystrophy,</td>
</tr>
<tr>
<td></td>
<td>Multiple sclerosis, Spinal bifida, ALS (Lou Gehrig's Disease), Arthritis, Parkinson's disease, Essential tremor</td>
</tr>
<tr>
<td><strong>Cognitive</strong></td>
<td>• Functional: Memory, Problem-solving, Attention, Reading, linguistic,</td>
</tr>
<tr>
<td></td>
<td>and verbal comprehension, Math comprehension, Visual comprehension</td>
</tr>
<tr>
<td></td>
<td>• Clinical Cognitive disabilities: Autism, Down Syndrome, traumatic brain injury (TBI), and even dementia. Less severe cognitive conditions include attention deficit disorder (ADD), dyslexia (difficulty reading), dyscalculia (difficulty with math), and learning disabilities in general</td>
</tr>
</tbody>
</table>

➢ Source: [Web Accessibility in Mind](https://webaim.org) (WebAIM)
What We CAN Do

Courses designed with UDL “strive to focus on the strength of individuals… what they CAN do rather than on what they cannot” and “proactively address the needs of people with the broadest range of characteristics…” (Emmert, M. A. 2008)

Knowing our students, think about their diverse learning needs… and Variability Matters
What is Universal Design?

“Universal Design” was coined by Ronald Mace in the 1970s.

“...the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”
The Three Principles – (from CAST)

Think Universally!

Designing a learner-centric and barrier-free learning environment

➢ Multiple means of Engagement: to engage or motivate your students
   ▪ Different strategies or technologies to recruit students’ interest, sustain their continuous effort to participate in their learning activities (e.g., iClicker, active collaborate team learning, online, hybrid, flipped classroom)

➢ Multiple means of Representation of your content
   ▪ Different or multi-modal ways to present, describe, or organize course content information (e.g., lecture, video, online, group discussion, road map, graphic organizers, field trip, etc.) to help them comprehend

➢ Multiple means of Action/Expression: to allow options/choices for students to be in control of or express their learning
   ▪ Different ways to allow learners to express, demonstrate or control their learning (e.g., Quizzes, exams, projects, papers, multimedia presentations)
The Three Principles – Graphic Organizer from CAST

- Provide multiple means of Engagement
  - Affective Networks: The "WHY" of Learning
  - Provide options for Recruiting Interest:
    - Optimize individual choice and autonomy (O.1)
    - Optimize relevance, value, and authenticity (O.2)
    - Minimize threats and distractions (O.3)

- Provide multiple means of Representation
  - Recognition Networks: The "WHAT" of Learning
  - Provide options for Perceptions:
    - Offer ways of customizing the display of information (P.1)
    - Offer alternatives for auditory information (P.2)
    - Offer alternatives for visual information (P.3)

- Provide multiple means of Action & Expression
  - Strategic Networks: The "HOW" of Learning
  - Provide options for Physical Action:
    - Vary the methods for response and navigation (A.1)
    - Optimize access to tools and assistive technologies (A.2)

- Provide options for Sustaining Effort & Persistence
  - Heighten salience of goals and objectives (S.1)
  - Vary demands and resources to optimize challenge (S.3)
  - Foster collaboration and community (S.3)
  - Increase mastery-oriented feedback (S.4)

- Provide options for Language & Symbols
  - Clarify vocabulary and symbols (L.1)
  - Clarify syntax and structure (L.2)
  - Support decoding of text, mathematical notation, and symbols (L.2)
  - Promote understanding across languages (L.4)
  - Illustrate through multiple media (L.7)

- Provide options for Expression & Communication
  - Use multiple media for communication (C.1)
  - Use multiple tools for construction and composition (C.2)
  - Build fluencies with graduated levels of support for practice and performance (C.3)

- Provide options for Self Regulation
  - Promote expectations and beliefs that optimize motivation (R.1)
  - Facilitate personal coping skills and strategies (R.2)
  - Develop self-assessment and reflection (R.3)

- Provide options for Comprehension
  - Activate or supply background knowledge (C.1)
  - Highlight patterns, critical features, big ideas, and relationships (C.2)
  - Guide information processing and visualization (C.3)
  - Maximize transfer and generalization (C.4)

- Provide options for Executive Functions
  - Guide appropriate goal-setting (E.1)
  - Support planning and strategy development (E.2)
  - Facilitate managing information and resources (E.3)
  - Enhance capacity for monitoring progress (E.4)

Expert learners who are...

- Purposeful & Motivated
- Resourceful & Knowledgeable
- Strategic & Goal-Directed
Inclusive Course Design Checklist

Be mindful of who our students are or who the “average students” may be by viewing Variability Matters and visit Understanding Our Students.

Use checklists below to prepare for your teaching:

- The 7-step for preparing accessible/inclusive teaching
- Accessibility guidelines for text materials
- Accessibility guidelines for multimedia materials
- Inclusive Course Design checklist
Follow Accessibility Guidelines – the L.I.S.T. to create your text based course materials
- Links: Provide meaningful label for web link
- Images, graphs, diagrams, chars, photos: Describe or explain any images, diagrams, charts, photos or graphical information
- Structure: Include structure for your document by using heading style feature
- Tables: Avoid complicated or nested tables; include and repeat header row for long tables over one page; and check the logical reading order of your table

Best Practices:
- Use more legible san serif fonts (e.g., Arial, Calibri, Helvetica, etc.)
- When formatting, use heading style, lists, bold, uppercase in addition to colored texts
- Check color contrast between text and background (WebAIM color contrast checker: http://webaim.org/resources/contrastchecker/)

Source: Web Content Accessibility Guidelines (WCAG) 2.0 Requirements – the Four Principles
Best Practices for Multimedia or Non-printed Information

For non-print multimedia course materials
- Include closed captions for your instructional videos
- Include a transcript for your audio materials
- Avoid using color only to convey information
- Use simple slide transition to reduce distraction
- Avoid animation or Flash; if used, describe the information
- Avoid flashing graphics that may cause epileptic seizures

Captioning support available at CFD’s Captioning Support web page.

Source: Section 508 Standards Chapter 2 E205.4 and WCAG 2.0
Point of Contact

Elizabeth.Tu@sjsu.edu or 408 924-3093

CFD’s Accessibility and Inclusive Teaching page:
http://www.sjsu.edu/cfd/teaching-learning/accessibility
The Importance of Structure or Description of Links

- Some screen readers can list all the web links for the document. (See screenshot on the right.)

- If only urls are listed, it’s difficult for users to relate the urls to your web references. (See upper half of this screenshot.)

- It’s more meaningful for screen reader to read the website name or label. (See lower half of this screenshot.)