Hack the Gap:

MAKING YOUR COLLECTIONS AND INSTRUCTION ACCESSIBLE FOR ALL
Who we are

Theresa Borchert, Electronic Resources Librarian

Virginia Connell, Coordinator of Library Instruction

Carl B. Ylvisaker Library
Concordia College, Moorhead, MN
Our Students
Our Students

(Gose “Disability Experts”)

U.S. Department of Education:
- 11% of college students have a disability
- Of those 2/3 have an “invisible” disability (ADHD, depression, learning disabilities, emotional disabilities, etc.)

Complicating factors:
- Many students do not ask for accommodations
- Many professors do not feel accommodations are justified

UCLA Annual Freshman Study
Our Students

(Gose “How One College”)

United States: Receive Accommodations

- High School: 85%
- College: 15%

United States: Degree Earners

- All Students: 56%
- Students with Learning Disabilities: 44%
Working Vocabulary
Working Vocabulary

- Universal Design in Instruction (UDI)
- Learning Styles (visual, aural, verbal, logical, physical, solitary, social)
- Accessibility
- Visible Disabilities
- Invisible Disabilities
- Differently Abled - Handicapped
  - Vision Impairment, blind
  - Hear Impairment, deaf
  - Speech Impairment, dumb
  - Reading Impairment, dyslexia
  - Organizationally challenged: Executive Function Issues
  - On the Spectrum, autistic
  - Motor Impairment: fine motor, gross motor
  - Physical limitations: wheelchair, cerebral palsy
- Instruction:
  - Chunking
  - Clustering
  - Mnemonics
- Tech
  - Coding
  - OCR, PDF, HTML
  - Screen Readers
  - Image readers
  - Audiobooks, Talking Books, read out loud functionality
Homework
Analysis of Need

- Background Reading
- Investigation of local population needs (students and faculty)
- Analysis of e-holdings for accessibility
- Evaluation of teaching pedagogies
Develop Relationships

Counseling Center and Disability Services
• Workshops & Coffee Hour
• Identification of students with differing abilities (with permission from students)
• Software
  o Dragon Naturally Speaking Software
  o OpenBook
  o Adobe Acrobat Pro
  o Magic
• Librarian Tools
  o List of installed software (description/tutorials)
  o Signage

• Academic Enhancement & Writing Center
  o In-library tutoring
  o Workshops on student status platform

• Registrar
  o Advising workshops
  o Student Success Collaborative advising tool

• IT
  o Software installation
  o Printer locations & accessibility

• Residence Life
  o Student behaviors & trends
E-Resource Access
E-Resource Functions

*Subjects Plus* list allows sorting alphabetically, by discipline, by format, and by tool function in order to increase choice and use. Users may choose “Read Aloud resources.”

Icons next to the name of the database highlight available functions.
SubjectsPlus and Accessibility

ROLL OVER AUDIO ICON

READ ALOUD RESOURCES
E-resources functionality

LIBRARY RESOURCES: LIMIT TO READ ALOUD

AVAILABILITY OF READ ALOUD FUNCTION
Database functionality comparison

ACADEMIC SEARCH PREMIER (EBSCO)  
EXPANDED ACADEMIC INDEX (GALE)
Web Accessibility: Screen Readers

**INAPPROPRIATE**

**APPROPRIATE**

Disability Resources

- Resource centers
  - Disability.gov: US federal government information for people with disabilities
  - ASRC: Area Special Education Cooperative in Northwest Minnesota
  - Education, Minnesota Department of Education; Minnesota Braille and Talking Book Library
  - Education, North Dakota Department of Public Instruction includes links to Vision Services and School for the Deaf
  - Human Services, Minnesota department of: includes Autism and Services for people with disabilities
  - Human Services, North Dakota department of: includes Autism and Services for people with disabilities
  - National Library Services for the Blind and Physically Handicapped includes link to Search the Catalog and BARD

- Resources
  - Americans with Disabilities Act: rights for people with disabilities - U.S. Dept. of Justice
  - Closing the Gap: trade journal on adaptive technology for disabilities
  - College Resources for Students with Disabilities guidebook - Affordable Colleges Online to help students transition to
  - NTN: Narrative Television Network
  - Paracare Center: Parent Advocacy Coalition for Educational Rights - Minnesota
  - Seeing Savvy: video clips of some sign language vocabulary

- Computer Accessibility
  - Cheat sheets: one-page accessibility resources to assist in creating accessible content - National Center on Disability and
  - Making your Website accessible: ACRL Tech Connect
  - The Trace Center research, development, and resource center
  - Web Accessibility Initiative (WAI) including Policies relating to Web accessibility

- Product & Company Links
  - Freedom Scientific - Blind and low vision products
  - More AIWC.com - Products of interest for vision impaired individuals and more
Web Accessibility: Screen Readers

E-RESERVES: SCANNED BOOK IMAGE

SCREEN READER RESULTS FOR SCANS
**Take-aways for e-access**

<table>
<thead>
<tr>
<th>AVAILABLE RESOURCES</th>
<th>MODIFICATIONS IN ACCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articles</td>
<td>Use resources that have listen options</td>
</tr>
<tr>
<td>Books</td>
<td>Provide book retrieval options as needed</td>
</tr>
<tr>
<td>DVDs</td>
<td>Check video files for transcript options</td>
</tr>
<tr>
<td>Streaming video</td>
<td>Check eReserve PDFs in resource to see if they are readable with a Screen reader before posting to a class resource page</td>
</tr>
<tr>
<td>Digital files</td>
<td>Create course web pages that allows ease of access.</td>
</tr>
<tr>
<td>eReserves</td>
<td>Use and/or create tutorials with alternative access options.</td>
</tr>
<tr>
<td>Print/online</td>
<td>Be on the lookout for changes in technology and interface access options within databases</td>
</tr>
<tr>
<td>Online Tutorials</td>
<td></td>
</tr>
</tbody>
</table>
Changing Technologies

Current & Old School:

JAWS/ OpenEyes
MAagic
Dragon Naturally Speaking
OpenBook
Recorder
GPS
Adobe Acrobat Pro
Adobe Acrobat Device (table-top camera)

New School:

Phone Apps

Examples for a vision-impaired person:

- Google Maps
- Recordium
- Compass
- Megalight
- Scanforme

Activate Accessibility features on device
- Camera
- Siri
Instruction Access

USING PRINCIPLES OF UNIVERSAL DESIGN FOR LEARNING IN THE CLASSROOM
Student Behaviors

- Ear toward you
- Looking at your mouth
- Avoiding eye contact
- Distracted
- Fidgety, antsy
- Irritable or demanding
- Wanting to take over the conversation
- Shy or quiet
- Note student “gear” or clothing (a hat might be shielding from florescent lighting; hearing aids or tinted glasses; a hooded sweatshirt may provide security)
- Reading out loud/”self-talking” through a task/using other aids for concentration
Universal Design for Instruction (UDI)

1) Equitable use
2) Flexibility in use
3) Simple, intuitive instruction
4) Perceptible information
5) Tolerance for error
6) Low physical effort
7) Room modifications
8) Co-learning
9) Instructional goals

(Chodock and Dolinger, p. 27)
1) Equitable Use

Aim:

Instruction is useable by all students – if not possible, what other means of instruction might provide equal access?

Examples:

- Online course guides
- Handouts
  - Font style & size
  - Printing vs. cursive
- Oral instruction
  - Use of a whiteboard/projection screen
  - Facing the class
Accessibility: Fonts

COMIC SANS (MICROSOFT 2013)

Hack the Gap: Making Your Collections and Instruction Accessible for All

Theresa Borchert, E-Access Services
Virginia Connell, Instruction Coordinator
Carl B. Ylvisaker Library
Concordia College, Moorhead, MN

DYSLEXIE (BOER 2017)

Hack the Gap: Making Your Collections and Instruction Accessible for All

Theresa Borchert, E-Access Services
Virginia Connell, Instruction Coordinator
Carl B. Ylvisaker Library
Concordia College, Moorhead, MN
2) FLEXIBILITY IN USE

Aim:
Instruction appeals to a range of learning styles & abilities

Examples:
• Active learning that engages senses
  ◦ Be aware of noise levels
  ◦ Avoid requiring use of only one sense
• Preview lesson plan
• Repeat questions
• Ask questions of students

3) SIMPLE, INTUITIVE INSTRUCTION

Aim:
Accessible style and language that follows the stated lesson plan

Examples:
• Link skills taught to the specific assignment of the class
• Let students steer topic choice for discussion
• Avoid “library-ese” or acronyms
4) PERCEPTIBLE INFORMATION

Aim:
Essential information is provided in instruction, being mindful of the physical environment or students’ sensory needs

Examples:
• Focus on usability features of databases or websites
• Note availability of accessibility features of databases or websites (in a way that includes all students)
• Be succinct with directions
• Use paper, online, oral, whiteboard formats to communicate information

5) TOLERANCE FOR ERROR

Aim:
Instruction will allow for a variety of levels of ability and work-time needs

Example:
• Build lesson plans to include one-third to one-half of the session as individual work time, with librarian available as guide-on-the-side
• Consider allowing work to be turned in “by the end of the day” or another later deadline than the end of class
6) LOW PHYSICAL EFFORT

Aim:
Avoid physical exertion that will diminish attention or understanding of the instruction

Examples:
• Build in effort-saving tools, such as one-click access to printing, citation-management options, etc.
• Avoid duplicative tasks

7) ROOM MODIFICATIONS

Aim:
Create your lesson plan with students’ physical abilities and room limitations in mind

Examples:
• Seating arrangements for solo or group work
• Lighting modifications
• Sound adaptations
• Ease of ingress and egress
8) CO-LEARNING

Aim:
Lesson plan creates easy opportunities for co-learning between students and between faculty and students

Examples:
• Work with faculty beforehand to create diverse and versatile instruction
• Foster collaboration between students in the class
• Make obtaining a follow-up research-help session both easy and customary
• Allow for and encourage email research assistance

9) INSTRUCTIONAL GOALS

Aim:
Create a classroom and lesson plan that recognizes strengths in everyone and that maintains everyone has value to contribute

Examples:
• In discussion ahead of the library session, develop a specific learning goal or two for the session with faculty
• Reward different learning styles
  ◦ Class interactions may be verbal (using a whiteboard) or non-verbal (using clickers and projector), social or independent, etc.
Take-aways for instruction

Small changes can make a big difference
- Flexible lesson/work plan reveals UDI in action: all students benefit
- Independent or group work options: Students on the spectrum, verbal learners, visual learners, social or solitary learners
- Digital & print options: Students with fine motor control difficulties, ADHD, dyslexia
- Multiple reinforcements of the instruction goal (whiteboard, oral explanations, hands-on application of learning, digital and print tools & resources): all students benefit

- Chunking, clustering, mnemonic devices: Students with ADHD, Executive Function problems, dyslexia, or on the spectrum
- Previewing the lesson and being predictable: Students on the spectrum, with ADHD, with dyslexia

Building lessons using UDI will benefit all:
- Decrease library anxiety
- Increase the chances of a rewarding library session
- Make other learning more successful as you scaffold students’ skills
UDL & IL Framework Parallels

<table>
<thead>
<tr>
<th>Resourceful &amp; Knowledgeable</th>
<th>Strategic &amp; goal-directed</th>
<th>Purposeful &amp; motivated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bring considerable prior knowledge to new learning</td>
<td>Formulate plans for learning</td>
<td>Are eager for new learning and are motivated by the mastery of learning itself</td>
</tr>
<tr>
<td>Activate that prior knowledge to identify, organize, prioritize, and assimilate new information</td>
<td>Devise effective strategies and tactics to optimize learning</td>
<td>Are goal-directed in their learning</td>
</tr>
<tr>
<td>Recognize the tools and resources that would help them find, structure, and remember new information</td>
<td>Organize resources and tools to facilitate learning</td>
<td>Know how to set challenging learning goals for themselves</td>
</tr>
<tr>
<td>Know how to transform new information into meaningful and useable information</td>
<td>Monitor their progress</td>
<td>Know how to sustain the effort and resilience that reaching those goals will require</td>
</tr>
<tr>
<td></td>
<td>Recognize their own strengths and weaknesses as learners</td>
<td>Monitor and regulate emotional reactions that would be impediments or distractions to their successful learning</td>
</tr>
<tr>
<td></td>
<td>Abandon plans and strategies that are ineffective</td>
<td></td>
</tr>
</tbody>
</table>

Resourceful & Knowledgeable:
- Searching is strategic
- Information creation is a process

Strategic & goal-directed:
- Research as Inquiry
- Searching is Strategic

Purposeful & motivated:
- Research as inquiry
- Information has value

(ACRL and “UDL and Expert Learners”)
UDL & IL Framework: Our Process (ACRL)
To-Do List
@ The Carl B.

- Creating immediate-feedback options for library session learning tasks
- Investigate introvert/extrovert learning styles in order to build more diverse lesson plans
- In-house librarian and staff development to increase knowledge of UD, especially for instruction, tech, & services
- Update and enhance collaboration between IT, Counseling Center, and Library, based on changes in staff and systems
- Work to find and use online tutorials with captioning
- Making the library site more accessible & posting an accessibility statement
- Creating a library policy regarding accessibility (with connections to other policies, such as Collection Development, Services, etc.)
Co-learning Q&A
Works Cited


Further Reading & Resources


Thanks!

For the Simulator Kits for Impaired Vision:
North Dakota Vision Services/School for the Blind
500 Stanford Road
Grand Forks, ND 58203
www.visionservices.com

For lots of advice and suggestions:
Family members and people we have collaborated with through the years.