



Universal Design for Sociology Courses

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Most teachers cannot individualize instruction for so many diverse learners. What they can do is present material in multiple ways.

”

Frank Bowe

Agenda

- What is Universal Design and Why is it Important?
 - Goals of Universal Design
 - Universal Design Principles
 - Challenges of Implementing Universal Design Principles
- Implementing Universal Design in Harvard Sociology Courses
 - Engagement
 - Representation
 - Action & Expression
- Summary



What is Universal Design?

The design of products and environments to be usable by all people, to the greatest extent possible, without adaptation or specialized design (Center for Universal Design).

Sociology courses should be usable by any student without specialized individual adaptation, as much as possible.

Why is Universal Design Important

- 1) ADA requirements are minimum standards, not absolutes or maximums (Smith & Preiser 2011).
- 2) Inclusivity – not considering diversity risks alienating potential students
- 3) Better design – when designers take diverse abilities into consideration, the products tend to be better for everyone (The Goals and Benefits of Universal Design)
 - 1) Example: Curb Cutouts for wheelchair users benefit people pushing strollers, shopping carts, etc.
 - 2) Example: Closed Captions for hard of hearing folks benefit those watching videos in a noisy environment or in an environment that must remain quiet like a library

Goals of Universal Design

- Accommodate all people, particularly those with functional limitations, without individual accommodations
- Functional Limitations: disabilities that result from interactions between individuals and environments
- Goal: Design environments/environmental features from the beginning to reduce or eliminate individual functional limitations (Smith & Preiser 2011)

Principles of Universal Design

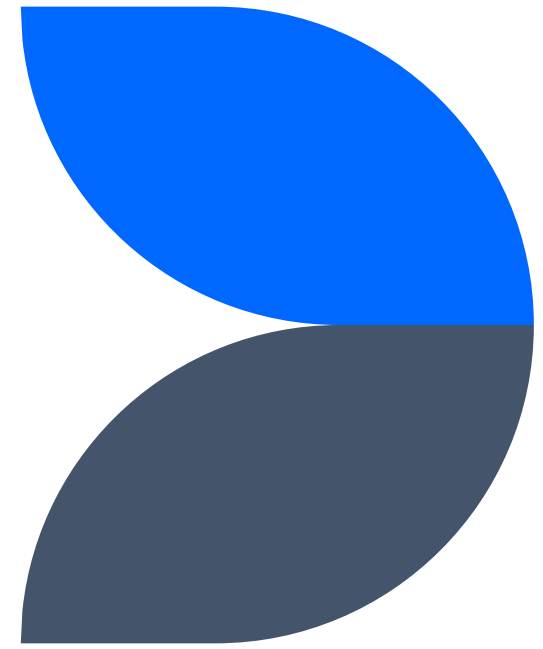
1. Equitable Use - The design is useful to users with a diverse range of abilities
2. Flexibility in Use - The design accommodates a wide range of preferences and abilities
3. Simple and Intuitive Use – The design is easy to understand, regardless of the user’s experience, knowledge, or language skills
4. Perceptible Information – The design communicates necessary information effectively to the user, regardless of ambient conditions or the student’s sensory abilities
5. Tolerance for Error - The course design minimizes the adverse consequences of accidental or unintended actions.
6. Low Physical Effort - Students can engage the course efficiently and comfortably and with a minimum of fatigue
7. Appropriate Size and Space for Use - Appropriate size and space is provided for physical access and use regardless of user’s body size, posture, or mobility.

(Connell et al 1997)

Challenges of Universal Design Implementation

- Many dimensions of diversity to cover
 - Geography/Language
 - Age/Experience
 - Socio-Economic Status
 - Sensory/Cognitive/Mobility limitations (temporary/permanent)
- Time to identify and correct accessibility obstacles

**Adapting
Universal Design
Principles for
Sociology Course
Design**



How to Design Courses Universally

- Make talking to students with disabilities part of course design
- Include students with a broad range of disabilities
- Have these discussions early in the course design process

(UDL; Smith & Preiser 2011)

How to Design Courses Universally

Considerations:

Visual – visual impairment, color-blindness, etc...

Color, Layout, Font/Typography

Content – Dyslexia, ADHD, Executive Dysfunction...

Language/Readability, Readings, Assignments, Images, Multimedia

Interaction/Activities – ASD, Adaptive, Sensory, or Mobility, dysfunction...

Kind of Participation, Time/Speed, Movement/Location

(UDL)

How to Design Courses Universally

- Provide a variety of options for:
 - Engagement:
 - Recruiting Interest
 - Sustaining Effort & Persistence
 - Self-Regulation
 - Representation
 - Perception
 - Language & Symbols
 - Comprehension
 - Action & Expression
 - Physical Action
 - Expression & communication
 - Executive Functions

(UDL)

How to Design Courses Universally

- Engagement:
 - Recruiting Interest
 - Sustaining Effort & Persistence
 - Self-Regulation

Engagement: Recruiting Interest

- Optimize Individual Choice and Autonomy by
 - Allowing students to participate in the design of activities and tasks
 - Involving students in setting their own goals for the course
- Optimize Relevance, Value, and Authenticity by
 - Designing activities so that learning outcomes are authentic, communicate to real audiences, and reflect a purpose that is clear to the participants
 - Designing tasks that allow for active participation, exploration and experimentation
 - Allowing for personal response, evaluation and self-reflection in content and activities
- Minimize Distractions & Threats by
 - Varying the level of novelty or risk
 - Varying the level of sensory stimulation
 - Involving all participants in whole class discussions

Engagement: Sustaining Effort & Persistence

- Make goals and objectives Obvious and Salient
 - Display goals in multiple different ways
 - Divide long-term goals into short-term assignments
 - Use prompts or scaffolding to visualize desired outcomes
 - Include students in discussions of the meaning of grade levels
- Use Flexible Tools and Supports to Optimize Challenge
 - Provide a range of demands that can satisfy core objectives
 - Provide alternative permissible tools and scaffolds
 - Make process, effort, and improvement salient criteria for meeting standards
- Cultivate Collaboration and Community
 - Create cooperative learning groups with clear goals, roles, and responsibilities
 - Use prompts to guide students in when and how to ask teachers/others for help
 - Use contracts, rubrics, or norms to create expectations for group work
- Emphasize Effort and Process to Increase Mastery-Oriented Feedback
 - Use feedback to encourage perseverance, efficacy & self-awareness, and the use of support when facing challenges
 - Give frequent, timely, and specific feedback
 - Provide substantive and informative feedback, not comparative or competitive

Engagement: Self-Regulation

- Motivate students by helping them be explicit about expectations & beliefs
 - Include activities that encourage self-reflection and identification of personal goals
 - Model the process of setting personally-appropriate goals given both strengths and weaknesses
- Facilitate personal coping skills and strategies
 - Provide adaptive strategies for handling subject-specific phobias (e.g. math)
 - Provide resources for and actively encourage seeking external emotional support
- Encourage self-assessment & reflection
 - Provide templates students can use to track their own behavior
 - Use activities to help students recognize their own progress

How to Design Courses Universally

- Representation
 - Perception
 - Language & Symbols
 - Comprehension

Representation: Perception

- Customize the display of information
 - Use flexible format so that students can change the following:
 - Size of text, images, graphs, tables, etc.
 - Contrast between text and background
 - Colors used for emphasis or additional information
 - Volume & speed of audio or video
 - Layout, font, etc used for digital or print materials (provide options before printing)
- Provide alternatives to auditory information
 - Captions, diagrams, charts, transcripts, ASL interpreters,
- Provide alternatives to visual information
 - Provide descriptions of all text, images, graphics, video, etc.
 - Use touch equivalents, physical objects, auditory cues for key concepts, perspective, etc.

Representation: Language & Symbols

- Clarify vocabulary and symbols
 - Have alternate representation of key vocab, labels, icons, & symbols available (glossary, graphic equivalent, etc.)
- Clarify syntax and structure
 - Use alternatives to unfamiliar syntax that highlight structural relations, relate to previously learned structure, make relations explicit
- Support decoding/translating text or math or other symbols
 - Allow/provide use of speech-to-text or text-to-speech, provide glossary of key terms
- Support understanding across languages
 - Use visualizations, provide electronic translation tools or links to multilingual glossaries on the web
- Use multi-media to illustrate
 - Make explicit links between information provided in texts and equations, charts, or diagrams

Representation: Comprehension

- Supply or encourage recall of background knowledge
 - Use images, concept anchoring, or concept mastery routines, concept maps
 - Use analogies or metaphors to bridge concepts
 - Connect strategies, concepts, ideas, across courses/disciplines
- Highlight patterns, big ideas, & relationships across content
 - Emphasize key words/phrases/images
 - Use multiple different examples
 - Highlight applicable previously learned skills
- Guide information processing & visualization
 - “Chunk” information into smaller elements; sequentially highlight information by releasing it gradually.
 - Use alternative formats, like arts/literature or film to explore big ideas
- Maximize transfer and generalization
 - Provide information retention/recall strategies, e.g. how to paraphrase, mnemonic devices like method of loci, etc...
 - To connect new ideas to old: provide word maps, concept webs, or use familiar contexts through analogy.
 - Make opportunities to review key concepts and ideas

How to Design Courses Universally

- Action & Expression
 - Physical Action
 - Expression & communication
 - Executive Functions

Action & Expression: Physical Action

- Use a variety of methods for response and navigation
 - Provide alternatives for physically interacting with materials by hand, voice, single switch, joystick, keyboard, or adapted keyboard
- Provide support for tools and assistive technologies
 - Provide alternate keyboard commands for mouse action
 - Provide access to alternative keyboards
 - Select software that works seamlessly with keyboard alternatives and alt keys

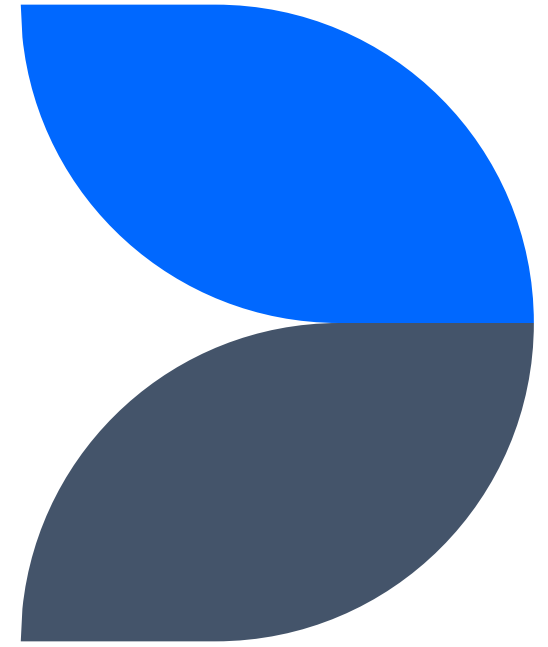
Action & Expression: Expression & Communication

- Use multiple media for communication
 - Text, speech, diagrams, video, music, visual art
 - Physical blocks, 3D models
 - Discussion forums, interactive applications
 - Demonstrate multiple problem-solving strategies
- Use multiple tools for composition and construction
 - Text-to-speech software, spelling/grammar/style checkers
 - Use web applications to allow practice with feedback (e.g. Criterion)
- Scaffold support for practice and performance to build mastery
 - Provide multiple models using different approaches to demonstrate same outcome
 - Support use of multiple teachers/mentors (list resources etc.)
 - Use multiple examples of novel solutions to authentic problems

Action & Expression: Executive Functions

- Guide appropriate goal setting
 - Use guides, prompts, and scaffolding to help students estimate effort, resources, difficulty and time
 - Provide examples of process and product
- Help develop planning and strategy
 - Provide checklists and project planning templates for understanding the problem, setting up prioritization, sequences, and schedules of steps
 - Provide guides for breaking long-term goals into reachable short-term objectives guides for breaking long-term goals into reachable short-term objectives
- Teach students to manage information and resources
 - Provide graphic organizers and templates for data collection and organizing information, include checklists and guides for note-taking
- Help students' build the capacity to monitor their own progress
 - Use assessment checklists, scoring rubrics, and multiple examples of annotated student work.
 - Show visual representations of progress (graphs & charts, before/after photos/diagrams, etc)

Summary



- Universal Design is an attempt to accommodate everyone by providing multiple pathways of learning
- It is important because it benefits everyone and because not doing it risks alienating students or even ADA lawsuits
- Courses are consistent with universal design principles when they provide a variety of options for student engagement, representation, and action & expression
- Students with a variety of abilities should be included early in the course design process
- This will help instructors consider how to construct multiple options that accommodate a variety of visual-, content-, or interaction-based abilities.

Thank you

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