Issues in assessment

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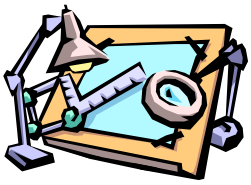
- 4.5.1: How can students with limited English proficiency be included in the assessment process?
- **4.5.2: How can assessments be developed using a universal design approach?**
- 4.5.3: Why are testing standards important?

- 4.5.2: How can assessments be developed using a universal design approach?



How can assessments be developed using a universal design approach?

- **Universally design assessments are**
  - assessments that are designed and developed from the beginning to be accessible and valid for the widest range of students, including students with disabilities and students with limited English proficiency.

How can assessments be developed using a universal design approach?

- **Universal design in assessments is related to universal design in architecture and other fields**
  - Universal Design has been broadly defined as "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" (Center for Universal Design).

How can assessments be developed using a universal design approach?

- **Examples of universal design include…**
  - **Flexibility in use**: The design supports a wide range of individual preferences and abilities.
  - **Simple and intuitive use**: Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
  - **Perceptible information**: The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

How can assessments be developed using a universal design approach?

- Some general universal design principles include…
  - 1. Equitable Use
  - 2. Flexibility in Use
  - 3. Simple and Intuitive Use
  - 4. Perceptible Information
  - 5. Tolerance for Error
  - 6. Low Physical Effort
  - 7. Size and Space for Approach and Use

» Thompson, Johnstone, & Thurlow, M. L. (2002).

How can assessments be developed using a universal design approach?

- **Principle One: Equitable use**:
  - The design is useful and marketable to people with diverse abilities.
    - a. Provide the same means of use for all users: identical whenever possible; equivalent when not.
    - b. Avoid segregating or stigmatizing any users.
    - c. Provisions for privacy, security, and safety should be equally available to all users.
    - d. Make the design appealing to all users.

How can assessments be developed using a universal design approach?

- **Principle Two: Flexibility in use**:
  - The design accommodates a wide range of individual preferences and abilities.
    - a. Provide choice in methods of use.
    - b. Accommodate right- or left-handed access and use.
    - c. Facilitate the user's accuracy and precision.
    - d. Provide adaptability to the user's pace.

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- **Principle Three: Simple and intuitive use**:
  - Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
    - a. Eliminate unnecessary complexity.
    - b. Be consistent with user expectations and intuition.

How can assessments be developed using a universal design approach?

- c. Accommodate a wide range of literacy and language skills.
- d. Arrange information consistent with its importance.
- e. Provide effective prompting and feedback during and after task completion.

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- **Principle Four: Perceptible information**:
  - The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
    - a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
    - b. Provide adequate contrast between essential information and its surroundings.

How can assessments be developed using a universal design approach?

- c. Maximize "legibility" of essential information.
- d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).
- e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

How can assessments be developed using a universal design approach?

- **Principle Five: Tolerance for error**:
  - The design minimizes hazards and the adverse consequences of accidental or unintended actions.
    - a. Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
    - b. Provide warnings of hazards and errors.
    - c. Provide fail safe features.
    - d. Discourage unconscious action in tasks that require vigilance.

How can assessments be developed using a universal design approach?

- **Principle Six: Low physical effort**:
  - The design can be used efficiently and comfortably and with a minimum of fatigue.
    - a. Allow user to maintain a neutral body position.
    - b. Use reasonable operating forces.
    - c. Minimize repetitive actions.
    - d. Minimize sustained physical effort.

How can assessments be developed using a universal design approach?

- **Principle Seven: Size and space for approach and use**:
  - Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.
    - a. Provide a clear line of sight to important elements for any seated or standing user.
    - b. Make reach to all components comfortable for any seated or standing user.
    - c. Accommodate variations in hand and grip size.
    - d. Provide adequate space for the use of assistive devices or personal assistance.

      » (The Center for Universal Design, North Carolina State University, 1997.)

How can assessments be developed using a universal design approach?

- **There are specific steps involved in the universal design of assessments. Specific universal design steps to be integrated with standard test development procedures at each stage of development may include:**
  - **A. Test conceptualization, where…**
    - **The construct(s) are measured precisely and explicitly so the test can be designed to measure the construct while minimizing the effects of irrelevant factors.**
    - **There is a full range of students in the definition of the target population.**

How can assessments be developed using a universal design approach?

- **B. Test construction:**
  - Develop items that minimize the effects of extraneous factors and that can be used with accommodations as appropriate
    - Avoid unnecessary use of graphics that cannot be presented in Braille, use font size and white space appropriate for clarity and focus, and avoid unnecessary linguistic complexity when it is not being assessed
  - Provide for a full range of test performance to avoid ceiling or floor effects.
  - Develop an item pool of sufficient size to permit elimination of items that are found to not be universally appropriate during the test tryout and item analysis.

How can assessments be developed using a universal design approach?

– **C. Test tryout:**
  - Include a full range of students in the tryout sample
    – students with disabilities, students with limited English proficiency, other students with special needs).
  - Include the use of accommodations during the test tryout

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– **D. Item analysis:**
  - Analyze item characteristics to determine which items can be used with the full range of students and with accommodations.
  - Examine items for evidence of disability bias.

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– **E. Test revision:**
  - Eliminate items with evidence of disability bias.
  - Include the full range of students and the use of accommodations in the test administration.

How can assessments be developed using a universal design approach?

- **Universally designed assessments benefit all students, not just those with disabilities or limited English proficiency by….**
  – Not having ceiling or floor effects
  – Reducing extraneous features, such as unnecessary linguistic complexity and confusing or low contrast graphics
  – Allowing all students to better show their skills on the constructs being tested.
  – Reducing the need for different forms, booklets, or assessments since all students are considered during test conceptualization, construction, field testing, item analysis, and test revision.

How can assessments be developed using a universal design approach?

- **Universally designed assessments may or may not cost more to develop.**
- Once universal design is incorporated into routine test development, the costs may not be very different from current costs.
- Ultimately the costs of not having good information on the performance of many of our students due to irrelevant access issues is higher than the cost of correcting these issues.

How can assessments be developed using a universal design approach?

- **Universal design will not result in eliminating the need for some accommodations during assessments but…..**
  – they can significantly reduce the need for them
  – some students will still need accommodations, for example…
    - students who are easily distracted by the presence of other students may still need to be tested individually;
    - students will need assistive technology for presentation and response;
    - students who cannot read print in a size less than 18 point, or who must use Braille, will still need a large print or Braille test booklet

How can assessments be developed using a universal design approach?

- Universally designed assessments will assess students more accurately by…
  - Removing extraneous and confounding factors to get more accurate scores that reflect actual student knowledge and skills, and not extraneous factors.
  - Not changing the test features necessary to measure the intend purpose
    - » (National Center on Educational Outcomes: http://education.umn.edu/NCEO/TopicAreas/UnivDesign/UnivDesign_FAQ.htm)