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Chapter 15: Exceptionality

Special Topics on Item Development for Accessibility

Universal Design (UD)
Having originated from architecture, UD has been applied successfully to instructional and assessment practices in education. The Center for Universal Design at North Carolina State University promotes "the idea that all new environments and products, to the greatest extent possible, should be usable by everyone no matter their age, ability, or circumstance" (http://www.ncsu.edu/project/design-projects/udi/).

    The NCEO (http://www.cehd.umn.edu/nceo/) extended the architecturally-based UD principles to the practice of assessment design, suggesting that UD assessments

> *are designed and developed from the beginning to allow participation of*
> *the widest possible range of students, and to result in valid inferences*
> *about performance for all students who participate in the assessment.*
> (Thompson, Johnstone, & Thurlow, 2002, p. 5).

The seven elements of UD applied to assessment are:
1.   inclusive assessment population;
2.   precisely defined constructs;
3.   accessible, non-biased items;
4.   amenable to accommodations;
5.   simple, clear, and intuitive instructions and procedures;
6.   maximum readability and comprehensibility; and
7.   maximum legibility.

Thompson, S.J., Johnstone, C.J., & Thurlow, M.L. (2002). *Universal design applied to large scale assessments* (Synthesis Report 44). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Exceptionality

In a very general sense, the term exceptionality describes a broad class of unique individual characteristics concerning educational needs of students. Exceptionalities include physical, cognitive, and emotional or behavioral impairments, and also conditions affecting gifted and talented students. Exceptionalities may affect learning and communication, and in our context, interaction with tests and assessments.

In its twentieth year, the journal Exceptionality is published "to provide a forum for the presentation of current research in special education. Manuscripts accepted for publication will represent a cross section of all areas of special education and exceptionality and will attempt to further the knowledge base and improve services to individuals with disabilities and gifted and talented behavior" (http://www.tandf.co.uk/journals/authors/hexcauth.asp).

Exceptional Children, published by the Council for Exceptional Children (CEC), is "dedicated to improving the educational success of individuals with disabilities and/or gifts and talents" (http://www.cec.sped.org/). Their website on assessment provides information on many issues affecting the exceptionalities community. On this website is a description of Response to Intervention (RtI), which is a process to identify and address emerging learning difficulties in children early and directly. RtI also includes methods for identification, selection, and placement, and progress monitoring assessment tools used to support students with exceptionalities. This website also contains information on alternative assessments used by school districts and states. This information includes dynamic assessment as an interactive tool employing a series of scaffolded prompts to uncover KSAs. Also included are family assessments, portfolios, and issues related to accommodations and modifications to improve accessibility to standardized assessments, among many others.

Another important resource is the National Center on Educational Outcomes (NCEO), which was established in 1990 at the University of Minnesota. Its mission is "to provide national leadership in designing and building educational assessments and accountability systems that appropriately monitor educational results for all students, including students with disabilities and English Language Learners (ELLs)" (http://www.cehd.umn.edu/nceo/About/). It serves as a strong policy advocate for the promotion of evidence-based practice and provides important dissemination and technical assistance through state and national needs assessments and policy reviews. It is a clearing house and contributor to research regarding educational outcomes for students with disabilities (SWDs) and ELLs. Among the topic areas with multiple resources at their website, we find accommodations, alternative assessments, universally designed assessments, assessment of English language proficiency. These topics, among others, are relevant to our discussion of item writing for test accessibility.

English Language Learners (ELLs)

Much of the research on the role of language in item development originates from studies of nonnative ELLs. The number of school-aged children in the Unites States who speak a language other than English is more than 11.2 million, 21% of the school-aged population (National Center for Education Statistics, 2012a). Based on 2011 National Assessment of Educational Progress (NAEP) reading results, the percent of ELL students at or above Basic in fourth grade was 30% compared with 70% for non-ELLs. In the eight-grade sample, the percent of ELLs at or above Basic was 29% compared with 77% for non-ELLs (NCES, 2011).

We have several factors to consider when addressing issues related to ELLs and testing (Pitoniak, Young, Martiniello, King, Buteux, & Ginsburgh, 2009). ELLs in the US come to schools with a wide range of linguistic backgrounds. Most speak Spanish, which also varies based on country of origin and region within the county. We have more than 400 different languages spoken in the homes of American schoolchildren. There are different levels of proficiency in an ELL's native language. Many have developed some speaking and listening proficiency, but many fewer are proficient in reading and writing in their native language. Similarly, there are different levels of proficiency in English. On top of language proficiency is a wide range of formal educational experience, including formal schooling in the native language or English, and testing experience in either language.

Individuals with Disabilities

In addition, students receiving special education services have also helped us understand the important role of language, particularly when complex language is introduced in test items where language skills are not being measured. More than 13% of school-aged children are provided with services for disabilities, including nearly 6.5 million (NCES, 2012). The most common diagnosis is the category of specific learning disabilities (nearly 2.5 million) and speech or language impairments (nearly 1.5 million) (NCES, 2012). The percent of students with disabilities (SWDs) at or above Basic on the 2011 NAEP Reading test in fourth grade was 32% compared with 70% of students without disabilities. In eighth grade, the percent at or above Basic level was 36% compared with 79% of students without disabilities (NCES, 2011).

The special education law that provides for special education and related services to students with disabilities is the Individuals with Disabilities Education Act (IDEA). It was first enacted in 1975 and most recently amended in 2004 (see http://nichcy.org/laws/idea for more information and a link to the IDEA legislation). IDEA defines a person with a disability

> as having mental retardation, a hearing impairment (including deafness), a speech or language impairment, a visual impairment (including blindness), a serious emotional disturbance (referred to in this part as "emotional disturbance"), an orthopedic impairment, autism, traumatic brain injury, another health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, and who, by reason thereof, needs special education and related services. (IDEA, Sec. 300.304 to 300.311)

More general legislation includes the Americans with Disabilities Act (see http://www.ada.gov/cguide.htm for more general information).

An individual with a disability is defined by the ADA as

> a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered. (US Department of Justice, 2009)

The issues related to meeting the unique learning needs of individuals with disabilities

and exceptionalities more broadly become even more complicated when individuals exhibit multiple exceptionalities. Sometimes, individuals with disabilities may also be gifted in many ways and are referred to as twice-exceptional (see Nicpon, Allmon, Sieck, & Stinson, 2011, for a review of research). The ability to identify and support ELLs with disabilities is also a significant challenge (Abedi, 2009). The biggest issues with this population are in identification and service provision, as both are much more complex. The issues related to test accessibility are no more or less complicated and the approaches described in this chapter apply to all cases.

Our interest in this area with respect to developing and validating test items is to illustrate how item-writing guidelines can be and have been used to improve test accessibility for individuals with exceptionalities. This is a validity issue at its core, as it bears directly on the interpretation and use of test scores. Special educators, English language educators, and measurement specialists have contributed often and effectively to increase our understanding of how individuals with exceptionalities interact with tests and test items. We have much guidance to support test development with these principles in mind. Unfortunately we are unable to include test and item design relevant to individuals with the most significant impairments—typically instructionally imbedded observational systems employing portfolios, performance assessments, or rating scales (Elliott & Roach, 2007). The guidelines presented in chapter 11 apply equally to these cases as well. We highlight the work of Abedi (2006) and Elliott and his colleagues (Elliott et al., 2010, Elliott et al., 2011), which embodies elements of the general theory of test accessibility, including principles of good item writing, UD, and cognitive load theory.

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