Overview of the Challenge

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A significant part of the story of American education since the 1970s has been the steady growth in the access certain groups have to services and opportunities that were heretofore closed to them because of the lack of legal protections. For persons who are deaf or hard of hearing, that increase in legal access has resulted from three specific pieces of legislation: Section 504 of the Rehabilitation Act, the Education for All Handicapped Children Act (now known as the Individuals With Disabilities Education Act), and the Americans With Disabilities Act. In different ways, these laws expanded the opportunities for all persons with disabilities, but they also gave rise to complex new issues that have been the subject of subsequent litigation and negotiation. In at least an indirect sense, the area of testing deaf and hard of hearing persons of all ages is one example of such an issue: Without the legislation, testing may not have been implemented, or individuals with disabilities may have been excluded. However, because testing is now required as part of equal access to education, new challenges have emerged related to equity and fairness in testing individuals with disabilities.

GROWING USE OF HIGH-STAKES TESTING

Since the mid-1990s, more and more states in the United States have implemented high-stakes testing for two purposes: as a condition of promotion, continuation, or graduation for elementary and secondary school students, and for licensure and certification of a wide range of professionals. As a result, deaf and hard of hearing adults, who previously had been denied access to certain professions, began to have such access, but increasingly they are being required to take and pass licensure examinations administered by a state agency. Colleges and universities that had excluded deaf and hard of hearing persons from their student bodies due to a lack of required accommodations opened their doors but required deaf and hard of hearing persons to take and pass certain entrance examinations in the traditional format. The inclusion movement in elementary and secondary education, as it has involved more and more deaf and hard of hearing students, has added fuel to this fire of educational testing and potential inequities for deaf and hard of hearing persons.

Thus, across all levels of education and in a number of professions, whereas testing of deaf and hard of hearing candidates or students had been a non-issue, it was now a clear issue—an ironic result of laws that were designed to be highly beneficial to all persons with disabilities. In fact, it has been reliably reported that students with disabilities consistently fail state tests at rates that are 35–45% higher than those for non-disabled students (Ysseldyke, et al., 1998). If we extend this computation, this statistic

would mean that students with disabilities are failing such tests at the rate of 75–80% on their initial testing—far greater than would be expected when examining other criteria such as grade-point average.

EQUAL STANDARDS AND FAIR ASSESSMENT

Deaf and hard of hearing persons can and should be held to the same high standards as hearing persons—whether for school or college examinations or professional licensure and certification. However, an equally essential consideration is that while the standards should be equivalent, the means of assessment must be equitable. Therefore, in an effort to enhance equity and access, formal measurements of professional expertise must address specific variables that affect the development and experiences of deaf and hard of hearing people. Local, state, and federal agencies that use such assessment results to make important judgments about deaf individuals must be well trained in the appropriate administration and interpretation of assessments.

In this sense, the stakes are high for everyone—for deaf and hard of hearing persons in terms of the decisions that will be made about their lives as a result of any assessments and for decision-makers in terms of being able to make fair and defensible decisions in a highly complex domain.

TASK FORCE ON EQUITY IN TESTING

In 1987, the National Task Force on Equity in Testing Deaf Teachers was initiated and headquartered at Gallaudet University. The focus at the time was on advocating for fair testing of deaf candidates for teacher certification in an era when the field of deaf education had a re-awakening of interest and awareness of the need for more deaf and hard of hearing teachers. Some serious barriers were beginning to be experienced nationally, which persist to the time of writing this book. Several cases were addressed by the task force, and individuals were advised as to appropriate actions to take; in addition, some state agencies were advised on appropriate accommodations to make. By the mid-1990s, the task force realized that problems of licensure for deaf persons were not limited to the teaching profession, as more and more deaf adults began to seek careers in a broader range of professions. Thus, the task force broadened its title to the National Task Force on Equity in Testing Deaf Professionals. Several national position statements were developed by the task force, and it continued to advise both states and individuals on proper ways to proceed in the case of apparent inequities.

By the year 2000, the significant increase in the implementation of high-stakes testing in schools indicated that still another broadening of mission would be appropriate. As a result, the task force changed its name again to its present title of the National Task Force on Equity in Testing Deaf and Hard of Hearing Individuals. Membership is open to all who are interested and includes a broad array of representatives from various fields, including education, occupational therapy, psychology, the law, and others. Entities represented include schools, programs, and postsecondary institutions that teach deaf and hard of hearing individuals, the Educational Testing Service, the Council for Exceptional Children, the National Board for Certification in Occupational

Therapy, the National Therapeutic Recreation Association, the Laurent Clerc National Deaf Education Center at Gallaudet University, and the Governor's Office of Disabilities for the State of Maryland. In recent years, guests and attendees at thrice-yearly meetings have included attorneys from the U.S. Office of Civil Rights, the U.S. Department of Justice, the Association of Social Work Boards, and testing companies such as Harcourt and Measured Progress.

THE BASIC PROBLEM: THE TYPE OF ENGLISH USED IN STANDARDIZED TESTS

For many deaf and hard of hearing persons, English is not fully accessible and may not function as a true first or primary language. Yet tests for school graduation, university admissions, and licensure are embedded in the English language with all of its nuances, some of which will be explained below. Such tests thus evaluate the individual's knowledge of English as much if not more than the content or skills that the tests purport to measure. However, the problem is not simply one of English-as-a-second-language (ESL); if it were, then the same accommodations afforded to a hearing non-native speaker of English would suffice for deaf and hard of hearing individuals. The following anecdote told by Gallaudet University professor of deaf studies, Ben Bahan, during a 1990 presentation at the Educational Testing Service and elsewhere illustrates how environmental access to English is markedly different for deaf and hard of hearing learners of English compared with hearing ESL learners. This is true regardless of whether the individual is a native American Sign Language (ASL) signer, a later learner of ASL, or someone who does not use sign language at all.

Two strangers, one deaf and the other a recent hearing immigrant, have just left an adult education center where they each attended English classes at different levels taught by different teachers. As it happens, the unit they both had just learned in their classes focused on the structure of "have been." At the bus stop, the two strangers encounter two hearing, native speakers of English engaged in conversation while waiting for a bus. The immigrant is able to eavesdrop and is surprised to hear them using the very sentence structure he has just learned about in class.

(Speaker #1) "I saw John today, and he wanted to know what have you been doing since you two last went out."

(Speaker #2) "Oh, I hope you didn't tell him I have been going bowling with Charlie."

The hearing ESL learner is able to experience the newly learned language structure being used in a naturalistic context. In contrast, the deaf individual sees two people talking, and, by observing their proximity to one another, can surmise a shared level of intimacy, but has no idea what they are saying and certainly does not have the same opportunity to apply what he has been learning in class. Instead of benefiting from conversational application, the deaf individual's environmental exposure to English is restricted to recognition of environmental printed words and phrases such as: bus stop, "Stop" (sign), Wal-Mart (across the street), and "Sale 30–50% off on red tag items." (Benjamin J. Bahan, Personal Communication, August, 24, 2004.)

RESEARCH

This book provides a digest of research relevant to this challenge, including work done by educational researchers, legal experts, test developers, and others. Considerable knowledge has been added to the field as a result of the research, which will be reported in a subsequent chapter. Yet, as so frequently happens with research other than medical research, a significant gap in time and awareness exists between the research results and any application to the changing of practices and related policies. Specifically, we can now identify some critical points about language-learning and access by deaf and hard of hearing persons. Yet this knowledge generally remains unknown to or unaccepted by test developers, policy makers, and those who use test results to make decisions about this population. The challenge now is how to narrow that information gap such that relevant knowledge and research results can be applied to the benefit of equity in testing deaf and hard of hearing persons.

FUNDAMENTAL PROBLEMS IN TEST CONSTRUCTION

Since the great majority of school-based tests, college-entrance tests, and licensure tests are of the multiple-choice variety, it is now appropriate to list some of the fundamental problems they pose for this population:

1. Some items in such tests contain *item bias* in the sense that they presume experience or present some content that would not be equally accessible to a deaf person, such as items related to music or rhyme, or (especially in the days prior to closed captioning), television, movies, and other staples of "hearing" culture.
2. Many such tests include some items that are embedded in *figurative or colloquial* English. A deaf person who has attained some level of mastery of the English language through reading and writing, using strategies less tied to phonological processing due to restricted or no auditory input, would not be able to access the intent of the item simply because it was worded by a hearing test developer who assumed a knowledge of colloquial English. Often there is not sufficient redundancy within the item to allow the test-taker to discern the meaning from context. This problem is particularly relevant when such language is not one of the constructs that is being tested, yet it prevents the test-taker from accessing the meaning of the item.
3. Many such tests provide *inadequate context* in the "stem" of the item (that portion of the item which describes the situation on which several subsequent multiple-choice items are based); research indicates that deaf readers require a fuller context before being able to make a selection (citation?).
4. Some items use words that have *multiple* meanings in cases where the deaf or hard of hearing test-taker might only have had access to a single meaning for the same word. If an alternate meaning, other than the one that the deaf or hard of hearing person knows, was intended by the test developer, then the deaf or hard of hearing person will get that item wrong. Related to this

     problem are words on the test that are used in ways that are not frequently used in other non-testing contexts.

   5. Some items use *multiple embedded dependent clauses* in item wording. Deaf and hard of hearing candidates can easily become lost in that complexity and miss the intent of the question itself. Test-makers sometimes do such embedding in order to increase item difficulty or get more information into less space or time, even though such structures are not the specific structures that are being measured by the test.

Other problems could be identified, but even one error resulting from any of the above five flaws could result in a candidate not meeting the cut-score (sometimes referred to as "cut-off" score) and mean the difference between graduation or non-graduation, or licensure or non-licensure, for a deaf or hard of hearing person. When one aggregates these flaws, the likelihood of the deaf or hard of person having a problem with a test because of its embeddedness in English increases severalfold.

APPROPRIATE REMEDIATION

Addressing such serious flaws is, however, another matter entirely, because deaf or hard of hearing test-takers constitute such a small minority of any constituency taking such examinations, whether it is a high school student body, a college-entrance cohort, or individuals seeking professional certification or licensure in a given state. Thus, while the technology of test development would, in theory, allow each of these flaws to be addressed and remedied by the production of an alternative form, such an action is not realistic. Alternative versions of the same test are costly to produce and would represent a discernable loss in revenue for the test developer in view of the small number of deaf and hard of hearing candidates paying fees for such alternative-version examinations. However, making test developers aware of these flaws may allow for modifications in the test development guidelines, since in some cases, the changes needed to increase equity for deaf and hard of hearing candidates may improve item clarity for all test-takers.

   How else have test administrators chosen to recognize this inequity, after it has been brought to their attention through complaints, hearings, or litigation? One response has been to allow certain accommodations during examinations. These have in general fallen into several categories:

   1. Allowing sign language interpreters for the giving of instructions by the test administrator; this accommodation is now required in law by the Americans With Disabilities Act, if it is requested.

   2. Allowing the candidate additional time, most commonly 50% more. This accommodation allows some deaf and hard of hearing candidates time needed to process English and may create a more level playing field.

   3. A private room or work station so that the deaf or hard of hearing examinee can work at his or her own pace without the pressure of a group-administered test.

4. A paper-and-pencil version of a test that is usually computer administered, especially when it is not possible to grant extended time for the computer-delivered version.
5. Sign language interpretation of the entire examination by a certified sign language interpreter.

Let us now examine each of these accommodations and their consequences. Allowing a sign language interpreter for the instructions, which is now required for all who request it, can avoid any ambiguities in what is expected of the test-taker. It also ensures that the candidate has equal access to information that may impact safety and comfort. Allowing additional time to take the test has enabled some deaf and hard of hearing test-takers, whose score was close to passing, to pass because of the removal of a very limited time constraint. In the case of an individually administered examination, again the pressure of time and peer group is removed and can make a difference for deaf and hard of hearing test-takers whose scores are bordering on passing in any case. But none of these accommodations may sufficiently compensate for the fundamental flaw of unequal access to English.

In the case of the fifth accommodation—allowing a sign language interpreter to sign the entire examination—there is the risk of altering what is being measured or creating an unduly challenging or much easier examination because both the language and the modality have been changed. Off-the-cuff interpretation without advance preparation is virtually impossible. Considerable expertise and collaboration are needed to create a test translation, whether for presentation via video technology or live with an interpreter. And there are other factors to consider as well, such as the interpreter's skill level and whether he or she is knowledgeable about the test material.

If these accommodations are not capable of fully addressing the problem, then what other options for action are available? One option has been for the decision-making body to award a waiver and simply excuse the deaf or hard of hearing individual from the examination. However, this action is definitely less desirable in the eyes of both hearing officials and the Deaf community because it then could permit deaf or hard of hearing persons who are genuinely not qualified to pass and either graduate or become licensed. Is any other option available?

ALTERNATIVE ASSESSMENTS

One of the critical problems with licensure testing and high-stakes testing for students has been the basing of important educational decisions on a single criterion—namely, a written examination. This limitation applies to hearing, non-disabled individuals as well as those with disabilities, but may have graver implications when the single measure directly or indirectly focuses on a given disability. A clear option is a multiple-measures approach to evaluation, not restricted to multiple-choice examinations.

The state of the art in educational measurement has grown significantly since the early 1990's when the American Educational Research Association (AERA) officially endorsed the validity of certain non-quantitative, or qualitative, methods in research

and evaluation. While certain qualitative techniques had been utilized for many years, they were accorded an important legitimacy by the action of the AERA. Some of these techniques, which can be adapted to the measurement of deaf and hard of hearing individuals, include:

1. The analysis of candidate *portfolios,* which are an accumulation of data showing the level of mastery of a subject. Oftentimes, well-constructed and validated sets of rubrics are useful in the hands of a panel of reviewers when applied to student or candidate products. This alternative is available to deaf students with multiple disabilities now, but is viewed as highly exceptional and is not available to the deaf and hard of hearing population as a whole.
2. Live or videotaped *observations* of students or candidates involved in a particular task, which is being evaluated for competency. This process requires trained observers using a systematic observation protocol.
3. *Interactive interviews* of students or candidates in reference to a specific skill or understanding, using a systematic interview protocol that has been pilot-tested and validated by a trained interviewer.
4. *Open-ended essay* tasks that require the student or candidate to express in their own words, with elaboration, their response to a situation or problem (as opposed to responding to a multiple-choice item).

It is easily seen how such methods present a double-edged sword. Individually or in combination, each approach could contribute to a comprehensive and balanced assessment of any individual's understanding, and some professional groups and examination authorities are looking at these alternatives as possibly promising. However, at this time, they are expensive to administer on any large scale, and it is probably unrealistic to expect the wide-scale implementation of such alternatives in the foreseeable future. Nevertheless, they might be able to be used to *supplement* rather than *supplant* regularly administered measures; if deaf and hard of hearing persons had access to such alternative means, a more complete picture of competency would emerge. Deaf and hard of hearing candidates actually might meet criteria with more rigorous assessment than that required of the hearing person because they would take both the regular examination as well as an alternative assessment of some kind.

DILEMMAS

This book, then, is to some degree about difficult choices—dilemmas—which face persons who are deaf or hard of hearing, and decision-makers (who more often than not tend to be hearing persons) who must make decisions about their qualifications and futures. The dilemmas include how to accommodate with existing examinations, how to equate results for deaf and hearing persons, how to create more accessible items and formats, how to decide among alternative assessments in terms of value and application, and how to ensure that all of these actions are financially feasible in view of budget restrictions in both the public and private sectors. None of these dilemmas is easily resolved, and each will require much experimentation and debate. It is hoped that

readers will achieve a deep understanding of all of the issues attendant on this sensitive area, such that the goal of both equity and maintenance of high standards can be achieved by deaf and hard of hearing persons of all ages.

REFERENCE

Ysseldyke, J. E., Thurlow, M. L., Langenfeld, K. L., Nelson, J., R., Teelucksingh, E., & Seyfarth, A. (1998). *Educational results for students with disabilities.* Minneapolis: National Center on Educational Outcomes. (ERIC Document Reproduction Service No. ED425590)