There are several methods one might use to determine the level of skills and knowledge...
of educational practitioners in the area of student assessment. One method is to survey various groups of education professionals and ask them to self-report on the extent of their knowledge (or their confidence) in skills associated with student assessment. This is the approach typically taken by researchers who have investigated the topic among counselors (Elmore, Ekstrom, & Diamond, 1993), principals, and teachers (Fennessey, 1982; Infantino, 1976). A second way to undertake research in this area is to develop a test of assessment skills and knowledge and administer it to groups of counselors, principals, and teachers. This approach was used by Impara, Divine, Bruce, Liverman & Gay (1991) and by Impara and Plake (in press). A third method, particularly suitable for teachers, is to examine the tests they develop and infer their knowledge of principles of test construction (Gullickson & Ellwein, 1985); this method provides only limited information about their knowledge of assessment skills.

A precursor to measuring the assessment skills of educational professionals is identifying the skills to be measured. This might be done by undertaking a job analysis, e.g., asking counselors, principals, and teachers what assessment skills and knowledge they need to perform their job. Another way is to seek appropriate professional standards that might define the scope and level of assessment skills and knowledge needed.

STANDARDS FOR ASSESSMENT

The major, and most general, standards are the Standards for Educational and Psychological Testing, (American Educational Research Association (AERA), American Psychological Association (APA), & National Council on Measurement in Education (NCME), 1985). More directly relevant to assessment skills are the standards that have been (or are being) developed by professional organizations responsible for certifying or otherwise imposing some degree of control or direction over the profession. Among the standards developed for counselors that are relevant to assessment are: Responsibilities of Users of Standardized Tests (American Association for Counseling and Development (AACC)/Association for Measurement and Evaluation in Counseling and Development (AMECD), 1989); Ethical Standards (AACC, 1988) (currently under revision); and the CACREP Accreditation Standards (Council for Accreditation of Counseling and Related Educational Programs, 1994).

In a joint endeavor the American Federation of Teachers (AFT), NCME, and the National Education Association (NEA) produced the Standards for Teacher Competence in Educational Assessment of Students (1990). In a follow up to that effort the American Association of School Administrators (AASA), National Association of Elementary School Principals (NAESP), National Association of Secondary School Principals NASSP), & NCME have drafted the Competency Standards in Student Assessment for Educational Administrators. (these standards should be available from the participating organizations by mid 1995)
THE RESEARCH FINDINGS ON SKILLS AND KNOWLEDGE

OF EDUCATIONAL PROFESSIONALSElmore et al. (1993) surveyed counselors, in-part to collect information related to the measurement dimensions of the Ethical Standards (AACD, 1988). The questionnaire asked counselors about their level of confidence associated with undertaking various assessment activities. The results indicated that many counselors feel highly confident about using test results (69%), selecting tests (67%), administering tests (90%), and interpreting test scores (72%). Counselors also reported high levels of confidence in using test norms (72%), using statistics like the mean, standard deviation, and correlation (67%), using test reliability and validity information (59%), and using the standard error of measurement (58%) (Elmore et al., 1993, p.118).

Impara et al. (1991) investigated the extent that elementary and secondary teachers' interpretation of a standardized test score report from a state testing program was aided by the interpretative information provided by the scoring service. They found that teachers who had the interpretive information made fewer errors responding to test questions based on the score report than did teachers who did not have the benefit of interpretive information. (14 of 17 correct vs. 12 of 17 correct) The most difficult items for all the teachers related to interpreting percentile bands. Some teachers, especially those at the secondary level, commented that they did not have to know how to interpret test scores because they could rely on the school counselors to interpret and explain test scores to students.

In a later study, Impara and Plake (in press) obtained responses from over 900 Virginia educators (balanced about equally among counselors, principals, and teachers at both elementary and secondary levels) on a test developed using as test specifications the Standards for Teacher Competence in Educational Assessment of Students (AFT, NCME, & NEA, 1990). Counselors' strengths were associated with items relating to test selection, validity, communication of assessment results and ethical practices. Unlike both principals and teachers, counselors showed particular strength in their basic understanding of the concept of reliability and measurement error, and their ability to interpret scores from standardized tests. In contrast to counselors, both principals and teachers more often confused reliability and validity.

Principals showed strength in understanding the bases for selecting an assessment strategy and the methods for determining validity. Most principals also answered correctly items addressing communication of test results, but (like teachers and counselors) were less proficient in the interpretation of standardized test results. Finally, principals’ scores were very high on the items measuring the recognition of ethical practices.
Although teachers' strengths were similar to those identified for principals and counselors, many teachers (about 37%) did not understand the correct interpretation of grade equivalent scores. All respondents had problems understanding how to combine scores from individual assessments, e.g., several tests, into a single summary grade. As in Impara et al. (1991), many teachers, especially those in secondary schools, indicated they rely on counselors to provide interpretations of standardized tests.

In terms of the overall performance of the different levels of professionals in this study, the counselors at both elementary and secondary levels and the elementary principals received higher scores than did either the teachers or secondary principals. It is clear that teachers rely on counselors and that this group of professionals is expected to serve in a consulting role to other professionals within the school in many matters of testing and assessment, especially when dealing with formal testing programs. In elementary schools where counselors are least likely to be available, principals may need to serve in the same consultative capacity as counselors do in high schools, so they, too, must be adequately prepared to assist teachers in matters related to formal testing programs. As a group, however, none of the professionals surveyed are well prepared in the development and use of assessments at the classroom level.

SUMMARY AND CONCLUSIONS

The findings from Elmore et al. (1993), Impara, et al., (1991) and Impara & Plake (in press) parallel each other and those from the self-report studies reported by other researchers in that many educational professionals have some knowledge of assessment practices, ranging from principles of test development and use to the practices associated with the use and interpretation of standardized and teacher-made tests. The skill levels associated with many important student assessment principles is, however, not consistent with the Standards adopted by professional organizations. The various standards that have been developed and endorsed by the professional associations in education are important documents and they provide excellent guides for the professional development of educators who work with assessment information on a regular basis. Clearly the assessment skills and knowledge of counselors, principals, and teachers are lacking in some important areas while in other important areas these educational professionals are highly skilled and knowledgeable.

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James C. Impara is Professional Associate, Buros Institute of Mental Measurements, University of Nebraska-Lincoln, Lincoln, NE.

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