APA’s Guidelines for Test User Qualifications

An Executive Summary

Samuel M. Turner
University of Maryland

Stephen T. DeMers
University of Kentucky

Heather Roberts Fox
American Psychological Association

Geoffrey M. Reed
American Psychological Association

At the direction of the Council of Representatives of the American Psychological Association (APA), the Task Force on Test User Qualifications (TFTUQ) was established in October 1996 to develop guidelines that inform test users and the general public of the qualifications that the APA considers important for the competent and responsible use of psychological tests. The TFTUQ reviewed the relevant literature related to test user qualifications (see, e.g., Eyde, Moreland, Robertson, Primoff, & Most, 1988, and Tyler, 1986), as well as policy statements developed by the APA (1950, 1992) and other groups both national (e.g., American Educational Research Association [AERA], APA, & National Council on Measurement in Education [NCME], 1999; American Association for Counseling and Development, 1988) and international (British Psychological Society, 1995, 1996; International Test Commission, 2000). The task force then developed a set of comprehensive guidelines and solicited comments from numerous individuals and groups involved with test use both within and outside the APA. The final report of the TFTUQ was approved by the APA Council of Representatives in August 2000. This article provides a brief summary of the Guidelines on Test User Qualification (APA, 2000) that are now APA policy.

The TFTUQ was established in part because of evidence that some current users of psychological tests may not possess the knowledge and skill that the APA considers desirable for optimal test use (see, e.g., Aiken, West, Sechrest, & Reno, 1990). The phrase test user qualifications refers to the combination of knowledge, skills, abilities, training, experience, and, where appropriate, practice credentials that the APA considers desirable for the responsible use of psychological tests. The guidelines in the TFTUQ’s report are intended to apply to persons who use psychological tests in a variety of settings and for diverse purposes. The APA’s purpose in developing these guidelines is to inform test users as well as individuals involved with training programs, regulatory and credentialing bodies, and the public about the qualifications that promote high professional standards in the use of tests with the public.

Historical Background

The reason that the APA has sought to develop and promulgate guidelines for the use of psychological tests evolves from the historical role the APA has played in the science and practice of testing and assessment. The discipline of psychology is the historical root for psychological testing and provides the research evidence and professional training to advance competent psychological assessment. Since 1950, the APA has addressed the issue of test user qualifications broadly in its ethical principles (APA, 1950,

Editor’s Note. This article is an executive summary of a larger report that was adopted by the American Psychological Association’s Council of Representatives on August 6, 2000. To obtain a copy of the full Report of the Task Force on Test User Qualifications, contact the Science Directorate, American Psychological Association, 750 First Street, NE, Washington, DC 20002-4242; phone number: (202) 336-6000.

Author’s Note. Samuel M. Turner, Maryland Center for Anxiety Disorders, Department of Psychology, University of Maryland; Stephen T. DeMers, Department of Educational and Counseling Psychology, University of Kentucky; Heather Roberts Fox, Science Directorate, American Psychological Association, Washington, DC, and Department of Reading, Special Education, and Instructional Technology, Towson University; Geoffrey M. Reed, Practice Directorate, American Psychological Association, Washington, DC.

The full report was developed by the American Psychological Association (APA) Task Force on Test User Qualifications (TFTUQ). The TFTUQ cochairs were Stephen T. DeMers, EdD, and Samuel M. Turner, PhD. The TFTUQ members included Marcia Andberg, PhD; William Foote, PhD; Leaetta Hough, PhD; Robert Ivnik, PhD; Scott Meier, PhD; Kevin Moreland, PhD (deceased); and Celiane M. Rey-Casserly, PhD. The TFTUQ wishes to acknowledge Stephen DeMers, EdD; Nadine Lambert, PhD; and Leona Aiken, PhD, for their role in the creation of the task force. It was their foresight regarding the need for an official policy on qualifications necessary for the competent use of tests that brought this motion to the APA Council of Representatives. In addition, the TFTUQ extends thanks to Wayne Camara, PhD; Rodney Lowman, PhD; Karen O’Brien, PhD; and many other APA colleagues for the consultation and assistance they gave to this project; to the Board of Professional Affairs, the Board of Scientific Affairs, the Committee on Legal Issues, and especially the Committee on Psychological Tests and Assessment for their kind support; to Dianne Maranto and Dianne Schneider, PhD, for staff support from the Science Directorate; and to Robert Walsh and Georgia Sargent for staff support from the Practice Directorate.

Correspondence concerning this article should be addressed to Samuel M. Turner, Maryland Center for Anxiety Disorders, Department of Psychology, University of Maryland, College Park, MD 20742. Electronic mail may be sent to turner@psyc.umd.edu.
The APA also has participated in formulating standards on the development and use of psychological and educational tests (APA, AERA, & NCME, 1954, 1966, 1974; AERA, APA, & NCME, 1985, 1999). Other professional groups that use psychological tests also have promulgated ethical guidelines that address qualifications for test use. For example, the American Counseling Association (formerly the American Association for Counseling and Development) has a specific set of Responsibilities of Users of Standardized Tests (American Association for Counseling and Development, 1988).

The task force found that concern over the misuse of tests has been growing in the international psychology community over the past few years. Several countries and international groups, including the British Psychological Society (1995, 1996), the Canadian Psychological Association (Simner, 1994), and the International Test Commission (2000), have launched initiatives to address concerns about test user qualifications.

Review of extant literature suggests that most of the problems associated with test use are related to the competence of individual test users, although the uneven quality of test construction and the ease with which test instruments can be obtained from some test publishers also contribute to these problems (Tyler, 1986). In devising the present set of guidelines, the TFTUQ kept in mind the types of problems identified by the empirical research and the conclusion that much of the difficulty lies with test users. The APA formed the TFTUQ in the belief that previous efforts to specify test user qualifications, although useful, did not provide the kind of specific guidance that many APA members and others were seeking.

Scope of the Guidelines

The use of psychological tests should typically be viewed within the broader concept of assessment. Psychological assessment is a complex activity requiring the interplay of knowledge of psychometric concepts with expertise in an area of professional practice or application. Assessment is a conceptual, problem-solving process of gathering dependable, relevant information about an individual, group, or institution to make informed decisions.

These guidelines describe two types of test user qualifications: (a) generic psychometric knowledge and skills that serve as a basis for most of the typical uses of tests and (b) specific qualifications for the responsible use of tests in particular settings or for specific purposes (e.g., health care settings or forensic or educational decision making). The guidelines apply most directly to standardized tests, such as tests of ability, aptitude, achievement, attitudes, interests, personality, cognitive functioning, and mental health. The guidelines define a psychological test as any measurement procedure for assessing psychological characteristics in which a sample of an examinee's behavior is obtained and subsequently evaluated and scored using a standardized process. The guidelines do not apply to unstandardized questionnaires and unstructured behavior samples or to teacher- or trainer-made tests used to evaluate performance in education or training.

Various activities included in the testing process may be appropriately conducted by different people working collaboratively. Each participant should possess the knowledge, skills, and abilities relevant to his or her role. For example, different individuals may be responsible for deciding what constructs, conditions, or characteristics need to be assessed, selecting the appropriate tests, administering and scoring tests, and interpreting and communicating the results. Moreover, some testing activities may involve tasks that require limited professional knowledge (e.g., administering or scoring some paper-and-pencil tests). In such circumstances of multiple participants in the testing process or participants with limited expertise, test use should be directed or supervised by a qualified test user. It is this qualified responsible test user to whom these guidelines apply.

Persons whose psychological test use is confined to research will find that the degree to which these guidelines apply to their work depends on the focus and setting of their research. The sections of the guidelines that address competencies related to psychometrics, statistics, test administration, and scoring are applicable to research that uses psychological tests. When research is conducted with clinical populations or in settings where there are likely to be real or perceived implications for the test taker, additional guidelines may be applicable.

Generic Knowledge and Skills

The TFTUQ began by conceptually dividing those skills and knowledge considered important for good test use into two main categories: first, core knowledge and skills and second, context-related qualifications. The core knowledge and skills discussed in this section are deemed essential for all test users who make decisions or formulate policies that directly affect the lives of test takers. This core set of knowledge and skills is considered to be relevant for all test users; however, the level of skill and depth of knowledge in these domains may vary depending on the testing purpose and context.

Psychometric and Measurement Knowledge

In general, it is important for test users to understand classical test theory and, when appropriate or necessary, item response theory (IRT). When test users are making assessments on the basis of IRT, such as adaptive testing, they should be familiar with the concepts of item parameters (e.g., item difficulty, item discrimination, and guessing), item and test information functions, and ability parameters (e.g., theta).

Descriptive statistics. Basic to any test use is the ability to define, apply, and interpret concepts of descriptive statistics. For example, means and standard deviations are often used when comparing different groups on test scales, whereas correlations are frequently used for examining the degree of convergence and divergence between two or more scales. Similarly, understanding how frequency distributions describe the varying levels of a behavior across a group of persons is essential.
using tests should have sufficient knowledge and understanding of descriptive statistics to select and use appropriate test instruments, as well as to score and interpret results. The most common descriptive statistics relevant to test use include frequency distributions, descriptive statistics characterizing the normal curve (e.g., kurtosis, skewness), measures of central tendency (e.g., mean, median, and mode), measures of variation (e.g., variance and standard deviation), indices of relationship (e.g., correlation coefficient), and scales, scores, and transformations.

Test results frequently represent information about individuals' characteristics, skills, abilities, and attitudes in numeric form. Test users should understand issues related to scaling, types of scores, and methods of score transformation. For example, test users should understand and know when to apply the various methods for representing test information (e.g., raw scores, standard scores, and percentiles). Relevant concepts include types of scales, types of scores (e.g., raw, transformed, percentile, standard, normalized), scale score equating, and cut scores.

**Reliability and measurement error.** Test users should understand issues of test score reliability and measurement error as they apply to the specific test being used, as well as other factors that may influence test results, and the appropriate interpretation and application of different measures of reliability (e.g., internal consistency, test–retest reliability, interrater reliability, and parallel forms reliability). Similarly, test users should understand the standard error of measurement, which presents a numerical estimate of the range of scores consistent with the individual's level of performance. Additional constructs related to reliability and measurement that should be understood by test users are delineated in Figure 1.

**Validity and meaning of test scores.** The interpretation and uses of test scores, not the test itself, are evaluated for validity. Responsibility for validation belongs both to the test developer, who provides evidence in support of test use for a particular purpose, and to the test user, who ultimately evaluates that evidence, other available data, and information gathered during the testing process to support interpretation of test scores. Test users have a particularly important role in evaluating validity evidence when the test is used for purposes different from those investigated by the test developer.

Contemporary discussions of validity have focused on evidence that supports the test as a measure of a construct (sometimes called **construct validity**). For example, evidence for the uses and interpretation of test scores may come through evaluation of the test content (content representativeness), through evidence of predictions of relevant outcomes (criterion-related validity), or from a number of other sources of evidence. Test users should understand the implications associated with the different sources of evidence that contribute to construct validity, as well as the limits of any one source of validity evidence (i.e., criterion, convergent, and discriminant validity).

**Normative interpretation of test scores.** Norms describe the distribution of test scores in a sample from a particular population. Test users should understand how differences between the test taker and the particular normative group affect the interpretation of test scores. Issues to be considered include the types of norms and their relevance for interpreting test taker scores, characteristics of the normative group, type of score referent (e.g., domain referenced, self-referenced), and expectancy tables.

**Selection of appropriate test(s).** Test users should select the best test or test version for a specific purpose and should have knowledge of testing practice in the context area and of the most appropriate norms when more than one normative set is available. Knowledge of test characteristics such as psychometric properties (presented above), basis in theory and research, and normative data (where appropriate) should influence test selection. For example, normative data or decision rules may not be accurate when (a) important characteristics of the examinee are not represented in the norm group, (b) administration or scoring procedures do not follow those used in standardizing the test, (c) characteristics of the test may affect its utility for the situation (e.g., ceiling and floor effects), (d) the test contains tasks that are not culturally relevant to the test taker, or (e) the validity evidence does not support decisions made on the basis of the test scores.

Those using tests should have an understanding of how the construction, administration, scoring, and interpretation of tests under consideration match the current needs. Mismatches in these dimensions between the selected test
and the current testing situation represent important factors that should be considered and that may invalidate usual test interpretation. More specifically, for test users to select an appropriate test for a particular use, it is important that they understand and consider such issues as the intended use of the test score, the method and procedures used to develop or revise the test being considered, the definition of the construct that the test purports to measure, and the definition of the test purpose and its intended context of use. Additional knowledge needed in this area is listed in Figure 2.

**Test administration procedures.** Knowledge about procedural requirements, confidentiality of test information, communication of results, and test security is important for many testing applications, as is familiarity with standardized administration and scoring procedures and understanding a test user’s ethical and legal responsibilities and the legal rights of test takers. Similarly, it is important that test users understand the legal and ethical issues related to the release of test materials, including issues of confidentiality, depending on the context of the testing and the characteristics of the test taker. Test users should be able to explain test results and test limitations to diverse audiences. Written communication should include the purpose of the test and the setting in which the testing occurred. In preparing written reports on test results, test users should be aware that test scores might become separated from the interpretive report over time and should be familiar with the areas in Figure 3.

**Ethnic, Racial, Cultural, Gender, Age, and Linguistic Variables**

Consideration of these variables may be important to the proper selection and use of psychological tests. For certain purposes, legal requirements influence or restrict the testing, scoring, interpretation, analysis, and use of test data of individuals in different subgroups. In some cases (e.g., employment testing), the use of gender, race, and ethnicity in test interpretation is illegal. Test users should consider and, where appropriate, obtain legal advice on legal and regulatory requirements to use test information in a manner consistent with legal and regulatory standards. Issues associated with testing individuals from particular subgroups, such as race or ethnicity, culture, language, gender, age, or other classifications, are addressed in greater detail in the

---

**Figure 2**

*Knowledge Needed for the Appropriate Selection of Tests*

- Type of keying or scaling used—rational or theoretical, empirical, internal consistency or construct homogeneity (e.g., factor analysis)
- Scoring procedures (e.g., clinical, mechanical, and correction for guessing)
- Type of score interpretation (criterion or domain referenced, norm referenced, ipsative)
- Item and scale score characteristics
- Item format
- Difficulty level
- Reliability (e.g., internal consistency and test–retest)
- Validity evidence of test scores
- Construct validity evidence
- Content representativeness
- Criterion-related
- Validity generalization (e.g., effects of sample size, test and criterion reliability and range restriction, and dichotomization of variables)
- Convergent
- Discriminant
- Cross-validation
- Criterion characteristics (e.g., sufficiency, relevance)
- Test bias
- Description of validation, normative, and/or standardization group(s) (characteristics of groups such as age, gender, race, culture, language, disabilities, geographic region, socioeconomic status [SES], educational or grade level, motivational set, mental status, and item format familiarity), sample size(s), and recency of data
- Test administration procedures (standardization procedures, time limits—power vs. speed)
- Knowledge of test taker variables that may moderate validity and interpretation of scores (such as age, gender, race, culture, language, disabilities, geographic region, era or time period tests, SES, educational or grade level, motivational set, mental status, and item format familiarity)
- Other or special requirements and limitations of test
- Adequacy of the match between test characteristics and present need in terms of construct measured, difficulty level, validity, reliability, test bias, normative data, similarity of normative group with present group, test administration procedures (accommodations for disabilities when appropriate, characteristics of test administrator, adaptation for those with different primary language when appropriate)
- Special requirements and limitations of test

The APA’s promulgated Guidelines and Principles for Accreditation of Programs in Professional Psychology (APA, 1996) discussed the need for psychology training programs to address issues of cultural diversity. The APA demonstrated its interest in and sensitivity to these issues by establishing the Commission on Ethnic Minority Recruitment, Retention, and Training in Psychology. In addition, the Task Force on Delivery of Services to Ethnic Minority Groups, under the auspices of the Board of Ethnic Minority Affairs, published Guidelines for Providers of Psychological Services to Ethnic, Linguistic, and Culturally Diverse Populations (APA, 1990). These guidelines were approved by the APA’s Council of Representatives. In addition, the International Test Commission has issued “Guidelines for Adapting Educational and Psychological Tests: A Progress Report” (Hambleton, 1994), which provides recommendations about adapting tests for cross-cultural testing. For test users using tests with different ethnic, racial, cultural, gender, and language groups, knowledge of the constructs listed in Figure 4 is essential.

### Testing Individuals With Disabilities

Tests are administered to increasing numbers of persons with disabilities in a variety of settings and for a multitude of purposes. The requirement to accommodate an individual with a disability in the testing situation raises many complex issues for test users. Test users must frequently make decisions regarding the use of tests that were not developed and normed for individuals with disabilities. In such circumstances, confidence in the inferences drawn from test results may be diminished. There may be legal requirements concerning the accommodation of individuals with disabilities in test administration and the use of modified tests. Test users should consider and, where appropriate, obtain legal advice on legal and regulatory requirements regarding appropriate administration of tests and use of test data when assessing individuals with disabilities.

Test users should be familiar with several efforts initiated during the 1990s to provide guidance to test users for assessing individuals with disabilities. The APA Task Force on Test Interpretation and Diversity published a book identifying the scientific and policy issues related to the interpretation of tests used with individuals for whom the tests were not developed, standardized, and validated (San doval, Frisby, Geisinger, Scheuneman, & Grenier, 1998). Additionally, the Joint Committee on Testing Practices is publishing a sourcebook for practitioners that describes some of the pertinent legal and regulatory information, as well as types of accommodations, required documentation, and the use of tests with disabled individuals in various contexts (Ekstrom & Smith, in press). Finally, the 1999 Standards for Educational and Psychological Testing (AERA, APA, & NCME, 1999) includes a chapter on technical considerations for testing individuals with disabilities. Those who administer tests to individuals with disabilities should be familiar with the legal, technical, and professional issues governing the use of tests with individuals with disabilities, including those listed in Figure 5.

### Supervised Experience

In addition to test users having knowledge and skills needed for appropriate test use, it is important that they have the opportunity to develop and practice their skills under the supervision of appropriately experienced professionals. This supervision typically begins in graduate school and continues throughout training until any creden-

---

**Figure 3**

Additional Knowledge Required for Test Administration

- Legal rights of test takers
- Standardized administration procedures
- Scoring procedures
- Confidentiality of test materials and test information
- Safeguards for protecting test material (protection against copyright infringement, protection against unauthorized dissemination of test items, keys, and scoring procedures)
- Safeguards for protecting protocols and test results (legal issues, ethical issues)
- Reporting results to the test taker, caregiver, or others as appropriate (characteristics of meaningful reports, amount of information to report, legal and ethical issues)

**Figure 4**

Factors Associated With Test Use in Diverse Groups

- Construct equivalence (information concerning the influence of psychological characteristics such as motivation, attitudes, and stereotype threat on test performance)
- Orientations and values that may alter the definition of the constructs(s) being assessed and how those factors may affect the interpretation of test results
- Requirements of the testing environment and how that may affect the performance of different groups
- Test bias
- Laws and public policies concerning use of tests that may have implications for test selection, as well as administration and interpretation
- Procedures for examining between-groups differences in test performance
- Empirical literature concerning differential validity for racial or cultural groups
The context in which psychological tests are used includes both the setting and the purpose of testing. Test user qualifications vary across settings, as well as within settings, depending on the purpose of testing. This section addresses the context-relevant qualifications that build on the generic qualifications described above. Regardless of the setting, psychological tests are typically used for the following purposes:

- **Classification.** Organizations seek to classify or place people in jobs to maximize overall utility to both the individuals and the institution. To perform these activities well, test users should strive to be knowledgeable about job clustering (e.g., creation of job families), validity, cost-benefit analysis, utility analysis, and measurement of work outcomes.

- **Description.** To analyze or interpret test results to understand the strengths and weaknesses of an individual or group. This information is integrated with theoretical models and empirical data to improve inferences.

- **Prediction.** To relate or interpret test results with regard to outcome data to predict future behavior of the individual or group of individuals.

- **Intervention planning.** To use test results to determine the appropriateness of different interventions and their relative efficacy within the target population.

- **Tracking.** To use test results to monitor psychological characteristics over time.

The sections that follow describe five major contexts in which tests are commonly used: employment, education (both individual and large-scale testing), vocational and career counseling, health care, and forensic assessment. Although there may be other contexts that require specific competencies, the test user qualifications (including appropriate training and supervision) are important in the major contexts where tests are used and are discussed below.

**Employment Context**

Many employers use tests as part of the assessment process to develop work-related information and recommendations or decisions about people who work for them or are seeking employment with them. Test users in this context should have not only the qualifications identified as core knowledge and skills but also an understanding of the work setting, the work itself, and the worker characteristics required of the work situation. They should strive to know what skills, abilities, or other individual difference characteristics enable people to perform effectively (as defined in a variety of ways) in a particular work setting. Test users should consider the strengths and weaknesses of different methods for determining the human requirements of the work situation and how to conduct such job, work, or practice analyses. They also should consider and, where appropriate, obtain legal advice about employment law and relevant court decisions (see Dunnette & Hough, 1990, 1991, 1992, 1994; Guion, 1998).

**Classification.** Organizations seek to classify or place people in jobs to maximize overall utility to both the individuals and the institution. To perform these activities well, test users should strive to be knowledgeable about job clustering (e.g., creation of job families), validity, cost-benefit analysis, utility analysis, and measurement of work outcomes.

Psychological tests are sometimes used to certify people as qualified to perform certain job or work activities. Test users should have knowledge of the task or work and knowledge of the level of performance required for competent practice. This means that test users should define the...
task or criterion, measure the required knowledge and skills, and identify the required performance level. They should strive to have a thorough knowledge of job, work, or practice analysis and of content validation principles and strategies.

**Description.** Description of an individual’s current abilities, skills, interests, personality, knowledge, or other personal characteristics can be a significant part of the assessment process. This information is the starting point for determining the fit between an individual and work in a given setting; identifying areas of needed individual, team, or organizational development; providing feedback about likely success in different work activities and settings; planning career choices and paths; and auditing organizational or unit readiness. Those who use psychological tests to describe individual, team, or organizational characteristics in the employment setting should have knowledge about job, work, or career analysis (see, e.g., Campion, 1994; Goldstein, Zedeck, & Schneider, 1993).

**Prediction.** Psychological tests may be used as part of a larger assessment process to help make predictions about an individual’s future training performance, job performance, trustworthiness, attrition, or a variety of other work-related criteria. These predictions are often made to facilitate recommendations or decisions about selection, promotion, or succession planning.

Test users involved in testing to predict future employment criteria should make every effort to be knowledgeable about the work setting, the work itself, and, hence, job or work analysis methods. They also should understand performance measurement, criterion constructs and their measurement, relationships between various predictor constructs and criterion constructs, research methods and design, validity concepts and evidence, test bias, adverse impact analysis, utility analysis, validity generalization, and group differences, and they should, where appropriate, obtain legal advice.

**Intervention planning.** Employment testing may be part of an analysis of the test taker’s training and development needs. Test results may provide information for developing plans to improve skill and performance of current work responsibilities and anticipated work responsibilities. Test results also may be used as part of career planning activities. When tests are used for these purposes, test users should make every effort to be knowledgeable about such matters as the work itself, the work setting, performance appraisal and performance measurement, criterion constructs and their measurement, training and development, career development, coaching and mentoring, and training needs analysis.

Employment testing may be part of an outplacement process. If testing is done as part of an involuntary process that determines who is to be retained and who is to be laid off, test users should be knowledgeable about the work itself, the work setting (hence, job, work, or practice analysis methods), performance measurement, criterion constructs and their measurement, validity concepts and evidence, test bias, adverse impact analysis, and group differences, and they should obtain appropriate legal advice. If testing is done as part of a voluntary job search process, test users should be knowledgeable about vocational and career guidance, job loss, and labor markets.

Employment testing also may be a part of a monitoring system designed to identify individuals who are at risk for performing below an acceptable level. The individuals may be employed in sensitive-duty (high cost for mistakes) jobs. Those who use tests to identify at-risk individuals should have the qualifications listed under the Classification and Prediction subsections above.

**Tracking.** Psychological tests may be used in predictive, criterion-related validation studies in which individuals and their performance are tracked over time. In addition to the knowledge recommended for the use of psychological tests for prediction purposes, test users who track individuals or their performance also need to understand how task or work performance and criterion performance requirements may change over time. In addition, test users who conduct reassessments should be familiar with the effects of repeated use of assessment procedures on both the individual and the findings obtained.

**Training and supervision.** Training for test use in the employment context is best obtained by successful completion of an integrated program of study that includes industrial psychology; psychology of individual differences; measurement theory; job, work, and practice analysis; performance measurement; and employment law relevant to the testing situation. Experience and supervision using tests in settings similar to those in which employment tests are used are important. For test users who provide assessment of health outcomes or understanding of health problems of individuals and groups (e.g., those working in employee assistance programs [EAPs]), the qualifications described in the Health Care Context section below also apply.

**Educational Context**

The results of psychological tests often serve as relevant information to guide educational decisions about both students and programs. Psychological tests are used in a variety of educational settings, including preschools, elementary and secondary schools, higher education, technical schools, business training programs, counseling centers, health and mental health settings that offer educational services, and educational consulting practices. Psychological tests are typically used to acquire information about students to make informed decisions about such issues as student admissions and placement, educational programming, student performance, and teacher or school effectiveness.

On an individual level, psychological tests are often used to describe a student’s learning or behavioral strengths and weaknesses. The results may then be used to develop educational interventions, to determine appropriate educational placements (e.g., special education, gifted education, magnet school program, or alternative educational setting), or as part of clinical diagnostic assessment to guide therapeutic services.
Assessment of groups of individuals, often called large-scale testing, typically addresses questions about educational programs or policies. Decision makers may aggregate results from psychological tests and use this information to evaluate program effectiveness and to develop recommendations for changes to educational programs or systems. Test users in these cases may use standardized tests or nonstandardized procedures (e.g., performance events or portfolios of student work) to obtain information about cognitive ability or academic achievement levels of a group of students (Fuchs & Fuchs, 1990).

Test user qualifications that have particular relevance in educational settings include the representativeness of the test sample, attention to language and cultural diversity, and the use of cut scores in selection for special programs. Test users also should understand the cognitive and emotional factors that affect student learning, as well as the social and political factors that affect schools as learning environments. Those who use psychological tests in social institutions like schools should be particularly skilled at communicating the results of testing to many different audiences, including educational decision makers, teachers, students, parents, and the public.

**Classification.** Tests are often used to identify or classify individual students or groups of students for admission to special programs. In public elementary and secondary schools, the most frequently used formal classification system is probably the one used to determine eligibility for special education services as required by federal and state law (e.g., the Individuals With Disabilities Education Act, 1990/1997). Therefore, test users in educational contexts should consider and, where appropriate, obtain legal advice regarding state and federal laws related to the provision of educational and related services to disabled students. Many schools also use curriculum-tracking schemes (e.g., general vs. college-preparatory classes) that categorize students and then place them in separate instructional tracks or ability groupings, often on the basis of test data. Individuals using psychological tests for classification purposes, in both individual and large-scale assessments, should be familiar with the taxonomic systems used by schools and other educational settings as well as the psychometric limitations of the tests used.

Test users also should possess the knowledge to select instruments that are appropriate for the characteristics of the student being evaluated. For example, tests that have adequate reliability and validity for assessing school-age students may be inappropriate for use with preschool children. Similarly, tests normed and validated for use with individuals from one culture or ethnic group may not be appropriate for assessing individuals from other cultural or ethnic populations. Also, when making high-stakes decisions about individuals, test users should integrate information when appropriate from multiple sources, such as psychological and educational test data, behavioral observations and ratings, school records, and interviews with parents and teachers (Salvia & Ysseldyke, 1995).

Large-scale tests are used for a variety of purposes, including program accountability and decisions related to admissions and educational placement. When schools, districts, or states develop or select a test to determine student achievement relative to state standards, test users should have the skills and knowledge to determine the degree of correspondence among the standards, curricula, and test content. When critical decisions, such as graduation or retention, are based on test results, test users should strive to consider students’ opportunity to learn the stated content and to identify other sources of relevant data that reflect student proficiency. When tests are used for college placement, test users should determine the degree of alignment between the test’s content and the college curriculum and should understand the relationship between predicted and actual performance in college before determining a cut score or other classification criteria. Legal requirements may influence or restrict the use of rank ordering or cut scores, particularly if these practices have a disproportionate effect on one or more subgroups.

**Description.** Psychological tests also are used in educational settings to describe aspects of learners’ skills and abilities, such as learning styles, motivation, reading readiness, and emotional maturity. Group measures of interests, attitudes, cognitive abilities, or emotional adjustment also may provide a basis for interventions designed to remediate current problems or to prevent future difficulties.

Large-scale assessments are often used by schools, districts, and states to measure the general level of student performance or to evaluate the effects of curricular decisions. In some instances, schools or teachers may be held accountable for their students’ test results, with penalties imposed for scores below expectations. Therefore, it is important that test users attend to the multiple factors that contribute to test score differences between schools, classrooms, or districts (e.g., student motivation, quality of prior educational experiences, and parental support of educational goals).

**Prediction.** In the educational context, tests are often used to predict the future behavior or academic success of a student or group of students. In individual assessment, tests are often used to screen students for placement in special programs or to place them in an instructional group or track on the basis of a prediction of expected future performance.

In large-scale testing, admissions tests are required for entry into most undergraduate, graduate, and professional programs. Admissions tests also are useful in college counseling, providing students with useful information on their potential for academic success at different colleges and universities. In addition, most colleges use specially developed placement tests to determine a student’s eligibility for particular courses.

Test users in educational settings should have the skills and knowledge to evaluate the relative contribution of teacher competence and motivation, school and classroom climate, peer group influence, class size, and other factors that play a critical role in determining a student’s future performance. Test users should understand how group differences (e.g., ethnicity, gender, race, and socioeconomic status [SES]) may affect performance on stan-
standardized tests, grades, school completion, and other outcomes that may be used in predicting academic success.

**Intervention planning.** Psychological tests are frequently used to plan interventions for one student or a group of students. Psychological tests are commonly used as part of the individual diagnostic assessment of students with learning or behavioral problems. The results from these tests help to describe or diagnose the educational strengths and weaknesses of students or their behavioral difficulties and contribute to the development of educational, behavioral, or mental health interventions. Those who use tests to prescribe interventions based on assessed student characteristics should be familiar with the empirical evidence for using test data to make such decisions.

Test results sometimes provide a rationale for educational interventions that affect a large number of students, such as a modification in instructional approach (see, e.g., Gettinger & Stoiber, 1999). Test users should strive to clearly communicate to decision makers the appropriateness of inferences based on test data and the likely effects of program changes on various groups of students. Test results may also be used as a basis for individual interventions, such as removing a student from school. Test users should consider and, where appropriate, obtain legal advice about relevant state and federal laws dealing with changes in school placement as well as the legal protections afforded to parents and students, including a student or parent’s due process rights and requirements of informed consent (Jacob-Timm & Hartshorne, 1994).

**Tracking.** Test users in school settings often administer tests multiple times to track the effects of educational programming or interventions. In individual assessment, special education law requires that students classified as disabled be reassessed at least every three years so that students are given a periodic review of their status. Groups of students may be assessed yearly to document academic progress or to evaluate program effectiveness. Aggregated student data are often used as the basis for implementing, modifying, or eliminating instructional programs.

When tests are used for tracking purposes in educational settings, test users should understand the effects of repeated test administrations on the students and on the findings obtained. For example, frequent retesting of reading achievement to guide instruction might appear advisable but could produce serious practice effects and spuriously inflated results, unless alternative forms of the reading tests are available. Those who use tests to track student performance should also strive to be aware of the social and instructional context variables that may influence student performance, so that changes in test scores are not automatically attributed to changes in student abilities.

**Training and supervision.** In addition to the qualifications outlined for all test users, the test user in the educational context should be knowledgeable in the content areas of educational and psychological diagnostic systems and intervention methods, as well as the legal requirements and protections for test takers that are relevant to the type of test being used. This combination of generic psychometric knowledge and context-relevant expertise is best acquired in an advanced professional preparation program, such as a doctoral program in school or educational psychology or educational measurement. As noted earlier, the type of training and the depth of knowledge in each of these domains may vary for different test users depending on whether they are responsible for individual diagnostic testing or large-scale testing. Test users in an educational environment should possess an appropriate practice credential where such credential is legally required to provide the type of testing being offered. It also is important that they receive supervised experience in the use of tests to address educational concerns appropriate to their role.

Individuals using psychological tests to place children in special education programs should be knowledgeable in areas such as developmental and social psychology, diagnostic decision making, child psychopathology, and special education practices. Those using psychological tests to address large-scale testing questions related to admissions, student grouping, or instructional programming should be particularly knowledgeable in the domains dealing with psychometrics, instructional design, educational and developmental psychology, and measurement theory.

**Career and Vocational Counseling Context**

Psychological testing in the career and vocational counseling context is used to help people make appropriate educational, occupational, retirement, and recreational choices and to assess difficulties that impede the career decision-making process. Career and vocational counselors integrate their knowledge of career demands with information about beliefs, attitudes, values, personalities, mental health, and abilities, with the goal of promoting beneficial career development, life planning, and decision making. The individual’s self-knowledge about values, strengths, weaknesses, motivation, psychological characteristics, and interests also is relevant.

Testing can provide persons with knowledge about their work-related and avocational interests, their abilities, and their values and can help them understand how these fit into the existing opportunities and requirements of the workplace and into their leisure activities. Test users should strive to understand how individuals’ particular interests, values, abilities, and skills relate to their choice of work and leisure activities. Test users also should have substantive knowledge in related areas of psychology, such as adolescent and adult development, personality, and psychopathology, as well as detailed and current knowledge of measurement questions involved with assessing interests, abilities, personality dimensions, and values.

Test users also should make every effort to be knowledgeable about types of work settings, work cultures and values, and the characteristics and requirements of types of jobs. They should strive to integrate the results of multiple measures from a number of different domains with their knowledge of vocational theories (Osipow & Fitzgerald, 1996) and career taxonomies (Holland, 1997; Lowman, 1991).

Test users identify and work with individual difference and systemic variables that may influence the person—
environment fit. Such factors include the individual’s family system, gender, ethnicity, cultural background, physical ability, SES, and psychological problems. Test users should be able to recognize and work not only with the problems explicitly presented by the test taker but also with other problems, including underlying emotional difficulties or environmental impediments that could affect the way the test taker uses test results.

Often, the person seeking career or leisure counseling is experiencing a life transition that brings additional personal, developmental, and emotional stress. In addition, such individuals may struggle with emotional problems that make deciding on a career difficult. To deal effectively with such complex mixtures of career, developmental, and emotional concerns, vocational test users should have qualifications similar to those required in the health care context (discussed below).

**Classification.** The primary focus of vocational classification is on identifying an individual’s career-related skills, abilities, and characteristics and then matching them with the requirements of specific jobs or job categories. Vocational classification also may be used to match an individual with a specific school or program or to help a person identify satisfying leisure activities or outlets for prized abilities. Knowledge of individual differences in cognition and personality is central to the assessment of person–environment fit. Differential patterns of abilities may be as important as scores on individual ability measures, so testing may need to cover a wide range of competencies.

**Description.** A holistic description of the individual’s personality and mental health is important in the career and vocational counseling context (Gysbers, Hepner, & Johnston, 1999). Test users may want to assess important constructs, such as career indecision and career choice anxiety, with those who have a history of difficulty in vocational decision making. Thus, to determine the most effective approach, test users in the career and vocational counseling context should be qualified to assess the mental health functioning of individuals seeking career counseling.

**Prediction.** The results of a variety of vocational tests are assumed to reflect stable, enduring traits that are relevant to future work performance and satisfaction. Although related constructs such as interests and cognitive abilities demonstrate stability over a period of years, the degree of consistency partly depends on the developmental level of the test taker. Vocational test users should temper predictions of future behavior with the knowledge that test takers’ further development and specific situations may strongly influence their work behaviors.

**Intervention planning.** To perform effective career and vocational interventions, test users should have knowledge of career development theories and skills in interviewing and history taking, as well as knowledge of relevant educational and career information resources. Test users should strive to be aware of discriminatory patterns that exist in various careers. In some cases, evaluation of test results shows that further psychological intervention is needed. Test users should be able to evaluate patterns of behavior and test results; recognize test takers who are unable to benefit from vocational information because of significant developmental, cognitive, emotional, or physical problems; and treat or refer them appropriately.

**Tracking.** Tests used for career and vocational assessment may provide standards against which to compare patterns of subsequent growth or deterioration. Test users should be knowledgeable about the psychometric and context-related implications of assessing career development over time.

**Training and supervision.** The use of psychological tests in career and vocational assessment requires skills in career and mental health assessment. Appropriate training includes coursework in measurement theory and adolescent and adult development, as well as the domain of vocational and career psychology. Finally, it is important that training include supervised experience in the use of psychological tests in vocational and career settings and relevant experience in educational, counseling, health care, and occupational settings.

**Health Care Context**

Health care is the provision of services aimed at enhancing the physical or mental well-being of individuals or at dealing with behaviors, emotions, or issues that are associated with suffering, disease, disablement, illness, risk of harm, or risk of loss of independence. Health care assessment commonly occurs in private practice, rehabilitation, medical or psychiatric inpatient or outpatient settings, schools, EAPs, and other settings that address health care needs. Psychological tests are used as part of the assessment process to develop health-related information and recommendations or decisions. Those who use tests for this purpose should have thorough grounding both in the core knowledge and skills enumerated earlier and in the specialized knowledge, training, or experience of specific substantive areas of health care.

In the health care context, psychological test data are typically used to augment information gathered from other sources (e.g., patient and collateral interviews, behavioral observations, and laboratory results). Health care providers who use psychological tests should strive to effectively integrate results from multiple tests and sources of information. Psychological test users should strive to understand how the nature of the setting (e.g., psychiatric hospital) and the characteristics of test takers (e.g., those who have a physical illness or disability or who are on medication) might affect the process of test administration, the results, and the interpretation. Test users should strive to communicate the technical aspects of their findings to other professionals as well as to health care consumers in language that is appropriate and understandable to each.

**Classification.** When psychological tests are used for classification purposes, the goal is frequently the assignment of a mental health, medical, or other diagnosis. In these instances, psychological test findings are generally combined with interview and historical data, behavioral observations, and data from other sources to derive a for-
mal diagnosis. When diagnosis is the goal of testing, test users should combine the skills associated with competent testing with a separate set of knowledge, skills, and experiences related to classification and diagnosis in the population of interest.

Test users should be able to identify and evaluate factors that may influence diagnostic determinations and that are frequently not accounted for in the development, standardization, and norming of psychological tests. For example, when working with persons whose physical symptoms may affect test performance, test users should be knowledgeable about and experienced at distinguishing illness-related test results from other determinants of a person’s test performance.

Test users should seek to understand determinants of diagnostic accuracy in relation to both the specific tests being used and the decisions that need to be made. For example, when psychological tests are used to screen for specific health problems such as alcoholism or dementia, test users should consider how fluctuations in base rates in different populations may affect the sensitivity and specificity of test results (Ivnik et al., 2000).

**Description.** Psychological tests also are used in health care to provide a more comprehensive description of individuals by delineating their unique personality, emotional, cognitive, or other characteristics. For example, a combination of personality, academic, aptitude, interest, and cognitive tests may be used to help describe the areas of both preserved and compromised functioning for a young person who is in a rehabilitation facility in hope of returning to work after suffering a head injury in a motor vehicle accident (MVA). When performing primarily descriptive assessments in health care, test users should consider the construct validity of the tests that they select and how these constructs are manifested in day-to-day behavior. To avoid misinterpreting normal inter- and intratest variance as pathology, test users who work in health care should consider the limits of normal variance when different psychological characteristics are simultaneously measured. When individuals are followed over time and psychological tests are repeated one or more times, test users should be attentive to issues that relate to how meaningful change is distinguished from normal test–retest variability (Ivnik et al., 1999; Jacobson & Truax, 1991; Sawrie, Chelune, Naugle, & Luders, 1996).

**Prediction.** Health care professionals are frequently asked to make predictions (i.e., prognoses) about the persons they serve, and psychological test users may specifically be asked to make testing-based predictions. For example, a health care professional testing the MVA victim mentioned above may be asked to predict when this person might return to work or to school or what the person’s final level of recovery may be. In these instances, test users should strive to be knowledgeable about the predictive limits of testing. Test users also should strive to understand how the patient’s unique characteristics (e.g., personality features, special strengths, disabilities or disorders, and sociocultural issues), the natural course of medical conditions, the likely efficacy of planned interventions, and relevant base-rate information may affect such predictions. Test users should strive to understand the empirical evidence of a test’s ability to make accurate predictions as well.

**Intervention planning.** In health care settings, data from psychological tests may be used in planning interventions. Intervention planning refers to the selection of specific remediation activities on the basis of a thorough knowledge of both the problem being addressed and available treatment options. Test users involved in intervention planning may use tests to provide information on an individual’s particular problem (classification), strengths and weaknesses (description), and the efficacy of treatment options (prediction). The same set of knowledge and skills required for competent classification, description, and prediction also is important in the development of an optimal treatment plan. For example, personality tests may be used to modify treatment approaches in a therapeutic setting (Maruish, 1999). Because intervention planning involves a specific type of prediction (i.e., the likelihood that a patient will benefit from a particular form of treatment), test users should strive to be aware of the limitations discussed above related to prediction and the scientific evidence supporting available treatments.

**Tracking.** In some circumstances, multiple sequential administrations of the same test(s) are frequently needed to document how psychological characteristics change over time or as a consequence of treatment (e.g., to track the course of a patient’s illness or recovery). To interpret these results, test users should strive to be knowledgeable about how repeated exposures to test procedures and test content influence subsequent test performances (e.g., practice effects), including how conditions (e.g., memory deficits) present during one examination may affect the results of later testing. Test users also should strive to understand how to distinguish measurement error from reliable test-score change (see, e.g., Ivnik et al., 1999; Jacobson & Truax, 1991; Sawrie et al., 1996). Psychological tests are sometimes used to measure treatment outcome. For example, test results may help to determine eligibility for health care services or to monitor treatment efficacy. If this application is different from the test’s original purpose, test users should be aware of potential factors that may limit the usefulness or validity of the test data as an indicator of treatment outcome.

**Training, supervision, and licensure.** In the health care context, the qualifications described above are best obtained through doctoral training in psychology, which includes psychological testing supervision in one or more health care settings that are similar to the setting(s) in which a specific test user intends to practice. In addition to coursework in psychological testing, personality theory and assessment, and measurement theory, independent health services providers who use tests for health care needs should be particularly knowledgeable in psychopathology, health psychology, life span–developmental psychology, and the biological bases of behavior. Test users in the health care context also should be skilled in clinical diagnostic interviewing and familiar with mental health diag-
nostic and classification systems. As noted earlier, the breadth and depth of knowledge in each of these domains, as well as additional technical qualifications, may vary depending on the specific area of specialized functioning.

The administration of psychological tests in the health care context is generally considered to be a form of health care service provision and as such is governed by state and provincial licensing laws related to health services providers. In most cases, health care professionals who use psychological tests are licensed by the state or province in which they work. Renewal of licensure in many states requires documentation of continuing professional education. Those who use psychological tests in a health care context should strive to obtain knowledge, supervised training, and professional experiences that go beyond the profession-specific knowledge, training, and experiences they obtained during graduate education, practica, internship, residency, or fellowship.

**Forensic Context**

In forensic settings, psychological tests are used to gather information and develop recommendations about people who are involved in legal proceedings. Test users in forensic settings should possess a working knowledge of the functioning of the administrative, correctional, or court system in which they practice. They should strive to be familiar with the statutory, administrative, or case law in the specific legal context where the testing occurs or, where appropriate, obtain legal advice on the pertinent laws. They should strive to communicate test results in a way that is useful for the finder of fact (i.e., the judge, the administrative body, or the jury). This includes communicating verbally with lawyers, writing formal reports, and giving sworn testimony in deposition or court.

This section addresses those who use clinical, rehabilitation, and neuropsychological tests in legal contexts, as well as those who believe that their test data will serve as a foundation for legal consultation or testimony. Thus, in addition to the core qualifications identified earlier, the qualifications described above for test users in health care contexts typically apply to test users in forensic settings. This section does not address test use by those who use psychological tests to conduct research in applied areas of forensics, such as memory, social psychology, or human factors. Nor does it apply to those who use tests in applied areas, such as clinical, rehabilitation, or neuropsychological practice or industrial and organizational or educational psychology, and who may be asked to provide consultation or testimony about work with their clients based on their training, education, or experience.

Those who use tests for forensic purposes should possess substantive knowledge in areas of psychology related to the forensic issues. For example, in correctional or criminal settings, knowledge about violence, criminality, and the relationship of psychopathology to those behaviors and activities is germane. Similarly, when assessing families in child custody or parental rights cases, it is important for test users to understand family dynamics, parenting, and different forms of child custody (APA Committee on Professional Practice and Standards, 1994).

Assessments for forensic purposes often occur in outpatient, inpatient, and correctional settings. Test users should strive to be knowledgeable about the effects of each of these settings on test administration and interpretation.

**Classification.** In most forensic situations, assessment includes the use of multiple measures to provide a thorough and legally defensible diagnosis (Heilbrun, 1992; Heinze & Grisso, 1996). Thus, test users in forensic settings should strive to integrate results from multiple tests with knowledge of accepted diagnostic taxonomies (e.g., the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed.; American Psychiatric Association, 1994) and knowledge about how test findings relate to these systems (von Talge, 1995).

Test users should strive to identify and evaluate critical factors that may influence diagnostic determinations. A thorough knowledge of response set and its influence on test results may be needed for accurate interpretation of test results. Because of the high stakes in legal proceedings (monetary settlements, child custody, jail sentences, and even the death penalty), test takers may be motivated to exaggerate or minimize their symptoms. Test users in forensic settings should strive to recognize these factors and to account for them in the interpretation. Additionally, test users in forensic settings should understand that psychopathology as measured by tests may be improved or exacerbated by incarceration and that trial proceedings and litigation may affect test data by increasing or decreasing the litigant’s anxiety, depression, or anger (Weissman, 1991).

Test users are often required to evaluate historical information to help the court arrive at a determination of causation or to review events that have occurred in the past to ascertain whether those events relate in some way to a legal standard. For example, in criminal settings, test users may be asked to assist the court in determining whether the defendant was criminally responsible for his or her behavior at the time of the offense. Or a test user may be asked to assess the defendant’s capacity to waive his or her Fourth and Fifth Amendment (Miranda) rights—critical for determining whether a confession is admissible in court. In tort (civil lawsuit) settings, determination of causation (the legal nexus between a specific event and a psychopathological condition) is often a critical element for determining whether even the minimum basis for a lawsuit exists. Even in contexts where causation involves strictly technical knowledge from other fields (e.g., chemistry or physiology), test users may be asked to provide legally admissible information on the psychological or neuropsychological status of an examinee without attributing causation.

Those using tests in forensic settings to determine the causation of legally relevant conditions or events should strive to be knowledgeable about how the tests are used to determine the origins or natural histories of mental disorders. Users of neuropsychological tests may use patterns of scores on those tests to inform opinions about the cause of specific behaviors (see, e.g., Martzke, Swan, & Varney,
Assessment of brain trauma or toxic chemical reactions may fall into this category. Test users assessing traumatic emotional reactions should have knowledge about the relationship of specific score patterns to specific types of emotional trauma. Test users also should have knowledge of relevant epidemiological studies and etiology of mental conditions.

**Description.** In forensic settings, clients are described in relation to a legal standard established by legislation or case law in a particular context. The most obvious example is the application of the standards for legal competency (e.g., to stand trial, to execute a legal document, and to be executed). In correctional settings, test results in conjunction with historical or behavioral data may determine whether an inmate is described as a high-, medium-, or low-security risk. In tort or disability settings, the standard may be a legal description of an emotional condition, which will be applied to examinees to determine their eligibility for compensation under administrative regulations (e.g., Social Security) or laws. To perform these descriptive activities, test users should consider and, where appropriate, obtain legal advice on the applicable legal standard to craft the appropriate assessment strategy to produce a legally useful result and to interpret the test results in light of that standard.

**Prediction.** In forensic practice, test users are often asked to make a statement about the future behavior of a test taker. In civil commitment settings, for example, most states’ criteria for involuntary commitment include the examinee’s dangerousness to self or others (Monahan & Steadman, 1996). In criminal settings, statements concerning the examinee’s potential for recidivism on parole from prison may be a critical element of a prerelease evaluation. In tort settings, predictions about the prognosis of an emotional condition may be necessary for determining damages in a lawsuit (Sales & Perrin, 1993). In domestic relations settings, predictions of a child’s reaction to a specific custody arrangement may be a critical part of the custody evaluation. To use test results for prediction, test users should be knowledgeable about the base rates of legally relevant behaviors (e.g., violence, suicide, or post-traumatic states) and the contribution of situational factors (e.g., life stresses, substance abuse, or treatment with psychotherapy or medication) to these behaviors.

**Intervention planning.** Intervention planning based on test data may be an important part of the test user’s responsibilities in forensic settings. For example, in divorce, adoption, or abuse and neglect cases, recommendations for treatment of a child or family may be integral to the child custody recommendation. In a sentencing evaluation, recommendations for treatment may be included in deliberations and influence the duration or location of the convicted person’s incarceration. In tort settings, treatment recommendations may, in part, determine the amount of monetary compensation provided for the plaintiff. In addition to the prediction skills indicated above, skills important for intervention planning in forensic settings include both knowledge of how test data may be helpful for selecting appropriate treatment strategies and knowledge of how test data may assist in predicting response to treatment.

**Tracking.** In forensic settings, it is often important to know how test data may be affected by the passage of time and by events that occur between repeated test administrations. In working with children, for example, test users should consider the effects of developmental sequences in the assessment of the child’s current emotional condition to trace the origins of that condition to specific events such as traumatic experiences or changes in custody. Tests may assist in the process of ruling out alternative causes of conditions. Although the determination of causation is generally a classification activity (see the Classification subsection above), a test user may be called on to review a sequence of test data generated through a series of testing periods.

**Training and supervision.** The knowledge, skills, and abilities identified in this section are best obtained through doctoral training in psychology and relevant supervised experience, as described above in the Health Care Context section. Licensure requirements for those who use psychological tests in the forensic context are similar to those required of practitioners in the health care context.

The coursework and training for individuals who use tests in the forensic context are comparable to the coursework and training for those who use tests for other health care needs, although a basic introduction to psychology and the law also is desirable. In addition, training in the specific area of law (e.g., criminal responsibility) may be important. This may be acquired through formal or continuing education coursework or through mentoring by, or consultation with, someone trained and knowledgeable in the relevant statutes (e.g., a lawyer specializing in the field in question). Supervised experience in the conduct of a particular type of forensic evaluation also may be critical. Experience in one forensic area (e.g., child custody evaluation) does not necessarily prepare the test user for functioning in another forensic area.

**A Look Forward**

The psychological testing process has undergone significant technological change over the past few decades. The use of computers to administer tests and to score and interpret test results is already an important part of everyday testing. Emerging technologies of the Internet and other innovations that expand applications across vast distances may significantly alter the relationship of the test user, the test taker, and the consumer of testing results.

Some of the positive changes resulting from these new technologies include wider availability, greater accuracy, and increased accessibility of tests. Continuing improvements in the development of interpretive algorithms and expert systems are leading to diminishing concurrent human oversight of the testing process. This technology will simplify some aspects of the assessment process. As the application of new technology to the testing arena produces improved but more complex testing services, it may become necessary for the knowledge and skills articulated in
this article to be supplemented with increased technological sophistication. Ironically, this increased complexity may mandate more extensive education and training in the fundamentals of test use. The knowledge and skills articulated here will become even more important as test users are required to distinguish technology-based style from science-based substance.

REFERENCES


