PREFACE

In *Assessment Procedures for Counselors and Helping Professionals*, our goal is to help current and future school counselors, marriage and family therapists, mental health counselors, career counselors, and other helping professionals become better consumers of the various methods and procedures used in the process of assessment. Assessment occurs in many settings, such as schools, mental health clinics, career counseling centers, substance abuse treatment centers, private practice, psychiatric hospitals, and vocational rehabilitation centers. Assessment is an integral part of the counseling process in which the counselor and client work together to gain a better understanding of the client's problems. We believe that effectiveness and accuracy in assessment are essential to effective counseling. Throughout the text, we stress that assessment is more than simply giving tests. Assessment involves collecting and integrating information about an individual from *multiple methods* and *multiple sources*. Throughout this textbook, our aim is to provide students with an overview of the many approaches to assessment so they can become competent and ethical practitioners in our multicultural society.

This textbook has three goals. The first goal is to supply foundational information about assessment, which includes an overview of the various methods and sources of assessment information. In addition, students must learn some basic principles of measurement in order to understand the applications and issues in assessment. Thus, we also provide foundational information about statistical concepts, test scores, and the psychometric aspects of assessment (e.g., validity and reliability). The second goal of this textbook is to present an overview of the general areas in which assessment is commonly utilized, such as in assessing intellectual ability, achievement, aptitude, career interests and skills, and personality. The third goal is to provide students with information about specific assessment applications and issues, such as clinical assessment, communicating assessment results, assessment with diverse populations, and ethical and legal issues.

To meet these goals, the textbook is divided into three parts that provide a balance of theory and practice information as well as coverage of the assessment instruments and strategies commonly used in school counseling, clinical mental health counseling, and vocational or career counseling settings. These sections include Principles and Foundations of Assessment, Overview of Assessment Areas, and Applications and Issues.

PRINCIPLES AND FOUNDATIONS OF ASSESSMENT

Part One of this textbook, Principles and Foundations of Psychological and Educational Assessment, focuses on the underlying principles and foundations of all forms of psychological and educational assessment. We designed this section to provide counselors with the essential concepts of measurement and evaluation that they need to engage in the assessment process. Chapter 1 introduces assessment and provides historical information that has influenced assessment practice. Chapter 2 focuses on the assessment process, emphasizing the importance of collecting data by using multiple methods from multiple sources. The chapter provides detailed information about

formal and informal data-collection methods (e.g., interviews, tests, observations) as well as the sources of assessment information (e.g., the client, parents, significant others, teachers, health professionals). Chapter 3 presents basic statistical concepts associated with tests and assessment. Chapter 4 presents information about types of scores and standards for scoring and interpreting assessment instruments. Chapters 5 and 6 supply information about the key psychometric considerations that are essential in assessment: reliability and validity. Chapter 7 integrates the elements of the assessment process by presenting information about selecting, administering, scoring, and reporting assessment results.

ASSESSMENT AREAS

Part Two of the textbook, Overview of Assessment Areas, builds on the Principles and Foundations section by exploring specific assessment areas. Chapter 8 supplies information about assessing intellectual ability, including the major theories of intelligence, the major tests of intelligence (e.g., the Wechsler scales, the Stanford–Binet, the Kaufman tests), and special issues in intelligence testing. Chapter 9 covers assessment of achievement, including achievement test batteries, individual achievement tests, diagnostic achievement tests, subject-area tests, and other types of achievement tests. Chapter 10 presents information about aptitude assessment. Extensive changes in U.S. social and economic conditions may result in more counselors working with clients on career-related issues; thus, Chapter 11 provides important information about career and employment assessment. The last chapter in this section, Chapter 12, focuses on personality assessment and the many types of personality instruments and techniques.

APPLICATIONS AND ISSUES

The chapters in Part Three, Applications and Issues Related to Assessment, center on the applications and issues related to specific assessment areas. The main focus is the effective, competent, and ethical application of assessment methods in various settings and with diverse populations. For example, a primary purpose of assessment is for diagnosing client issues and problems. Thus, Chapter 13 focuses exclusively on clinical assessment and the use of assessment procedures to diagnose mental disorders, develop treatment plans, monitor counseling progress, and evaluate outcome. Chapter 14 presents information about assessment issues in education, such as the assessment activities of school counselors, the types of assessment instruments used in schools, assessing specific learning disabilities and giftedness, test preparation and performance, environmental assessment in the schools, and assessment competencies for school counselors. Because assessment strategies are applied to diverse populations, Chapter 15 supplies important information about multicultural assessment, including social and cultural factors related to assessing individuals, groups, and specific populations, as well as the competencies and standards required for assessing individuals from diverse backgrounds. Chapter 16 presents information about communicating assessment results. Finally, Chapter 17 focuses on the important ethical and legal issues related to assessment.

CHANGES IN THE EIGHTH EDITION

First published in 1988, this textbook has become a classic among assessment textbooks designed specifically for counselors. The eighth edition hosts extensive changes in the content of the text; we have updated all of the chapters and strived to provide the most accurate, up-to-date assessment information. At the same time, we have endeavored to maintain the original appeal of the text by retaining an easy-to-read format and continuing to emphasize assessment information that is most useful and relevant for school counselors, marriage and family therapists, mental health counselors, and other helping professionals. Throughout the text, we provide information and examples about widely used assessment instruments in order to help students become familiar with these well-known tests. This edition has been completely revised to align with the 2014 standards for educational and psychological testing.

Key revisions in this edition include the following:

- Chapter 1, Introduction to Assessment, consists of revised and expanded information about assessment in counseling. This introductory chapter provides an overview of the purpose for assessment as well as new information about the assessment process.
- Chapter 2, Methods and Sources of Assessment Information, has been revised to describe current information about the multiple methods and sources of data collection used in the assessment process. This chapter encompasses information about formal and informal assessment instruments and strategies divided into three broad categories: interviews, tests, and observation. Information about the importance of using collateral sources in assessment is also presented.
- The chapters on statistical concepts, understanding scores, and reliability and validity (Chapters 3, 4, 5, and 6) have been extensively reorganized and revised. Chapter 5 provides expanded information on sources of measurement error.
- Chapter 7 summarizes the assessment process by focusing on the procedures for selecting, administering, scoring, and interpreting assessment results. It includes information about the steps involved in selecting appropriate assessment instruments and strategies; the various sources of information about instruments; the process of evaluating assessment instruments; and procedures for administration, scoring, and interpretation.
- We have updated and improved all of the chapters in Part Two, Overview of Assessment Areas, to include the most current information about specific assessment strategies and instruments. All chapters in this section (Chapters 8 through 12) supply up-to-date information about the most widely used instruments and strategies. For example, Chapter 8, Assessment of Intelligence and General Ability, includes information about the latest revisions of key intelligence tests as well as expanded information on the contemporary and emerging theories of intelligence.
- Chapter 13, Clinical Assessment, has been restructured to include a broad presentation of the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) and its use in clinical assessment. In addition, we have added new information about the mental status exam, suicide risk assessment, and behavioral observation used in clinical assessment.
- We have updated Chapter 14, Assessment in Education, including updated information about school assessment programs. We have also added specific information about the common assessment activities performed by school counselors and updated

information about conducting needs assessments, assessing specific learning disabilities, assessing giftedness, and environmental assessment in the schools.

- Chapter 15, Assessment Issues with Diverse Populations, has been extensively revised. We expanded the discussion of measurement bias to align with the concept of fairness in testing, as described in the 2014 edition of the *Standards for Educational and Psychological Testing.* We restructured the section on assessing individuals with disabilities to encompass assessment of individuals with visual impairment, hearing impairment, intellectual disability, and other disabilities.
- Chapter 16, Communicating Assessment Results, has also been extensively revised. Because counselors often orally communicate assessment results to clients, parents, and other professionals, we expanded the section on the use of feedback sessions to report results. Furthermore, we updated and improved the information provided about written assessment reports.
- In Chapter 17, Ethical and Legal Issues in Assessment, we have updated the overview of ethical codes from professional organizations relevant to assessment. We also have updated and expanded the section on statutes and regulations that have implications for assessment.

ACKNOWLEDGMENTS

I would like to thank my publisher, Kevin Davis, for believing in me and giving me the chance to revise such an esteemed book. This book influenced me during my graduate training, and now I have the privilege to revise it for the eighth edition. Thanks to the late Robert Drummond for his many contributions to the assessment world and for authoring such a foundational textbook. I would also like to thank Melinda Rankin for her excellent copyediting skills. She has an amazing eye for detail and a gentle way of helping me to see my own writing errors. Finally, I would like to thank the following colleagues, whose reviews improved this edition: Donald Deering, Oakland University and University of Phoenix; Josué R. Gonzalez, Clinical Psychologist—San Antonio, Texas; Dawn C. Lorenz, Penn State University; Diane Kelly-Riley, Washington State University; and Anthony Tasso, Farleigh Dickinson University.

CJS

CHAPTER

1 Introduction to Assessment

Imagine being asked by a child welfare agency to conduct an assessment that would determine a child's potential for transitioning from foster care status to adoption within a family. As part of the assessment, you might visit the home of the potential parents to determine the appropriateness of the environment and to have a realistic sense of the family functioning. You would also have to evaluate the social and emotional development of the child and the readiness for adoption. For example, it would be necessary to consider the child's ability to bond with a new family, any developmental issues that may be present, and any potential barriers that might impact the success of the adoption process. In order to gather enough information to make this type of determination, you might interview the parents, observe the child playing and interacting, and conduct evaluation using standardized assessment instruments (e.g., the Bayley Scales of Infant and Toddler Development). Consider how important this assessment process would be to the children and the parents. The overall assessment process would be quite involved, and the results would have incredibly high stakes. The final assessment report would include information about any developmental concerns, an evaluation of the family environment, an interpretation of standardized scores, and a final recommendation based on the data. Based on the assessment results, the child welfare agency would make a decision about finalizing the adoption.

It is a privilege to play such a role in people's lives, and the privilege should be honored with careful attention to best practices and a wealth of knowledge about the assessment process. Although the results of assessment do not always lead to happy outcomes, this example provides some insight into where your journey through this book will lead. Assessment has long been regarded as a fundamental component of all helping professions and the cornerstone of the counseling process. Simply put, assessment is the process of gathering information about a client and determining the meaning of that information. It is through assessment that counselors can uncover the nature of a client's problems or issues; the magnitude of these problems and how they are impacting the client's life; how the client's family, relationships, or past experiences are affecting the current problem; the client's strengths and readiness for counseling; and whether counseling can be beneficial to the client. Assessment is also critical for establishing the goals and objectives of counseling and for determining the most effective interventions. Assessment occurs in all counseling settings, including schools, mental health clinics, career counseling centers, substance abuse treatment centers, private practice, psychiatric hospitals, and vocational rehabilitation centers. In practice, counselors are *always* assessing. Assessment is an ongoing, fluid, and dynamic process that continues throughout the course of the helping relationship.

Although students in the helping professions often initially question the need for assessment training, competency in assessment is integral to successful counseling practice (Whiston, 2012).

The purpose of this textbook is to help current and future school counselors, mental health counselors, career counselors, marriage and family therapists, and other helping professionals recognize the integral role between assessment and counseling, understand the process of assessment, develop an awareness of the applications of assessment, and understand the legal and ethical issues specific to assessment. We believe that competency in assessment is essential to positive outcomes in counseling. In order to be competent in assessment, you will need to seek supervised practice opportunities in addition to learning the content in this textbook. Each chapter in this book will help you build upon your ability to integrate assessment into your practice as a professional counselor.

Throughout the textbook, we use the term *assessment* rather than *testing*. It is important to understand that testing is just one component of the assessment process and that the scope of assessment activities is far beyond the exclusive use of standardized tests. Although we will present information about important and widely used educational and psychological tests throughout the text, we stress that assessment is more than simply giving tests. Assessment involves collecting and integrating information about an individual from *multiple methods* (e.g., interviews, observations, tests) and *multiple sources* (e.g., the client, family members, teachers, physicians). Corroborating data from multiple assessment methods and sources helps create a more comprehensive and accurate understanding of the client and his or her presenting concerns.

After studying this chapter, you should be able to:

- Define *assessment*.
- Describe the various purposes of assessment.
- Describe the broad categories of data collection methods and the various sources of assessment information.
- Explain the importance of integrating multiple methods and multiple sources of assessment information.
- List and describe the steps in the assessment process.
- Describe the competencies required by counselors for the effective use of assessment instruments.
- Describe the historical context of assessment.
- Describe the application of computer technology in the field of assessment.

WHAT IS ASSESSMENT?

Before we can talk about the assessment process, it is important to understand our definition of assessment. The term *assessment* refers to any systematic procedure for collecting information that is used to make inferences or decisions about the characteristics of a person (American Educational Research Association (AERA), American Psychological Association (APA), & National Council on Measurement in Education (NCME), 2014). Assessment encompasses a broad array of data collection methods from multiple sources

to yield relevant, accurate, and reliable information about an individual. In counseling and other helping professions, assessment is considered a *process*, because it is the *continual practice* of gathering information. Some hold to a traditional (yet erroneous) belief that assessment is limited to the first meeting with an individual; in reality, assessment is an ongoing process that may begin even before the first face-to-face contact with the individual and that continues throughout the course of the helping relationship.

Many disciplines employ the activity of assessment, including psychology, counseling, education, social work, health, military, and business and industry. Educators and other school personnel use assessment to identify learning or behavioral or emotional problems in students and to determine appropriate interventions and educational plans. Psychologists and other mental health professionals utilize assessment to help in diagnosing mental disorders, treatment planning, and monitoring and evaluating treatment progress. Career counselors engage in assessment to evaluate individuals' vocational interests and aptitudes. Because numerous types of professionals engage in assessment, we will refer to those individuals as *counselors*, *test users*, *assessors*, *examiners*, or simply *professionals* throughout the textbook. Similarly, we will refer to individuals who participate in the assessment process as *clients*, *test takers*, *assessees*, or *examinees*.

Assessment is often equated with *testing*, and the two terms are often confused or erroneously used interchangeably. Even today, many published textbooks hardly distinguish between assessment and testing. As Cohen, Swerdlik, and Sturman (2012) noted, *testing* has been a catch-all phrase for the entire testing process rather than just the administration of a test. However, assessment goes beyond merely giving tests. It is a comprehensive process that involves the integration of information from multiple data collection methods (e.g., interviews, tests, observations). Therefore, tests are now considered to be one aspect of the overall assessment process (American Educational Research Association (AERA) et al., 2014). The fact that assessment can proceed effectively without testing helps to distinguish between these two activities (Weiner, 2013).

The methods for collecting assessment information can be grouped into three broad categories: interviews, tests, and observations. Each category comprises a wide array of formal and informal instruments and strategies, such as unstructured interviews, rating scales, standardized tests, projective drawings, checklists, questionnaires, and so on. Assessment also involves obtaining information from various sources, which may include the client, family members, spouses or partners, teachers, physicians, mental health professionals, and other professionals. The assessment process varies from assessment to assessment, depending upon the purpose for assessment, the setting in which the assessment takes place, the needs of the client, and the availability and utility of the methods and sources of information (Weiner, 2013). We emphasize the importance of using multiple methods in most assessments, because the results of a single assessment instrument should never be the sole determinant of important decisions about clients.

The Purposes of Assessment

Now that we have defined assessment, it is important to explore the rationale for conducting assessment in counseling and other helping professions. Why do counselors assess? The short answer to this question is to gather information about a client. However, the information that counselors need to collect about a client depends a great deal on the *purpose* or *reason for assessment*. The research literature contains at least four general

purposes of assessment, including screening, identification and diagnosis, intervention planning, and progress and outcome evaluation (Erford, 2012; Sattler & Hoge, 2006; Selborn, Marion, & Bagby, 2013).

SCREENING *Screening* is a quick process, usually involving a single procedure or instrument, used to determine whether an individual has a high risk of having a specific problem and needs more in-depth assessment at that time. The screening process is not comprehensive, and the instruments used for screening are often held to lower standards of psychometrical soundness (Erford, 2012). Screening does not necessarily detect a specific problem or disorder an individual might have or how serious it might be; rather, it provides counselors with preliminary information that identifies those individuals with a high probability of having a particular problem. If an individual is identified as having a high risk for a disorder through the screening process, then further assessment is warranted. For example, many colleges have depression screening days in which students are given the opportunity to complete a questionnaire or instrument that detects a risk for depression. If the results of the instrument indicate a high risk for depression, then the student is referred to the counseling center for further evaluation and, if needed, counseling.

IDENTIFICATION AND DIAGNOSIS In counseling, assessment is often conducted as a means of *identifying* or *diagnosing* problems, symptoms, or disorders. *Diagnosis* can be defined as a "detailed analysis of an individual's strengths and weaknesses, with the general goal of arriving at a classification decision" (Erford, 2006, p. 2). The assessment process for diagnosis typically encompasses the use of a series of instruments and strategies to identify a client's problem areas that need to be targeted for intervention. Many counselors are required to diagnose individuals using a classification system called the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,* (DSM-5; American Psychiatric Association (APA), 2013). *Mental disorders* are behavioral or psychological patterns that impair an individual's cognitive, emotional, or behavioral functioning. In mental health counseling settings, depression and anxiety are examples of problems commonly diagnosed using the DSM-5. In school settings, identifying students who may be experiencing delays or learning problems is an important objective of assessment.

INTERVENTION PLANNING *Intervention planning* (i.e., treatment planning) involves deciding on a course of action that facilitates client change and helps improve the client's outcome. In most cases, an individual is referred for counseling because he or she is struggling and needs specific psychological, educational, or behavioral interventions to improve his or her situation (Lichtenberger, Mather, Kaufman, & Kaufman, 2005). In these cases, the purpose of assessment is to gather information to determine the most effective interventions that address and resolve the client's specific areas of concern. There are innumerable interventions that a counselor can choose from, and the interventions decided upon are based on the client's problems and the reason for referral. In addition, the setting in which the assessment takes place (such as a school, hospital, community mental health agency, private practice, or vocational center) will influence the types of interventions recommended (Lichtenberger et al., 2005).

PROGRESS AND OUTCOME EVALUATION Once interventions have been implemented, counselors may use various assessment instruments and strategies to monitor a client's progress and evaluate outcome. By periodically monitoring a client's progress, counselors can

determine if the interventions are positively impacting the client. If an intervention is having no positive effects, then counselors may reevaluate the client and make new intervention plans. When an intervention program is completed, counselors may conduct an outcome evaluation to determine if the particular intervention was effective and if the client achieved his or her goals at the end of counseling. The first step in *progress and outcome evaluation* is establishing a *baseline measure* of the client's condition. This usually takes place during the initial meeting for assessment and can involve the use of formal or informal assessment instruments or strategies. For example, an informal method would be to ask the client to rate his or her feelings of depression on a scale from 0 to 10, with 0 indicating a complete absence of depressive symptoms and 10 indicating feeling intensely depressed. An example of a formal assessment instrument designed specifically for progress and outcome evaluation is the Outcome Questionnaire (OQ-45), which measures adult clients' psychological symptoms (e.g., depression, anxiety), interpersonal functioning, and social role functioning. The assessment methods used to collect baseline data are periodically readministered to monitor the client's progress over the course of intervention. To assess the outcome of the intervention, the same instruments are also administered after the client has completed the intervention. Results from the outcome assessment are analyzed to determine if there has been a change from the baseline score.

Multiple Methods and Multiple Sources

You are likely beginning to see that assessment is a complex but essential process. Counselors using best practices conduct assessment by using multiple methods and multiple sources. Imagine having a complex jigsaw puzzle that you need to put together without having an idea of what the puzzle is supposed to look like when it is completed. You might attempt to use different approaches to determine some direction for solving the puzzle, you might get others to give you input about the process and outcome, and you might apply some problem-solving methods to the task. Conducting a thorough assessment is a similar process. As counselors and helping professionals, we often are unaware of what the end picture will look like for a client, but we have to begin to piece together the parts that will aim toward a solution to the presenting problems.

Selecting and utilizing *multiple methods* of data collection, which may be referred to as a multimodal approach to assessment, is essential in order to have checks and balances for information gathered. The methods utilized to collect assessment information can be broadly categorized as interviews, tests, and observations. Within each category is a wide array of *formal* (e.g., standardized tests, structured interviews, formal observation) and *informal* (e.g., unstructured interviews, projective techniques, checklists, questionnaires, anecdotal reports) instruments and strategies. The sources of assessment information may include the client, parents, spouses or partners, teachers, physicians, and mental health professionals, to name just a few. Figure 1.1 illustrates the various methods and sources that may be utilized in the assessment process. In most assessments, using multiple methods and multiple sources is important for obtaining information that is thorough enough to produce an in-depth understanding of the individual. Counselors should never rely solely on the results of a single assessment instrument or strategy to make important decisions about clients. In this section, we will present an overview of the methods (i.e., interviews, tests, observations) and sources of assessment information. Chapter 2 more fully describes each of these assessment methods and sources.

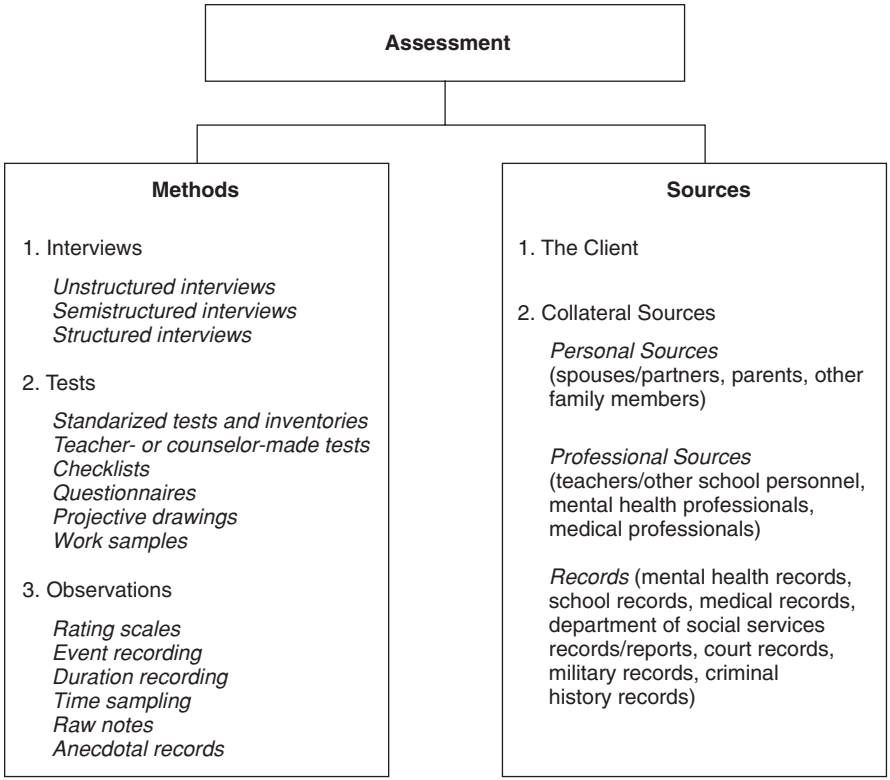

FIGURE 1.1 Multiple methods and multiple sources of the assessment process.

It may seem like an obvious point, but meeting face-to-face (or via camera) with a client is critical for gaining a complete picture from the assessment process. The *interview* is a face-to-face meeting of the assessment professional and the client. Interviewing may include such diverse techniques as unstructured interactions, semistructured interactions, and highly formal structured interactions. Its primary purpose is to gather background information relevant to the reason for assessment. The interview can be considered the single most important method of gathering information about the client's presenting problem and background information. Without interview data, information from tests and observations is without context and meaningless. In many settings, the interview is the primary (and sometimes only) assessment method used to collect data.

Tests are instruments designed to measure specific attributes of an individual, such as knowledge or skill level, intellectual functioning, aptitude, interests or preferences, values, personality traits, psychological symptoms, level of functioning, and so on. Counselors may use data collected from formal and informal tests, checklists, questionnaires, or inventories for several purposes, such as screening for emotional, behavioral, or learning problems; classifying or diagnosing certain attributes, problems, or disorders; selecting or placing individuals into training, educational or vocational programs, or employment opportunities; assisting in planning educational or psychological interventions; or evaluating the effectiveness of specific interventions or educational programs. Test results are

particularly useful in assessment, because they may reveal vital diagnostic information that would not have been uncovered through other assessment methods.

Observation is an assessment method that involves watching and recording the behavior of an individual in a particular environment. It is a way of seeing what a person actually does, rather than relying on others' perceptions of behavior. Observation is useful for collecting information about an individual's emotional responses, social interactions, motor skills, and job performance and for identifying specific patterns of behavior. Observation can be formal, involving the use of standardized rating scales and highly structured procedures, or informal, with the counselor taking raw notes regarding a client's verbal and nonverbal behavior during the assessment.

In addition to multiple methods, counselors use *multiple sources* of information. The client is usually the primary source of information during the assessment process. Other sources of information (called *collateral sources*) include *personal sources*, such as parents, spouses or partners, and others close to the individual being evaluated, and *professional sources,* such as teachers, physicians, mental health professionals, and other professionals. Information from collateral sources is valuable, because it is typically more objective and reliable than information obtained directly from examinees. Another source of assessment information comes from client *records,* such as school grades or attendance, previous psychological or educational assessment reports, mental health treatment plans or summaries, court documents, records from social services agencies, and so on.

There is no set standard as to the number of methods or sources that should be used in assessment. The methods and sources chosen for the assessment process typically depend upon the nature of the referral questions, the reason for assessment, and available assessment resources. The client interview is considered the cornerstone of assessment and is employed in almost all cases. However, utilizing additional methods and sources of information leads to a more complete and accurate picture of the individual being evaluated. For example, say that a mental health counselor working in an outpatient counseling center conducts unstructured interviews with clients to determine the reason they are seeking counseling and to collect relevant background information. The counselor also asks clients to complete a self-report checklist of psychological symptoms. From the checklist, the counselor discovers that a particular client has many symptoms of depression, which the client did not disclose during the interview. In this example, the use of the checklist provided essential information that was not uncovered by the interview alone. The client profile also might be more clearly detailed with the administration of some standardized tests; however, the counselor might not have access to these tests in his work setting.

The Assessment Process

Now that we have defined assessment and discussed methods and sources, it is important to reemphasize that the assessment process is more than simply giving a test. Assessment is a complex, problem-solving process that necessitates collecting and analyzing information about an individual in order to make decisions or inferences about that person. The first and most important step in the assessment process is to identify the client's problem(s) to be addressed and the reason for assessment (Urbina, 2014). A clear sense of why an assessment is being conducted helps counselors select the methods and sources of information that will provide an adequate basis for arriving at useful conclusions and recommendations (Weiner, 2013). In most instances, the process of assessment ends with a verbal

or written report that contains the assessment results and recommendations. In between the beginning and end points of the assessment process are other additional actions directed at collecting relevant client information. Although the process of assessment might appear overwhelming now, it can be broken down into the following four manageable steps (Hardwood, Beutler, & Groth-Marnat, 2011):

1. ***Identify the Problem*** The first step in the assessment process is identifying the presenting problem—that is, the reason that the individual is being assessed. Because assessment is so clearly linked to counseling, the reason for assessment and the reason for counseling are often one and the same. Reasons for assessment and/or counseling can stem from a variety of problems or concerns, such as academic or vocational performance, cognitive abilities, behavioral problems, or emotional and social functioning (Lichtenberger et al., 2005). In order to proceed to the next step in the assessment process, the counselor must have a clear idea about what the problem is and the reasons for which the client is being seen.

   Clients may be self-referred for assessment, or they may be referred by another source, such as a family member, teacher, judge, physician, or human resources manager. Referral sources can help clarify the nature and severity of the client's problem through the specific questions they want answered about the client. Thus, referral questions are often directly linked to the problem being addressed in assessment. The following are examples of referral questions that help define the client's problem:
   - Does this student have a learning disability? If so, does he or she qualify for special education or related services?
   - Is this child ready to begin kindergarten?
   - Does this child's problematic behavior indicate a diagnosis of Attention Deficit/Hyperactivity Disorder (ADHD)?
   - Is this individual suicidal?
   - Does this adult have Posttraumatic Stress Disorder (PTSD)?
   - Does this parent have a mental disorder that might interfere with parenting?
   - What are this individual's vocational interests?
   - How well can this employee be expected to perform if promoted to a management position?
2. ***Select and Implement Assessment Methods*** After counselors determine the nature of the problem that needs to be appraised in the assessment process, the next step involves selecting and implementing methods for collecting data (e.g., interviews, tests, observation) and determining the sources of assessment information. Counselors choose from among numerous formal and informal assessment instruments and strategies based on the reason for referral, the context in which the assessment takes place, and the adequacy of the instruments and procedures they will use. Interviews are used in almost every assessment to obtain background information about an individual, including family history, work and education background, social history, and other relevant cultural and environmental factors. Counselors may administer tests to evaluate a person's cognitive functioning, knowledge, skills, abilities, or personality traits. Observation may be used to record or monitor a client's behavior in a particular setting. Collateral information also may be obtained from family members, spouses or partners, and others close to the individual being evaluated. Although there are no set guidelines for which or how many assessment

instruments or strategies to use, in general, the more methods used to collect data, the more accurate and objective the information obtained.

3. ***Evaluate the Assessment Information*** A key task for counselors is evaluating assessment information, which involves scoring, interpreting, and integrating information obtained from all assessment methods and sources to answer the referral question. To be competent in evaluating assessment information, counselors need knowledge and skills in basic statistical concepts, psychometric principles, and the procedures for interpreting assessment results. Evaluating assessment information is a difficult step, because the counselor is often confronted with a dizzying array of information gathered during the assessment process. To organize this data, counselors can use the following steps (Kamphaus & Frick, 2010; Sattler & Hoge, 2006):
   a. Document any significant findings that clearly identify problem areas.
   b. Identify convergent findings across methods and sources.
   c. Identify and explain discrepancies in information across methods and sources.
   d. Arrive at a tentative formulation or hypothesis of the individual's problem.
   e. Determine the information to include in the assessment report.
4. ***Report Assessment Results and Make Recommendations*** The final step in the assessment process is reporting results and making recommendations. This involves (a) describing the individual being assessed and his or her situation, (b) reporting general hypotheses about the individual, (c) supporting those hypotheses with assessment information, and (d) proposing recommendations related to the original reason for referral (Kaufman & Lichtenberger, 2002; Ownby, 1997; Sattler, 2008). The general hypotheses are the counselor's descriptive or clinical impressions of the individual that are based on multiple methods and sources of assessment data. When reporting these hypotheses, make sure to provide enough assessment data to support your conclusion.

   Making recommendations involves identifying specific ways to resolve the presenting problem or referral question by addressing the assessment's key findings about the individual (Lichtenberger et al., 2005). Counselors recommend strategies and interventions that are designed to facilitate change and improve outcomes based on the individual and his or her assessment results (Kaufman & Lichtenberger, 2002). Because individuals are referred for assessment for a variety of reasons, recommendations vary depending on the referral questions. In addition, the setting in which the assessment takes place (such as a school, hospital, mental health clinic, college, or vocational training center) will influence the type and number of recommendations (Kaufman & Lichtenberger, 2002). For example, in school settings, most referrals for assessment involve students' problems that affect their academic performance. In this situation, recommendations typically focus on behavioral interventions, instructional strategies, or other appropriate educational services (Lichtenberger et al., 2005). Assessments at mental health centers are requested generally for diagnosing mental disorders, treatment planning, and monitoring treatment progress; thus, recommendations may include a variety of clinical interventions and techniques.

Competencies Required for Assessment

Just like professional counseling, you need both knowledge and skills to be competent in assessment. Although a course in measurement and assessment might provide you with the foundational knowledge of assessment, you would need supervised practice to be

competent. Because some people have underestimated the complexity of assessment, practiced beyond the scope of their training, or attributed too much meaning to a single test score, the public has developed a degree of skepticism in relation to assessment. As a result, several governing bodies and professional associations related to assessment have set explicit guidelines for the selection, use, administration, and interpretation of assessment instruments. Those guidelines can be translated into the following competencies:

1. Understand the basic statistical concepts and define, compute, and interpret measures of central tendency, variability, and relationship.
2. Understand basic measurement concepts, such as scales of measurement, types of reliability, types of validity, and norm groups.
3. Compute and apply measurement formulas, such as the standard error of measurement and Spearman–Brown prophecy formula.
4. Read, evaluate, and understand instrument manuals and reports.
5. Follow exactly as specified the procedures for administering, scoring, and interpreting an assessment instrument.
6. List and describe major assessment instruments in their fields.
7. Identify and locate sources of information about assessment instruments.
8. Discuss as well as demonstrate the use of different systems of presenting data in tabular and graphic forms.
9. Compare and contrast different types of scores and discuss their strengths and weaknesses.
10. Explain the relative nature of norm-referenced interpretation in interpreting individual scores.
11. Help teach clients to use tests as exploratory tools and in decision making.
12. Present results from assessment instruments both verbally (using feedback sessions) and in written form.
13. Pace a feedback session to enhance the client's knowledge of the test results.
14. Use strategies to prepare clients for testing to maximize the accuracy of the test results.
15. Explain assessment results to clients thoughtfully and accurately, but in language they understand.
16. Use effective communication skills when presenting assessment results to individuals, groups, parents, students, teachers, and professionals.
17. Shape the client's reaction to and encourage appropriate use of assessment information.
18. Be alert to the verbal and nonverbal cues expressed by the client throughout the assessment process.
19. Use appropriate strategies with clients who perceive assessment results as negative.
20. Be familiar with the interpretation forms and computerized report forms so as to guide the client to the information and explanation.
21. Be familiar with the legal, professional, and ethical guidelines related to assessment.
22. Be aware of the client's rights and the professional's responsibilities as a test administrator and counselor.
23. Have knowledge of the current issues and trends in assessment.

The Association for Assessment in Counseling (now the Association for Assessment and Research in Counseling) published *Responsibilities of Users of Standardized Tests*

(Association for Assessment in Counseling, 2003), which describes the qualifications that professionals must have in order to provide valuable, ethical, and effective assessment services to the public. Qualifications to use standardized tests depend on at least four factors:

1. ***Purposes of Testing*** A clear purpose for using an assessment instrument should be established. Because the purpose of an instrument directly affects how the results are used, qualifications beyond general competencies may be needed to interpret the results.
2. ***Characteristics of Tests*** Counselors should understand the strengths and limitations of each instrument used.
3. ***Settings and Conditions of Test Use*** Counselors should evaluate the levels of knowledge and skill required for using a particular assessment instrument prior to implementing the instrument.
4. ***Roles of Test Selectors, Administrators, Scorers, and Interpreters*** The education, training, and experience of test users determine which instruments they are qualified to administer and interpret.

HISTORICAL PERSPECTIVES

Part of being competent in assessment involves having a working knowledge of the history of assessment. Assessment is not a new concept. Even though the test movement in the United States began only at the turn of the 20th century (see Table 1.1), tests actually have been used for thousands of years. Around 2200 B.C., the Chinese used essay examinations to help select civil service employees. The philosophies of Socrates and Plato emphasized the importance of assessing an individual's competencies and aptitudes in vocational selection. Throughout the centuries, philosophers and educators have devised certain scales or items to provide teachers and parents with useful information to help their children. Anthony Fitzherbert (1470–1538) identified some items to screen individuals with retardation from those without—for example, being able to count to 20 pence, being able to tell one's age, and being able to identify one's father or mother.

Juan Huarte (1530–1589) was probably the first author to suggest formal intelligence testing. His book title was translated as *The Trial of Wits: Discovering the Great Differences of Wits among Men and What Sorts of Learning Suit Best with Each Genius.* Jean Esquirol (1772–1840), a French physician, proposed that there are several levels of intellectual deficiencies and that language is a valid psychological criterion for differentiating among levels. Eduardo Seguin (1812–1880) also worked with individuals with intellectual disabilities and believed that these people should be trained in sensory discrimination and in the development of motor control.

The Victorian era marked the beginning of modern science and witnessed the influence of Darwinian biology on the studies of individuals. In 1879 in Leipzig, Wilhelm Wundt (1832–1920) founded the first psychological laboratory. His work was largely concerned with sensitivity to visual, auditory, and other sensory stimuli and simple reaction time. He followed scientific procedures and rigorously controlled observations. He influenced the measurement movement by using methodology that required precision, accuracy, order, and reproducibility of data and findings. The interest in the exceptional individual broadened to include personality and behavior. Sigmund Freud, Jean Martin Charcot, and Philippe Pinel were interested in individuals with personal and social

TABLE 1.1 Major Events in the Test Movement

1900–1909
- Jung Word Association Test
- Binet and Simon Intelligence Scale
- Standardized group tests of achievement
- Stone Arithmetic Test
- Thorndike Handwriting, Language, Spelling, and Arithmetic Tests
- Spearman's measurement theory
- Pearson's theory of correlation
- Thorndike's textbook on educational measurement
- Goddard's translation of Binet into English

1910–1919
- Army Alpha and Army Beta Tests
- Stenquist Test of Mechanical Abilities
- Porteous Maze Test
- Seashore Measures of Musical Talents
- Spearman's Factors in Intelligence
- Stanford–Binet Intelligence Scale
- Otis Absolute Point Scale
- Stern's concept of mental quotient
- Woodworth Personal Data Sheet

1920–1929
- Founding of the Psychological Corporation
- Goodenough Draw-a-Man Test
- Strong Vocational Interest Blank
- Terman, Kelley, and Ruch's Stanford Achievement Test
- Clark's Aptitude Testing
- Spearman's *The Abilities of Man: Their Nature and Measurement*
- Morrison's School Mastery Tests
- Rorschach Ink Blot Test
- Hartshorne and May's Character Education Inquiry
- Kohs's Block Design Test

1930–1939
- Thurstone's primary mental abilities
- Buros's First Mental Measurements Yearbook
- Johnson's test-scoring machine
- Graduate Record Examinations
- Wechsler Bellevue Intelligence Scale
- 1937 revision of the Stanford–Binet Intelligence Scale
- Murray's Thematic Apperception Test
- Bernreuter Personality Inventory
- Leiter International Performance Scale
- Kuder Preference Scale Record
- Lindquist's Iowa Every-Pupil Test
- Bender Visual Motor Gestalt Test
- Marino's Sociometric Techniques
- Piaget's Origins of Intelligence
- Tiegs and Clark's Progressive Achievement Test
- Gesell Maturity Scale

1940–1949
- Minnesota Multiphasic Personality Inventory
- Wechsler Intelligence Scale for Children
- U.S. Employment Service's General Aptitude Test Battery
- Cattell Infant Intelligence Scale

1950–1959
- Lindquist's electronic test scoring
- *Technical Recommendations for Psychological Tests and Diagnostic Techniques*
- *Technical Recommendations for Achievement Tests*
- Guilford's *The Nature of Human Intelligence*
- Stevenson's *The Study of Behavior: O-Technique and Its Methodology*
- Osgood's semantic differential
- National Defense Education Act
- Frederikson's In-Basket Assessment Technique
- Bloom's Taxonomy of Educational Objectives

1960–1969
- National Assessment of Educational Progress
- Wechsler Preschool and Primary Scale of Intelligence
- 1960 revision of the Stanford–Binet Intelligence Scale
- *Standards for Educational and Psychological Testing*

TABLE 1.1 Major Events in the Test Movement (*Continued*)

- Jensen's *How Much Can We Boost IQ and Scholastic Achievement?*
- Civil Rights Act of 1964
- Kuder Occupational Interest Survey
- Cattell's Theory of Fluid and Crystallized Intelligence
- Bayley Scales of Infant Development

1970–1979

- Family Educational Rights and Privacy Act of 1974
- New York State Truth in Testing Act
- Education of All Handicapped Children Act (became the Individuals with Disabilities Education Act [IDEA])
- Self-Directed Search
- System of Multicultural Pluralistic Assessment
- Wechsler Intelligence Scale for Children—Revised
- Revision of the *Standards for Educational and Psychological Testing*
- Rokeach Value Survey
- Peabody Picture Vocabulary Test
- Millon Clinical Multiaxial Inventory
- McCarthy Scales of Children's Abilities
- Use of computers in testing

1980–1989

- Thorndike, Hagen, and Stattler's revision of the Stanford–Binet Intelligence Scale
- Carl D. Perkins Vocational Education Act of 1984
- Kaufman Assessment Battery for Children
- Revision of the *Standards for Educational and Psychological Testing*
- Minnesota Multiphasic Personality Inventory, Second Edition
- Wechsler Adult Intelligence Scale—Revised
- Nader & Nairn's *The Reign of ETS: The Corporation that Makes Up Minds* (Ralph Nader's report on the Educational Testing Service)
- Differential Ability Scales
- Naglieri Nonverbal Ability Test
- Test of Nonverbal Intelligence 1–3
- Bayley Scale of Infant Development
- Computer-adaptive and computer-assisted tests

1990–2000

- Americans with Disabilities Act of 1990
- Health Insurance Portability and Accountability Act of 1996
- Herrnstein and Murray's *The Bell Curve*
- Sixteen Personality Factor Questionnaire, Fifth Edition
- Wechsler Adult Intelligence Scale, Third Edition
- Revision of the *Standards for Educational and Psychological Testing*
- Wechsler Individual Achievement Test
- Stanford–Binet Intelligence Scale, Fifth Edition
- Goleman's *Emotional Intelligence: Why It Can Matter More than IQ*
- Baron's Emotional Quotient Inventory
- Internet-based tests

2001–Present

- No Child Left Behind Act of 2001
- Individuals with Disabilities Education Improvement Act of 2004
- Newly revised Strong Interest Inventory
- Wechsler Intelligence Scale for Children, Fifth Edition
- Wechsler Preschool and Primary Scale of Intelligence, Third Edition
- Kaufman Brief Intelligence Test, Second Edition
- Wechsler Adult Intelligence Scale, Fourth Edition
- Standards for Educational and Psychological Testing (2014)
- International Test Commission Standards

judgment problems. Early interest in measuring intelligence also dates back to the late 19th century, when Sir Francis Galton (1822–1911), cousin to Charles Darwin, applied Darwin's evolutionary theory to attempt to demonstrate a hereditary basis for intelligence. In 1905, French psychologist Alfred Binet (1857–1911) constructed the first intelligence test (the Binet–Simon scale) that measured children's cognitive ability to learn school-type tasks or *educational attainments*, focusing on language, memory, judgment, comprehension, and reasoning (Binet & Simon, 1916). Binet claimed that his scale provided a crude means of differentiating between those children who could function in the regular classroom and those who could not.

The assessment of children rapidly expanded to the assessment of adults when the United States entered World War I in 1917 (Anastasi & Urbina, 1997). During this time, the armed services developed a group intelligence test called the Army Alpha to use in the selection and classification of military personnel. The original purpose of the army test was to identify those recruits whose lower intelligence would create problems for the military organization. A similar test was created for use with illiterate or non-English-speaking recruits, called the Army Beta. At the end of World War I, there was also an interest in screening recruits for psychosis and other emotional disabilities. The army once again developed a new test, called the Woodworth Personal Data Sheet, which was a forerunner of modern personality tests.

The successful use of tests by the armed services led to widespread adoption of tests in education and industry. Other factors also contributed to the acceptance of tests. Growth in population, free public education, compulsory school attendance laws, and the increase in students going on to institutions of higher education all were factors that changed the philosophy and practice of testing.

In addition, the egalitarian, political, and philosophical movements that championed integration, women's rights, rights of individuals with disabilities, and cultural group heritage influenced how people viewed tests. Tests were criticized for cultural bias, gender bias, unfairness to minority groups, and unfairness to groups with disabilities. These criticisms led to improved review procedures for the selection of test items and the selection of norming samples.

In recent years, however, the prevailing educational policy in the United States has changed from an open, humanistic education to back-to-basics and accountability-based approaches. The current use of high-stakes tests in the U.S. educational system can impact a student's educational paths or choices, such as whether a student is promoted or retained at a grade level, graduated, or admitted into a desired program.

Despite the changes in the social and political climate, the use of tests in the United States increased dramatically in the 20th and 21st centuries and continues to grow. It is estimated that Americans take anywhere from 143 million to nearly 400 million standardized tests yearly for education alone, 50 million to nearly 200 million job tests for business and industry, and several million more for government and military jobs (Sacks, 1999). The test industry has been greatly affected by technology. Computer-based tests represent a great advancement from the time when test usage was time-consuming and laborious in terms of administering, scoring, and interpreting tests, as well as writing up test results (Cohen et al., 2012). Today, most test publishers offer computer software for administering, scoring, and/or interpreting tests. Technological advances make the use of tests in the assessment process more convenient and affordable, further increasing the growth in test usage.

ASSESSMENT AND TECHNOLOGY

The assessment process has changed dramatically since the development of Wundt's first laboratory in 1879. Although observation is still an important component of the assessment process, we have now developed more efficient means to administer assessments, collect information, analyze data, and write reports. To say the least, counselors have seen tremendous growth in the use of technology in assessment. In today's world of counseling practice, computers are an essential component of the assessment process, and many assessment instruments can be administered via the Internet.

Computer-Based Assessment

The use of computers has been viewed as a way to enhance and advance the field of assessment. In all areas of assessment (e.g., personality, intellectual ability, achievement, career and employment assessment), computer-based assessment instruments and strategies are available. With dynamic visuals, sound, user interactivity, and near-real-time score reporting, computer-based assessment vastly expands assessment possibility beyond the limitations of traditional paper-and-pencil instruments (Scalise & Gifford, 2006). Although initially computers were used only in the processing of test data, computer-based assessment now encompasses a broad range of operations and procedures, such as the following:

- ***Computer Administration of Assessment Instruments*** Administering tests, questionnaires, and interviews via the computer is one of the most common computer assessment applications. This response format has many advantages over traditional paper-and-pencil methods, such as increased delivery, potential time savings, and the ability for items to be adapted or tailored based on the test taker's response to a previous item.
- ***Automated Test Scoring*** Computer-based assessment provides automated scoring of responses, thereby giving test takers almost immediate feedback and their overall score. Computer scoring reduces the possibility that respondents would make errors while filling out handwritten answer sheets and eliminates the errors that clinicians and technicians would make while hand-scoring items.
- ***Computer-Generated Reports and Narratives*** Computer-based assessment instruments often provide computer-generated reports or narratives. These reports are automated interpretations that are generated based on user input and resulting test scores (Butcher, 2013). The reports may contain very complex and detailed statements or summary statements.
- ***Computer-Adaptive Tests*** Computer-adaptive tests are specifically tailored to an individual's ability level. The computer quickly determines the examinee's ability level and then tailors the questions to that level. The first question is usually selected close to the passing level. If the test taker answers the question correctly, then a more difficult item is presented next. Using a computer-adaptive test, test takers have a more personalized assessment experience in a controlled environment. Computer-adaptive tests also provide sensitivity to the needs of users with disabilities, helping ensure equality and fairness in testing.
- ***Computer Simulations*** Computer simulation is the technique of representing real-world experiences through a computer program. Interactive software programs allow individuals to explore new situations, make decisions, acquire knowledge

based on their input, and apply this knowledge to control the ever-changing simulation state. Simulations have been in use for many years to assess performance in different environments. In the military, simulation has long been used for assessing the readiness of individuals to perform military operations, and devices used for computer simulations range from plastic mock-ups to laptop computers to full-motion aircraft simulators. In education, simulations can be used to investigate problem-solving skills, allowing students to explore a range of options in a particular problem scenario. Scenario-based testing is also used for some counseling-related exams, such as the Clinical Mental Health Counseling Exam (CMHCE).

Computer technology also helps facilitate and improve all phases of measurement practices. The increased availability of powerful computers and computer software in recent decades has greatly enhanced the ease of evaluating the reliability (consistency) and validity (accuracy) of test results. Such statistical operations are routinely carried out with computer software programs such as SPSS and SAS.

Despite the many advantages of using computer-based assessment, there are several limitations as well. For example, computer-based test interpretations or narrative reports should not be viewed as stand-alone clinical evaluations (Butcher, 2013). Computer-based interpretations are unable to take into account the uniqueness of the test taker and incorporate such elements as a client's personal history, life events, or current stressors. Therefore, computerized reports are considered broad, general descriptions that should not be used without the evaluation of a skilled counselor. Whether or not a counselor chooses to use a computer-based test interpretation, it is the counselor who is ultimately accountable for the accuracy of interpretations.

Internet-Based Assessment

The Internet is also changing the current landscape and the future of assessment by providing a profusion of assessment instruments with 24–7 access, ease of use, immediate scoring, and a more limited need for test administrators, leading to convenience, cost effectiveness, and efficient testing. It is difficult to estimate the number of assessment-related websites currently available on the Internet, other than to say that the number is large and increasing (Buchanan, 2002). Internet-based assessment websites vary in content, quality, and function. Some seek to adhere to high standards of professionalism of assessment, whereas others appear unprofessional and unconcerned with ethical and security issues. The motivation for development of many of these sites is easy to understand. Commercial assessment sites can make more money, because the Internet offers easy access to large numbers of participants. Researchers benefit from Internet-based assessment because they have access to large numbers of participants; the costs associated with traditional assessment methods, such as publishing and distributing paper surveys, mailing materials to study participants, and data collection and entry, are eliminated; and the costs to develop, publish, and maintain web-based surveys are significantly lower.

The expansion of assessment instruments on the Internet has brought about a number of issues. Concerns about the reliability and validity of the data collected through the Internet remain, although previous research indicates no significant difference between traditional and Internet-based testing. Another concern is that although many people have access to the Internet, not everyone does, which can be a confounding variable in a research study in terms of population sample. Questions regarding test security remain, and it is

difficult to positively identify a person taking an online assessment if the test is not taken at a special site. Another issue involves providing feedback or results to participants—specifically, the inability to have human contact with a clinician or researcher while the participant is receiving and processing test results.

CONTROVERSIAL ISSUES IN ASSESSMENT

A field as complex and long-standing as assessment cannot exist without controversy. As you might guess, some of the controversy has been among assessment professionals themselves, and other controversies have been between the public and the assessment community. Some of the issues involved are recurrent and will be discussed again in other chapters. It is imperative that counselors who conduct assessment be aware of ongoing controversies and the impact on their scope of practice with regard to assessment. Controversy can drive changes in practice. As such, counselors should maintain awareness of legal and ethical guidelines related to the assessment process and should be certain to apply those guidelines to their practice. The following statements reflect some of the current issues, complaints, and controversies:

- Assessment is an invasion of privacy.
- There is too much reliance on test scores for decision making, without enough consideration for an individual's background history.
- Tests are biased; they are unfair and discriminate against diverse groups.
- Tests may be self-incriminating, and individuals should have the right to rebuttal.
- Intelligence tests are not measuring the right constructs.
- We cannot rely on grades and diplomas; we must have demonstration of competencies on objective tests.
- Multiple-choice tests need to be replaced by authentic and performance assessment.
- There is too much pressure on students, teachers, and parents because of high-stakes testing.

Summary

Many disciplines (e.g., psychology, counseling, education, social work, health, military, business or industry) employ the activity of assessment for such purposes as screening, identification and diagnosis, intervention planning, and progress evaluation. The assessment process encompasses multiple data collection methods from multiple sources to yield relevant, accurate, and reliable information about an individual. A key task of assessment professionals is to analyze and integrate information obtained from all assessment methods and sources to answer the referral question. Professionals must then make recommendations that are relevant to the assessment results and the referral question.

Having knowledge of the history of assessment can help with understanding current assessment issues and practices. The testing movement is about 100 years old. Some tests were constructed in the 19th century, but the majority of test development occurred in the 20th century. Many of the innovations and changes of the test movement resulted from major national crises and social and political movements. The use of computer-based and Internet-based assessment continues to become more prevalent in the assessment field.

Moving Forward

This textbook is divided into three parts (Part I, Principles and Foundations of Assessment; Part II, Overview of Assessment Areas; and Part III, Applications and Issues) that provide a balance of theory and practice information as well as coverage of the assessment instruments and strategies commonly used in the various areas of counseling (e.g., school counseling, clinical mental health counseling, vocational or career counseling settings). Although each section has a different focus, it is important to remember that all of the components of the textbook are interrelated and that each section builds upon your ability to be competent in the area of assessment. Chapter 1 introduced you to the principles and foundations of assessment. You will continue to explore this area in Chapters 2 through 7. Chapters 8 through 12 provide an overview of assessment areas, and the remainder of the book focuses on applications and issues. As you read each chapter, contemplate questions for discussion, and complete related activities, you should consider how each chapter fits within the framework we have provided and work to integrate the information into your epistemology of counseling practice.

Questions for Discussion

1. What tests have you taken during your lifetime? For what purposes were they given? How were the test results used? What type of feedback did you get about the results?
2. Do you believe assessment is an integral part of the counseling process? Why or why not?
3. Explain the importance of integrating multiple methods and multiple sources of assessment information.
4. Should knowledge of the historical foundations of testing be a competency required by workers in the helping professions? Why or why not?
5. In what ways are computer-based assessment instruments and traditional assessment instruments alike? In what ways are they different?

Suggested Activities

1. Interview individuals who are working in the helping professions to find out what assessment instruments or strategies they regularly use.
2. Review media sources (e.g., websites, newspapers), and identify three events that have occurred over the last 5 years that have impacted assessment.
3. Discuss the assessment issue you think is most important for counselors to address.

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CHAPTER

2 Methods and Sources of Assessment Information

The assessment process involves collecting relevant, accurate, and reliable information about an individual that can be used to make inferences or decisions about that person. To collect data that is thorough enough to produce an in-depth understanding of a client, counselors typically use multiple methods for collecting assessment information. These methods can be grouped into three broad categories: interviews, tests, and observations. Each category contains a wide array of formal and informal instruments and strategies, such as unstructured interviews, rating scales, standardized tests, projective drawings, checklists, questionnaires, and so on. Assessment also involves obtaining information from various sources, which may include the client, family members, spouses or partners, teachers, physicians, and other professionals. This chapter provides an overview of methods used in the assessment process and the sources of assessment information.

After studying this chapter, you should be able to:

- Identify and describe the data collection methods used in assessment.
- Identify and describe the various sources of assessment information.
- Explain the difference between formal and informal assessment instruments and strategies.
- Explain the importance of using multiple methods and multiple sources of information in assessment.
- Describe the initial interview and explain its purpose in the assessment process.
- Explain the differences among structured, semistructured, and unstructured interviews.
- Describe the categories and characteristics of tests used in the assessment process.
- Define *observation* and describe the various observation strategies and approaches used in the assessment process.

ASSESSMENT METHODS AND SOURCES

The assessment process utilizes diverse data collection methods from different sources to obtain relevant client information that serves as a basis for formulating conclusions and recommendations. The methods of data collection can be broadly categorized as interviews, tests, or observations. In each of these three categories, counselors may choose from

a multitude of formal and informal instruments and strategies to collect information. Although the client is usually the primary source of information, information also may be obtained from relatives, friends, teachers, health professionals, and other relevant collateral sources. Information may also come from documents, such as medical records, school records, and written reports of earlier assessments.

The methods and sources of information can vary considerably from assessment to assessment, depending upon the purpose for assessment, the setting in which the assessment takes place, the needs of the client, and the availability and utility of the methods and sources of information (Weiner, 2013). Some assessments may be based entirely on information obtained from interviews, particularly if a client is quite forthcoming and open to the assessment process. If a client is reluctant to disclose information, then the assessment may primarily include information from collateral sources and records. In a clinical setting, it is often difficult to predict which methods and sources of information will prove most critical or valuable in the assessment process before meeting the client. Behavioral observation and standardized testing can both provide excellent information. Each may prove more useful than the other in certain cases. For example, a classroom assessment of disruptive behavior might best be served by observation strategies, whereas an assessment of pathology might be best served by standardized testing. In some cases, standardized test results could provide information that might not be evident through observation or interview (Weiner, 2013). As an example, imagine conducting a risk assessment for a college student who threatened a professor. Observation or interview alone would probably not provide enough information to arrive at a reliable estimate of the danger or lack thereof. In this case, the addition of data from a standardized assessment of psychopathology (e.g., Minnesota Multiphasic Personality Inventory [MMPI-2] and the Millon Clinical Multiaxial Inventory [MCMI-III]) would allow for a more thorough analysis of the individual's potential for harm.

Regardless of whether observation or standardized assessment is used, the initial interview is almost always required in the assessment process to obtain relevant background information about the client and the client's perceptions of his or her problems and strengths. When working with children, it is important to also interview parents or guardians, teachers, and other caregivers who can provide relevant information that will aid in your assessment of the child. We recommend for most assessments that counselors use more than one method and source of assessment information. Corroborating information from a number of methods and sources helps create a more comprehensive and accurate understanding of the client and his or her presenting concerns. We caution counselors against using the results of a single assessment instrument or strategy to make important decisions about clients.

We also recommend that counselors collect assessment data across settings when possible. Consider a child who is displaying disruptive behavior problems in school. Although a parent can provide the best insight about a child's behavior in many cases, it would also be important to have the teacher's perspective on this particular behavior. Imagine that you conduct observations in clinic, home, and school settings and discover that the behavior only occurs in a single teacher's classroom. The intervention you design would be setting specific, and you would attempt to determine the purpose (i.e., function) of the behavior in that setting. If at the onset you accept the behavior to be global and fail to evaluate behavior across settings, then you might limit the potential for success.

Formal and Informal Assessment Instruments and Strategies

Our examples thus far have demonstrated the complexity of assessment and the potential consequences of obtaining limited data. However, it is important to note that the complexity of the assessment process depends on the purpose of assessment. In some cases, counselors use an informal assessment process to gain some basic information. Assessment methods that are *informal* include the use of instruments and strategies that are developed *without* proven reliability and validity. There is no standardization of administration, scoring procedures, or interpretation. Furthermore, informal methods typically draw upon a counselor's professional judgment for determining hypotheses about the client, interpreting instrument results, and making recommendations. There are a variety of informal assessment procedures that counselors may use, including unstructured interviews, informal observation, projective drawings, checklists, work samples, teacher- or counselor-made tests, and questionnaires. An example of an informal assessment is the use of a feeling chart that describes the differences in emotional states to help clients identify their own emotional responses.

Methods of assessment that are categorized as *formal* generally involve the use of assessment instruments that are standardized. These formal assessment methods have structured materials, uniform administration procedures, and consistent methods for scoring and interpretation. A standardized instrument has undergone extensive instrument development, which involves the writing and rewriting of items, hundreds of administrations, the development of reliability and validity data, administrations to what are sometimes very large groups (i.e., thousands) of examinees, and the development of clearly specified administration and scoring procedures (Salkind, 2012). The primary purpose for standardizing an assessment instrument is to make sure that all the variables that are under the control of the examiner are as uniform as possible so that everyone who takes the test will be taking it in the same way (Urbina, 2014). Formal assessment instruments can include standardized psychological or educational tests, structured interviews, or structured behavior observations. As counselors, we use standardized tests for a variety of reasons. Counselors often use instruments such as the Beck Depression Inventory (Beck, Steer, & Brown, 1996) to diagnose and classify levels of depression in clients. The Beck Depression Inventory (BDI-II) is the most frequently used standardized instrument for the assessment of depression and provides a score that can indicate the severity of depression. Although this is a formal assessment instrument, it contains only 21 items and takes approximately ten minutes to complete.

An instrument that is standardized implies a level of technical quality or that the instrument is psychometrically sound. *Psychometrics* can be defined as the field of study concerned with educational and psychological measurement. An instrument that has *psychometric soundness* generally has proven *reliability* (or consistency of scores) and *validity* (the accuracy to measure what the instrument is designed to measure) and is standardized on a relevant *norm group* (i.e., a reference group of people who participated in the standardization of the test to which researchers and professionals can compare the performance of their subjects or clients). Psychometric aspects of assessment instruments will be discussed further in Chapters 4, 5, and 6.

Although throughout this textbook we have categorized assessment methods into three general categories (interviews, tests, and observations), it is important to remember that within each category there are many instruments and procedures that can be classified

TABLE 2.1 Examples of Formal and Informal Assessment Instruments and Strategies

Method	Formal	Informal
Interviews	Structured interviews Semistructured interviews	Unstructured interviews Semistructured interviews
Tests	Standardized tests and inventories	Teacher- or counselor-made tests Checklists Questionnaires Projective drawings Work samples
Observations	Rating scales Event recording Duration recording	Raw notes Anecdotal records

as either formal or informal (see Table 2.1). Using a combination of formal and informal assessment tools is recommended to provide an in-depth evaluation of clients, but the right mix of formal and informal assessment methods will vary from assessment to assessment. Chapter 7 will provide information on the process of selecting appropriate assessment instruments and strategies.

THE INITIAL INTERVIEW

Now that we have reviewed the elements of the assessment process, it is important to conduct a more in-depth exploration of each element. As we stated earlier, interviews are typically included in all forms of assessment and are one of the most important means of collecting information in the assessment process. The practice of interviewing covers a broad range, from totally unstructured interactions to semistructured interactions to highly formal structured interviews. The primary purpose of interviews is to gather background information relevant to the client's current problems. Obtaining background information often helps counselors understand the context for the client's current concerns, determine the longevity of problems and symptoms, and tailor plans for interventions to the client's specific context (Erford, 2013).

The interview generally begins prior to other assessment methods, and interview information often serves as a basis for selecting other instruments and strategies in the assessment process. Although counselors gather the majority of interview data at the onset of assessment, interview data is continually collected throughout the assessment and/or counseling process (Hardwood, Beutler, & Groth-Marnat, 2011). Interview data is integrated with other assessment data to describe the individual, make predictions or decisions about the individual, or both. The *initial interview* is considered the cornerstone of assessment: without interview data, there is no context in which to interpret results from other assessment methods.

During the initial interview, a client might discuss some symptoms of depression. In order to understand the symptoms more clearly, a counselor might use an informal assessment process, such as the SAD PERSONS Scale. This instrument is an informal scale that

provides a rating of suicide potential based on categories such as sex, age, depression, and previous attempts at suicide. If the client has a moderate or high score on the SAD PERSONS Scale, then the counselor might decide to use the BDI-II to corroborate the information and determine a more formal assessment of depression severity. The questions from the SAD PERSONS Scale could be woven into the interview process seamlessly.

Degrees of Structure in Interviews

The degrees of structure in interviews vary. Interviews can have little structure, allowing counselors to freely drift from one topic to the next, or be highly structured and goal oriented. The degree of structure depends on the purpose of the interview, the population (e.g., child, adult), the setting (e.g., school, research institute, outpatient counseling center, psychiatric hospital), and the skill of the counselor (e.g., ability to relate data to a decision tree for the diagnostic process). Based on the degree of structure, interviews can be categorized as *structured*, *semistructured*, or *unstructured*. Each approach has benefits and drawbacks, but the primary purpose of all three types is to obtain relevant background information about the individual being interviewed (see Table 2.2 for a summary of interview types).

STRUCTURED INTERVIEWS Structured interviews are the most rigorous and the least flexible interview format. As a formal assessment procedure, structured interviews consist of specific questions formulated ahead of time. They are commercially available standardized instruments that have specific instructions and guidelines for administering, scoring, and interpreting results. Using a structured interview, counselors are required to ask each client exactly the same questions in the same manner and not deviate from the text. Although all counselors can use structured interviews, they are especially helpful to those counselors who are beginning to learn the process of interviewing. The advantages of structured interviews are that (a) they ensure that specific information will be collected from all interviewees; (b) they do not require as much training, because interviewers simply read from a list of questions in a prescribed order; and (c) because of the standardization, they substantially improve the reliability of the assessment process (Erford, 2006). Because of the

TABLE 2.2 Summary of Interview Types

Unstructured interviews	Very flexible Informal (nonstandardized) Interviewer may follow a general format Widely used
Semistructured interviews	More flexible Not completely standardized Interviewers may probe and expand interviewee responses
Structured interviews	Less flexible Formal (standardized) No deviation in procedure Often used in research settings

consistency of the information obtained through structured interviews, they are invaluable tools in research settings. Because counselors are not allowed to deviate from the text, the use of structured interviews is often criticized for potentially damaging rapport with a client and preventing the therapeutic alliance between counselor and client from being established (Craig, 2005). It is important to note that structured interviews can be quite time-consuming. As such, counselors in clinical settings may see structured interviews as impractical because of time constraints.

SEMISTRUCTURED INTERVIEWS Although counselors might find structured interviews impractical because of the time requirement, there is still a need for interview tools that have structure and provide a means for gathering detailed information. Like structured interviews, semistructured interviews consist of a scripted set of questions; however, interviewers are allowed a degree of flexibility in the process. Interviewers may deviate from the text, change the wording of questions, or change the order in which questions are asked (Opie, 2004). Furthermore, interviewers are allowed to probe and expand on the interviewee's responses (Craig, 2009; Hersen & Turner, 2012). Semistructured interviews may be either standardized or nonstandardized instruments.

UNSTRUCTURED INTERVIEWS As an informal assessment strategy, the unstructured interview is the most frequently used type of interview among practicing counselors and psychologists (Sommers-Flanagan & Sommers-Flanagan, 2008). It is considered unstructured because it does not rely on a set of specified questions. The counselor is free to ask questions about whatever he or she considers to be relevant, and there is no predetermined order to questions. However, unstructured interviewing is not an agendaless process (Erford, 2013). Interviewers typically assess several general domains, including the presenting problem, family background, social and academic history, medical history, and previous counseling or psychiatric experiences (see Table 2.3). Counselors need to have a clear idea of why the individual is being interviewed ahead of time, because the kinds of questions asked depend on the types of decisions to be made after the interview.

Unstructured interviews have many similarities with counseling or psychotherapy (Jones, 2010). Both interviewers and counselors must establish rapport between themselves and interviewees or clients, which requires interviewers and counselors to be warm, genuine, respectful, and empathic. Interviewers and counselors must establish an atmosphere of safety and acceptance in order for interviewees or clients to feel comfortable with self-disclosure. In addition, interviewers and counselors both need effective listening skills, such as effective questioning, probing, and reflecting skills. Unlike counseling sessions, however, the primary goal of the interview is to obtain relevant client information. Although the interview can certainly be a therapeutic experience for the client, that is secondary to gathering information needed for determining the client's problems or concerns and formulating hypotheses about the client.

The unstructured interview has several advantages compared to other types of interviews: The interviewer is free to pursue important but unanticipated topics, the interviewee has more choice in deciding what to talk about, and there is more opportunity for building rapport, which is important to the success of counseling. Because of the flexibility of this method, counselors are able to adapt the interview to pursue certain problems or topics in depth while limiting focus on topics deemed unproblematic. A primary limitation of this method involves reliability and validity: Because every counselor's

TABLE 2.3 General Domains of Unstructured Interviews

I. *Identifying information*	Name, address, phone number, age, gender, date of birth, workplace, relationship status, and referral source
II. *Presenting problem*	The client's primary problems or concerns
III. *Family history*	Information about the client's family background, including information about first-degree relatives (parents or siblings), the composition of the family during the client's childhood and adolescence, and the quality of relationships with family members both past and present
IV. *Relationship history*	The client's current living situation, current and previous marital or nonmarital relationships, children, and social support
V. *Developmental history*	Significant developmental events that may influence current problems or circumstances
VI. *Educational history*	Schools attended, educational level attained, and any professional, technical, and/or vocational training
VII. *Employment history*	Current employment status, length of tenure on past jobs, military service (rank and duties), job performance, job losses, leaves of absence, and occupational injuries
VIII. *Medical history*	Previous and current medical problems (major illnesses and injuries), medications, hospitalizations, and disabilities
IX. *Previous psychiatric or counseling experiences*	Previous psychiatric or counseling services in inpatient or outpatient settings; also, any psychiatric medications

interview is different in terms of which questions are asked and how questions are worded, it is difficult to evaluate the reliability or validity of the information obtained during the interview.

Interview Guidelines

Successful interviews rely on the interviewer's ability to communicate and understand the communications of interviewees (Sattler & Hoge, 2006). Professionals should consider the following general guidelines before and during an interview (Groth-Marnat, 2009; Morrison, 2008; Young, 2012):

1. Be concerned about the physical setting or environment for the interview. Interviews will be better if the environment is quiet and comfortable. If the room is noisy or has poor lighting, then it may detract from the quality of the information gained. Seating should be arranged so that the interviewer and the interviewee are appropriately spaced, with no physical barriers (such as desks) between seats.
2. Explain the purpose of the interview and how the session will proceed. Explain how the interview information will be used.
3. Describe the confidential nature of the interview and the limits of confidentiality. In addition, explain that the client has the right not to discuss any information he or she does not wish to disclose.
4. When conducting a standardized semistructured or structured interview, abide by the published administration procedures.

5. When conducting an unstructured interview, begin with open-ended questions, and use more direct (closed) questions to fill in gaps. Avoid "why" questions, because they may increase interviewee defensiveness.
6. Be alert to the nonverbal as well as verbal behavior of the interviewee. How a person says something may be as important as what is said.

TESTS

Although assessment is an accepted practice in all helping professions, testing can be a controversial process and creates a level of suspicion in the public eye. The use of tests in the United States increased dramatically during the 20th century and continues to grow into the new millennium. It is estimated that Americans take anywhere from 143 million to nearly 400 million standardized tests yearly for education alone, 50 million to nearly 200 million job tests for business and industry, and several million more for government and military jobs (Sacks, 2001). Many test results can have a large impact on an individual's life path. These types of tests are often referred to as *High Stakes*. When tests impact the potential to obtain a job, graduate from public school, or become admitted into college, or affect other large life events, the scrutiny of testing becomes even more significant. We discuss these issues in more depth in Chapters 15 and 17.

As a counselor using testing as part of the assessment process, it is important to understand the elements of a test and have competency in the administration of tests. A *test* may be defined simply as a measurement process. In the helping professions, educational and psychological tests are used to provide a measure of various individual attributes, such as cognitive functioning, knowledge, skills, abilities, or personality traits. Test data is integrated into the overall assessment in a way that helps counselors better understand clients and make decisions in their best interests. Tests are utilized in assessment for a variety of purposes, including screening for emotional, behavioral, or learning problems; classifying an individual into a certain descriptive category (e.g., introvert); selecting or placing individuals into certain training, educational, or vocational programs; assisting in the diagnosis of a mental disorder; assisting in intervention or treatment planning; evaluating the effectiveness of a particular intervention or course of action (i.e., progress and outcome evaluation); and hypothesis testing in research studies.

Literally thousands of tests are available in education and psychology, and it is nearly impossible for counselors to be familiar with every test. Tests may differ on a number of features, such as content, format, administration procedures, scoring and interpretation procedures, and cost (Cohen, Swerdlik, & Sturman, 2012). The *content* (subject matter) of a test varies depending on the purpose or focus of the particular test. Some tests are comprehensive, with content covering a broad range of subject areas. For example, the California Achievement Test (CAT/6) measures several areas of achievement, including reading, language, math, study skills, science, and social studies. In contrast, some tests have a more narrow focus and contain content only on a single subject area, such as the SAT Subject Test in Biology.

The *format* of a test pertains to the type, structure, and number of items on the test. Test items can be classified as either selected-response or constructed-response items. *Selected-response items* (also called *forced-choice items*) require respondents to indicate which of two or more statements is correct. Multiple-choice, true/false, and matching items are all examples of selected-response items. *Rating scales* are also considered a type of selected-response

format in which items are answered using a scale of successive intervals (rating scales are discussed in more detail in the Observation section later in this chapter). In contrast to selected-response items, *constructed-response items* require test takers to supply their own responses (rather than selecting a given response). These include fill-in-the-blank items, sentence completion, essay questions, verbal responses, performance tasks, portfolios, drawings, and so on. Selected-response items are typically preferred over constructed-response items, because they cover a broader range of content and can be answered and scored more quickly. However, selected-response items constrain test takers to a single appropriate answer and are subject to guessing, whereas constructed-response items allow individuals to demonstrate more in-depth understanding and more freedom and creativity in their responses. Figure 2.1 provides examples of some selected-response and constructed-response formats. Tests vary widely in the number of items and the length of test-taking time: a test can consist of 10 or 15 items and take 10 minutes to complete, it can encompass hundreds of items and take several hours to complete, or it can consist of anything in between.

Although it is important to understand all elements of testing, it is an ethical requirement that counselors only use tests for which they received training and that counselors

Format Type	Sample Item
Selected response	
True/false	I have the time of my life at parties. True False
Multiple choice	At a grocery store, a customer hands the cashier a $20 bill to pay for a bottle of soda that costs $1.36. How much change should the cashier give back to the customer? A. $17.64 B. $18.36 C. $18.64 D. $18.74 E. $19.36
Rating scale	I value work environments that are flexible and do not require a specific time schedule Strongly Disagree ☐ Disagree ☐ Neither Agree nor Disagree ☐ Agree ☐ Strongly Agree ☐
Constructed response	
Sentence completion	I often wish _____
Verbal responses	Spell this word for me: solemn.
Drawings	Draw as good a person as you can.

FIGURE 2.1 Examples of item-response formats.

have competency in the administration of tests (American Counseling Association, 2014). Test administration procedures vary widely. Tests can be administered *individually* (i.e., given to one individual at a time) by a very active, very knowledgeable test examiner or administered to a *group* of individuals at the same time. Tests can also be *self-administered*, in which case the examinee reads the instructions alone and takes the test. Other forms of test administration include computer-administered tests, video or audio administration, and nonverbal administration. The complexity of the test will dictate the level of training required to become competent in administration.

Tests may differ in the procedures for scoring and interpretation. Tests may be hand scored, computer scored, sent to the publisher for scoring, or self-scored by the client. Some test scores are based on the number of items answered correctly, whereas others simply elicit information about one's opinions, preferences, and so forth. Tests that are scored on the basis of correctness are usually used to measure some aspect of a person's knowledge, skills, or abilities. Tests that are not evaluative are usually grouped under the rubric of personality tests (Urbina, 2014).

After tests are scored, the process of *interpretation* involves making sense out of test scores by converting test data into meaningful information. For example, raw scores can be converted to other types of scores (such as percentiles or standard scores), which are used to help describe and interpret an examinee's performance. Although published tests often have available software for computer-generated interpretations, the examiner is ultimately responsible for scoring, interpreting, and explaining test results to examinees.

The cost of tests varies widely. Most standardized tests must be purchased from test publishers, and tests prices can range from under $100 to thousands of dollars. The cost of a test is often broken down by components. For example, many publishers charge separately for the test manual, test booklets, scoring sheets, computer software, and other items. Some test publishers offer a starter kit that includes all of the test materials for one set price. Also, some test booklets are reusable, requiring examiners to purchase only answer sheets for another testing. Some tests are offered through computer software and can have single-use or subscription costs. Some tests are available free of charge in published research journals or textbooks.

Categories of Tests

Because there are thousands of tests, it is useful to have a way to classify tests into categories. However, because tests differ from each other in a variety of ways, there is no uniformly accepted system of classification (Domino & Domino, 2006). Instead, tests can be categorized based on a variety of aspects, such as the area of assessment, whether or not the test is standardized, how scores are interpreted, how the test is administered, and item type. As with most practices in assessment, professionals use different terminology to categorize tests, depending on their particular training, experience, and the settings in which they work. We will review some of the common approaches to classifying tests.

AREA OF ASSESSMENT Tests can be classified according to the area of assessment, such as the following:

- ***Intellectual Ability Tests*** Assess variables related to intelligence and cognitive abilities, such as verbal ability, numeric ability, reasoning, memory, and processing speed.

- ***Aptitude Tests*** Estimate a person's potential to succeed in an activity requiring certain skills.
- ***Achievement Tests*** Measure an individual's level of knowledge in a particular area.
- ***Career or Employment Inventories*** Assess an individual's interests and help classify those interests in terms of jobs and careers.
- ***Personality Inventories*** Measure a wide range of stable and unique personality traits, states, and attitudes, as well as emotional problems or psychological disorders.

STANDARDIZED AND NONSTANDARDIZED TESTS Tests may be broadly categorized as standardized (formal) or nonstandardized (informal). Standardization implies uniformity of procedures in administering and scoring the test; thus, *standardized tests* are those that have structured test materials, specific instructions for administration, and specific scoring methods. Test users are expected to follow carefully the standardized procedures for administering, scoring, and interpreting tests, as described in the test manual. The scores on standardized tests have generally proven reliability (i.e., consistency) and validity (i.e., the inferences based on test scores are sound and appropriate). Standardized tests are also presumed to have relevancy to the population for which they were intended. This means that they were typically developed using a large, representative norm group. Because of their validity, reliability, and norming data, standardized tests are frequently of higher quality than nonstandardized tests.

In contrast to standardized tests, *nonstandardized tests* are informally constructed tests without proven reliability or validity and have limited use and application. Examples of nonstandardized tests include teacher-made tests, projective drawings, checklists, and questionnaires.

INDIVIDUAL AND GROUP TESTS Tests can be categorized based on how they are administered. For example, individual tests are designed for administration to only a single examinee at a time. Group tests are administered to multiple individuals simultaneously. Individual tests are typically used for diagnostic decision making and generally require examiners to meet and establish rapport with examinees. They allow examiners to observe verbal and nonverbal behaviors during the test administration, enabling examiners to gain more insight about the source of the examinee's problems. Usually, administering individual tests requires competency. This means that a counselor should have special training, expertise, familiarity with materials, and practice with timing procedures. A competent test user, according to the International Test Commission (intestcom.org/Guidelines/Test+Use.php), must have full understanding of the tests to use them appropriately; users must also respect all involved in the testing process by acting professionally and appropriately.

Group tests are typically more efficient than individual tests. They are usually less expensive than individually administered tests, they minimize the time needed for administration and scoring, and they require less examiner skill and training. Group tests usually contain items that can be scored objectively, usually by a computer, which reduces or eliminates the scoring errors commonly found in individual tests.

MAXIMUM-PERFORMANCE AND TYPICAL-PERFORMANCE TESTS In assessment, some tests evaluate test-taker responses on the basis of correctness (i.e., right/wrong, pass/fail). These types of tests, called *maximum-performance tests,* are usually used to appraise some aspect

of a person's knowledge, skills, or abilities. For example, an achievement test generally measures maximum performance. However, many instruments used in psychological assessment are not evaluative and do not have items with correct or incorrect answers. These types of instruments, called *typical-performance tests*, simply elicit information about one's opinions and preferences and are used to appraise an individual's motivations, attitudes, interests, and opinions. For example, when a counselor is helping someone to identify career choices, he or she might administer a career interest inventory. This type of assessment instrument simply helps an individual to determine areas of the work world that are more interesting than others. There are no right or wrong responses to these types of assessment instruments.

VERBAL AND NONVERBAL TESTS Tests can be classified as either verbal or nonverbal. *Verbal tests* rely heavily on language usage, particularly oral or written responses. These tests may involve grammar, vocabulary, sentence completion, analogies, and following verbal instructions. Because verbal tests require examinees to understand the meaning of words and the structure and logic of language, they discriminate very heavily toward native speakers of the language in which the test was developed. In contrast to verbal tests, *nonverbal tests* reduce or completely eliminate the need for examinees to use language when taking the test. Nonverbal tests provide opportunities for examinees to comprehend directions with little or no language, have limited linguistic content, and allow examinees to respond to items nonverbally. For example, a nonverbal test may require a test taker to respond to pictorial materials rather than verbal items. An example of a nonverbal test is the Peabody Picture Vocabulary Test (4th edition; Dunn & Dunn, 2007) or the PPVT. The PPVT is a norm-referenced test that is individually administered. The normative sample for the test included national representation for cultural diversity and special education. Thus, the PPVT can be used to address some of the issues relative to English as a second language and special education issues specific to speech production.

OBJECTIVE AND SUBJECTIVE TESTS A common way to distinguish tests is based on the types of items on the test. An *objective test* (i.e., *structured test*) contains selected-response items (e.g., multiple choice, true/false), each of which contains a single correct or best answer. It is considered objective, because scoring consists of matching the test taker's item responses to previously determined correct answers; there are no subjective or judgmental decisions involved in the scoring process. In contrast, *subjective tests* consist of constructed-response items (e.g., essay questions, performance tasks, portfolios) that require the examiner to make judgmental decisions to score the test.

OTHER TERMINOLOGY Strictly speaking, the term *test* should be used only for those procedures in which test takers' responses are evaluated based on their correctness or quality (Urbina, 2014). Such instruments are usually maximum-performance tests that measure a person's knowledge, skills, or abilities. Tests that do not evaluate individuals on the basis of correct and incorrect item responses (i.e., typical-performance tests) may be referred to by several different names, such as *inventories*, *questionnaires*, *surveys*, *checklists*, *schedules*, or *projective techniques*. These instruments typically elicit information about an individual's motivations, preferences, attitudes, interests, opinions, and emotional makeup (Urbina, 2014).

The term *scale* is commonly used in connection with tests. Scales can refer to any of the following (Urbina, 2014): (a) a whole test made up of several parts (e.g., the Stanford–Binet

Intelligence Scale); (b) a whole test focusing on a single characteristic (e.g., the Internal–External Locus of Control Scale); (c) a subtest, which is a set of items within a test that measures specific characteristics (e.g., the depression scale of the MMPI-2); (d) a group of subtests that share some common characteristic (e.g., the verbal scales of the Wechsler intelligence tests); or (e) a numerical system used to rate or categorize some measured dimension (e.g., a rating scale).

Battery is another term that we often see in assessment. A battery is a group of tests or subtests administered to one person at one time (Urbina, 2014). For example, in assessing achievement, test batteries may be administered that consist of separate tests that measure such areas as reading, mathematics, and language.

PARTICIPANTS IN THE TESTING PROCESS There are many stakeholders involved in the test industry, and therefore the Standards for Educational and Psychological Testing were developed to provide guidelines for developing and evaluating tests, standards for conducting assessment, and methods of validating the interpretation of assessment data (American Educational Research Association (AERA), American Psychological Association (APA), & National Council on Measurement in Education (NCME), 2014). As such, it is important to clarify the various parties and their roles in the testing industry. For example, *test developers* are usually, but not always, academicians or investigators who are mainly interested in research. They are interested in developing a test that accurately measures the intended construct and will conduct research studies to support their claims. Test developers provide documentation (in the test manuals) for test users to make sound judgments about the nature and quality of the test (American Educational Research Association (AERA) et al., 2014). *Test publishers* are the organizations or corporations that publish, market, and sell tests. They also sometimes provide scoring services. *Test users* are the individuals or agencies that select tests for some purpose. They may also be involved in administering and scoring tests and using test results to make decisions. Test users are most interested in the appropriateness of the tests for their purposes, whereas test publishers are naturally more inclined toward profit margins (Urbina, 2014). *Test takers* are the individuals who take the test by choice, direction, or necessity. Table 2.4 summarizes the various parties and their roles.

TABLE 2.4 Participants Involved in the Testing Process

Test developers	The people or organizations that construct tests. They should provide information and supporting evidence that test users need to select appropriate tests.
Test publishers	The organizations or corporations that publish, market, and sell tests.
Test users	The people or agencies that select tests that meet their purposes and are appropriate for the intended test takers. Test users may also be involved in administering, scoring, and interpreting tests or making decisions based on test results.
Test takers	The individuals who take the tests.
Test reviewers	The individuals who conduct a scholarly review to critically evaluate a test based on its psychometric and practical qualities.

COMPUTER-BASED TESTS Computers were first introduced to the field of psychology in the 1950s. Since that time, and particularly in the last few decades, the use of computers in assessment has grown exponentially. Advancements in computer technology and the continued integration of this technology into educational, psychological, and counseling practice are changing the way professionals conduct assessment. *Computer-based testing* refers to using computers for test administration, scoring, and interpretation and for generating narratives and written reports (Butcher, 2003). Computer-based testing has dramatically changed the practice of assessment from an overwhelmingly complex process involving face-to-face administration, extensive preparation time, hand scoring using overlay templates and hand calculations, manual interpretation, and manual report writing (Cohen et al., 2012). Today, with the help of computers test takers can respond to test items on a computer monitor, and the computer program scores the test, analyzes the results, and even provides some form of interpretive report or narrative (Cohen & Swerdlik, 2012).

Needless to say, computer-based testing saves test users a great deal of time and has made the process of testing much more convenient. Computer-based tests offer other advantages over traditional paper-and-pencil tests through immediate scoring and reporting of test results, test administration efficiency, flexible test administration schedules, greater test security, and reduced costs. Computer-based testing also allows for the use of innovative item types that are not feasible in the paper-and-pencil format, such as audio- and video-based test items (Parshall, Spray, Kalohn, & Davey, 2002).

During the past 25 years, more than 400 studies have investigated whether results from computer-based tests could be used interchangeably with paper-and-pencil test results. Increasingly, tests are being adapted for computerized administration and have scores comparable to paper-and-pencil administration of the same tests (Boo & Visopel, 2012). It is important to note that some tests have not been adapted effectively for computer-based administration. Counselors should review the psychometric properties of the test in relation to the mode of administration prior to selecting a computerized version. Although some limits to computer-based testing still exist, the process continues to expand, and more tests are becoming available via computer administration. One test that is of interest to many counselors is the National Counselor Exam (NCE). This 200-item, multiple-choice test is available in both paper-and-pencil and computer-based administrations. The NCE is the exam required to become a National Certified Counselor and also the exam required for licensure in many states.

One type of computer-based test commonly used in achievement testing is computer-adaptive tests. A *computer-adaptive test* is a test that tailors (or adapts) test questions to the ability of each test taker. Each time a test taker answers a question, the computer adjusts to the individual's responses when determining what question to present next. For example, a computer-adaptive test will start with a question that is moderately difficult. If the question is answered correctly, then the next question will be more difficult. If it is answered incorrectly, then the next question will be easier. This process continues until all questions are answered, at which point the computer will determine the test taker's ability level. Because the computer scores each item before selecting the next one, only one question is presented at a time, and the test takers may not skip, return to, or change responses to previous questions. One example of a computer-adaptive test is the Graduate Management Admission Test (GMAT), which is used as part of the admission process for a graduate degree in business. The GMAT computer-adapted test begins with the assumption that the test taker has an average score and thus begins with an item of medium difficulty.

Based on performance on the first question, the difficulty level and points of the exam are adjusted by the computer.

OBSERVATION

So far, we have covered two methods of assessment: interviews and tests. The third method is observation, which is widely used in psychological and educational assessment. *Observation* is monitoring the actions of others or oneself in a particular context and making a record of what is observed (Aiken & Groth-Marnat, 2006). It is a way of seeing what a person actually *does* in situations, rather than simply making inferences about behavior based on information from interviews or test results. Behavioral observation can provide professionals with information about an individual's functioning, such as emotional responses, social interactions, motor skills (i.e., body movements), and job performance, to name just a few (Murphy & Davidshofer, 2005). It is particularly useful for identifying patterns of behavior—that is, identifying the immediate behavior, its antecedents (what happened just before the behavior), and its consequences (what happened afterward). The process of identifying behavior patterns is often employed in P–12 schools through an approach called *functional behavior assessment* (FBA), which seeks to identify the problem behavior of a student and determine the function or purpose of the behavior. Counselors can use the results of an FBA to develop interventions or teach acceptable alternatives to the behavior.

Understanding the function of behavior is not limited to the P–12 system. Counselors working with children and adolescents in any area should have an understanding of behavioral observation and FBA. In many cases, counselors can help parents, schools, residential facilities, or inpatient settings to develop behavioral interventions for children and adolescents. Understanding the elements of observation and behavioral function are critical for this task. For example, imagine a child who is disrupting an activity because he does not want to participate. The function (purpose) of his behavior in this case is probably to escape the activity. If you used time out as a consequence and removed the child from the activity, then the child would actually be removed from the activity, and get what he wanted. This would reinforce his behavior rather than change it. One of the more appropriate actions in this scenario would be to ignore the behavior or to find opportunities to reinforce the appropriate actions of others.

Counselors may use *formal* assessment instruments (e.g., standardized rating scales and computer-based observation software) or *informal* strategies (e.g., raw notes) to conduct observations. Observations can be a one-shot affair or consist of several samplings over a longer time span. Observers may center on specific behaviors that are objective and measurable or on general, overall behavior or adjustment. Depending on the context and the age of the client, observations can be made and recorded by professionals, significant others, any other person acquainted with the client, or the client himself or herself. Examples of observation include the following:

- A school counselor observes a child interacting with his classmates on the school playground to evaluate his social skills.
- A family therapist views a videotape of parents and children playing together to assess parenting skills.
- An adult who wants to change his eating patterns records his thoughts and feelings prior to feeling an urge to overeat.

- While administering a structured clinical interview, a counselor observes and notes the client's disposition, conversational skills, and overall mood.

There are a variety of strategies and approaches used for observation. We will present information about informal and formal observation, direct and indirect observation, the settings of observation, and unobtrusive and participant observation. Furthermore, we will discuss the various ways of recording data obtained through observation.

Formal and Informal Observation

Formal and informal methods of observation differ primarily in the degree of structure required. *Formal observation* is a highly structured process in which the observer decides ahead of time who will be observed, what behavior will be observed, when and where the observation will take place, and how the behavior will be recorded. The process requires the use of trained observers and sophisticated procedures for recording, analyzing, and interpreting data. Formal observation often relies on the use of standardized instruments for recording data, such as published rating scales. However, in recent years a large number of software applications have been developed to assist in the observation process. These observation applications have standard observation processes for various behavioral issues, timers, and observation schedules. The results of the observations can be presented in graph or table format. In addition to allowing for standard observations, the programs are also customizable.

In contrast, informal observation is much less structured and occurs whenever professionals make notes of a client's behavior. They may take rough notes of any behavior they observe, which is usually not predetermined, and write a more elaborate summary after the observation. For example, during an interview a counselor may notice that the client appears sluggish in movement, does not make eye contact, and has slowed speech. These behaviors are often indicative of an individual with depressive symptoms. By recording these observations and considering them with information obtained from the interview and other assessment data, the counselor can determine if the client is indeed depressed. It is important to note that although informal observation provides rich data for understanding an individual's problem, it is not sufficient by itself for diagnosing a problem or determining an effective intervention plan. As is the case with formal observations, there are also software applications for informal observations. Some software programs provide the opportunity to conduct both forms of observation in a single application.

Direct and Indirect Observation

Direct observation is a firsthand account of actual behavior as it occurs. As the term implies, observations of behavior are not filtered through the perceptions of some informant: The individual's behaviors are observed directly (Kamphaus, Barry, & Frick, 2005). In contrast, professionals using *indirect observation* rely on reported observations of behaviors by others who have direct contact with the individual. In direct observation, an observer may use a checklist or other instrument to record the presence and frequency of specific behaviors, or the observer can simply watch and record as much as possible of whatever appears to be useful or important. In addition to tracking target behaviors, direct observations can be used to identify a pattern of certain events or stimuli that consistently precede the behavior's occurrence.

Natural and Contrived Settings

Observations that take place in naturally occurring settings, such as an individual's work or school, are called *naturalistic observations*. For example, a school-based mental health counselor may use naturalistic observations to assess a child's behaviors (such as leaving his seat) in a classroom, or a child who fights during recess may be observed at school during recess. Observations may also occur in a laboratory or other *contrived setting* (also known as *analogue assessment*). This type of observation aims to evaluate behavior in a theoretical situation that is developed to mimic a real-life (natural) situation (Hersen, 2006). For example, a researcher may observe an individual performing a particular task in a simulated work environment.

Unobtrusive and Participant Observation

Observations are said to be *unobtrusive* when there is no interaction between the observer and those being observed and when the individual's behavior is not affected by the observation itself. Observers can monitor an individual unobtrusively through the use of a one-way mirror or video recording. For example, a clinical supervisor may use video recordings to observe a counselor trainee's counseling skills. In contrast, *participant observation* entails the observer both watching and interacting with the individual as part of the observational situation. Participant observation is commonly used in qualitative research studies and enables researchers to provide more detailed and accurate information about the people they are studying.

Methods of Recording Observations

Because the purpose of observation is to identify and record behaviors, many methods are available for documenting observations. The method of observation selected depends on whether the counselor uses formal or informal observation. In formal observation, structured methods of data recording are used, such as event recording, duration recording, time sampling, and rating scales. For informal observation, counselors may use anecdotal records or raw notes of clients' behaviors. Although there are affordable software applications available to record all types of observations, it is important to understand the basic principles of observation before using the software. In order to illustrate these principles, we discuss observation using paper-and-pencil procedures.

EVENT RECORDING *Event recording* (also called *frequency recording*) is the simplest of the observation data collection methods. It requires an observer to observe, count, and record the number of times a behavior has occurred. Event recording is best suited to recording occurrences of *low-rate behaviors*, which are behaviors that have a definite beginning and ending and do not often occur (e.g., a student leaving his or her seat; Shapiro, 1987). A tally sheet listing the behaviors to be observed and counted is useful: When the observer sees the behavior of interest, he or she simply makes a tick mark on the sheet (see Figure 2.2). After the observation, the tick marks can be totaled.

DURATION RECORDING *Duration recording* is used when it is more important to know for how long a behavior occurs rather than the frequency of the behavior. In duration recording, the length of time of a behavior from beginning to end is tracked. It is most applicable

Date(s) 2/1 to 2/5

Name _____

Observer _____

Description of Behavior: Leaving seat during science class

Days	Tallies	Total Count
Monday	////////	8
Tuesday	//////////	10
Wednesday	///////	7
Thursday	//////////	12
Friday	///////////////	15

Average = 10.4

FIGURE 2.2 Tally sheet used to record the frequency of behavior.

for recording sustained behaviors that have a clear beginning and a clear ending; it is not recommended for behaviors that occur at a very high rate. Crying, temper tantrums, and thumb sucking are examples of behaviors that can be documented using duration recording (see Figure 2.3; Shapiro, 1987). Duration recording usually requires a watch or clock so that a precise measurement of the behavior can be recorded.

TIME SAMPLING In both event and duration recording techniques, all occurrences of the behaviors are documented during the observational period. However, some behaviors occur too frequently to obtain accurate counts or have no clear beginning or ending, which prevents effective event and duration recording (Kamphaus, Barry, & Frick, 2005). In these cases, time sampling is a more appropriate data collection method. *Time sampling* (sometimes referred to as *interval recording*, *interval sampling*, or *interval time sampling*) divides observation periods into specific time intervals; then, behaviors are simply coded as being

Date(s) 10/5 to 10/8

Name _____

Observer _____

Description of Behavior: Crying

Date	Time episode started	Time episode ended	Duration of episode
10/5	9:15 a.m.	9:26 a.m.	11 minutes
10/5	9:45 a.m.	9:57 a.m.	12 minutes
10/6	9:05 a.m.	9:11 a.m.	6 minutes
10/7	9:03 a.m.	9:09 a.m.	6 minutes
10/8	9:15 a.m.	9:20 a.m.	5 minutes

FIGURE 2.3 Record of the duration of behavior.

Problem Behaviors	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	30″	1′	Total
Inappropriate Movement																																	
Inattention																																	
Inappropriate Vocalizations																																	
Repetitive Motor Movements																																	
Aggression																																	

FIGURE 2.4 Sample items from the BASC-2 student observation scale.

Note: Quotation marks (″) refer to seconds. Apostrophes (′) refer to minutes.

Source: Behavior Assessment System for Children, Second Edition (BASC-2). Copyright © 2004 by NCS Pearson, Inc. Reproduced with permission. All rights reserved.

either present or absent during each time interval. Interval length varies, depending on the frequency of the behavior, the amount of time allowed for the observation, and the skill of the observer in monitoring and recording child behavior (Nock & Kurtz, 2005). As an example, the Behavior Assessment System for Children (BASC-2; Reynolds & Kamphaus, 2001) is a published, comprehensive system that assesses children's behavior. It includes a time-sampling method for observing students in which observers code behaviors (such as responses to the teacher, peer interactions, or working on school subjects) repeatedly during 3-second intervals spaced 30 seconds apart for a total of 15 minutes. The percentage of intervals during which a given behavior occurred can be calculated to provide information about the frequency of adaptive and maladaptive behaviors. An example of the BASC-2 Student Observation Scale is shown in Figure 2.4.

RATING SCALES In observation, *rating scales* are used to describe and evaluate an individual's specific behaviors. Rating scales often appear as preprinted sheets on which the observer rates each behavior to indicate either its quality or how often the behavior occurred. Rating scales are an efficient means of collecting information about a variety of behaviors, from general functioning to such specific behaviors as social skills, aggressive behavior, anxiety, and hyperactivity, to name a few. They can be used repeatedly and across settings and can be completed by various sources (e.g., the client, teachers, parents, counselors).

Rating scales usually list the important dimensions of the behaviors being rated and quantify those dimensions in some way to convey meaning (Rutherford, Quinn, & Mathur, 2007). A few commonly used rating scale formats in observation include Likert scales, graphic scales, and semantic differential scales. The *Likert scale* (named after the psychologist who developed it) consists of a series of written statements to which respondents indicate how much they agree or disagree (i.e., *strongly disagree*, *disagree*, *neither agree nor disagree*, *agree*, *strongly agree*). The *graphic rating scale* is similar to the Likert scale, except that it presents respondents with a graphic 5- or 7-point continuum ranging from *never* to *always* or from *strongly disagree* to *strongly agree*. Verbal anchors are typically placed at

Likert scale

I take a positive attitude toward myself.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
☐	☐	☐	☐	☐

Graphic scale

The child's aggressive behavior occurs following a request to perform a difficult task.

1	2	3	4	5
Never	Seldom	Sometimes	Generally	Always

Semantic differential scale

Place an "X" on the line to represent your current mood.

anxious_____calm
1 2 3 4 5 6 7

depressed_____cheerful
1 2 3 4 5 6 7

FIGURE 2.5 Examples of rating scales.

various points along the scale. *Semantic differential rating scales* consist of bipolar adjectives separated by a 7-point scale on which respondents select one point to indicate their response. These rating scales are illustrated in Figure 2.5.

An important issue in using rating scales is the identity of the informant (i.e., source of information) who completes the scale. Typically, *informants* are teachers, parents, or others who know the individual being assessed or the individual himself or herself. Some informants are in a better position to rate certain behaviors; for example, parents are more likely to be knowledgeable about a child's sleep patterns, sibling interactions, eating behaviors, and so forth (Rutherford et al., 2007). Some published rating scales may be designed for only one informant (e.g., parents only, children only), and some have separate forms for multiple informants (e.g., teachers, parents, child). For example, the Achenbach System of Empirically Based Assessment (ASEBA) includes a series of rating scales designed to assess children's behavior problems and social competencies by using separate rating forms for parents, teachers, and children (see Figure 2.6 for a sample from the Teacher's Report Form [TRF] for Ages 6–18; Achenbach & Rescorla, 2001). The best practice in using rating scales is to employ multiple informants across situations and settings (Rutherford et al., 2007). This provides a more complete view of an individual's behavior across situations and settings.

The most significant criticism of rating scales involves rater (informant) bias, which can affect the validity of the instrument. Table 2.5 provides a list of common rating errors.

ANECDOTAL RECORDS An *anecdotal record* is a brief, descriptive narrative of an individual's behavior that is recorded after the behavior occurs. An anecdotal record may be a running

VIII. Compared to typical pupils of the same age:	1. Much less	2. Somewhat less	3. Slightly less	4. About average	5. Slightly more	6. Somewhat more	7. Much more
1. How hard is he/she working?	☐	☐	☐	☐	☐	☐	☐
2. How appropriately is he/she behaving?	☐	☐	☐	☐	☐	☐	☐
3. How much is he/she learning?	☐	☐	☐	☐	☐	☐	☐
4. How happy is he/she?	☐	☐	☐	☐	☐	☐	☐

FIGURE 2.6 Sample of the Teacher's Report Form for Ages 6–18.

Source: Reprinted with permission from *Manual for the ASEBA School-Age Forms and Profiles,* by T. M. Achenbach & L. A. Rescorla, 2001, Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.

account of what an individual says and does during a particular period of time, or it may be a single record of a significant incident (e.g., critical incident report). As a method of informal observation, anecdotal records may consist of notes written on index cards or in a log, which are more fully elaborated upon and summarized after the observation. As a formal observation method, anecdotal records can be very detailed accounts written on formal record forms. They typically include the name of the individual observed; the name of observer; the date, time, and setting of the observation; the anecdote (i.e., the description

TABLE 2.5 Rating Scale Errors

Leniency or generosity	Ratings tend to always be at the top of the range.
Severity	Ratings tend to always be at the lower end of the range.
Central tendency	Ratings tend to fall consistently in the middle or average range.
Response acquiescence	Rater tends to agree with each item.
Response deviance	Rater tends to respond in a deviant, unfavorable, uncommon, or unusual way.
Social desirability	Test responses are interpreted to provide the most favorable view of the examinee.
Halo effect	Ratings tend to be influenced by good impressions of the examinee. High ratings on some traits are generalized to others.
Negative halo	Ratings tend to be influenced by bad impressions of the examinee.
Logical error	Ratings are similar on characteristics the rater feels are logically related.
Contrast error	Ratings on the current candidate are influenced by the previous candidate.
Proximity error	Ratings made on items that are printed close together tend to be rated the same.
Most recent performance error	Ratings are influenced by the person's most recent performance rather than his or her usual level of performance.

of the observation); and a reflection on or interpretation of the observation. The following are procedural suggestions for recording behavior anecdotes:

- Focus on a single specific incident.
- Be brief but complete.
- Objectively describe specific behaviors using examples.
- Use phrases rather than sentences.
- List the behaviors in the sequence in which they occurred.
- Include direct quotations whenever possible and significant.
- Record both positive and negative statements.
- Write the anecdote immediately after the observation occurs.

Self-Monitoring

Self-monitoring (also called self-assessment) is one of the most commonly used assessment approaches in research and practice (Hersen, 2006). *Self-monitoring* is a process by which an individual tracks and records their own specific behaviors and related (Cohen et al., 2012). It can be successfully employed to monitor and record the frequency, antecedents, and consequences of problematic behaviors (e.g., social anxieties, phobias, social skills problems, habits). For example, individuals with anger-management problems may use self-monitoring to record the date, time, and location of an anger episode and the events, thoughts, and feelings that preceded the episode.

Self-monitoring can be used for both assessment and intervention. Simply gaining awareness about one's patterns of behavior can affect the frequency with which behaviors occur. However, the usefulness of self-monitoring depends a great deal on the individual's compliance in recording his or her behavior. Self-monitoring requires individuals to be aware that they are engaging in the behavior and to have a timely and efficient means of logging behavior occurrences. Behaviors can be recorded using frequency marks, checklists, or other means. To help with recording behaviors in a timely fashion, various devices are available, such as golf wrist score counters and digital timers or alarms.

Self-monitoring can also include the use of autobiographies, diaries, journals, letters, stories, and poems. These approaches help provide insight into an individual's behavior, attitudes, and personality dimensions.

COLLATERAL SOURCES

Typically, the primary source of information is the individual who is being evaluated—but not always. Sometimes, a wellspring of information can come from people who know the individual best. Any third party who provides information is considered a *collateral source* (Table 2.6 provides a list of potential collateral sources). Family members, spouses or partners, and others close to the individual being evaluated are useful personal sources of information. Information can also be obtained from professional sources involved with the individual, such as teachers, physicians, and mental health professionals. Collateral information is generally obtained from *interviews* with the third party, either face-to-face or by telephone (Heilbrun, Warren, & Picarello, 2003). Although family and friends often want to give opinions, information should focus primarily on behavior descriptions (i.e., what the informant has personally observed or witnessed). Rating scales completed by collateral sources are often an effective means for obtaining behavioral descriptions of the client.

TABLE 2.6 Sources of Collateral Information

Personal sources	Spouses or partners
	Family members
	Roommates
	Employers or coworkers
	Neighbors
Professional sources	Mental health professionals
	Teachers or other school personnel
	Medical professionals
	Social services workers
	Guardians ad litem
	Probation or parole officers
Records	Mental health records
	School records
	Medical records
	Department of Social Services records or reports
	Court records
	Military records
	Criminal history records

Another valuable source of collateral information can be found in *records* (Craig, 2009), which can include school grades or attendance, previous psychological or educational assessments, mental health treatment plans or summaries, court documents, and letters from medical providers, to name just a few. In general, information from collateral sources, especially from more neutral professional sources, can be considered more objective and reliable than information obtained directly from examinees (Austin, 2002).

The extent to which a counselor uses collateral information depends on the purpose of the evaluation, the complexity of the client's presentation, and the intervention goals. It is particularly important in cases involving individuals with impaired insight into their problems, such as those with substance-abuse problems or cognitive disabilities (American Psychiatric Association, 2006). For example, in a psychiatric crisis center, collateral information may be crucial to understanding a client's acute mental health problems. When assessing children, counselors regularly obtain information from parents about the child's behavior at home, or they may contact the child's teacher to obtain information about the child's functioning at school.

Collateral information is considered a necessary component in all *forensic evaluations*, which are evaluations that address a given legal issue (e.g., child custody evaluations; Cavagnaro, Shuster, & Colwell, 2013; Ertelt & Matson, 2013). Information from third parties may offset the potential bias of the examinee's self-report. For example, it can be expected that the parents in a child custody evaluation may intentionally or unintentionally distort, exaggerate, or minimize the information they present during an interview so that the examiner will view them favorably. In this case, collateral information from

professional sources can help evaluators scrutinize the credibility of data obtained from parents (Patel & Choate, 2014).

An important issue in obtaining information from collateral sources is the confidentiality of the individual being evaluated. Permission must be obtained through consent forms signed by the client (or the client's parent) before professionals can request information or contact third parties.

Summary

In this chapter, we provided an overview of the three types of assessment. We will continue to integrate information about interviews, tests, and observations throughout the remainder of the textbook. It is important to note that counselors and other helping professionals need supervised training on each type of assessment in order to achieve competency. In addition to covering the types of assessment, we also introduced you to types of data and sources of information used to obtain a complete and accurate picture of the individual being evaluated.

Regardless of the type of assessment, counselors may choose from a wide array of formal or informal instruments and strategies. Although the client is usually the primary source of information, collateral information is often gathered from relatives, friends, teachers, health professionals, and other relevant parties. Information may also come from documents, such as medical records, school records, and written reports of earlier assessments. Counselors are required to integrate information from multiple data collection methods and multiple sources to form impressions and make recommendations about the individual being assessed.

Questions for Discussion

1. What is the difference between formal and informal methods of assessment?
2. Among the methods of assessment (i.e., interviews, tests, observation), which one do you think yields the most valuable information about a client?
3. How does the use of multiple assessment instruments and strategies (as opposed to using just one method) benefit the assessment process?
4. If you were engaged in the assessment process, which sources of assessment information would you use? What would your decision be based on?

Suggested Activities

1. Write a brief essay on the subject of assessment. Discuss your thoughts on assessment in general and your beliefs about its purpose in the helping professions.
2. Interview a school counselor, mental health counselor, or marriage and family therapist. Inquire about which assessment instruments and strategies he or she uses on a regular basis.
3. In triads, develop a semistructured interview. Use the general domains listed in Table 2.3, and brainstorm and construct as many questions as possible for each domain.
4. Using the semistructured interview developed in the previous activity, role-play an interview in which one student is the counselor, one is the client, and one is an observer. The counselor asks the client the questions that were developed for the semistructured interview. After the interview, all three may then discuss the following: How did the counselor feel asking questions? How much

did the client respond to questions? Were some questions harder to ask or answer than other questions? What counselor and client behaviors did the observer notice throughout the interview?

5. In a small group, develop a behavior rating scale that evaluates counseling skills. To do this, you must first determine the specific counseling skills to be evaluated and then decide on the type of scale (numerical scales, graphic scales, or semantic differential scales) used to measure the skills.
6. Search the Internet for behavior observation charts. Select three different charts to compare and contrast. In small groups, discuss the three charts and the types of observations for which they might be designed. Determine a behavior that the group would want to observe, and discuss which form might be the best choice. What modifications would the group have to make in order to conduct the observation?

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