Practice guide for the use of psychological tests and instruments

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Section 1: Introduction

1.1 Purpose and content

This Practice Guide exemplifies 'best practice' in psychological testing. It has been developed to:

- benefit members of the Australian Psychological Society and more generally the psychology profession by outlining principles of psychological test use.
- set out the competencies deemed necessary for the proficient use of psychological tests and instruments.
- form a statement of minimum or essential requirements, based on current professional thinking in Australia, and in the international context, for professional competence in using psychometric assessment.
- supplement the relevant sections in the current APS Code of Ethics and the current version of the Ethical Guidelines for psychological assessment and the use of psychological tests.
- provide a Practice Guide that is generic in nature and covers the application of tests across a range of contexts including educational, clinical, and organisational, and in a range of formats including individual and group, traditional ‘paper and pencil’ tests, computer-based, and online assessments.
- benefit the public through ensuring appropriate standards are maintained.

1.2 Uses

Although intended primarily for psychologists and members of the Australian Psychological Society in particular, it is hoped that this Practice Guide will have wider application and influence, such as with the Psychology Board of Australia’s policies and guidelines and in the training of psychologists.

By attempting to define the skill and knowledge base necessary to undertake psychological testing we believe that this Practice Guide will have the following benefits.

- Providing educators responsible for the provision of training in psychological testing with a set of minimum standards for use in the design of courses and the establishment of criteria for examining competence.
- Providing the basis for self-assessment to enable psychologists to assess their present level of skill and knowledge prior to undertaking testing.
- Stimulating deeper debate and thinking about the competencies required for psychological testing.
- Providing a basis that might also assist the training of related professionals who make use of standardised tests and instruments in other professional areas (e.g., speech pathology, occupational therapy).

In general, the Practice Guide is a reminder that the skill and knowledge base for using psychological tests and instruments is complex and requires ongoing participation in professional development activities to maintain competence.

1.3 What are psychological tests and instruments?

From consideration of the literature it is evident that there is no brief definition of “a psychological instrument”, certainly not one that would capture the essence of what constitutes a psychological instrument. Instead it appears more appropriate to describe the characteristics of a psychological instrument. These are set out below.
Psychological instruments may come in varying formats, including pencil and paper tasks or computer-based tasks, activities such as putting together puzzles, drawing, solving problems, recalling information, and direct or indirect observation of interactions and behaviour. However, psychological instruments:

- are based on a test theory (e.g., classical; item response theory);
- draw upon psychological theory or theories and hence require in depth knowledge of psychological theory to interpret the results meaningfully and in context;
- have established psychometric properties including reliability and validity;
- have an explicit empirical mechanism for interpreting a test taker’s scores, such as population norms, criteria for determining clinical significance, and criteria for categorising individuals;
- require standardised administration and scoring procedures to be followed; and
- provide a basis to draw inferences about broader underlying behaviours and attributes from a sample of behaviour.

1.4 What are not psychological tests and instruments?

Many tests, questionnaires and checklists exist that would not be considered as psychological tests. Tests, questionnaires and checklists which have the following features would not be regarded as ‘psychological’ by the majority of psychologists.

- The absence of norms or other standardised empirically-based reference points with the result that it is not possible to assess individual differences with any known degree of accuracy. For example, magazine check-lists and many self-report exercises used as part of personal development training courses, even though they might cover psychological topics, would be excluded on this basis.
- Interpretation is self-evident and does not require an inferential leap such that deeper inferences of a psychological nature are not involved.
- The content is not intrinsically psychological and not of the kind on which psychological theories are typically based.

Even if a measure is determined not to be a psychological test or instrument, psychologists choosing to use such measures will have evaluated them in terms of reliability, validity, utility and fairness before forming professional judgments on the basis of the results.

1.5 Terminology

Psychologists and other professionals often refer to all psychological tests and instruments as ‘tests’ and this term is used at times in this Practice Guide. Tests, however, are usually conducted to obtain a score that reflects how well the test taker has performed on that particular test. This does not apply across all areas of assessment. For example, personality instruments do not assess how much personality an individual has, but rather examine each individual’s profile across one or more dimensions. In the area of intelligence or cognitive abilities assessment, although a total score may convey an overall level of performance, the psychologist will also be focusing on the profile of scores across sub-tests or indices that contribute to the overall score. It is important, therefore, that when a psychologist is discussing the use of a psychological test or instrument care is taken regarding the use of the word ‘test’, especially when working with test takers. Indeed even when the instrument may genuinely be regarded as a test, the use of the word with test takers can raise anxiety levels unnecessarily.
While it is accepted that different psychology practice sectors utilise different terms to describe the individual to whom the psychology service is being provided such as ‘client’, ‘patient’, ‘test taker’, or ‘candidate’, in this document we have chosen to use the term ‘test taker’ to describe the person who is the recipient of psychological testing regardless of test context.

1.6 The skills and knowledge required for the proficient use of psychological tests and instruments

Competent use of psychological tests embraces the following 15 practices. Psychologists who choose to undertake psychological testing are expected to have developed the competencies that underlie all 15 practices:

1. The application of basic psychometric principles and procedures
2. The application of psychological theory underlying psychological testing
3. Ensuring psychological testing is appropriate
4. Selecting the most appropriate psychological test or instrument
5. Organising and conducting a testing session
6. Accurate scoring and use of norms
7. Interpreting the results
8. Making decisions and providing recommendations on the basis of the results
9. Communicating the results
10. Monitoring effectiveness
11. Recognising the different requirements of individuals with disabilities
12. Recognising the different requirements of individuals from different ethnic groups
13. Recognising the different requirements of online testing and the digital presentation of tests
14. Maintaining confidentiality and security of test material
15. Adhering to appropriate professional and ethical principles

Underlying these practices are the following broad areas of knowledge and skills.

- Basic psychometric principles and procedures, and the technical requirements of tests and instruments.
- The nature of any constructs underlying a score that are essential to the way in which inferences are to be drawn from results.
- The technical properties and limitations of the particular test or instrument used.
- The recency of the particular test or instrument and why and how it may have changed over various editions.
- The context in which the test or instrument is being used (e.g., for clinical diagnosis, personal/relationship counselling, assessing school readiness, personnel selection, diagnosing brain damage) in order to be able to integrate the results with other pertinent information about the individual(s) being assessed.
- Standardised test practices for administration and scoring of psychological tests and instruments.
- The test conditions and factors (e.g., test taker characteristics) to be considered to ensure effective test administration.
- Accurate scoring and interpretation of test results.
- Reporting results, both by way of oral feedback to the test taker and by way of a written report to any third party (e.g., the test taker, teacher, manager, or medical practitioner) including strengths and limitations of computer generated reports.
In addition, there is an important attitudinal component to using psychological tests and instruments – a willingness and confidence through informed practice to take full responsibility for the choice and use of selected tests and instruments in the event of challenge concerning reliability, validity, utility or fairness (e.g. by test taker or court process). Indeed, a part of this willingness is a commitment to the clear articulation of the evidence upon which test-based inferences are made, so that others can clearly understand how the test data have led to a particular interpretation or opinion.

Certain aspects of psychological testing can be delegated to appropriately trained and supervised non-psychologists, provided the psychologist accepts ultimate responsibility for the tasks that are delegated. For example, the administration and scoring of some measures can be performed under the guidance of a psychologist. Some aspects of using results (e.g., applying decision rules on the basis of cut-off scores) might also be entrusted to non-psychologists, provided the psychologist has determined the manner in which the measure is to be used and assumes responsibility for its use. However, as indicated in the APS Ethical guidelines for psychological assessment and the use of psychological tests, while the administration of tests can be delegated to a non-psychologist, the interpretation and reporting of test results remains the responsibility of the psychologist. It is also important to recognise that the qualifications and training of those to whom testing is delegated must still meet minimum requirements established by test publishers, regulatory authorities, and their representatives.

Competence in the use of psychological tests and instruments involves extensive training and cannot be developed solely through short courses. Sufficient rehearsal to ensure standardised administration before commencing assessment is essential. A thorough level of familiarity with the APS Code of Ethics and Ethical Guidelines relevant to testing is also essential. Once an appropriate level of proficiency has been obtained, the following should be undertaken to ensure knowledge and skills in the area of psychological testing remain current.

- Attending courses on psychological testing that form part of a degree/diploma course.
- Attending short courses and workshops on psychological testing (e.g., courses offered by test publishers, distributors or independent consultants).
- Attending conference sessions related to testing practices, test development, and ethical and professional issues in testing.
- Participating in regular supervision, including peer consultation.
- Reading manuals and text books on psychometrics and psychological testing.
- Engaging in on-line training and distance learning programs.

Further training will be required to develop areas of expertise beyond a general level of competence, such as that obtained via further training in an area of psychology and undertaking an advanced course of study (e.g., Masters or Doctoral degree).

In addition, psychologists should recognise that in maintaining their competence and undertaking psychological assessments they derive a wealth of knowledge that can be imparted to the profession regarding test utility in specific settings, norms development, or test design and construction.
Section 2: Guidelines

This section addresses the 15 practices outlined on page 6 regarding the knowledge and skills relevant to all applications of psychological testing.

While many of these guidelines pertain to conducting face-to-face testing sessions using traditional testing methods, many of the competencies also apply to computer-based and online testing which, depending on the context of the testing, can have some advantages over traditional testing methods, but also introduces issues of its own, especially around a lack of direct interaction with the test taker and control over and supervision of online testing sessions. Specific considerations for computer-based and online testing will be addressed in a later section.

2.1 The application of basic psychometric principles and procedures

Prior to deciding whether to administer a psychological test or instrument in a particular context or with a particular test taker or group, and prior to deciding what test or instrument to use, psychologists should be knowledgeable about the psychometric principles and procedures that underpin psychological testing. Without this knowledge informed decisions cannot be made.

The underlying principle in this section is knowledge of psychometrics. Psychologists ensure that they have the necessary skills and knowledge to undertake the practices in which they engage. In the case of psychological assessment, knowledge of psychometrics and test theory is core.

Psychologists:
- understand the basis upon which an assessment tool has been developed, including both classical test theory and item response theory. In so doing psychologists are able to apply basic psychometric principles and procedures in the selection of psychological tests or instruments including the following.

Basic descriptive statistical methods including:
- the strengths and limitations of different statistical approaches.
- constructing histograms or frequency polygons.
- the properties of the normal distribution curve.
- the different measures of central tendency (means, medians and modes) and the circumstances under which each is preferred.
- various standard errors including standard errors of measurement, estimation, and prediction.
- standard deviation.
- skewness and kurtosis.
- confidence limits and how they are constructed.
- Item Response Theory and Classical Test Theory as they pertain to the tests being used.
- base-rate metrics that impact on decision-making such as sensitivity, specificity, predictive powers, and likelihood ratio.
- probability theory.
- binomial distribution.
Scaling (including normative) procedures including:

- the uses and limitations of:
  - age equivalents
  - percentile ranks
  - base rates
  - z-scores
  - T-scores
  - Stanines
  - Stens

- A clear understanding of the influence of demographic variables and other potentially confounding factors on test scores. This goes beyond the stratification of norms tables to recognise that not all variables that influence test scores are accounted for in normative tables.

- The differences between ‘age norms’ and ‘school year norms’, and the implications of these differences.

- The use of tables of the ‘Areas under the Normal Distribution’ to convert z-scores into percentiles and vice-versa.

- The use of tables to facilitate conversion from one norm system (e.g., Deviation IQs) to another norm system (e.g., percentiles, scaled scores, T-scores).

- The differences between ipsative and normative score comparisons and the implications for interpreting test results.

- The difference between norm-referenced and criterion-referenced, or domain-referenced instruments.

- The impact of skewness and kurtosis on the estimation of percentile ranks and selection of cut-off scores.

- The difference between scores derived using Classical Test Theory and those derived from Item Response Theory.

Construction procedures:

While not all psychologists will participate in the process of test development or construction, it is important that they all understand the implications of how a test was developed and the limitations this may impose on reliability and validity, including an understanding of:

- item writing and paneling.

- item trialing.

- item analysis (including distractor analysis).

- differential Item Functioning (DIF) analyses.

- standardisation procedures.

- the objectives of special approaches such as Item Response Theory, Rasch scaling, and factor analysis.

- computer adaptive test development.

Reliability:

- The concept of correlation and the conditions under which correlation coefficients are maximised.

- The distinctions drawn in Classical Test Theory between ‘true score variance’, ‘systematic error variance’ and ‘random error variance’.

- Sources of measurement error in psychological tests (item sampling, situational factors, dispositional factors, scoring error).

- Methods of estimating reliability (internal consistency, equivalence and stability) and the formulae that are commonly employed (product-moment correlations, split-half, Kuder-Richardson, Coefficient Alpha).

- The relationship between reliability and test length.
• The effect of restriction of range on reliability and how to adjust for this
• Understanding that reliability coefficients are not fixed properties of tests and as psychometric properties have associated standard errors of measurement.
• Computing limits for different levels of confidence from raw and standard scores.
• Computing the standard errors for the difference between scores achieved by the same test taker on two different tests or scores achieved by two different test takers on the same test.

Validity:
• The conceptual distinctions between face, content, construct, and criterion-related validity.
• The distinction between concurrent and predictive criterion-related validities and the merits and drawbacks to both approaches.
• The various forms of construct validity such as factorial, concurrent, discriminant, convergent, and divergent and the rationale behind multi-trait/multi-method techniques.
• The different ways of demonstrating validity (validity coefficients, expectancy tables, differences in means between contrasting criterion groups).
• Appreciation of how internal consistency serves as an upper limit to, and constrains, validity.
• The concept of multiple correlation and its uses in validating batteries of tests, or scales on self-report inventories.
• The problems and pitfalls in validating tests, such as restriction of range in scores and/or criterion measures, criterion-contamination, low criterion reliability, inadequate sampling, using inappropriate criterion-measures, gaining the cooperation of test takers, and failing to detect curvilinear relationships between predictors and criterion measures.

Miscellaneous:
• The assessment of ‘test utility’ (e.g., in occupational settings, in terms of cost-benefit analysis).
• The concept of ‘differential validity’ particularly in the context of test fairness on grounds of gender, age, and culture, and an appreciation that much of the evidence in this area is based on small sample sizes.
• ‘Justifiable’ and ‘unjustifiable’ test bias and the techniques for detecting item bias in specific groups of test takers.
• The conceptual distinction between ‘culture free’ and ‘culture fair’ tests recognising that psychological tests cannot be ‘culture free’.
• The conceptual distinction between ‘test fairness’ and ‘affirmative action’/ ‘positive discrimination’, (i.e., the interplay between sound psychometric practice and issues of a more ‘sociopolitical’ nature).
• The implications of using older, unrevised tests.

Example practice errors
• Concluding that there is a genuine difference between two scores for the same person, or the scores of two different people, when in fact the differences are within the limits of probability.
• Concluding that a difference which is statistically significant is clinically meaningful when it has a high base-rate in the normative sample.
• Estimating IQs from norm tables for group or individual general reasoning tests when the norms are not based on a representative sample of the general population.
2.2 The application of psychological theory underlying psychological testing

In order to make informed decisions regarding whether to administer a psychological test or instrument and, if so, what measures to select, it is essential that the psychologist has a full understanding of the underpinning psychological theory or theories and can make an assessment of the validity of that theory. Without such knowledge psychologists cannot make a judgment about suitability or interpret the results in a meaningful way. Psychologists should have an in depth understanding of the theories and psychological models that are applicable across their areas of expertise and be able to apply this knowledge to the selection of an appropriate battery.

The underlying principle in this section is knowledge of psychological theories. Recognising the different domains of psychology in which assessments are administered, it is not expected that psychologists will have expertise across all areas and for this reason should refer an individual to another psychologist who has expertise in the area in which an assessment is being conducted. There may be occasions when there are no options for a referral and the psychologist will need to determine whether he or she can gain the required skills and knowledge to undertake the assessment. This might be through training or through a supervision process.

Psychologists:
- in using psychological tests have an understanding of the application of knowledge of theories and models to:
  - evaluate the evidence in support of the theory upon which the test or instrument is based.
  - evaluate whether the structure of the psychological test or instrument, including any subscales reflects the theory.
  - evaluate whether the content of the psychological test or instrument reflects the theory.
  - consider whether the results of any administration of the psychological test or instrument can be interpreted meaningfully with reference to the underlying theory.
  - make an informed decision about which theory provides a sounder basis and best meets the needs of the assessment in instances where there are several psychological tests or instruments in the same domain (e.g., intelligence) that are underpinned by different theories.

Example practice errors
- Selecting instruments that lack a sound theoretical basis.
- Using an instrument based on one theory but interpreting it without consideration of the theoretical basis or according to another theoretical approach that is not relevant to the instrument. (e.g., past uses of tests such as the Bender, Rorschach, and TAT exemplify this).
- Selecting and interpreting an instrument that is assumed to be based on a particular theory when it is not.
- Using a test or instrument while lacking adequate knowledge of the underlying theory.

2.3 Ensuring psychological testing is appropriate

Psychologists do not assume that it is appropriate to administer a psychological test in all contexts and for all purposes when responding to a referral and consider alternatives.

The underlying principle in this section is relevance. Not all questions asked of a psychologist can be effectively evaluated through psychological testing. Similarly, not all individuals have the capacity to undertake a psychological assessment and alternative approaches may be more appropriate. In some circumstances an abundance of collateral information is available to confirm or disconfirm the hypotheses that could be otherwise evaluated in a psychological assessment.
Psychologists:
- conduct a thorough needs analysis before determining the need to assess individuals or groups with psychological tests or instruments.
- avoid accepting at face value a referral for a psychological test to be administered.
- define the precise purpose in assessing an individual or group of individuals, when the assessment is indicated on the basis of test taker needs or job analysis.
- identify the psychological attributes or constructs that are relevant to the assessment process.
- weigh up the advantages of a psychometric assessment, as opposed to an alternative method of gathering information. For example, given that some forms of assessment are more expensive than others, both in terms of time and cost of testing materials, a cost-benefit analysis is often indicated.
- consider the ethics of using a psychometric assessment as a significant decision making or diagnostic tool when other methods are available, if the outcome is likely to be deleterious to the person concerned (e.g., in clinical situations where the test taker might react negatively to the results; in organisational situations where employees might be concerned that the results may be used in making retrenchment decisions, or given inappropriate weighting in making selection decisions).
- consider the level of cooperation and commitment on the part of the test taker, and other interested parties (e.g., teacher, parents, manager)
- recognise that in many professional contexts these practices have been undertaken at the institutional or practice level and psychologists are expected to conform to decisions that have already been made. It is, nonetheless, the responsibility of the psychologist to continue to monitor and evaluate the appropriateness and effectiveness of the decisions consistent with the above principles.

Example practice errors
- When testing is optional, failing to provide other interested parties (e.g., parents, managers) with sufficient information to help them judge whether testing is appropriate.
- Not considering factors that may question the appropriateness of testing such as motivation for seeking psychological testing or testing for a personal agenda.
- Conducting psychological testing without a clear referral question or in response to a referral that does not justify the need to administer tests or instruments.
- Re-administering a test without waiting the appropriate length of time as recommended by the test developer.
- Administering only those psychological tests or instruments requested by a referrer when either different tests or more extensive assessments are warranted.

2.4 Selecting the most appropriate psychological test or instrument
Psychologists must explicitly choose the instruments they utilise in assessing a test taker and have a clear rationale for linking the measures with the relevant hypotheses. Pressures such as the considerable costs and resources involved in undertaking psychological assessment may restrict the range of instruments that can be utilised effectively. Similarly, the instruments that were taught to psychologists during their training may attain a disproportionate representation in subsequent assessments. While these influences are understandable they do not absolve psychologists of the responsibility to choose the most appropriate instruments and to be prepared and able to defend their selection of tests for an assessment. Psychologists cannot be expected to know every test that is available, nor is it reasonable to assume that they will have ready access to any test just because it is appropriate to their assessment. With recent developments in digital presentations, psychologists have to take account of the most appropriate test format and mode of administration. Much of the decision-making in relation to test selection, therefore, is conducted well in advance of a specific testing session and contributes to the determination of scope and breadth of practice. Psychologists should not engage in assessments for which they are not trained or lack the appropriate tests or instruments.
The underlying principle in this section is preparedness. Psychologists must actively seek to be as prepared as they can be to conduct an assessment. Biased or inappropriate test selection will undermine the accuracy and yield of any psychological assessment, limiting both the scope of the assessment and preventing the detection of difficulties that were not assessed.

Psychologists:
• know where and how to find relevant information to guide test selection
• select an instrument that is appropriate to its intended use, using resources such as:
  - the professional literature
  - expert advice
  - independent reviews
  - test publishers’ catalogues and websites
  - test guides and directories
  - the technical manual and specimen sets
  - the methods and measured that are employed in a particular setting
• make appropriate use of the technical sections of manuals to determine suitability in terms of:
  - reliability, validity, and appropriateness of norms (taking note of their representativeness, the size of the sample on which they are based, and their recency)
  - test utility, and possible adverse impact on groups such as those who speak English as a second language, older adults, or people with physical and intellectual disabilities.
• avoid uses not specifically recommended in the test manual, unless supported by applied research or data. Where such research or data is not available, careful consideration must be given as to the rationale and justification for employing the test.
• are informed about the different test formats and modes of administration and when to choose one appropriate to the situation.
• take full responsibility for choosing and using a measure for a purpose for which it has not been validated previously.
• take into account the limitations that a test taker may have and whether or not the instruments selected are appropriate for those limitations.
• consider if there are any factors that may have an impact on the performance of test takers (e.g., level of competence with the English language, medical condition or disability, reading level, recent exposure to the same test).

Example practice errors
• Selecting a test or instrument simply because they are better known or are the ones that are used most frequently without checking that they are the best fit for the particular assessment.
• Selecting psychological tests or instruments purely on the basis of face validity, title, descriptions in publishers’ catalogues or ‘quick reference’ charts, or tables supplied by some test publishers.
• Choosing the wrong level of test, (e.g., one designed for use with graduates when the test taker clearly does not belong to this population and the overall context in which the test is being used does not call for skills at graduate level; or one designed for a particular age range of children when the test taker does not fall within this range).
• Selecting tests or instruments that may well be valid, but which might offend some test takers because of content or wording (e.g., use of the generic ‘he’, or sex or racial stereotyping, even if unintended).
• Choosing an inappropriate and/or outdated norm table (e.g., choosing a norm table because it seems occupationally-specific, such as ‘applicants for apprenticeships in the petro-chemical industry’, but failing to take note of the sources of selectivity in that particular norm group, the sample characteristics, and the date when the norms were constructed).
• Using an age inappropriate test (e.g., using an adult test with a test taker aged under 18 years or a dementia rating measure with test takers younger than the norms).
2.5 Organising and conducting a testing session

When conducting a testing session, psychologists recognise the importance of rapport in maintaining the motivation and cooperation of the test taker with a focus on minimising confounding variables which would compromise the accuracy of the test findings. This includes respect for the dignity and integrity of the test taker and encompasses vigilance in ensuring informed consent, open disclosure about the purposes of the assessment, and provision of feedback unless specifically contraindicated. Psychologists understand that there is little to be gained in conducting an assessment with an unmotivated or uncooperative test taker, and will not engage in assessment unless these barriers can be overcome. Psychologists who engage in group administrations must be aware of the additional demands and challenges associated with this mode of testing.

The underlying principle in this section is the relationship. Establishing rapport and an appropriate professional relationship is a necessary precursor to an effective assessment. Psychologists and test takers benefit from an accurate assessment that is not compromised by difficulties in the professional relationship, characteristics of the test taker, or a failure to cooperate or effectively engage in the assessment. Psychologists also work to maintain the motivation of the test taker throughout the assessment to ensure that it is representative of the individual’s current capabilities.

a. General issues for individual and group testing

Psychologists, prior to commencing the testing session:
- inform the test taker of the time and place of the testing session well in advance, ensuring they are adequately prepared for what they will be required to do and why.
- have practised the administration and scoring of the test to a level such that the administration can proceed smoothly, including handling materials and equipment including computers, tablets, stop watches and audio players if required.
- are thoroughly familiar with requirements for establishing basal and ceiling cut-offs and the scoring of items linked to determining these in real time when testing.
- set up the test environment to promote comfort and minimise distractions.
- ensure that sufficient materials are available and that any equipment is in working order.
- ensure that any reusable booklets have been carefully checked for marks or notes which may have been made by previous test takers.

Psychologists, during the testing session:
- establish rapport with the test taker to ensure motivation and minimise anxiety.
- allow the presence of a third party (e.g., parent, support person) only in circumstances where it is deemed necessary to undertake the testing, such as to avoid a young child becoming distressed.
- establish with any third party the conditions under which they may be present in the room (e.g., do not interfere in any way with the testing process, sit out of eye contact of the test taker).
- check to ensure the test taker has the necessary materials.
- provide assurance of confidentiality and inform the test taker of the limits to confidentiality and their rights and obligations under relevant legislation.
- explain, as part of the informed consent process, to whom feedback will be given, and the form in which it will be provided.
- adhere strictly to instructions for administration provided in the manual, including verbatim instructions to the test taker, except where provisions or accommodations are considered necessary or appropriate (see https://www.psychology.org.au/Assets/Files/16APS-PP-B-PWD-P1-.pdf)
- sometimes deviate from the standard administration if they are seeking information as part of ‘testing the limits’ only after standardised administration has been completed or if a standardised score is not sought.
- provide the test taker with the appropriate time to work through practice/example items according to instructions in the manual.
- know when to query responses on individual items and use correct procedures for querying.
- make an independent note of the start time in case of timer/stop-watch failure
- check to ensure proper use of answer sheets and response procedures.
- deal appropriately with any concerns or questions which may arise without compromising the purpose of the test.
- maintain accurate timing if there is a time limit, using mechanical or electronic timers or a stopwatch and accurately record response times relevant to scores on items.
- take account of behaviours that may impact on performance including signs of fatigue, stress or anxiety and take note of other behaviours that are important in the subsequent interpretation of the results in the broader context of the referral question.
- provide encouragement without revealing correctness or incorrectness of responses (unless this is required as part of administration).
- ensure understanding that correct answers do exist in areas of ability testing but in other areas such as personality appraisals, honest answers are required.

Psychologists, following the testing session:
- thank the test taker for their participation and explain the next stage in the assessment, such as the provision of feedback.
- collect materials upon completion and check that all materials have been returned.
- visually check answer sheets for ambiguous markings which could be obscured by scoring keys or which could cause problems with machine scoring procedures.
- correctly calculate scores.

Example practice errors
- Misrepresenting the assessment or increasing anxiety by referring to the instrument as a “test”, especially when it is not designed to be a test of any ability or psychological trait.
- Giving a wrong impression to the test taker of the importance of time and/or accuracy in responding.
- Deviating from verbatim instructions. Even minor variations in syntax may change the difficulty of the item or the test taker’s understanding of what is required. This ‘drift’ often occurs as a result of over-familiarity with the test instrument and should be countered by regularly checking back with the manual so that errors in administration or scoring do not develop over time.
- Incorrect pronunciation in verbal tests.
- Incorrect layout of performance material.
- Incorrectly demonstrating a task (e.g., in block design, paper folding, or similar tests).
- Failing to monitor and record response times accurately. For example, imposing the wrong time limit (e.g., timing for 1m 20s rather than 120s).
- Failing to query responses according to the criteria specified.
- Failing to establish a basal score or to discontinue when a ceiling score is reached.
- Failing to observe and record behavioural data which may be useful in interpreting test results.
- Agreeing to allow a third party (e.g., parent, support person) to sit in on the testing session when it is not essential to completing the testing.
b. Additional considerations for group sessions

Psychologists:

• plan the testing session with due regard to the maximum number of test takers who can be assessed in one session, and ensure optimum efficiency in the use of time.

• arrange a suitable venue and arrange the seating to maximise comfort and minimise the possibility of cheating or collaboration.

• brief assistants on their role in helping with the testing session and ensuring vigilance is maintained.

• keep a testing session log including notes on any particular problems which arose during the session which might have affected a test taker’s performance.

Example practice errors

• Not checking reusable booklets for stray marks or notes, which might influence the responses of subsequent test takers.

• Assessing test takers by mail or permitting them to take tests home with them to complete (e.g., sending a job applicant a personality questionnaire to complete at home).

• Adopting a casual attitude to standardised administration procedures, including the delegation of administration duties to untrained and unqualified assistants.

• Creating unnecessary anxiety by being poorly prepared, appearing bored, impatient or inconsiderate; deviating from, or rushing through, the standard instructions; not giving enough time to people needing help during the practice sessions.

• Being overly-solicitous and displaying partiality to test takers.

• Allowing more than the official time because test takers are ‘struggling’.

• Applying an incorrect time limit or setting a time limit when none was intended.

• Giving a ‘count-down’ (e.g., 10 minutes to go; 5 minutes to go) during testing, unless this is specified in the manual and the test instrument has been standardised under these conditions.

• Leaving the room unattended while testing is in progress, talking on the telephone, texting, checking emails or chatting to assistants.

• Failing to notice when a test taker may need help (e.g., turning over two pages at a time, working in the wrong answer column).

• Failing to edit answer sheets which have been filled incorrectly before proceeding with hand scoring (e.g., some test takers may have put a cross through an answer they wished to change, instead of completely erasing it. If the erroneous answer is not erased by the administrator prior to scoring, it could still show up as being valid when a cardboard template is placed over it).

2.6 Accurate scoring and use of norms

Psychologists are responsible for the accurate scoring of all tests and inventories they administer. Many psychological tests and inventories are norm-referenced to allow a comparison point and provide additional meaning to test scores. Research has found that scoring errors are common and for this reason psychologists must be particularly alert when scoring tests and inventories in order to reduce the likelihood of errors occurring. Accurate scoring and the application of norms for interpretation is a basic skill in psychological testing.

For many tests and inventories the source of normative data is in the published manual for the particular instrument. With some tests and inventories, however, normative data is derived from the research literature or volumes specifically compiling and publishing such data. This is particularly important when a test or inventory is being applied to a setting distinct from the one in which it was developed. Additionally, these other sources of normative data may permit adjustment for relevant demographic variables, expand the age range of a test, or provide analyses and interpretative guidelines that enhance the validity of the test or inventory. The difficulty
this generates is that different standardised scores may result from the use of different norms. For this reason psychologists carefully consider the normative data they use and make clear the sources of these data when not using those provided in the test manual. This can be readily achieved by referencing the norms used along with the test taker’s scores in an appendix at the end of the report.

The underlying principle in this section is accuracy. Careful selection of tests and inventories, building good rapport, effective test administration, and systematic recording of test performances will be of little value if errors are made in the scoring and representation of the data in relation to an appropriate comparison group.

Psychologists:
- ensure the use of test norms is appropriate to the population from which the test taker is drawn.
- correctly compute scores and check for any scoring or data entry errors.
- ensure that they accurately employ standardisation algorithms when converting raw scores to standardised scores and/or percentile ranks.
- ensure that whenever possible computer scoring packages are used that also have hand-scored protocols to the point where the accuracy of the electronic data entry and output can be verified.
- select the most appropriate normative data. Where use of an inappropriate normative group is unavoidable this must be clearly indicated, along with potential limitations resulting from their use.
- are responsible for the procedures and information that are used in software scoring packages and must be particularly vigilant regarding entry and usage errors in those circumstances where hand-scoring is not possible.
- double-check all scoring and calculations including calculating raw scores and the conversion of these to standard scores and are vigilant and committed to the elimination of scoring errors.

Example practice errors
- Failing to check and recheck data scoring and data entry.
- Failing to cross-check the scoring of answer sheets.
- Failing to accommodate for the influence of omitted items on test scores.
- Utilising score computation methods incorrectly. Examples are summing raw scores instead of scaled scores, presenting sums of scaled scores as index or IQ scores, and failing to reverse code items when required.
- Failing to reverse the sign when using a z-score transformation on error or time scores before looking up percentile ranks. This results in a low score being allocated a high percentile rank, or conversely a high score with a low percentile rank.
- Not correctly incorporating basal and ceiling rules into scoring (e.g., forgetting to include the scores for items below the basal).
- Misapplying methods developed for specific editions of tests with later editions.
- Utilising British or US norms for premorbid estimates because of the perceived similarity of Australian, US or UK cultures.
- Not using software scoring packages when required or using them incorrectly.
- Being too lenient or harsh in evaluating a response.
- Placing too much emphasis on supposed mitigating circumstances.

2.7 Interpreting the results

After scoring and analysing psychological test data, the findings must be interpreted and integrated with other sources of information. Mere description of test findings is insufficient to be considered interpretation and integration of these interpretations with other information is a necessary step before the process can be considered complete.
The underlying principle in this section is attribution. The fundamental mistake a psychologist can make at this point in the assessment process is misattribution and procedures and practices must be implemented to safeguard against this type of error. It is also one of the most challenging and difficult aspects of assessment as its effectiveness can be compromised by any errors made in the previous processes.

Psychologists:

- adhere closely to the interpretive guidelines as provided in the manual and/or as established through subsequent research reported in the professional literature, and refrain from generalising beyond the established meaning of a score.
- take into account any departures from standardised administration procedures.
- consider all other information about the test taker that is relevant to drawing inferences from results (e.g., the person might not be proficient in English, was very nervous about being tested, was on large doses of medication, had taken the same or a similar test previously, had experienced browser or other online technical problems).
- where available incorporate measures of cognitive effort and motivation into their assessments regardless of the setting. It is always important to understand when a test taker's test performances have been compromised by motivational factors.
- allow for any major anomalies in the appropriateness of the norms used (e.g., it may be the case that use of an inappropriate norm group is unavoidable, even when the best possible measure has been selected).
- use computer-generated interpretive reports as a guide only or adapted with consideration of the range of inputs into the assessment process to meet individual test taker needs.
- are mindful that no score is perfectly reliable. Standard Error estimates quoted in the manual can be used to determine the likely upper and lower limits of the ‘true’ score for the person concerned to assist in evaluating the impact of reliability on test score interpretation.
- seek verification of inferences that are drawn from results from other sources of information, and from the test taker themselves when feedback sessions are conducted.
- are aware of response bias and when it is a likely or common factor in testing.
- refrain from drawing inferences from the way in which a person answered individual items, unless the test is designed to support such inferences.
- consider all potential possibilities and avoid confirmatory bias when considering the outcomes of the assessment process including the test scores.
- recognise the major limitations of interpreting a person’s results without the benefit of having interacted with the person.
- are aware of the limitations of secondary interpretation of test results and communicate these limitations in any oral or written report.

Example practice errors

- Not taking into account any departures from standardised administration procedures or familiarity with the specific content through prior exposure to the questions.
- Interpreting the sums of scaled scores as a composite score.
- Not allowing for factors such as gender, age, education, and culture in instances where these are irrelevant to the purpose of testing, yet influence the level of performance on an ability test or response to a self-report inventory (e.g., validity studies suggest that older clerical job applicants can be unfairly discriminated against when given ‘speed and accuracy’ tests of clerical aptitude, which are typically standardised on younger applicants - age-adjusted norms would therefore be appropriate in such an instance).
- Ignoring other information about the test taker, or giving an inappropriately small or large weighting to the results of a single test or test session in arriving at the final decision.
• Ignoring or minimising findings that conflict with strong evidence suggested by other findings (including the tests themselves).
• Being unaware that a person may be manipulating the test situation for personal gain (e.g. ‘faking bad’ in order to obtain compensation or access to resources).
• Labelling the person as dishonest or devious purely on the basis of a high ‘faking’ score and failing to appreciate that other factors are often involved including self-delusion, cultural values, high or low self-esteem, or plain error measurement.
• Not taking account of the limitations and risks associated with blind testing when drawing conclusions.

2.8 Making decisions and providing recommendations on the basis of the results

For psychological assessments to serve a purpose they must have the potential to impact on test takers. From this perspective assessments should result in recommendations. Most psychological assessment reports will contain recommendations that stem from the assessment.

The underlying principle in this section is responsibility. This is an aspect where base-rates, consequences, and pragmatics influence decision-making. This involves taking account of the test taker’s current circumstances and the implications of false positive or false negative findings.

Psychologists:
• make recommendations or decisions based on information gathered from a range of assessment processes of which test results provide one source, although, using tests to screen, or short-list people is justifiable under certain circumstances provided the validity of this approach can be demonstrated.
• specify the rationale for setting a specific cut-off score if it is used to classify, select or certify the test taker concerned.
• use results to help structure and guide subsequent assessment procedures (e.g., interviews, clinical observation, or reference checks) by generating hypotheses for further probing.
• are informed by the assessment results in developing tailored intervention programs.

Example practice errors
• Using IQ scores alone as a rationale for decisions regarding access to or withdrawal of special services.
• Making a diagnosis based on the results of one (or at the most) two tests or instruments, rather than generating hypotheses about functional impairments.
• Not being clear about whether a diagnosis has been made (e.g., using language such as “is consistent with” or “may be indicative of” that does not provide the reader with a firm diagnostic outcome.
• Basing recommendations or decisions on an outdated measure or a measure without suitable age or population norms.
• Failing to provide clear justifications for criteria used in determining cut-offs when offering hypotheses or recommendations for future action.
• Providing generic or the same feedback in reports without relating them to test findings – this includes provision of lists of tasks or interventions that could be of general benefit to anyone (e.g., noting that individuals with ASD may also have dysgraphia and providing recommendations without assessing the individual).
• Focusing too much on a diagnosis rather than using results to determine the ongoing needs of the test taker and a basis for future interventions.
2.9 Communicating the results

Psychologists are required to communicate their findings in a way that can be readily understood by the recipient and appropriate to their developmental level.

The underlying principle in this section is clarity. In contemporary practice key elements of clear communication include writing in a manner that is jargon-free, succinct and conveys the critical components. In the context of report writing this emphasises not only the test findings and relevant background information, but also presents how the integrated test findings lead to the conclusions, opinions, and recommendations in the report. It reflects a commitment to clearly explaining to the reader how we know what we know. This can be challenging for many psychologists because it provides the reader a basis for identifying inconsistencies, inaccuracies, poor reasoning, and misattribution, and is an expression of the psychologist’s commitment to professional responsibility and accountability.

a. Written feedback

Psychologists aim to ensure understanding of reports and:

• write reports with the intended recipient(s) in mind (e.g., language and vocabulary should be appropriate for the report’s intended audience) while recognising that reports can end up being read by others (e.g., when a test taker provides a signed release to provide another professional with a report).
• write reports in such a way that they can be readily understood by most readers when there are multiple stakeholders (e.g. parents, school, court).
• use language that appropriately reflects the level of confidence or certainty in the interpretation of the test scores.
• avoid psychometric jargon such as ‘sten 8’, ‘surface trait’, ‘latent trait’, and ‘factor score’ unless these are deemed important and are fully explained.
• prepare separate reports when necessary to meet different needs or address different issues (e.g., addressing learning needs for a child versus a referral to a psychiatrist for psychiatric treatment) while ensuring that overlapping information is consistent across reports even though expressed in different ways (e.g. IQ scores and category descriptors).
• inform test takers when more than one report is to be prepared and for what purpose.

Psychologists consider the format and content of the report and:

• ensure that assessment reports always commence with appropriate identifying information including, at a minimum, the test taker’s name, age and/or date of birth as appropriate, date of assessment, and a clear indication of the person (name, job title, profession, organisation) for whom the report has been prepared.
• preface a report with the reason(s) for the assessment including a summary of background events leading to the request and summaries of any previous assessments and their outcomes relevant to the present objective.
• consider the desirability of preparing an outline of the various sources of information on which the report is based (e.g., interview impressions, behavioural observation, reference checks, psychological tests, other written reports) and the names of the tests or instruments that were used, including mention of the particular form or level chosen. Information of this nature may be best presented as an appendix or attachment to the report.
• provide guidance as to what further information (e.g., testing, observational, performance/behavioural) may be required to address the referral question(s).
• ensure that reports contain the essential findings of psychological testing, fully integrated with other sources of information.
• provide test scores in an appropriate format (e.g., standardised) to support the basis for an interpretation or opinion.
• provide findings in response to the referral question and other relevant issues arising from the assessment.
• structure the report around the key objectives of assessment, not around the test findings or the tests themselves.
• ensure that inferences drawn from results are specific to the data obtained and can be supported if challenged.
• only include potentially damaging material (e.g., previous drug use) if this is directly relevant to the purpose of the assessment.
• provide an accurate description of the test used including the edition, and where appropriate, include the acronym in brackets at first mention and used in the remainder of the report.
• avoid conveying the results of psychological testing in terms which might encourage reductionist thinking (type-casting) on the part of the reader.
• outline clearly the advantages and limitations of psychological assessments in order to ensure that end-users of psychological assessment findings (e.g., teachers, employers, medical practitioners) are fully informed.
• give an indication of the approximate time period (e.g., six months, two years) at which follow-up should occur or further testing may be considered and the reasons for this.
• conclude the report with a summary of the major findings as they relate to the assessment brief, and a recommendation or series of recommendations, including the desirability of possible further testing at a later stage.

Example practice errors
• Poor style and clarity in report writing (e.g., making ambiguous statements and having little regard for the reader of the report or recipient of feedback).
• Making statements about test findings that are tentative and undermine the credibility of the report.
• Not reporting the type of comparison (norm) group, thereby increasing the risk that the decision maker may draw an unwarranted conclusion from the results (e.g., ‘below average assertiveness’ could be misleading as it implies a comparison with the general population; ‘below average assertiveness compared to others in leadership positions’ is preferable if the norms are based on leaders).
• Providing psychological test scores in the body of the report without a meaningful interpretation.
• Providing an interpretation of test findings without providing the data upon which it is based.
• Providing a copy of the output of psychological report-writing software annotated or otherwise. This includes the practice of copying text from such outputs and including them in reports. Given these programs utilise only the data that is input and cannot deviate from their algorithms, they cannot be considered to reflect adequate interpretation or integration.
• Providing the test scores on the psychological test proformas/record sheets rather than transferring these to a separate summary sheet.
• Including raw scores in a psychological report.
• Referring to results as ‘IQs’, whether verbally or orally, when in fact only one facet of general intelligence (e.g., verbal reasoning) was assessed.
• Generalising beyond the immediate purpose of the assessment (e.g., a high score on a measure of stress, strain and coping does not necessarily imply clinical depression, anxiety, burnout or general life and/or job dissatisfaction).
• Presenting a blow-by-blow account of the results, whether orally or in writing, without attempting any real synthesis of available information.
• Amending the report to discount, or ‘water down’, the results because the test taker does not agree with the interpretation.
• Creating the impression in the mind of the recipient of the results that a Stanine (or Sten) is a score marked out of 9 (or 10) or failing to make clear that a percentile rank is not a percentage score on a test.
• Providing IQs, either as percentiles or in qualitative terms, without any supporting or contextual information, including characteristics of both the instrument itself and of the person being assessed.

• Providing a summary and/or recommendations which are inconsistent with the general thrust and tenor of the report or do not clearly stem from outcomes of the assessment.

b. Oral Feedback

Psychologists, prior to providing oral feedback:

• observe the same degree of caution in interpreting the results and make the same allowances for departures from standardised administration procedures as when preparing a written report.

• are aware of the limitations of oral feedback by phone and Skype, rather than face-to-face.

• consider the possible effects on a test taker of giving feedback and ensure that the information will be conveyed in a manner that is neither distressing nor unduly optimistic.

• provide test takers with feedback on their results as often as is practicable unless, in the judgment of the user, disclosure is not in the test taker’s best interests and is likely to do more harm than good. This feedback should not compromise the integrity of the test or testing process.

• consider asking the test taker: “What would you like to learn from our feedback session?” or “What would you like to learn about yourself?”

• are mindful that a test taker may not be prepared or ready to hear and understand all of the feedback provided. It is their level of understanding and openness to the information that determines the pace and extent of feedback, not the psychologist’s desire to reveal all to them.

• ensure the test taker understands issues relating to Custody (who retains and stores the test findings), Accessibility (who has access to test findings and under what conditions) and Ownership (who actually ‘owns’ the results). This also relates to the confidentiality and security of results.

Psychologists, when providing oral feedback:

• set the scene by explaining the purpose of the feedback interview, giving an indication of the time it will take, and the assurance that confidentiality (within specified limits) will be maintained.

• ask for permission to take notes, outline the structure of the interview, emphasise that results are not infallible, and stress that ‘making sense of the findings’ is a joint responsibility.

• allow the test taker receiving feedback time to talk about the experience as a prelude to the feedback session itself (e.g., What do they recollect? How do they feel they performed? What did they think of the tests or the testing process? In hindsight, would they have tackled the tests differently if they were to do them a second time?).

• emphasise the essentially self-report nature of personality, behavioural, interests and values inventories and that the results will be inaccurate if the test taker had not been open and honest.

• encourage test takers to question, provide examples, and generally to play an active part in the feedback process.

• avoid the ‘tell-and-sell’ style of giving feedback and the danger of setting oneself up as ‘the expert’.

• emphasise the relative, rather than the absolute nature of the results.

• communicate empathy but maintain objectivity in order to help the test taker understand and accept all the results, the ‘positive’ with the ‘negative’.

• use neutral, non-value-laden descriptors such as ‘very high’ and ‘very low’ in preference to ‘exceptional’ or ‘very poor’ when describing levels of performance on ability tests. When commenting on personality profiles, avoid leaving the test taker with the impression that it is ‘better’ to be at the high (or low) end of any particular scale.
• report the results in terms that are understandable to the test taker (e.g., ‘well above average compared with other Year 11 students’) and refrain from using psychometric jargon (e.g., ‘Sten 8’, ‘Factor H’, ‘second-order anxiety’).

• ensure that recipients of feedback are properly cautioned not to rely solely on their scores when making real-life decisions.

• state percentile ranks only if the basis for these is explained in lay terms and the comparison or normative group is emphasized, recognising the tendency of individuals to think of percentile ranks as percentage scores on a test.

• make linkages between self-report scales and ability scores when commenting on particular aptitudes, interests, and preferences; these often help to ‘soften the blow’ when commenting on below average ability results.

• avoid giving the test taker anything in writing which could be misconstrued (e.g., a copy of his or her personality profile).

• give a summary of the salient findings before closing the feedback session and leave the test taker with some positive messages.

• thank the test taker for their time and cooperation, and remind them, if appropriate, of the next stage in the assessment procedure.

• provide information about how the test taker might follow up should they realise they are unclear about some of the feedback.

Example practice errors

• Failing to think through the consequences of feeding back information to test takers who may react adversely to their results.

• Providing feedback at a level that is not appropriate to the test taker’s level of comprehension.

• Providing too much oral feedback in a session for the test taker to follow and retain the key points.

• Telling people they have ‘failed’, when in reality they have not met the often highly select standards that employers and educational institutions set.

• Providing unrealistic feedback such as telling people they can do anything because they are ‘bright’, ‘motivated’ or ‘well-adjusted’.

• Giving people a copy of a response booklet or a computer-generated report of their results.

• Not being clear at the outset when feedback cannot be provided due to conducting the assessment for a third party such as a court.

2.10 Monitoring effectiveness

While psychologists routinely monitor the effectiveness of their intervention services, they may neglect evaluating the effectiveness of assessment and testing processes.

Maintaining up-to-date knowledge of new developments in the use of particular psychological tests and instruments is an expectation of ethical and professional practice. Where possible, as standard practice, psychologists should also be gathering information about their own testing outcomes, including whether the testing process has adequately addressed the referral question and whether the selected tests and level of detail provided in recommendations and associated reports, responds appropriately to the aims of testing.

The underlying principles in this section are usefulness and value. Psychologists, in providing a psychological service, have an obligation to meet a need and to do so effectively.
Psychologists:
• keep abreast of the professional literature concerning psychological testing including reviews of tests, advances in testing and test instruments, and reports on their validities in different contexts.
• strive to share their experience of using particular tests and to learn through the experience of other colleagues (e.g., through the professional literature, attendance at conferences, establishing or joining a test user support network).
• periodically review the continuing effectiveness of the assessment tools they use questioning whether their preferred tests continue to be the most effective and are based on current theories and approaches to testing.
• monitor changes over time in populations of individuals being assessed (especially in terms of age, gender, educational attainment, culture, physical disability and other factors known to be correlated with performance).
• monitor the use of assessment tools for adverse impacts and the attendant possibility that the test(s) might be unjustifiably biased against particular groups of people.

Example practice errors
• Failure to ensure knowledge and familiarity with current tests and the use of outdated tests without a justification of the purpose for using a superseded version.
• Use of outdated and/or inappropriate norms without justification and without an explicit statement about the potential limitations of the test outcomes.
• Failing to keep abreast of test development (both technical and theoretical) which limits their ability to ensure consideration of the range of assessment processes and tools.
• Using a test that is inappropriate or invalid for the testing purpose (for example with inappropriate levels of item difficulty).
• Using a new version of a test for comparison with performance on an earlier version without ensuring correspondence between the two versions.

2.11 Recognising the different requirements of individuals with disabilities

Psychologists across a variety of settings such as educational, clinical, community, forensic and organisational sectors may work with individuals with a disability. The aim is always to facilitate access to services, including psychological testing. In undertaking psychological testing with people with a disability, psychologists require an understanding of the specific disability in question, of the processes that can enable access to psychological testing, and of person-centred practices.

The underlying principles in this section are access and fairness. People with a disability have a right to equitable service provision that meets their specific needs.

Psychologists:
• consider whether they have the appropriate level of competence to work with a test taker presenting with a disability and refer on if needed.
• access the literature and short reports with regard to testing individuals with disabilities.
• work within a person-centred, psychosocial framework.
• adopt a strength-based enablement approach to testing.
• consider the suitability of testing and investigate the availability of measures for the specific disability group being assessed.

1 The Convention on the Rights of Persons with Disabilities defines persons with disabilities as those people who have persistent physical, mental, intellectual or sensory impairments that, in the context of a range of barriers (e.g., physical, economic or attitudinal), may limit their ability to participate fully in society and to do so in a manner equal to that of a person without a disability.
seek to determine whether appropriate accommodations can be made where there is no appropriate measure for the specific population being assessed, and make clear the limitations of the measure and the accuracy of any resultant interpretation or judgment.

Example practice errors

- Taking on an assessment for someone with a specific disability for which the psychologist does not have particular expertise rather than referring on.
- Interpreting at face value a test or subtest measuring a construct in a group for which the test was not intended and where the person's disability will have a negative impact on performance.
- Assessing individuals on a measure that is not suitable for them and drawing conclusions, including in some cases a determination that the test taker is not assessable or is functioning at a low level.
- Making appropriate accommodations but failing to adequately report these and their possible impact in the report.
- Confusing accommodations with modifications to a test.
- Being overly focused on a test taker's limitations rather than on their strengths.

2.12 Recognising the different requirements of individuals from different ethnic groups

There is increased understanding that culture and ethnicity are factors that impact on the provision of services, including psychological testing. Psychologists working with different ethnic groups work within a sociocultural framework and attend to ethnic, cultural and historical factors. This includes consideration of an individual's language, cultural values, beliefs, rules and expectations, as well as the impact of past experiences. For psychologists working with Aboriginal and Torres Strait Islander people, an understanding of the historical experience and how past events continue to impact on indigenous Australians is crucial. It is expected that psychologists working with indigenous people have completed cultural competence training.

The underlying principles in this section are respect and non-discriminatory behaviour. Avoiding discrimination of people because of personal characteristics such as age, religion, sexuality, ethnicity, gender or disability is an ethical obligation under the APS Code of Ethics.

Psychologists:

- understand how the characteristics of a person such as culture, language, and religion can impact on the suitability of a psychological test and the applicability of the norms of any particular measure.
- understand how westernised concepts (e.g., informed consent) and interpersonal communication styles (e.g., direct questioning, eye contact) may not be appropriate for working with some cultural groups.
- investigate the availability of measures for the specific population being assessed.
- seek to determine whether appropriate accommodations can be made where there is no appropriate measure for the specific population being assessed, and make clear the limitations of the measure and the accuracy of any resultant interpretation or judgment.
- are mindful of the impact of any previous experiences such as trauma or displacement, and the effect it may have on the person's readiness to be assessed.
- are aware of limitations in competence in working with particular groups and refer to a professional with the expertise required to conduct the assessment.
- reflect on any personal attitudes, values or biases that may have a bearing on the testing process.

Accommodations are changes made to processes or tools to allow individuals that are disadvantaged due to language, culture or disability, to take part in the assessment while measuring the same construct.
• avoid the use of interpreters to support psychological assessment where possible and refer the test taker to
a psychologist who is a fluent speaker of the language used by the test taker.
• use an accredited interpreter when a psychologist fluent in the test taker’s language cannot be found.

Example practice errors
• Failing to evaluate the level of understanding of the English language prior to assessment.
• Not considering cultural aspects broader than language proficiency.
• Taking on an assessment for someone from a population group for which the psychologist does not have
particular expertise rather than referring on.
• Interpreting at face value a test measuring a construct in a group for which the test was not intended where
the cultural values in the test will impact on the individual’s performance.
• Assessing individuals on a measure that is not suitable for them and drawing conclusions, including in some
cases a determination that the individual is not assessable or is functioning at a low level.
• Making appropriate accommodations but failing to adequately report these and their possible impact in
the report.
• Confusing accommodations with modifications to a test.
• Using an interpreter who is a family member or friend of the test taker.

2.13 Recognising the different requirements of online testing and the
digital presentation of tests

Advances in the use of technology have led to major developments that have impacted on psychological
testing. These include the administration and taking of tests online; the use of digital devices such as tablets
for the administration of what were traditionally regarded as pencil and paper tests; and in some cases more
automated scoring and the calculation of standardised scores.

Psychologists using online testing and digital technologies, while ensuring appropriate practice principles are
followed as expected in traditional testing methods, must recognise and take account of differences that occur.
For example, for some online testing can be conducted remotely, with the psychologist emailing a web link to
the test taker. In other instances online or digital format tests (e.g., using a tablet or computer), still require that
they be undertaken in a one on one format with the psychologist still administering the test to the test-taker.
With the move of many tests to digital format psychologists need to develop competence in administering such
tests using digital platforms. The increasing popularity of Mobile Internet Testing (MIT) requires psychologists
to be alert to the medium or platform by which test takers undertake testing given the likely variation in testing
environments, and technical issues such as display size.

The underlying principles in this section are accessibility and integrity. While online and digital testing can
provide many advantages over paper and pencil tests such as easier access and efficiency, there are also
challenges such as the authentication of test takers, test security and test taker engagement and feedback.
Psychologists facilitating online and digital testing should ensure they are informed about the professional and
ethical considerations and the consequences of these.

Psychologists:
• use only those online tests that have adequate psychometric properties.
• ensure the security of test material and test data collected using online or digital formats including adoption
of de-identification and encryption practices.

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3 For further information on online testing see http://www.psychology.org.au/Assets/Files/Online-psychological-testing.pdf which
provides some examples of good online testing practices as well as identifying issues for consideration.
• ensure that any data storage linked to online and/or digital testing meets all requirements for security and confidentiality.

• collect sufficient information about the test taker prior to undertaking testing, preferably through other communication mediums (e.g., secure videoconferencing) if the test is to be undertaken remotely, in order to determine the appropriateness of a particular test to the population group from which the test taker comes and any information required to meet the requirements of the broader assessment.

• instruct the test taker on the conditions under which a test should be undertaken if the test is to be completed remotely, including the establishment of a test environment that minimises distractions and interruptions.

• understand the risks of unsupervised test completion and have a method for test taker authentication and seek to minimise practices that may invalidate the results.

• in general, encourage the test taker to undertake the testing on a device with a relatively large display, rather than, say, a smartphone. (This applies particularly to cognitive ability testing).

• seek confirmation from test takers that they will comply with the requirements of the test (e.g., undertake the testing independently and in compliance with instructions).

• inform the test taker of the process for receiving feedback and the mechanism by which this will be achieved, particularly if the test is being undertaken remotely.

• document their communication with the test taker including all online instructions, informed consent and further dialogue.

• prevent access to test material and test data by non-psychologists and unauthorised users.

• store a copy of the test results separate to the online or digital system (either hard copy or electronic).

• recognise that skills for administering traditional tests do not all transfer directly to the administration of online and digital testing.

• endeavor to keep abreast of the rapid developments in online and digital based testing.

Example practice errors
• Failing to have a process for confirming informed consent.

• Undertaking interpretation of data from an online test in isolation of any supportive information (e.g., observations, history, third-party corroboration).

• Not having a mechanism to provide feedback, or refusing to provide feedback, to test takers of online tests or instruments.

• Not considering the technical abilities of the test taker and how these may impact on the results of online testing.

• Forming judgments about a test taker solely on the results of an online test without any non-test information to support decision-making.

• Assuming familiarity with traditional tests is sufficient to move to using the digital format.

• Assuming that the online or digital test application is a sufficiently reliable platform for storing client information.

• Failing to recognise the potential for differences between test taker performance across the various digital platforms: pc/mac; tablet; gaming console; smartphone. (This applies in particular to timed cognitive ability testing).

• Assuming the test taker has undertaken the tests under optimal, distraction free conditions.
2.14 Maintaining confidentiality and security of test material

Confidentiality is a cornerstone of psychological service provision and most psychologists are acutely aware of their obligation to protect the confidential information of those to whom they provide a service. In addition, under the Australian Privacy Act a person has a right to request their personal information and a psychologist must generally comply with the request, unless one of the exceptions applies. This right does not however, extend to access to protected psychological test material that may have been used as part of the psychological service. Psychologists have an ethical and professional obligation under the APS Code of Ethics and agreements formed with test publishers and suppliers when purchasing psychological test material, that they protect access to this material by non-psychologists. These restrictions focus on ensuring that the integrity of the test material is not compromised for future test use and the test information is not misused, both of which have the potential to cause harm to the general public.

The underlying principle in this section is professional diligence. Even where a legal request under legislation for access to psychological material has been made, psychologists should seek to prevent or limit access. For further guidance see https://www.psychology.org.au/Assets/Files/Managing-legal-requests.pdf

Psychologists:

• obtain informed consent from the test taker prior to assessment, a requirement that should also be extended, as far as is practicable, to persons with disabilities.

• explain the limits of confidentiality to the test taker prior to giving the test and disclose the names and/or positions of all other people who may be provided with a copy of the report.

• revisit consent whenever necessary and obtain consent before releasing the results to interested parties other than those initially specified.

• ensure the anonymity of test takers whose results are stored in a data base (e.g., by assigning ID codes and separating identifying information from the data).

• mark all documents containing results as ‘Confidential’ or ‘In Confidence’ and place them in a file/location where unqualified people cannot gain access.

• ensure that all test materials are fully accounted for at the end of a test session.

• keep materials stored under lock and key, or digital equivalent, while not in use. For further information on storing test material in electronic format see https://www.psychology.org.au/Assets/Files/16APS-PP-B-RTPEF-P1.pdf

• retain test material as required (whether in electronic or hard copy) for a minimum of seven years, or in the case of a minor, seven years after they attain the age of 18 years, in order to satisfy ethical and legal requirements. In instances where results could become legal evidence, it is advisable to keep records for longer than seven years.

• provide information to colleagues and others to promote understanding of the importance of the security of psychological tests and test material.

• make materials available only to persons who are qualified to use them.

• respect the confidentiality of results by limiting access to these only to those people who have a legitimate need to know and are qualified to access them.

• in receipt of a legal request for test material, explain their obligations to protect the material and seek alternative solutions to assist the court (for further information see https://www.psychology.org.au/Assets/Files/Managing-legal-requests.pdf).

• take appropriate steps to maintain security of test materials upon leaving an employer (e.g., entrusting them to another psychologist; leaving a note specifying the user restrictions that apply; negotiating a basis for assuming ownership of the materials; donating to a university test library).
• ensure there is a ‘succession plan’ that protects any recorded psychological test results including databases containing potentially identifiable personal results (e.g., handover of materials to qualified colleague/s, and/or a documented practice contingency plan).

• dispose of old test materials in a secure manner (e.g., secure shredder or returning to the publisher or supplier).

Example practice errors
• Plotting or tabulating test results of workshop participants without the consent of those involved.
• Cajoling reluctant workshop participants into sharing their test results with the other participants.
• Failing to account for all booklets before allowing test takers to leave the test room.
• Releasing results without obtaining the prior consent of the individual concerned.
• Releasing test material following a request made under the Australian Privacy Act.
• Releasing test material under a subpoena without communicating the necessary protection of the test material.
• Discussing results with a third party without consent from the test-taker or de-identification, even in the context of supervision.
• Storing test material and/or test results in a location shared by non-psychology team members.
• Purchasing a psychological test or inventory for a person not qualified to use the test.
• Permitting access to a psychological test or instrument to a person not qualified to use it.
• Asking particular individuals (e.g., students) to score a test taken by their peers.

2.15 Adhering to appropriate professional and ethical principles

Psychological testing raises ethical and professional issues specific to the testing process (e.g., competent test use, independence in all stages of testing) as well as the general ethical principles that apply to all psychology services (e.g., ensuring informed consent, confidentiality, non-discrimination). Psychological testing and reporting may be scrutinised and challenged by test takers, other professionals and courts. This is appropriate given the important decision-making processes that result from the testing process and the impact that it can have on people’s lives. This requires the psychologist to fully understand and accept the responsibilities associated with psychological testing and to ensure ethical and professional testing practices.

The underlying principle in this section is adherence to ethical standards. The role of formal psychological testing is a key psychology activity and a crucial and valued aspect of psychology work and should not be undertaken by anyone without the necessary commitment that underpins best practice principles.

Psychologists:
• are informed about the laws which directly or indirectly affect the use of tests (e.g., Health Practitioner Regulation National Law; Freedom of Information; Equal Opportunity, anti-discrimination legislation, privacy legislation and health records acts).
• provide in their written reports the information upon which their interpretation is based including relevant test scores and any specific methods of analysis undertaken.
• identify resources available to them for assisting members of the general public who may have concerns about psychological tests and reports (e.g., websites designed to provide job applicants with practice runs before taking tests).
• consider the ways of dealing with problems that might occur as a result of prior exposure to test items, the advantages and disadvantages of using parallel, alternate, or equivalent forms of a test, and the likely time period over which a test-based decision (e.g., clinical diagnosis, personal or career development advice, job suitability) can reasonably be expected to remain valid.
• are aware of the problems of using self-report inventories, notably the issues of impression management (e.g., faking good/social desirability response set), acquiescence, random responding, the normative ipsative/forced-choice debate, and the production of interpretive reports based on generalities which could apply to almost anyone (sometimes known as the ‘Barnum effect’).

• maintain objectivity in the face of persuasive advertising promoting particular tests and are skilled at appropriate selection of tests to meet the assessment requirements.

• take part in continuing education in the academic underpinnings of psychology and psychological testing.

• are engaged in learning about new research developments in the area of psychological testing and incorporating these into practice.

• keep up-to-date with developments in the broad contextual domains in which testing occurs (e.g., education, preventive medicine, psycholinguistics, human resource management). Testing does not occur in a vacuum; it is not possible to integrate results with other sources of information if the user lacks familiarity with the broader context in which testing is performed.

• retain the test form as part of the client file, including the protocol or detailed summary sheet for online tests, to ensure accountability and allow for checking of scores and scoring practices if necessary.

• respect copyright laws and obligations to test suppliers by using original booklets, answer sheets and other materials and do not photocopy such material without the written permission of the publisher/author, unless the materials are explicitly and intentionally reproducible or meet fair-use conditions.

• ensure that any scanning of test protocol or other test material meets the requirements of the test supplier.

Example practice errors

• Using measures that have not been adapted, standardised, normed, and/or validated for Australian use without justification.

• Failing to appreciate the impact of the item or response format in a self-report questionnaire (e.g., Test takers with Asperger Syndrome often prefer a normative versus forced-choice format.).

• Photocopying copyrighted test material.

• Continuing to use a test, rather than purchasing another test, even though the literature has demonstrated considerable limitations.

• Succumbing to pressure (e.g., from an employer or test taker) and changing test scores.
Resources

American Psychological Association

Australian Psychological Society
https://www.psychology.org.au/psych-testing/

Australian Psychological Society Test and Testing Expert Group
http://www.psychology.org.au/psych-testing/TTEG/

British Psychological Society’s Psychological Testing Centre
http://ptc.bps.org.uk/

European Federation of Psychologists Association
http://www.efpa.eu/professional-development

International Test Commission
https://www.intestcom.org/page/5