TEACHERS' GUIDE TO ASSESSMENT

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TEACHERS' GUIDE TO ASSESSMENT

In 2011, an ACT Cross Sectoral Assessment Working Party was established to develop a best-practice guide to assessment for teachers, aligned to the intent of the *Australian Curriculum*. The resulting publication was the *Teachers' Guide to Assessment.*

The *Teachers' Guide to Assessment* was updated in 2016 to align with the ACT's continued commitment to implementing the *Australian Curriculum* and to reflect current research and evidence-based assessment practices.

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INTRODUCTION

Research demonstrates that quality assessment can have a greater positive impact on student learning than any other intervention.[1] Data shows that all students benefit from quality assessment practices.[2]

'Assessment: from the Latin root assidere, to sit beside another.'

The primary purpose of assessment is to promote learning. Assessment provides evidence of how learners are progressing according to defined standards throughout a period of learning, as well as achievement at the end of the learning period. Willis and Cowie, refer to assessment as a 'generative dance' wherein assessment is:

re-imagined as a dynamic space in which teachers learn about their students as they learn with their students, and where all students can be empowered to find success and in turn develop learner agency.[3]

Quality assessment includes both the cognitive and affective domains. It is informed, purposeful, authentic, valid and reliable.

National Frameworks for Schools and Teachers

The Australian Professional Standards for Teachers 'define the work of teachers and make explicit the elements of high quality, effective teaching in 21st century schools that will improve educational outcomes for students'.[4] Standard 5 *Professional Practice* relates to a teacher's ability to 'assess, provide feedback and report on student learning.'

This standard, and its five focus areas, assess student learning:

5.1   Provide feedback to students on their learnings

5.2   Make consistent and comparable judgements

5.3   Interpret student data

5.4   Report on student achievement

5.5   highlight the importance of building assessment expertise in our teaching community.

The National School Improvement Tool (NSIT) highlights elements of good practice in relation to assessment as follows:

• specific targets should be set and progress evaluated at key points throughout students' schooling

• schools should engage in the collaborative analysis of achievement data in order to identify starting points, monitor progress, and inform school-based decision making

• communication with parents and carers is crucial in providing information about where students are in their learning.

Australian Curriculum

The implementation of the *Australian Curriculum* in the ACT provides an opportunity for teachers to develop a deeper understanding of the nature and purpose of assessment, and to gain confidence in their assessment practices.

The *Australian Curriculum* Achievement Standards are the reference point for assessing and reporting on students' learning from kindergarten to year 10 in all ACT schools. The Achievement Standards:

• describe the expected learning and progress for students who have been taught the *Australian Curriculum*

• include the depth of conceptual understanding, sophistication of skills, and the essential knowledge students are expected to acquire

• present an ordered sequence of learning from Kindergarten to Year 10, with a clear and unambiguous progression between years or bands.

In the ACT, students are graded each semester on the depth, breadth and range of their knowledge, skills and understanding, relative to the expected Achievement Standard and content studied. Levels of depth and breadth are reflected in a common grading tool known as the A-E scale.

Teachers' on-balance judgments rely on the quality and variety of assessment tasks students complete over time. The emphasis is on providing a range of assessment opportunities for students to demonstrate their knowledge, skills and understanding.

Quality Assessment for the 21st Century

In his paper, *Reforming Educational Assessment: Imperatives, principles and challenges* (2013)[5] Professor Geoff Masters AO suggests that the frameworks for assessing students' learning are undergoing fundamental transformation.

Three developments underpin this transformation:

- *new thinking*

- *new metrics*

- *new technologies*.

New thinking relates to how assessment monitors learning. The fundamental purpose of assessment is: 'to establish and understand where learners are in an aspect of their learning at the time of assessment'.[5] Assessment clarifies what the learner knows, understands or can do, and highlights what is needed to progress the learner to the required standard of achievement at the end of the year or band of development.

New metrics represents assessment of a broader range of skills and attributes than those addressed by most contemporary assessment practices. These skills and attributes are referred to in the *Australian Curriculum* as General Capabilities.

New technologies have the potential to transform assessment practices through more personalised, interactive and intelligent forms of evidence gathering, as well as by providing more immediate, high-quality feedback to learners. For example real-time interactions in online learning environments.

These three developments, together with advances in our understanding of learning itself, are transforming school assessment practices.

New thinking in quality assessment

The nature of assessment influences what is learned and the degree of meaningful engagement by students in the learning process[6].
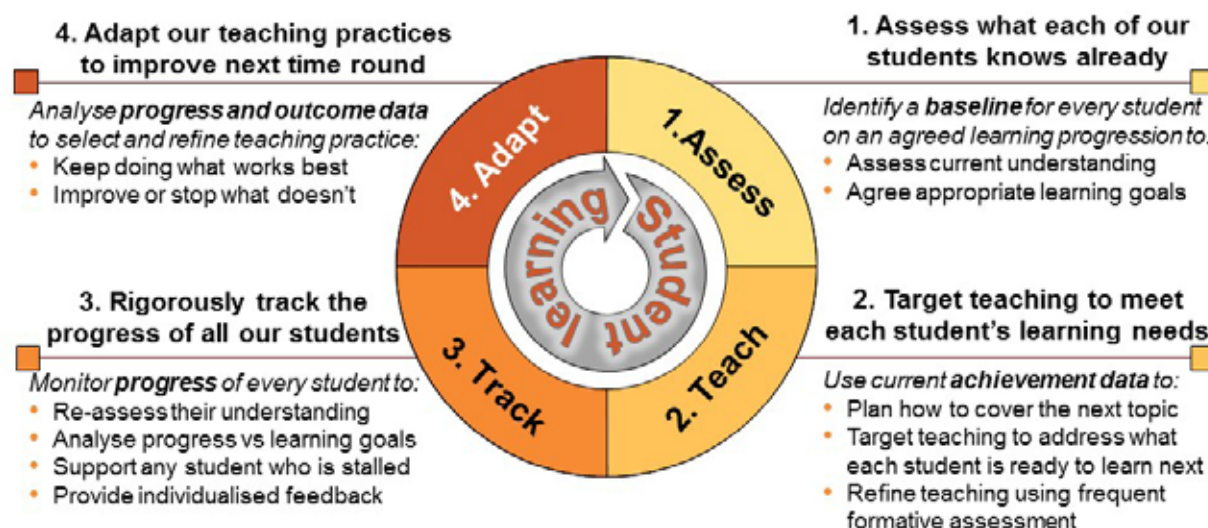
Quality assessment:

- allows all students to achieve

- is considered during the design of the teaching and learning task

- is integral to the teaching and learning cycle

- allows opportunities for students to show the extent of their learning

- shows performance and individual progress

- allows measurement of learning gain

- informs, monitors and progresses learning

- is designed with the learners, the learning goals, curriculum outcomes and the teaching in mind

- has strong validity and reliability

- has inter-rater reliability when evaluated

- shows the benefits of the program and the curriculum through student growth.

In *Targeted teaching: How better use of data can improve student learning*,[7] Goss and Hunter indicate that a rigorous use of evidence supports the process of formative assessment to improve teaching and learning.

Rigorous use of evidence supports a positive feedback loop that can improve teaching and student learning

GRATTAN Institute

4. Adapt our teaching practices to improve next time round

Analyse progress and outcome data to select and refine teaching practice:
- Keep doing what works best
- Improve or stop what doesn't

1. Assess what each of our students knows already

Identify a baseline for every student on an agreed learning progression to:
- Assess current understanding
- Agree appropriate learning goals

3. Rigorously track the progress of all our students

Monitor progress of every student to:
- Re-assess their understanding
- Analyse progress vs learning goals
- Support any student who is stalled
- Provide individualised feedback

2. Target teaching to meet each student's learning needs

Use current achievement data to:
- Plan how to cover the next topic
- Target teaching to address what each student is ready to learn next
- Refine teaching using frequent formative assessment

Student learning — 4. Adapt, 1. Assess, 2. Teach, 3. Track

Reproduced with permission from Goss et. al., *Targeted teaching: how better use of data can improve student learning*, Grattan Institute, Figure 5

Teachers should start by developing a clear understanding of where each student is at in his/her learning. Though assessment, teachers identify gaps in knowledge, set learning goals and gauge the level of support needed to ensure all students achieve.

Using evidence-based teaching and learning strategies, teaching is then targeted to address what each student is ready to learn next. Teachers and schools track students' progress over time against both learning goals and grade-level expectations. Finally, the evidence of learning collected at each stage is used to enable teachers to evaluate and adapt their practices to ensure that the needs of all students are being met.[8]

Formative assessment strategies encourage students to reflect on and monitor their own learning processes through feedback and opportunities to improve and set future goals.

Seven principles of quality feedback:[9]

1. Clarify what good performance is

2. Facilitate self-assessment

3. Deliver high quality feedback information

4. Encourage teacher and peer dialogue

5. Encourage positive motivation and self-esteem

6. Provide opportunities to close the gap

7. Use feedback to improve teaching

New metrics in quality assessment

General Capabilities play a significant role in the *Australian Curriculum* in equipping young Australians to live and work successfully in the 21st century.

Capability encompasses knowledge, skills, behaviours and dispositions. Students develop capability when they apply knowledge and

skills confidently, effectively and appropriately in complex and changing circumstances, at school and in their lives outside school.[9]

Teachers are expected to teach and assess General Capabilities to the extent they are incorporated within each learning area.

New technologies in quality assessment

Learning analytics make data an integral part of planning, designing and assessing learning experiences.[10]

Schools accumulate comprehensive data about students and the subjects studied. This data, which may include academic performance, national and external test results, student wellbeing, classroom observations and attendance, is often stored in separate domains.

School Data Analytics (Learning Analytics) is an emerging field of study that focuses on using digital technologies to provide valuable real-time information directly to educators and school leaders. Learning Analytics merges, manipulates and analyses the data schools store to produce valuable information to support decision making at all levels, spur curriculum innovation and pedagogical change, prompt proactive academic intervention and ultimately optimise learning outcomes for students.

A school data analytics system allows school leaders and teachers to:

• use educational data to effectively support strategic planning and quality teaching

• gain insights into student and school performance

• compare and contrast school academic results with results obtained from external providers such as NAPLAN, ICAS, and ACER

• publish rich academic information and analysis for parents and students.

Information on student achievement helps to inform decisions about learning and teaching. Used wisely, data is diagnostic; it suggests questions to be asked and informs decisions that affect student learning and teacher pedagogy.

Collaborative Assessment of Student Work

When teachers collaborate to plan, design and deliver assessment; and have opportunities to compare and discuss students' work, they improve their understanding of learning goals and assessment criteria; and develop greater insight into where students are at in their learning. All assessment information about students should form a continuous feedback loop to the teacher.[11]

This thinking applies to school leaders. Student assessment information tells leaders what teachers in their school need to learn to make a difference to student learning outcomes.[12]

To develop assessment knowledge and expertise amongst ACT teachers, schools are encouraged to:

• provide opportunities for teachers to collaborate and participate in professional dialogue and collegial work focusing on assessment practices

• facilitate conversations about student work in relation to the *Australian Curriculum* achievement standards and use the annotated student work sample portfolios available on the *Australian Curriculum* website

• provide opportunities for teachers to develop their understandings of cross-curriculum priorities and general capabilities, and to work collaboratively to include these in assessments that enrich and expand their knowledge of the capabilities and progress of each learner

• develop teacher understanding and use of formative assessment practices to inform their own teaching practice

• collect and analyse data about teacher effectiveness from student work samples and learner feedback

• develop the efficacy of teachers to utilise new technologies that gather learner data in real time and provide instant feedback, mechanisms

• develop accountability systems to ensure teachers understand and utilise evidence-based and standards-referenced assessment practices.

Appendix 1: Range of assessments - sub-types and strategies[13]

Term	Definition	Examples
Summative assessment	Summative assessment is assessment that is used to signify competence or that contributes to a student's grade in a course, module, level or degree. Summative assessments are useful tools for reporting student progress to parents, school authorities and outside authorities such as tertiary institutions. Grades are usually an outcome of summative assessment. Grades indicate whether the student has a satisfactory level of knowledge or skill gain – Is the student able to effectively progress to the next part of the class? To the next course in the curriculum? To the next level of academic standing? *(O'Farrell, 2013 – Dublin Institute of Technology)*	• Examinations (major, high-stakes exams) • Final examination (a truly summative assessment) • Term papers (drafts submitted throughout the semester would be formative assessment) • Projects (project phases submitted at various completion points could be formatively assessed) • Portfolios (could also be assessed during its development as a formative assessment) • Performances • Student evaluation of the course (teaching effectiveness)
Formative assessment	Formative assessment is an integrated part of teaching, learning and assessment. The iterative nature of formative assessment provides opportunities to develop more nuanced views about how students learn and adapt. Formative assessment provides feedback and information during the instructional process, while learning is taking place. A primary focus of formative assessment is to identify areas that may need improvement. Formative assessment focuses on the process toward completing the product. Once the project is completed, no further revisions can be made. If, however, students are allowed to make revisions, the assessment becomes formative, wherein students can take advantage of the opportunity to improve. *(Northern Illinois University, Faculty Development and Instructional Design Center)*	• Observations during in-class activities including observations of students non-verbal feedback during lecture • Homework exercises as review for exams and class discussions • Reflection journals that are reviewed periodically during the semester • Question and answer sessions, both formal (planned) and informal (spontaneous) • Conferences between the instructor and student at various points in the semester • In-class activities where students informally present their results • Student feedback collected by periodically answering specific questions about the instruction; and their self-evaluation of performance and progress

Term	Definition	Examples
Diagnostic assessment	Diagnostic assessment can help identify students' current knowledge of a subject, their skill sets and capabilities, and to clarify misconceptions before teaching takes place. Knowing students' strengths and weaknesses can help teachers plan what to teach and how to teach it. *(Northern Illinois University, Faculty Development and Instructional Design Centre)*	• Pre-tests (on content and abilities) • Self-assessments (identifying skills and competencies) • Discussion board responses (on content-specific prompts) • Off-level assessments
Curriculum-based assessment (CBA)	Curriculum-based assessment is a type of formative assessment that allows students to demonstrate their level of skills along a continuum. A specific level curriculum-based assessment covers all the components in a specific skill. The information gathered can reveal exactly where a student needs to be placed in the teaching sequence. *(NSW Centre for Effective Reading)*	
Curriculum-based measurement (CBM)	Curriculum-based measurement is used to measure student progress towards mastery of specific skills. It is sometimes called progress monitoring. Student progress can be monitored using short assessment tasks or probes at regular intervals to: • document progress towards a goal • identify students who are not demonstrating adequate progress • record performance until a set criterion is achieved • demonstrate the effectiveness of the teaching program. *(NSW Centre for Effective Reading)*	
Performance-based assessment	Performance-based assessment is a way for students to demonstrate knowledge, skills and understanding. Performance-based assessment measures how well students can apply or use what they know, often in real-world situations. *(edutopia.org)*	A performance-based assessment may require a student to: • make something • produce a report • give a demonstration.
Portfolio assessment	A portfolio is a collection limited to only the work that best serves the portfolio's purpose, rather than a collection of all of a student's work. The pieces contained in a portfolio are carefully and deliberately selected.	• visual arts portfolio • drama diary • TAS portfolio • science journal
Continuous assessment	Continuous assessment usually involves a series of tasks that are individually assessed. It may be appropriate to add a final assessment to continuous assessment. Continuous assessment is best used when there are several distinct module learning outcomes which are achieved at definable stages during the module. *(O'Farrell, 2013 – Dublin Institute of Technology)*	Diagnostic tests may be used as continuous assessment e.g. • PAT tests • maths and science unit tests.

Term	Definition	Examples
Computer-assisted assessment	Computer-assisted assessment is a broad term for the use of computers in the assessment of student learning. Computer-assisted assessment is a fast and efficient way to provide immediate feedback to the learner, and to save time on marking. It is typically formative, in that it helps students to discover whether they have learned the intention. *(O'Farrell, 2013 – Dublin Institute of Technology)*	Various other forms exist, such as Computer-Aided Assessment, Computerised Assessment, Computer –Based Assessment (CBA) and Computer-Based Testing (CBT)
Online assessment	Online Computer-Based Assessment has existed for a long time in the form of Multiple Choice Questions (MCQ's). Computer-Based Assessment is commonly directly made via a computer, whereas Computer-Assisted Assessment is used to manage or support the assessment process. *(Sliney and Murphy, 2011)*	many diagnostic assessment tools may be used as online assessment e.g. • PAT maths and science • PAT Reading.
Peer assessment	In the context of student learning, peer assessment is used to evaluate other students' work, and to give and receive feedback (Wilson, 2002). With appropriate training and close moderation, it is possible that students can play a role in summative assessment, gut generally peer assessment works best in formative assessment where students give each other feedback on each other's work. Performance and attitude can be evaluated with peer assessment. *(O'Farrell, 2013 – Dublin Institute of Technology)*	Assessment tools for this type of evaluation might include sentence completion, Likert scales, checklists or holistic scales.
Self-assessment	With self-assessment, students check their work, revisit assignment drafts and texts, and research and reflect upon their past practice. Care is needed to teach the student to make judgements on what was actually achieved rather than what was 'meant'. But once mastered, in addition to judging one's own work, the concept of self-assessment develops skills in self-awareness and critical reflection. Many of the benefits of peer assessment apply to self-assessment. *(O'Farrell, 2013 – Dublin Institute of Technology)*	Assessment decisions can be made by students on their own essays, reports, presentations, projects, dissertations, learner logs, portfolios, etc.
Small group assessment	Group assessment occurs when individuals work collaboratively to produce a piece of work. The advantage of group work for the assessor is often that the burden of marking many individual pieces of work is significantly reduced, as well as the educational justification that collaboration is an important generic life skill that education should be developing in its students. The key disadvantage of this form of assessment is evaluating the individual student's participation and performance within the group task. *(O'Farrell, 2010 – Dublin Institute of Technology)*	

Term	Definition	Examples
Standardised assessment	Standardised or norm referenced assessments assess and report a student's achievement in comparison to other students. For example – a standardised assessment may be used to determine whether or not a student has a complex reading difficulty. Standardised assessments are created by professional agencies and use the same materials and administration procedures for all students. *(NSW Centre for Effective Reading)*	For example: • AGAT • MYAT • CoGAT • OLSAT • ICAS Competitions
Criterion based assessment	Criterion-based assessment evaluates a student's performance against specific observable and measurable criteria. A criterion for assessment explains the relationship between how well a student answers the set questions or performs set task and the mark and grade they are given. Whereas learning outcomes describe what a student is expected to do, assessment criteria describe how well they should be able to do it to obtain a particular grade. *(NSW Centre for Effective Reading)*	
High stakes assessment	High stakes assessment comes in many forms. It may be used for a wide variety of purposes but generally carries a significant consequence.	For example: • Select entry school admission exams • Year 12 exit exams/ assessments • University entrance exams
Pre-assessment	With a pre-test, an instructor can determine what the students need to learn and then help the students focus on the pieces of the instruction that have not previously been learned. A pre-test might be given before a lesson starts or as a way to gain students' attention and provide them with the objective(s) of the lesson. Pre-tests may be viewed as diagnostic, in some cases as summative and even as formative (if returned to, or discussed with, the student). In no circumstance should the results of a pre-test be included in an overall summative marking scheme.	Outcomes-based tasks focused on end of unit expectations e.g. 'with the end in mind'.
Post-assessment	By assessing outcomes, the teacher has more information about learning processes. Items on a post-test should differ from the items on the pre-test but be aligned to the same outcomes. Assessment at the highest level should show a transformation of learning from the pre-test to the post-test in new scenarios.	Aligned to the pre-assessment outcomes (both content and skills).

Acronyms

ACER   Australian Council for Educational Research

AGAT   ACER General Ability Tests

ICAS   International Competitions and Assessments for Schools

NAPLAN   National Assessment Program - Literacy and Numeracy

PAT   Progressive Achievement Tests

TAS   Teacher-Assessed Student

Notes

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