

# Exploring effectiveness and rationale of different assessment types

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## Abstract

This paper explores issues surrounding the effectiveness and rationale of use of summative and formative assessment. Summative assessment is effective for informing third parties of student achievement in comparable methods. However this creates high-stake pressures, which can have negative influences on student performance. Formative assessment is generally perceived as effective for developing students as lifelong learners, the variations in literary definitions and assessment design guidelines result in confusing implementation and effectiveness. To alleviate issues of effectiveness and comparability, an integration of summative and formative assessment may produce more idealistic assessment design parameters.

**Keywords:** *effective assessment, formative, summative, assessment design, rationale, effectiveness*



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## Summative Assessment

Summative assessment is usually designed as a summary of students' descriptive content knowledge at the end of units, years or schooling (Crooks, 2011). The results may be used to inform students' of their progress, however this information is better suited for third parties such as national policy makers, future employers and tertiary institutions. The third party use is a controversial rationale for maintaining summative assessment in education, as some believe the information is unreliable and of low validity (Harlen, 2009). Dufaux (2012) argues while the standardisation from these en masse assessments is important for qualification, they do not provide a holistic insight into students' capabilities due to the high-stakes pressure influencing performance. However Dufaux's (2012) argument is based on the assumption that summative assessments are a valid source of information; a perspective Black, Harrison, Hodgen, Marshall & Serret (2010) queries. With the standardisation of summative assessment, Black et al. (2010) found teacher's attention to the validity of assessment was undermined by the assessment regimes. Crooks (2011) supports Black et al. (2010) conclusion and adds New Zealand contextual evidence to the perspective. Crooks (2011) recognises the distrust in teacher's professional judgements regarding validity, as this is generally reflected in political and media criticism.

In assessing the political rationale for national summative assessment, it appears to be logical – the need for

standardisation to illustrate international competitiveness. However with validity criticism from Black et al. (2010), literature now questions the ability of New Zealand to truly reach national targets like '85% NCEA Level 2 achievement' for secondary schools (Parata, 2012). Crooks (2011) adds to the query by highlighting schools' strategic response to such targets. Due to the high-stakes pressure of schools being accountable for student achievement, schools encourage and discourage students to participate in certain academic pathways; thereby hindering future achievement possibilities (Crooks, 2011). This is strong evidence for the invalidity of national summative data, not to mention the strong influence schools are having on individual achievement (Looney, 2009; Rosenkvist, 2009).

However validity is not the only concern for national summative achievement influences, the practice-policy gap regarding pedagogical values of the New Zealand education system is also impacting the development of student learning. The policy encouragement from recent documents (Assessment Reform Group, 2002; New Zealand Curriculum, 2007) state education leaders and policy makers value assessment as a tool for students' lifelong learning development through formative assessment. However with the aforementioned pressures of targets, Crooks (2011) is concerned for the genuine implementation of these values beyond the literature.

With these criticisms in mind, it becomes challenging to see the importance of summative assessment. Therefore it appears the use of summative assessment should not be focused to influence

students' learning, but should supply summarised information of students' content knowledge to concerned third parties. To influence student learning the alternative, *assessment for learning* is generally accepted as an effective pedagogy.

## Formative Assessment

Formative assessment currently has ambiguous definitions. Literature agrees it is assessment with the intention to help learners improve content knowledge and/or skills. However, one of the factors attributing to the confusion surrounding formative assessment is the definition of 'learners' improvement. Authors including Harlen and James (1997) suggest learners' improvement refers to the individual student developing knowledge acquisition skills, social and emotional maturity and the development of cognitive processing skills. Thereby, taking a holistic approach to learner development there is a need to be conscious of the influence education has on this. However the practical implementation of this idea varies; this is Bennett's (2011) concern for the impacts and future of formative assessment in education. Few have attempted to define the practical implementation; Wiliam (2011) provides a matrix with a focus on students, peers and teachers working to facilitate learning development.

While this is a clear explanation, the Assessment Reform Group (2002) have their own definition of formative assessment as "Assessment for learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to be, and how to get there." With variations in definitions throughout literature it is clear to see the source of Bennett's critique. From varied definitions and understandings of formative assessment, Bennett (2011) claims this is negatively impacting the effectiveness of formative assessment. Unlike summative assessment, the rationale for formative assessment in education is student centered. Dixon and Ecclestone (2003) claim effective formative assessment enhances conceptual learning, and promotes student autonomy and motivation.

To achieve these idealistic targets, Black and Wiliam (1998, p58-59) provided a comprehensive list of aspects teachers should take into account when designing effective formative assessment.

- The assumptions about learning underlying the curriculum and pedagogy;
- The rationale underlying the composition and presentation of the learning work;
- The precise nature of the various types of assessment evidence revealed by the learner's responses;
- The interpretative framework used by both teachers and learners in responding to this evidence;
- The learning work used in acting on the interpretations so derived;
- The divisions of responsibility between learners and teachers in these processes;
- The perceptions and beliefs held by the learners about themselves as learners about their own learning work, and about the aims and methods for their studies;
- The perceptions and beliefs of teachers about learning, about the 'abilities' and prospects of their students, and about their roles as assessors;
- The nature of the social setting in the classroom, as created by the learning and teaching members and by

the constraints of the wider school system as they perceive and evaluate them;

- Issues relating to race, class and gender, which appear to have received little attention in research studies of formative assessment;
- The extent to which the context of any study is artificial and the possible effects of this feature on the generalisability of the results.

However with further research it is becoming clear another significant separating factor between summative and formative is the focus on results. While summative assessment is results and accountability focused, Black and Wiliam's (1998) list implies the focus of formative assessment is how students are learning, how they perceive their learning and what goals they strive to achieve as a result of feedback. As a result, formative assessment is more accepted as it is viewed as a way for teachers to design assessment around their students with the intention of help them achieve – rather than highlighting their shortcomings (Harlen, 2009; Looney, 2011). However, Bennett (2011) argues formative assessment has not reached its potential effectiveness to transform students into lifelong learners. Bennett recognises the focus of formative assessment is currently content knowledge, therefore due to the varied understanding of formative assessment, the results and implementation are also varied.

To provide comprehensive effective formative assessment Bennett (2011) believes, teacher's need to place more focus on the conceptual development of assessment, where questions like; what is being assessed, why is it being assessed, and how does it impact on students' learning, should be answered.

## Effective Assessment

Although summative and formative assessments have aspects attributing to their efficacy, Looney (2011) suggests an integration including these aspects as a way beyond the summative versus formative argument. Looney suggests four methods of improving assessment effectiveness including, bottom up direction, promotion of teacher professionalism, consideration of economic costs, and addressing gaps in research development. Since assessment impacts students, teachers, and schools treating teachers as leaders in development of effective pedagogical assessment strategies seems to be a logical shift in direction. Currently the New Zealand system operates in a top down form (policy makers down to teachers), but with teachers constantly interacting with assessment, their inquiry and reflection as to the effectiveness of assessment can create continual practical improvement (Looney, 2011).

Promotion of teacher professionalism can instil a change in the way teachers view their roles and the role of assessment. Looney (2011) suggests for teachers to effectively implement assessment, they require training to develop those pedagogical skills. Although New Zealand teachers constantly undergo professional development, the scope of that development (if it does not already) should include understanding how effective assessment can be carried out (Looney, 2011).

Although literature is continually evolving to produce methods of implementing effective assessment, there is a research-implementation gap – particularly in the New Zealand education sector. Beyond pre-service teacher education, teachers are only updating their skills during professional development courses;

which is generally not often enough to remain informed with literary developments.

Therefore the innovations being made in regard to effective assessment get to teachers through a 'trickle down' system ultimately resulting in an information-lag. While this is not directly related to the effectiveness of either summative or formative assessment, the research-implementation gap is important for the widespread understanding of effective assessment, which as aforementioned is a leading cause for the ineffective implementation of assessment.

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