



Standards-Based Assessment in the Senior Secondary School: A Review of the Literature

New Zealand Journal of Teachers' Work, Volume 2, Issue 2, 107-115, 2005

PETER RAWLINS, JILL BRANDON, JAN CHAPMAN, LINDA LEACH, GUYON NEUTZE, ADÈLE SCOTT, NICK ZEPKE
Massey University

BACKGROUND

In 2004, the New Zealand Qualifications Authority (NZQA) completed its implementation of a standards-based assessment (SBA) system with the National Certificate of Educational Achievement (NCEA) as the main qualification for secondary students. NZQA is conducting ongoing research into SBA practices in the senior secondary school. To ensure that findings from this research build on and link to international and national literature, a team from Massey University were commissioned to conduct a review of the existing literature.

Discussion with NZQA staff resulted in the identification of five key themes: policy issues, technical matters, teaching; learning, and diversity. A search strategy using international databases and a set of inclusion/exclusion criteria was developed. The review team sought to identify articles about SBA and relevant to the senior secondary school. It was decided to include not only empirical studies but also literature reviews and theoretical work, and to focus on more recent work, particularly that done since the mid 1990s.

The initial search located 90 pages of bibliographic information about studies of interest. From this list those studies that seemed most closely related to the themes were selected and accessed then, the inclusion/exclusion criteria were applied to them. The search iteration continued for over four months until the writing of the critical review of the studies began.

From this 130 items initially deemed suitable, 88 publications were selected for analysis and 80 were selected for the synthesis of the literature. An annotated, evaluative, bibliography was completed by developing a template format that summarises key information from each article reviewed. These templates were then used to write a critical literature review. This paper summarises some of the key findings of the full literature review.

One significant problem facing the review team was that SBA is difficult to define (Croft, 1993). The term has been used in numerous ways to mean different things, even within the NZQA literature. As an example, criterion-referenced assessment has been used synonymously with criteria-based assessment, standards-based assessment, standards-referenced assessment, competency-based assessment and achievement-based assessment. On other occasions these terms have had different meanings. Competency-based assessment and achievement-based assessment are frequently interpreted as different versions of SBA. In this review, all paradigms have been considered in the synthesis of the literature.

INTRODUCTION

The debates surrounding the value of SBA are complex. There are avid proponents of this type of assessment and equally passionate critics. Advocates stress improved transparency and understanding of the assessment process (Barker in Peddie & Tuck, 1995; Francisco, 1999; Tomlinson, 2002); higher levels of student achievement (Supovitz, 2001); improved links between knowledge and performance (Barker in Peddie & Tuck, 1995); improved generic skills (Gfroerer, 2000); more stability and robustness of teacher judgements from diverse assessment methods (Pitman, 1985); enhanced international comparability (Peddie & Tuck, 1995); and the potential democratisation of learning and the erosion of traditional barriers and quotas (Barker in Peddie & Tuck, 1995). Indeed, Gipps (1994) argues that SBA ameliorates competition, reduces anxiety, increases intrinsic motivation, and promotes achievement, cooperation, self-efficacy, metacognition and deep learning.

Critics are equally vocal in their opposition to SBA. Lee and Lee (2000) and Sizmur and Sainsbury (1997) identify issues of proliferation, atomisation and specificity in SBA as resulting in manageability and workload problems for teachers. Dearing (cited in Sizmur and Sainsbury, 1997) states that 'many teachers feel that the mechanics of recording teacher assessment information have interfered with teaching and learning' (p.137). Singh-Morris (1997) contends that standards are reductionist. Students do not learn in discretely defined bits so assessing pre-specified skills may lead to a narrowing of the curriculum, over-assessment and the growth of an assessment curriculum rather than a learning curriculum.

SELECTED POLICY ISSUES IN STANDARDS-BASED ASSESSMENT

The literature indicates that SBA is a dominant assessment paradigm in English speaking countries (Gipps, 1994; Philips, 1998; Strachan, 2002; Tognolini *et al.*, 2001; Wolf, 1995). Indeed SBA has been theorised as just one aspect of a wider educational reform movement (Bennett & Merrick, 2004; Cowan *et al.*, 2002; WestEd, 2000). Clune (2001) takes up this view by proposing a holistic model of standards-based reform, which through purposeful activities leads to standards-based policy, which then leads to a rigorously implemented standards-based curriculum for all students. This, in turn leads to high student achievement through standards-based assessment.

A distinctive feature of the New Zealand migration of assessment policy was the decision to create a single, National Qualifications Framework (NQF). Philips (2003) considers the NQF to be possibly the most comprehensive in the world, embracing both academic and vocational qualifications. Initially the NQF, as framed by NZQA, consisted of a potentially infinite number of vocational and academic Unit Standards, sorted into content domains and eight levels of difficulty that would span from the senior secondary level through to the tertiary level. However, this unitary framework did not find universal favour, with the following three aspects attracting criticism. Firstly, Unit Standards are more suited to assessment of technical or practical skills than higher order thinking skills. Secondly, they are unsuited to university learning. Finally, their use has the potential to atomise or fragment integrated knowledge and thereby distort

the curriculum (Codd *et al.*, in Peddie & Tuck, 1995; Elley & Hall in Peddie & Tuck, 1995; Hearn, 1997; Lee & Lee, 2000).

This ongoing critique resulted in the 'broadening' of the NQF in 1996 (Lee & Lee, 2000), and in the announcement of the NCEA in the Achievement 2001 Policy. This saw the introduction of a new standards based assessment tool, Achievement Standards, that allowed for graded achievement levels – not achieved; achieved; achieved with merit, and achieved with excellence – for both the internally and externally assessed Achievement Standards (Lee & Lee, 2000; Philips, 2003).

Standards-based assessment, it has been claimed, is costly to implement (Gilmore, 1991; Linn & Herman, 1997; Wolf, 1995). It is time-consuming in absolute terms, for both candidates and assessor and it imposes major costs in terms of equipment, provision of wide-ranging assessment situations, and repeated evidence of mastery. Accordingly, the provision of adequate resourcing must be a major policy decision for any organisation seeking to successfully implement SBA.

TECHNICAL CONSIDERATIONS IN STANDARDS-BASED ASSESSMENT

There is considerable debate in the literature about which of the purposes of assessment should take priority – formative, summative or evaluative assessment. Some argue that public confidence in the system of assessment is vital and therefore the evaluation and accountability aspect is the most important (e.g., Hall, 1999; Winch & Gingell, 1996). Others critique the prevalence of assessment for accountability as it leads to 'teaching to' and 'learning for' the test (Boss *et al.*, 2001; Wiliam, 2004).

A number of authors, particularly in the New Zealand context, critique the atomisation of learning in SBA (Barrington, 2004; Boss *et al.*, 2001; Davis, 1996; Hall, 1999; Hearn, 1997; New Zealand Post Primary Teachers Association (NZPPTA), 2002; Peddie & Tuck, 1995; Strathdee & Hughes, 2001). Holistic knowledge and understanding gives way to knowledge that is more easily measured at the expense of critical, creative and integrated thinking. Davis (1995) argues that rich knowledge and skills are relational to many other things involving complex and holistic systems of belief connected in diverse ways. Learning does not occur in discrete bits but is an integrated process. Accordingly, SBA may run the risk of fostering a 'bricks without mortar' approach to course design, delivery and assessment (Hall, 1999). In opposition to this view, Hearn (1997), reporting NZPPTA views, argues that atomisation is not an inevitable consequence of SBA and that it can elicit sophisticated skills and knowledge and does not inhibit them. Hager *et al.* (1994) recommend an integrated approach to programme design in which discrete standards are combined to better represent the field of knowledge.

There has also been much debate in the literature regarding validity and reliability in SBA. Validity and reliability presume to guarantee, on the one hand, that assessments are fit for the purposes they are set (Gipps, 1994; Hall, 1999), and on the other, that these purposes are consistently met. Crombie (in Peddie & Tuck, 1995) warns that concern with reliability can lead to an over-restrictive view of what is being tested, and may result in invalid assessment (Linn & Herman, 1997). Using the notions of consequential validity (Gipps, 1994) and ecological validity (Black & Wiliam, 1998) the balance of opinion in the literature seems to be that SBA can be valid as long as it assesses course learning outcomes and is fit for the context for which it is intended. Gipps

(1994) also contends that SBA cannot be responsive to traditional reliability criteria. She argues instead that, since a set of standards should represent consensus among stakeholders on what students must know and be able to do, moderation by consensus groups and external consultations, rather than statistical moderation, is more appropriate. In support of this view, Hager *et al.* (1994) point out that informed professional judgement has been found typically to have a high level of reliability.

Alignment is a key technical matter addressed in the literature. The concept has different constructions. It may specify alignment between standards and assessments, standards and teaching, standards and curriculum, and between teaching and assessments. Any or all of these may be present in specific cases. The evidence is that the closer the alignment between these factors, the better the students achieve (e.g., Clune, 2001; Linn & Herman, 1997; Porter & Smithson, 2001).

THE IMPACT OF STANDARDS-BASED ASSESSMENT ON TEACHING

Standards-based reform is consistent with an emerging view of assessment *for* learning rather than assessment *of* learning (Assessment Reform Group, 1999; Black & William, 1998; Crooks, 1998). This paradigm calls for deep changes both in teachers' perceptions of their own role in relation to their students and in their classroom practice. In particular, it suggests a move to a more student-centred pedagogical approach, placing the student in a more active role in the learning, teaching and assessment cycle, thus creating a partnership between student and teacher. The clarity and transparency of assessment standards help teachers provide students with information of what they know and can do and, more importantly, a clear picture of what they need to do to improve so they can take charge of their own learning (Black & William, 1998; Crooks, 1988).

The balance of the literature suggests that the impact of SBA on pedagogy is moderately positive. Studies reporting teachers' concerns that assessment was impinging on teaching time and becoming more important than the 'joy of learning', (Boss *et al.*, 2001; Preece & Skinner, 1999) are balanced by studies that found the effects were not extreme and in essence teaching was not being 're-invented' in the image of assessment (Wilson & Floden, 2001). Other reports found that SBA had a positive impact on pedagogy (Barrington, 2004; Bushnell, 1992; Kannapel *et al.*, 2001) with the clarity of assessment standards creating a catalyst for teachers using their professional judgement to create a more coherent teaching practice embracing the old and the new (Wilson & Floden, 2001), resulting in pedagogy that is more organised, systematic and standardised (Preece & Skinner, 1999) and creating more student-centred approaches (Eng, 1992).

As mentioned earlier, one of the criticisms of SBA is that it atomises the curriculum and fragments intricately integrated knowledge (e.g., Peddie & Tuck, 1995). The literature is divided on this issue. Some studies concluded that assessment *per se* has a constricting effect on curriculum and pedagogy with teachers tending to teach for assessment rather than for learning (Harlen & Crick, 2003; Preece & Skinner, 1999). Other studies have reported that SBA has the effect of expanding curriculum in some schools into areas that had previously received little attention, for example, arts and humanities (Kannapel *et al.*, 2001). A study by Wilson and Floden (2001) found that, although every

teacher reported that tests affected instruction, independent classroom observations showed that assessments were, in fact, neither predominant nor entirely absent, suggesting that teachers' perceptions are not always accurate.

Studies by Bushnell (1992) and Francisco (1999) confirm that, although the process of implementing SBA was initially time consuming, the benefits to improved assessment and the re-evaluation of teaching strategies, outweighed the cost. Improvement to professional dialogue between teachers has been reported as the most productive and meaningful professional development in recent times (Clune, 2001; Harlen & Crick, 2003; James, 2000; Wilson & Floden, 2001).

THE IMPACT OF STANDARDS-BASED ASSESSMENT ON LEARNING

The balance of evidence from the literature suggests that standards-based reform, and its implied pedagogical changes, have a positive impact on student learning and achievement (e.g., Black & Wiliam, 1998; Bushnell, 1992; Clune, 2001; Gipps, 1994; Hipkins, 2004; Hipkins *et al.*, 2004; Kannapel *et al.*, 2001; Ronis, 1999). There are, however, some studies that report that the effects may only be modest (Supovitz, 2001) or not unequivocal (Khatti *et al.*, 1998). In addition, there are some indications that SBA may create a performance orientation in students which is contra to the very philosophical underpinnings of standards-based reform (e.g., James, 2000; Stefanou & Parkes, 2003).

Given that assessment in New Zealand is no longer about students competing against one another, but about achieving to a set standard, it is not surprising that research suggests that students are becoming more empowered by SBA and are increasing in confidence (Barrington, 2004; Hipkins & Vaughan, 2004). Many schools in New Zealand are beginning to acknowledge the value of SBA to learning (Barrington, 2004; Gibson, 2004; Mallard, 2004).

The potential for quality formative assessment is a key feature of SBA that can lead to significant improvement in student achievement (e.g., Assessment Reform Group, 1999; Black & Wiliam, 1998; Francisco, 1999; James, 2000; Supovitz, 2001). By providing clear objectives, students can recognise gaps in their learning between the current level and desired level and can take effective action to close the gap (Brookhart, 2001; Ronis, 1999). In addition to this, SBA contributes to an increased understanding of the assessment process and a shift from quality control in learning to quality assurance (Black & Wiliam, 1998).

IMPACT OF STANDARDS-BASED ASSESSMENT ON DIVERSITY

The academic achievements of diverse learners within SBA systems have been mixed. The research suggests that although diverse students perform better under SBA than under a norm-referenced system, there is still a significant gap between the achievement of students with special needs and their middle class majority peers (Ortiz, 2000), particularly minority students and those from low income households (Kannapel *et al.*, 2001; Madaus & Clarke, 2001). It remains to be seen whether NCEA, as a high-stakes national assessment system, can provide more positive outcomes for diverse students than the previous system, although Mallard (2004) has indicated that there are initial signs of improved achievement by Māori and Pasifika students.

Standards-based assessment potentially provides schools with greater opportunity to adapt assessment tasks to meet the needs of diverse learners, while still assessing the set standard(s) (Hager *et al.*, 1994; Hipkins *et al.*,

2004). In order that SBA is fully inclusive there are a number of issues that need to be addressed. In particular, the provision of accommodations such as more time and special aids (Thurlow, 2000), and alternative assessments, designed and moderated, so they are viewed as comparable and of equal status to those commonly used.

CONCLUSION

The standards-based reform movement and SBA have been the subject of much debate in the international literature. Although it should be recognised that there are ongoing issues of manageability, validity and reliability, alignment to, and atomisation of, the curriculum, it should also be recognised that SBA has a positive impact on teacher pedagogy, student achievement and programme adaptation to better meet the needs of an increasingly diverse range of students.

REFERENCES

- Assessment Reform Group. (1999). *Assessment for Learning*. Retrieved on 30 August, 2004 from: http://www.aaia.org.uk/pdf/Assessment_for_Learning.pdf
- Barrington, E. (2004). Vice-Chancellor's Symposium on National Certificate of Education (NCEA). *Teaching Snippets*, 23, 1-2. Auckland University Centre for Professional Development. Retrieved from: <http://www.auckland.ac.nz/cpd>
- Bennett, S., & Merrick, M. (2004). A progress report and latest recommendations on ACSA's advocacy role in the development of California's standards-based assessment and accountability system. Unpublished paper.
- Black, P., & William, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice*, 5(1), 7-74.
- Boss, T., Endorf, D., & Duckendahl, C. (2001). *Informing state assessment from the local level: A district's reflections*. Annual Meeting of the Mid-Western Education Research Association, Chicago, Illinois.
- Brookhart, S. (2001). Successful students' formative and summative uses of assessment information. *Assessment in Education*, 8(2), 153-169.
- Bushnell, P. (1992). *The development of grade-related criteria in Sixth Form Certificate Drama*. Christchurch: Education Department, University of Canterbury, Research Report No. 92-1.
- Clune, W.H. (2001). Towards a theory of standards-based reform: The case of nine NSF state-wide systematic initiatives. In S.H. Fuhrman (Ed.), *From the capitol to the classroom: Standards-based reform in the States*. (pp.13-38). Chicago: The University of Chicago Press.
- Cowan, P., Morrison, H., Wylie, C., McBride, F., Lee, M., & Greenaway, G. (2002). Disseminating standards in higher order learning: Systemically valid instruments for standards-based education reform. *Interactive Learning Environments*, 10(3), 217-241.
- Croft, C. (1993). The conflicting world of standards-based assessment. Paper presented at the National Conference of the New Zealand Association for Research in Education (15th, Hamilton, New Zealand, December 2-5, 1993). 18 pages.

- Crooks, T. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58(4), 438-481.
- Davis, A. (1995). Criterion-referenced assessment and the development of knowledge and understanding. *Journal of Philosophy of Education*, 29(1), 3-21.
- Davis, A. (1996). Who's afraid of assessment? Remarks on Winch and Gingell's reply. *Journal of Philosophy of Education*, 30(3), 389-400.
- Eng, G. (1992). *The use of grade-related criteria in Sixth Form Certificate English: A comparative study*. Christchurch: Education Department, University of Canterbury, Research Report No. 92-2.
- Francisco, S. (1999). *Trialing of standards based assessment in the ACT Year 12 Certificate*. Canberra Institute of Technology, Institute Assessment Project, Occasional Paper No. 23. 15 pages.
- Gfroerer, M. (2000). Career guidance on the cutting edge of competency-based assessment. *Journal of Career Development*, 27(2), 119-131.
- Gibson, R. (2004). *NCEA – Improved student outcomes*. A paper presented at the National Secondary Schools Qualification Conference, 26-27 July, Massey University College of Education, Palmerston North. pp.1-9.
- Gilmore, A. (1991). *An evaluation of the Sixth Form Certificate English moderation trial*. Christchurch: Canterbury University. 365 pages.
- Gipps, C. (1994) *Beyond testing: Towards a theory of educational assessment*. London: The Falmer Press.
- Hager, P., Gonczi, A., & Athanasou, J. (1994). General issues about assessment of competence. *Assessment and Evaluation in Higher Education*, 19(1) 3-16.
- Hall, C. (1999). National Certificate of Educational Achievement: Issues of reliability, validity and manageability. *New Zealand Annual Review of Education*, 9, 173-196.
- Harlen, W., & Crick, R., (2003). Testing and motivation for learning. *Assessment in Education*, 10(2), 169-207.
- Hearn, S. (1997). Te Tiro Hou meets the Green Paper: Where to from here in secondary school qualifications? *Access: Critical Perspectives on Cultural and Policy Studies in Education*, 16(2), 48-55.
- Hipkins, R. (2004). *Changing school subjects for changing times*. Paper presented at the NZPPTA Conference: Charting the Future, The Way Forward for Secondary Education, 18-20 April 2004, Wellington and at the National Secondary Schools Qualification Conference, 26-27 July, Massey University College of Education, Palmerston North. pp.1-13.
- Hipkins, R., & Vaughan, K. (2004). *Learning curves: Meeting children needs in an evolving qualifications regime. From cabbages to kings: A first report*. Wellington: New Zealand Council for Educational Research. (142 pages). Retrieved on 25 July, 2004 from:
http://www.nzcer.org.nz/default.php?products_id=213
- Hipkins, R., Vaughan, K., Beals, F., & Ferral, H. (2004). *Learning curves: Meeting student learning needs in an evolving qualifications regime. Shared pathways and multiple tracks*. Retrieved on 23 July, 2004 from:
http://www.nzcer.org.nz/default.php?products_id=665
- James, M. (2000). Measured lives: The rise of assessment as the engine of change in English schools. *The Curriculum Journal*, 11(3), 343-364.
- Kannapel, J.P., Aagard, L., Coe, P., & Reeves, C. (2001). The impact of standards and accountability on teaching and learning in Kentucky. In S.H.

- Fuhrman (Ed.), *From the capitol to the classroom: Standards-based reform in the States* (pp. 217-241). Chicago: The University of Chicago Press.
- Khatti, N., Reeve, A., & Kane, M. (1998). *Principles and practices of performance assessment*. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Lee, H., & Lee, G. (2000). The National Certificate of Educational Achievement (NCEA): 'Fragile – handle with care'. *New Zealand Annual Review of Education*, 10, 5-38.
- Linn, R., & Herman, J. (1997). *A policymaker's guide to standards-led assessment*. Denver: ECS Distribution Centre.
- Madaus, G., & Clarke, M. (2001). The adverse impact of high-stakes testing on minority students: Evidence from 100 years of test data. In G. Orfield & M. Kornhaber (Eds.), *Raising Standards or Raising Barriers? Inequality and High-Stakes Testing in Public Education*. Boston: Century Foundation Press.
- Mallard, T. (2004). *Achieving quality education outcomes*. Speech to New Zealand Post Primary Teachers Association (NZPPTA), Wellington, 23 September, 2004.
- New Zealand Post Primary Teachers Association. (2002). PPTA submission to Education and Science Select Committee inquiry into the implementation of the NCEA October/November 2002. Retrieved on 23 July, 2004 from: <http://www.ppta.org.nz/cms/imagelibrary/100115.doc>
- Ortiz, A.A. (2000). Including students with special needs in standards-based reform: Issues associated with the alignment of standards, curriculum and instruction. In Mid-Continent Research for Education and Learning (Ed), *Including special needs students in standards-based reform: A report on McREL's diversity roundtable III*. A paper presented at the third Mid-Continent Research for Education and Learning (McREL) Diversity Roundtable, Denver, Colorado, September 14-15, pp.41-64.
- Peddie, R., & Tuck, B. (Eds.). (1995). *Setting the standards*. Dunmore Press: Palmerston North.
- Philips, D. (1998). *The switchmen of history: The development of a unitary Qualifications Framework*. Unpublished PhD thesis. Wellington: Victoria University.
- Philips, D. (2003). Lessons from New Zealand's National Qualifications Framework. *Journal of Education and Work*, 16(3), 289-303.
- Pitman, J. (1985). *Criteria-based assessment: The Queensland experience*. Paper presented at the 11th International Conference of the International Association for Educational Assessment, Oxford, England, 27 June-2 July and at the Australian Conference of Assessment and Certification Authorities, 29 July-2 August.
- Porter, A.C., & Smithson, J.L. (2001). Are content standards being implemented in the classroom? A methodology and some tentative answers. In S.H. Fuhrman (Ed.). *From the capitol to the classroom: Standards-based reform in the States* (pp. 60-80). Chicago: The University of Chicago Press.
- Preece, P., & Skinner, N. (1999). The National Assessment in science at Key Stage 3 in England and Wales and its impact on teaching and learning. *Assessment in Education*, 6(1), 11-25.
- Ronis, D. (1999). *Performance based learning and the NCTM recommendations*. A paper presented at the Annual General Meeting of the Association for Supervision and Curriculum Development, San Francisco CA, March 6-8, 10 pages.

- Singh-Morris, A. (1997). A response to the Green Paper. *Access: Critical Perspectives on Cultural and Policy Studies in Education*, 16(2), 65-73.
- Sizmur, S., & Sainsbury, M. (1997). Criterion referencing and the meaning of National Curriculum assessment. *British Journal of Educational Studies*, 45(2), 123-140.
- Stefanou, C., & Parkes, J. (2003). Effects of classroom assessment on student motivation in fifth-grade science. *The Journal of Educational Research*, 96(3), 152-162.
- Strachan, J. (2002). Assessment in change: Some reflections on the local and international background to the National Certificate of Educational Achievement (NCEA). *New Zealand Annual Review of Education*, 11, 245-258.
- Strathdee, R., & Hughes, D. (2001). The National Qualifications Framework and the discouraged worker effect. *New Zealand Journal of Educational Studies*, 36(2), 155-169.
- Supovitz, J.A. (2001). Translating teaching practice into improved student achievement. In S.H. Fuhrman (Ed.). *From the capitol to the classroom: Standards-based reform in the States* (pp. 81-98). Chicago: The University of Chicago Press.
- Thurlow, M.L. (2000). Including special needs students in standards-based assessments. In Mid-Continent Research for Education and Learning. (Ed.), *Including special needs students in standards-based reform: A report on McREL's diversity roundtable III* (pp.15-40). A paper presented at the third Mid-Continent Research for Education and Learning (McREL) Diversity Roundtable, Denver, Colorado, September 14-15.
- Tognolini, J., Andrich, D., & Ball, S. (2001). *Report of the consultancy to research international best practice in outcome-based assessment related to post-compulsory education*. Sydney: Educational Testing Centre, University of New South Wales.
- Tomlinson, M. (2002). *Inquiry into A level standards*. Retrieved on 19 July, 2004 from:
<http://image.guardian.co.uk/sysfiles/Education/documents/2002/12/03/alevelinquiry.pdf>
- WestEd. (2000). Developing a standards-based assessment system: A handbook. (Report No. RJ96006901). San Francisco, CA: WestEd. (ERIC Document Reproduction Service No. 440 980), 184 pages.
- William, D. (2004). *Keeping learning on track: Integrating assessment with instruction*. Invited address to the International Association for Educational Assessment (IAEA), Philadelphia. 19 pages
- Wilson, S.M., & Floden, R.E. (2001). Hedging bets: Standards-based reform in classrooms. In S.H. Fuhrman (Ed.). *From the capitol to the classroom: Standards-based reform in the States*. Chicago: The University of Chicago Press, 193-216.
- Winch, C., & Gingell, J. (1996) Educational assessment: Reply to Andrew Davis. *Journal of Philosophy of Education*, 30(3), 377-388.
- Wolf, A. (1995). *Competence-based assessment*. Buckingham: Open University Press.



About the Author(s)

New Zealand Journal of Teachers' Work, Volume 2, Issue 2, 2005

PETER RAWLINS, JILL BRANDON, JAN CHAPMAN, LINDA LEACH, GUYON NEUTZE, ADÈLE SCOTT, NICK ZEPKE
Massey University

Nick Zepke is an Associate Professor in the School of Educational Studies and coordinator of the undergraduate programmes in adult education. Dr Linda Leach is a senior lecturer in the School of Educational Studies and the coordinator of postgraduate programmes in adult education. Jill Brandon is the Head of the School of Arts, Development and Health. Jan Chapman is a senior lecturer with the School of Curriculum and Pedagogy. Guyon Neutze was formerly a senior lecturer in the Department of Social and Policy Studies in Education. Peter Rawlins is a lecturer in the School of Curriculum and Pedagogy. Adèle Scott is a senior lecturer in the School of Educational Studies.

Peter Rawlins
Massey University College of Education
Private Bag 11 222
Palmerston North
p.rawlins@massey.ac.nz