

Research Conferences

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Good Data, Bad News, Good Policy
Making ...

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ACER

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Professor Matters has been keenly interested in educational measurement since she was a pup – as a teacher; school administrator; bureaucrat, researcher; advisor; test developer; writer; and mother. Her major achievements include:

- teaching students to use their minds well (taught Chemistry and Physics for 20 years in Independent, state and Catholic schools, including 5 years as a deputy principal)
- leading teams of talented educators on various projects (e.g. QCS Test, Assessment & Reporting, New Basics)
- writing journal articles, books and conference papers on test design and marking, test-taking behaviour; assessment/testing formats, the underachievement of boys (before the topic became trendy), the curriculum wars, the relationship between pedagogy and assessment, 'death by assessment', school reform, and standards-based assessment
- compiling reports including Reinventing Years 10–12 in State Schools (1999, with Richard Smith et al.), and The New Basics Research Report (2004)
- having fun working across academe and the bureaucracy.

Introduction

The New Basics Trial in Queensland (2000–04) was about improving educational outcomes. At its heart was the idea that, to do this, there must be an orchestration of the message systems of curriculum, teaching and assessment – and that these changes must be in practices, not merely in statements of intention or expectation.

What were the changes? We changed the curriculum by introducing three suites of Rich Tasks covering three 3-year spans from Year 1 to Year 9. To determine their curriculum plans, teachers had to map backwards from these tasks – each of whose specification was given on a single A3 page [Education Queensland. (2004)].

We changed assessment by introducing a system of social moderation aimed at achieving state-wide comparability. This system required teachers to talk among themselves and compare their opinions about student work, not just within their school but also across schools.

And we changed teaching by 'upping the ante' intellectually, challenging teachers professionally, and connecting what was done in the classroom to the real world.

The Rich Tasks at the centre of the New Basics embodied the changes that we sought. They were rich in the sense of having variety, scope and depth; in requiring academic rigour; and in being multidisciplinary. Student performances on Rich Tasks were assessed in rich ways – the final grade was not the result of some scoring algorithm but of on-balance judgements made by teachers considering each performance from multiple perspectives.

We learnt many things from the Trial about many areas of the education

system; this paper covers two – our experience with policy makers before, during and after the Trial; and the highs and lows of what teachers will (and will not) do.

We learnt that policy makers come and go – the ones you finish with are often not the ones you started with. (The same is true of teachers and principals!)

Commitment to school reform can wax and wane, and be influenced by factors outside anyone's control. We learnt that there are some teachers who are excited by opportunities and grasp the nettle for the betterment of their students. There are also some who are not excited, and who avoid the nettle.

There were different challenges in the primary and secondary years – the Trial deliberately spanned the two. In the primary years, the challenge was to the view of the teacher as the fount of all knowledge that mattered; in the secondary years the challenge was to the existence of 'silos' that compartmentalise knowledge and the disciplines. Teachers' threshold knowledge was often found wanting (especially in Mathematics and the physical sciences), but we also often found teachers willing to learn new approaches, new concepts and new skills.

The New Basics research findings were considered by the Minister for Education in presenting the Government's position on how to improve student learning and to increase comparability of assessment and reporting across schools [Education Queensland (2005)].

Evidence-based policy making

The New Basics research and evaluation reports (Department of

Education and the Arts, 2004; Australian Council for Educational Research, 2004) were considered by the Queensland Minister for Education in presenting the Government's position on how to improve student learning and to increase comparability of assessment and reporting across schools (Department of Education and the Arts, 2005).

The New Basics approach to curriculum, teaching, assessment, reporting, and school organisation was developed and trialled because of a widespread recognition and acceptance in 1999–2000 that major changes in education were absolutely essential, particularly in the compulsory years of schooling.

This view is confirmed by our most recent research, which, furthermore, strongly suggests that change is still needed. The New Basics research program demonstrated ways in which it might be possible to bring about such change.

There were four aspects to the New Basics trial: development of an integrated framework for curriculum, pedagogy and assessment for new times; implementation of the framework in volunteer state schools that were selected, quarantined, resourced and supported; a research program comprising 25 individual research activities; and an independent external evaluation.

Ultimately, there were three objects of learning from the New Basics trial: the New Basics per se (which was the aim of the exercise), the management of intervention, and the education system itself. In this paper, I focus on two of them: one, the strengths and weaknesses of the New Basics idea in practice; and two, the critical issues that

have been identified as applying across the State beyond New Basics and beyond state schools.

This paper spans the trial period (2000–04) and the immediate post-trial period (2005), showing how research evidence informed policy-making.

New Basics Framework

A comprehensive history of the development of the New Basics Framework and its implementation in 58 state schools can be found in 'The New Basics: Narrative and Commentary', within the research report. A summary of the key components follows.

- What is taught: Four categories of essential practices for new times: Life pathways and social futures, Multiliteracies and communications media, Active citizenship, and Environments and technologies.
- How it is taught: Four categories of effective teaching strategies: Intellectual quality, Connectedness to the wide world, Recognition of difference, and Social support.
- How learning is displayed: Three suites of transdisciplinary tasks in three 3-year spans within Years 1–9: First suite – 5 tasks; second suite – 7; third suite – 8. Rich Tasks are published in an A3 'artbook' as a collection of double-page spreads, one for each task, giving the task description; New Basics referents; targeted repertoires of practice; task specs; ideas, hints and comments; task parameters; and assessment criteria.
- How the evidence of learning is assessed and reported:
 - Pre-set standards for each task – as indicated by the desirable

features of high-quality performance and the features of acceptable performance;

- Rich Task assessment model – a variant of the traditional criteria/standards matrix;
- Moderation strategy – four stages beginning with clarification of task intent and concluding with ratification of teacher judgements of the standard of student work;
- Common-format reports – of the results of formative assessment at the end of a 3-year span, as an overall grade for each Rich Task in the suite, with associated legend for ease of interpretation, and with state-wide comparability assured.

Differences between KLA and New Basics

At the same time as the New Basics Program was being developed and implemented in Queensland, another program of educational reform was in progress across Australia – the Key Learning Areas (KLAs). The differences between the two need to be understood.

- The KLA curriculum is organised into eight areas, which are based on composite fields of knowledge, each with its own content and context. The New Basics idea organises a futures-oriented curriculum into four categories, each of which has an explicit orientation towards researching, understanding, and coming to grips with newly emerging economic, social and cultural conditions.
- Within the New Basics Framework, productive pedagogies are a mandatory rather than desirable component.

- In the KLA idea, outcomes are expressed in terms of what students are expected to know and to be able to do within a composite of specific fields of knowledge at certain stages. In the New Basics idea, outcomes are expressed as Rich Tasks – the specific activities with real-world value and use, through which students are able to display their grasp of important ideas and skills.
- The KLA idea incorporated a staggered implementation of syllabuses as they became available over a span of years. The New Basics idea made all Rich Tasks available at once.
- The KLA syllabuses are silent on the body of evidence required for assessment. The New Basics documents are prescriptive.
- The KLA syllabuses do not contain assessment criteria. In Queensland, the Core Learning Outcomes are indicators of standards. Rich Tasks have task-specific grading masters. The desirable features are indicators of standards.
- The KLA syllabuses follow a constructivist approach to learning. The New Basics Rich Tasks realise the reconceptualist paradigm.

Research program

A research program was developed around three key questions: Is the New Basics likely to lead to the changes that are wanted? Is the New Basics likely to be accepted? Is the New Basics feasible on an extended basis? These three questions spring from the central research question: Is the New Basics viable?

These questions gave rise to 25 separate research activities (see 'New

Basics Research Papers: In Essence' in the research report). The research program used a mixed methods approach – from case study to multilevel modelling, critical discourse analysis to psychometrics.

The method, results and conclusions for each of the research activities were scrutinised by the Framework Research Advisory Group, four internationally recognised researchers working independently of Education Queensland (EQ). The conduct of the research and the validity of the research findings were the subject of a commissioned external evaluation.

Eleven key messages

The following messages from the research report relate specifically to New Basics in the EQ context in which the Trial took place.

- 1 The Trial of the New Basics provided value for money, demonstrating the capacity of the New Basics package as a complete system.
- 2 The New Basics package (curriculum, teaching, moderated assessment and reporting) can be used to revitalise the education system, to reform schools, and to achieve the student learnings necessary for the new world.
- 3 Schools and teachers experienced real challenges but also significant rewards in doing New Basics, in the development of the professional community, the public accountability, and the links with the world outside the classroom.
- 4 Associated with educational innovation are real tensions in accommodating the oft-competing demands for academic excellence

and public administration. It can be hard to find the resources (people, money and priorities) needed to support the long-term developments that bring real and substantial change.

- 5 The Department of Education, in opening itself up to information about the state/health of the system through the trialling of the New Basics, reveals aspects of a mature system that is ready to face the demands, obstacles, uncertainties and risks of successful operation in the 21st century.
- 6 The changes needed to align the schools and classrooms of public education with the needs of the future can be achieved without high additional cost and without detracting from the 'old' basics.
- 7 As a curriculum project alone, unaccompanied by a powerful assessment system and the development of schools as learning organisations, the New Basics is not likely to have continuing impact.
- 8 Since the New Basics is about fundamental change in schooling, it will be necessary to ensure schools (and EQ structures) are learning organisations.
- 9 Real, sustained and substantive changes in professional practices, which are not at the heart of teaching and schooling, are not effected overnight or on the basis of an edict.
- 10 Any approach to extension should be sensitive to the preconditions identified during the Trial for optimising the chances of success for schools implementing the New Basics package.
- 11 Any implementation of changes based on learnings from the New

Basics should be gradual, consistent with the need to develop the capacity of the system and its schools.

Selected research findings

- The Rich Tasks were found to be richer than the best student work from non-trial schools (themselves selected to be the best of their type) in Year 6, and as rich in Years 3 and 9.
- In general, Queensland teachers take the view that assessment is relevant to, and has a positive effect on, teaching and learning. Simultaneously, the general view is that assessment lacks validity and is inaccurate. Teachers do not appear to be convinced that assessment is a tool for school accountability (the opposite of their NZ counterparts).
- Students in New Basics schools held their own on conventional standardised tests of literacy and numeracy.
- Teachers' participation in various stages of moderation was one of the most important contributors to professional skills enhancement and to developing confidence in applying the model for grading students' Rich Task performances.
- The New Basics assessment system is able to withstand pressure and respond to challenges that arise in the quest for comparability.
 - Factors that might explain students' performances across Rich Tasks are:
 - Year 3 – technology, performing, verbal language;
 - Year 6 – non-traditional learning frames;

Year 9 – individual discourse in formal registers, project management of group endeavours, non-traditional learning frames.

- Test scores of students in trial schools on the International Schools' Assessment (ISA) (a standardised test of Reading Literacy, Mathematical Literacy and Writing), improved significantly over time, but did so to an extent not significantly different from the extent of improvement of students in non-trial schools (including non-state schools).
- Year 6 students in trial schools who identified as Aboriginal or Torres Strait Islander students improved more than other students in the domain of Reading Literacy on ISA.
- Very few students (from trial and non-trial schools alike) performed very highly according to the criteria for assessing problem-solving on the World Class Tests.
- Queensland students are not test-wise, and state-school teachers (of students in Years 3 to 9) do not have a positive attitude to external tests.
- The QSRLS-observed decline in *intellectual quality* and *connectedness* from primary to Year 8 was checked.
- Students in trial schools rated teacher classroom practice in three of the four dimensions of a measure of 'enacted pedagogy' higher than did students in non-trial schools.
- Teachers were surprised that some of their students performed so well.
- A not-insignificant proportion of students met the ambitious aspirational standards set for award of A-grade.

Strengths and weaknesses according to the external evaluation

- ↑ Quality of student work
- ↑ Development of an assessment system
- ↑ Changes in approaches to teaching
- ↔ Performance on standardised tests
- ↓ Congruence with other aspects of the school system and its context
- ↓ Differential impact between year levels

Research involving real student work indicated that the New Basics could lead to the types of changes that are wanted, with student performances changing not just in depth but also in nature. Research also indicated that moderated assessment could deliver shifts in teachers' classroom practices. Reactions of principals and teachers to external testing and the subsequent performance of students on those tests indicated a lack of test-wiseness that could be detrimental to Queensland students in other stressful testing environments.

System blockages included the transfer of principals out of New Basics schools in juncture years, IT processes, and the changing role of district director during the Trial.

There were different challenges in the primary and secondary years – the Trial deliberately spanned the two. In the primary years the challenge was to the view of the teacher as the fount of all knowledge that mattered; in the secondary years the challenge was to the existence of silos that compartmentalise knowledge and the disciplines. Teachers' threshold

knowledge was often wanting (especially in mathematics and the physical sciences), but teachers were willing to learn new approaches, new concepts and new skills.

Change was – and still is – needed

The New Basics Research Report suggests deeper issues about the state of education in Queensland than those identified in 1999–2000, and also suggests how change can be achieved. These perspectives are supported by the findings from another study – *Assessment & Reporting Framework (ARF) Pilot Study* (Education Queensland, 2003).

An Assessment and Reporting Taskforce was established in 2001 because it was clear that there was no coherent approach to assessment and reporting in P–10. In 2003, the ARF Pilot Study explored assessment in the context of KLA syllabus implementation in Queensland state schools.

As a result of these two studies, together with the earlier *Queensland School Reform Longitudinal Study* (QSRLS) (The University of Queensland, 2001), the Department of Education came to possess a large volume of hard data and rigorous analyses about what is happening in classrooms, which made it possible to describe crucial aspects of education across all state schools Years 1–9 (a description that can reasonably be extrapolated to P–10).

Some of the research studies were absolute: What is happening in trial schools? Some were longitudinal: How have trial schools changed over time? Many of the studies, however, were comparative: Is what is happening in

trial schools different from what is happening in non-trial schools?

Findings not just about state schools

Because comparative studies were incorporated into the New Basics Research Program, it was necessary to collect data from many more schools than just the trial schools. Data were collected from other state schools and from some non-state schools. For certain studies, matched or 'like' schools were selected whereas, for other studies, schools were selected because they were known to be outstanding ('the best'). Therefore, the critical issues that were identified apply across Queensland schooling in Years 1–9, beyond the New Basics.

Critical issues

The expression of the critical issues is deceptively simple and falls under five headings – curriculum, schools, schools' communities, teachers, and the education system.

- There are large gaps between the intended curriculum and the enacted curriculum.
- Some schools can handle change and meet future needs; some act to contain or neutralise change.
- Diversity in the nature and intensity of, and attitudes to, the relationships between schools and their communities is huge.
- *In general*, teachers do not possess high levels of content knowledge, are not confident about assessment, and are not sure what students are learning.
- Queensland education's message system lacks coherence.

Possible responses to this less-than-palatable news were many and varied, as were the options for action.

Options for action

One could tinker with the existing situation, *but* the results would not meet future needs. One could ignore what the research is saying, *but* the tension between what is needed and what has been achieved is already widely known. One could put resources into more documents, or more bolt-on professional development programs – the usual response in such situations – *but* this is an expensive solution that has been tried in other places at other times. One could interpret teachers' need for support in *their* basics (assessment, pedagogy, curriculum) as showing that they need very detailed specifications, *but* this approach would de-skill the profession.

Since the cost of the Trial (\$10.7m over four years) was, amongst other things, the cost of finding out that change can occur and can be accepted, one could draw on the research evidence for methods of bringing about change. This is not to say, however, that simply extending the New Basics is the answer. And so, in June 2004, the Director-General stated:

December 2003 marked the end of the Trial, but that was by no means the end of the New Basics. I have authorised 58 schools that have been involved to date to continue with the New Basics while we take the time to reflect on the learnings from the Trial and determine how they can be transferred to all schools.

Later this year, the Minister for Education will present the Government's position on how best to report student

achievement and school performance information. The ongoing program of work, to which the New Basic research and evaluation will contribute, will extend this into the development of recommendations to Government on how to achieve greater integration of curriculum, teaching, assessment and reporting in our schools.

It seemed that the way forward was to identify the core values of New Basics and incorporate those into all schools, setting aside territorial aggrandisement and simply *using* what is *useful*. This is not the same as arguing for or against implementing the New Basics in more schools, all schools or no schools.

Core values of the New Basics in action

Did the New Basics per se trigger the desired changes in trial schools? Probably not. It was more likely to be the different way of doing business – of ‘doing school’ according to the core values of the program; namely, curriculum values, teaching values, assessment system values, and action values. Curriculum values are expanded on below. For brevity, other values are merely listed under each of the other three headings.

Curriculum values

Futures orientation: Curriculum is designed around tasks that prepare students for new workplaces, technologies and cultures. Some of the tasks involve traditional ways of doing things; others are responses to new times. Some of them require existing practices and skills, some require the blending of old and new, while others require students and teachers to

construct and explore new problems, new learning strategies and new solutions.

Focused and uncluttered: Curriculum planning requires a principled selection of learnings from various disciplines and skills (social, cultural, cognitive and linguistic) rather than universal coverage of prescribed ‘atomistic’ learning outcomes. Students study fewer things in greater depth in order to achieve greater levels of understanding.

Fluid and responsive: Curriculum development does not focus on sets of documents and lists of outcomes that have been composed over several years in committee but, rather, is thought of in terms of a renewable and criticisable resource that is dynamic, changing in relation to new contexts, renewed and sustained by teachers and curriculum developers.

Transdisciplinary: The transdisciplinary (or multi-disciplinary) approach to teaching and learning draws on practices and skills across disciplines while attempting to retain the integrity of each discipline; as opposed to the thematic or interdisciplinary approach that seek links between disciplines often with a dilution of discipline-specific expertise. Caution: Before ‘going trans’, teachers need to be able to work confidently with the disciplines.

The ‘old’ basics: The old basics remain at the heart of the New Basics but are not considered to be sufficient as the substance of modern education. The New Basics, in emphasising the skills that students need to complete intellectually challenging, integrated, real-life tasks, should not sacrifice basic skills development.

Teaching values

Upping the intellectual ante
Connecting students to the wider world
Generating a supportive classroom environment
Recognising difference.

Assessment system values

Rigour
Comparability
Validity
Accountability.

Action values

Prescribing the required outputs (goals) but not the way to get there (process)
Developing school–community links
Closing the loop with monitoring, feedback and support
Strengthening teachers’ content knowledge and assessment skills through built-in, not bolt-on, approaches to professional development
Enhancing learning organisations at school and system levels
Using program values to drive planning and organisation.

Queensland Curriculum, Assessment and Reporting (QCAR) Framework

The policy-makers decided that any policy statement and action plan for progressing the integration of curriculum, teaching, assessment and reporting should be based on research, including the New Basics research. They sought and received Cabinet

endorsement of 12 evidence-based characteristics of an effective schooling system.

Clear governance

There are clearly articulated roles and responsibilities for all parties involved in policy making and practice in curriculum, teaching, assessment and reporting.

Research-based

Decisions on educational policy and practice in curriculum, teaching, assessment and reporting are informed by rigorous research.

Equality of opportunity

Every young Queensland, regardless of economic or social circumstances, is given the opportunity to acquire essential knowledges, skills, understandings and capacities.

Transparent

Queensland schools are able to benchmark their performance on the basis of data about schools performance as well as data on student achievement in areas of learning at key junctures.

Flexible

Curriculum is readily renewable and responsive to new contexts.

Intellectually challenging

Learners study fewer things in greater depth, achieving deeper levels of understanding. Learning experiences draw on specific fields of knowledge as well as integrate ideas, concepts and information across fields of knowledge.

Authentic

Knowledges and skills from real-world sources such as industry flow freely back and forth between the wider community and the learning environment.

Inclusive

Individual needs and learning styles are accommodated, diversity is recognised and celebrated, and student participation in decision-making is encouraged.

Supportive

Students receive clear guidelines on what they are learning, how they will be assessed, and how they can influence practices in the classroom. Students are encouraged to take risks in a safe environment and be responsible for their own behaviour and learning.

Accountable

Schools convey high expectations and students are able to demonstrate their learning through valid assessment tasks, and assessment results that are reported on are comparable across the State.

Teacher professional community

Teachers participate in sustained intellectual work, and use a range of teaching strategies to provide flexible and innovative learning experiences for individual students and groups of students.

Adaptable

There is a willingness to try new ways of working and be responsive to emerging technologies, and societal and organisational change.

Highlights of the new QCAR Framework

- Define what is essential curriculum for all students in Years P–10;
- Set standards of student achievement in the essential curriculum.
- Create a bank of assessment tools for teachers that link to the essential curriculum and standards.
- Establish, at key points in the P–10 years, rigorous comparable assessment against the defined standards.
- Specify a common framework for reporting student achievement against standards.

The policy direction for the framework was developed by the Department of Education and the Arts in collaboration with the Queensland Catholic Education Commission, the Association of Independent Schools Queensland, Education Queensland, and the Queensland Studies Authority (QSA). The Queensland Government will set parameters to guide the creation of the materials and tools that make up the QCAR Framework. The QSA will develop the materials and tools in consultation with key stakeholders, ready for implementation state-wide in 2008.

References

All documents cited in this paper can be found at:

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