to support
student learning

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*Although there has been an increase in the amount of information collected from and about Australian schools, this information is not always being used effectively to enhance learning writes **Gabrielle Matters**, author of the latest edition of the Australian Education Review.*

More and more data are being collected from and about schools in Australia yet there should be better use of those data at all levels of the education-delivery system in this country. Also, we need recommendations coming out of research to be stated unambiguously even if the message is unpalatable. One of the main purposes for collecting and analysing educational data is to support learning in schools. To do this effectively we need to be sure that the everyday use of data by practitioners actually does enhance the learning experience.

These are among the conclusions drawn in the latest edition of the Australian Education Review, *Using data to support learning in schools: Students, teachers, systems*. It examines the issues raised at the ACER Research Conference 2005 – *Using data to support learning* – by analysing the conference papers in the light of a survey of broader Australian and international literature on using data to support learning. The main purpose of the review is to enable readers to stop and consider not only what was in the conference papers but also the bigger issues about using data.

In his foreword to the review, renowned assessment expert Dr Randy Bennett, Distinguished (US) Presidential Appointee in the Research and Development Division at the Educational Testing Service (ETS),

Princeton, New Jersey, agrees that the demand to improve decision making through data has occurred because we are living in an age of accountability facilitated by new technology. But he goes further in stating that governments must ensure that today's students are educated to the highest achievement standards possible, giving reasons for this assertion.

Data are currently collected from and about schools by teachers, researchers and policy analysts among others. The kinds of data to be collected and interrogated can be data that emanate from different sources including:

• Observing student performance (which is the outward and visible sign of student learning)

• Research into factors that improve student achievement (such as teaching practices and student motivation)

• Research into factors that affect participation rates (such as gender and socioeconomic status)

• Evaluation of government policies (such as school reform, curriculum revision and testing regimes)

More strategic thinking is required to determine how best to collect and use the data. The review reminds us that we need to avoid a 'recipe-book approach' to data analysis.

It is also important to think strategically about what question we have in mind when we begin collecting data. In other words, what is it that we are asking the data to tell us? The questions need to be both open and focused for, above all, they determine the parameters for the investigation: the data source, what data are collected and the interpretations available to practitioners, policy makers and stakeholders.

Research Conference 2005

The enormous interest in using data in schools was in evidence at ACER's Research Conference 2005 – *Using data to support learning*. In the largest conference undertaken by ACER to date, more than 750 delegates met in Melbourne to consider issues confronting Australian schools in the collection and use of data.

An analysis of the three keynote addresses and 16 concurrent papers revealed that there is sometimes a disjuncture between what the research findings reveal and what is done in practice.

Dichotomies

In addition to a disjuncture between research and practice, the review identifies four dichotomies, which, it argues, inhibit the effective collection and use of data. They are:

1. assessment for learning versus assessment of learning

2. student work versus test score as evidence of learning

3. progress of individual student versus success of school

4. sociology versus psychology as an explication of success

The dichotomies are analysed in the review with alternatives suggested. The general lesson to be taken away from the analysis of each dichotomy is that there are many ways to use data to support learning and each has its own special wonder. These dichotomies must be 'demolished' in order for there to be enhancements in the effectiveness of using data to support learning. In acknowledging the existence of these four particular dichotomies, it is ultimately not so important whether they are real or imagined.

What is important is the resulting identification of eight discrete approaches which produce a wealth of information that can be used to support learning, especially student learning.

Conclusions

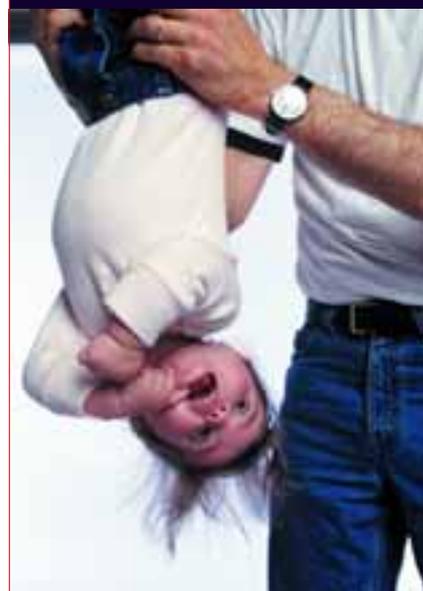The review concludes with eight recommendations to be considered by those working in the field:

• A new project to collate and reflect on the existing body of cutting-edge research on using student work as a data source

• A detailed review of the attitudes of Australian teachers and policy makers to the application of assessment for learning

• Hands-on training for system administrators in the use of large-scale datasets, with special emphasis on using these datasets in formulating educational policy

• Provision of professional development programs for teachers in techniques for interrogating student data, especially data supplied to schools by external agencies and assessment data generated at the school level

• Commissioning of two research studies:

1. a rigorous appraisal of existing research findings related to current national and international issues by a coalition of educational interests; and

2. a meta-analysis seeking evidence of the everyday use of data in ways that support learning.

• Commitment to a multi-disciplinary approach when briefs are prepared for practitioners and policy makers on educational research findings about a pertinent issue

• An acknowledgment that there should be better use of research findings at all levels of the education-delivery system in this country.

The 'how' of using data to support learning involves collecting reliable data, making valid interpretations, reflecting on those interpretations, and acting upon that information if and when necessary.

Australian Education Review number 49, *Using data to support learning in schools: Students, teachers, systems*, by Gabrielle Matters, is available for download from the ACER website at *www.acer.edu.au*. Print copies can be purchased from ACER Press. Contact customer service on (03) 9835 7447 or via email on *sales@acer.edu.au*

The Australian Education Review series provides literature reviews with analyses of contemporary issues in education. The series is edited by Suzanne Mellor, ACER Senior Research Fellow.