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Qualifications and future labour market in Australia

A person's educational qualifications provide essential labour market information to employers in filling vacancies and help individuals in the development of career paths. They also provide a measure of the output of Australia's training system.

Chandra Shah and Gerald Burke from the Monash University-ACER Centre for the Economics of Education and Training (CEET) presented a paper at CEET's annual conference on 3 November on the future supply of, and requirements for, vocational education and training (VET) qualifications in Australia.

The qualifications profile of the employed workforce was derived from estimates of growth in employment and *skills deepening* within occupations. Skills deepening in an occupation is measured as the increase in the proportion of people with qualifications over and above that due to employment growth. The ABS *Education and work survey* data from 2001 to 2005 indicate considerable skills deepening in Australia. Assuming these trends continue, the proportion of employed people with qualifications in 2016 is estimated to be 71.2 per cent compared with 58 per cent in 2005, with increasing numbers achieving qualifications at higher levels. Employment in Australia will grow more slowly from 2006 to 2016, with faster growth in higher skilled occupations than in lower skilled occupations.

To increase qualifications held by Australians in work to targeted levels, more training will be required for substantial numbers of new entrants and for existing workers. The number of additional people who will need to have qualifications from 2006 to 2016 is estimated to be 4.03 million, 2.25 million new entrants and 1.78 million existing workers.

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Of these, 61.4 per cent will need a VET qualification and 38.6 per cent a higher education qualification. Among VET qualifications needed, 49.3 per cent will be at certificate III/IV, 35.7 per cent at advanced diploma/diploma and remainder at certificate I/II.

If supply of people with VET qualifications remains at the same level as in 2005, a shortfall of 240,000 is expected over the ten years to 2016. Shortfalls are expected at the advanced diploma, diploma and certificate III levels. Surpluses are expected at certificate I, II and IV levels.

A shift in distribution to the higher qualifications means a considerable increase in the average time taken to complete a course. Training hours delivered will, therefore, need to increase five per cent per year to ensure not only the required number of qualified people become available, but also that their qualifications are at appropriate levels.

Estimates of future qualifications required by the employed workforce in this report are based on Australia having 11.23 million people employed in 2016. However, if employment was to increase above this level (eg. through higher participation in the labour force) then training requirements will be higher than these estimates.

The full report, Qualifications and the future labour market in Australia, is available from the [Early Childhood Development website](#).

Further information about the CEET annual conference is available from the [CEET website](#).

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Effective teaching practices

Much of what is commonly claimed as 'effective teaching practice' and implemented during the early and middle years of schooling in Australian schools, for either mainstream students or for those experiencing learning difficulties, is not grounded in findings from evidence-based research according to a recent presentation by Dr Ken Rowe.

The prevailing educational philosophy of constructivism (a theory of self-directed learning rather than a theory of teaching) continues to have marked influences on shaping teachers' interpretations of how they should teach. However, in contrast to teacher-directed methods of teaching there is strong evidence that exclusive emphasis on constructivist approaches to teaching is not in the best interests of any group of students, and especially those experiencing learning difficulties.

ACER has trialled a professional development (PD) program to support teachers to improve literacy and numeracy outcomes for students with learning difficulties in years 4, 5 and 6. The program was developed in response to a request of the Australian Government Department of Education, Science and Training. The material used in the Intervention Project is titled: *Working Out What Works (WOWW) Training and Resource Manual: A teacher professional development program designed to support teachers to improve literacy and numeracy outcomes for students with learning difficulties in Years 4, 5 and 6*. The PD program, which included information about children's auditory processing capacity, has been informed by findings from a comprehensive review of evidence-based research.

For the purposes of the research, students with learning difficulties were defined as those in mainstream schools in years 4, 5 and 6 who experience a learning difficulty and whose literacy and numeracy achievements are below national benchmark standards.

The study sample included 56 schools: 35 *intervention* schools and 21 *reference schools*. *Intervention* schools included those whose teachers were provided with professional development in effective, evidence-based strategies for students with learning difficulties in *Reading and Numeracy* during February/March 2005.

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For comparative purposes, teachers from participating *reference* schools did not receive this PD during February/March 2005, but were provided with this same PD during May 2006.

Pre- and post-test data from students were collected in March 2005 and again in September 2005. Initial analyses indicate that in March 2005 there were no significant differences between *intervention* and *reference* school students' average *Reading* and *Numeracy* achievements. However, in September 2005 there were significant improvements in the *Reading* and *Numeracy* achievements of students in *intervention* schools compared with those in *reference* schools. Given the short duration between the March and September 2005 assessment periods, this result is remarkable.

The findings also indicate that the behaviours of students in *intervention* schools were significantly more positive compared with the behaviours of students in *reference* schools, especially their *attentive* behaviours in the classroom. Again, given the short duration between the March and September 2005 assessment periods, these results are particularly encouraging. Other studies have shown that repeated under-achievement by students (especially in literacy) is strongly related to increasing disengagement at school, low self-esteem, as well as disruptive and dysfunctional externalizing behaviours at school.

The findings were consistent with the qualitative information obtained from case study visits to schools. The most effective interventions with students with learning difficulties were:

- Direct instruction;
- Strategy instruction; and
- Combined direct instruction and strategy instruction.

This is supported by a large body of evidence-based research that indicates superior effects of initial *direct instruction* and *strategy instruction* approaches to maximising student learning. So what made the difference to students' learning and achievement progress for those in the *intervention* schools? Simply, teachers in the *intervention* schools were taught how to teach via *direct/explicit instruction* teaching methods.

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Educational effectiveness for all students is crucially dependent on the provision of *quality teaching* by competent teachers who are equipped with effective, evidence-based teaching strategies that *work*, and the maintenance of high teaching standards via strategic professional development at all levels of schooling.

It is important to note that the relative utility of *direct instruction* and *constructivist* approaches to teaching and learning are neither mutually exclusive nor independent. Both approaches have merit in their own right, provided that students have the basic knowledge and skills (best provided initially by *direct instruction*) before engagement in 'rich' *constructivist* learning activities. The problem arises when *constructivist* learning activities precede explicit teaching, or replace it, with the assumption that students have adequate knowledge and skills to efficiently and effectively engage with *constructivist* learning activities designed to generate new learning.

While it is not feasible to legislate *quality teaching* into existence, the fact that teachers and teaching make a difference should provide impetus and encouragement to those concerned with the crucial issues of *educational effectiveness*, *quality teaching* and *teaching standards*, to at least invest in quality teacher recruitment, pre-service education and professional development.

Since teachers are the most valuable resource available to schools, an investment in teacher professionalism is vital by ensuring that they are equipped with an evidence-based repertoire of pedagogical skills that are effective in meeting the developmental and learning needs of ALL students.

This article is based on a background paper by Dr Ken Rowe, Research Director, Learning Processes, Australian Council for Educational Research presented at the NSW DET Office of Schools Portfolio Forum in July.

[Effective teaching practices for students with and without learning difficulties: Constructivism as a legitimate theory of learning AND of teaching?](#)

This article was originally published in *Side by Side*, published by the NSW Department of Education and Training, Issue 4, September 2006, page 12.

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ACER UPDATE

Evaluation of the Teacher of Exemplary Practice program

ACER's Teaching and Leadership research program has been contracted to evaluate the effectiveness of the Northern Territory's Department of Employment, Education and Training's (DEET) 'Teacher of Exemplary Practice' (TEP) program. This is a scheme under which teachers who are able to demonstrate superior teaching skills are rewarded. The evaluation will consider the effectiveness of the current schemes for selecting TEPs in terms of rewarding individual teachers and supporting DEET's delivery of key programs.

ACER Corporate profile updated

A newly updated ACER Corporate profile brochure is now available both online and in print form.

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