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## *Labour market and income consequences of participation in TAFE*

*What are the benefits of studying at a college of Technical And Further Education (TAFE)? A new Research Monograph from ACER investigates the income consequences of TAFE study.*

Well-educated people generally earn more – even in countries with highly regulated labour markets that in effect place a ceiling on earnings. It is also well documented that educated workers experience higher labour-force participation and lower unemployment rates.



Increased earnings are a common measure of the outcome of education. However, the purposes of education are far broader: the development of individuals' intellectual capacity and the promotion of a stable, tolerant, and equitable society are also important. These benefits are difficult to measure in economic terms, although they may have direct economic consequences.

The monograph, by Michael Long, Phillip McKenzie and Andrew Sturman, also investigates differences in participation in TAFE by groups from various social and educational backgrounds.

Compared with graduates of higher education, those who have successfully completed an apprenticeship or some other TAFE qualification come from a broader range of social and economic backgrounds. TAFE seems to provide an opportunity for those who have been less successful at school, and who, perhaps because of this, have left school without completing Year 12.

The data were provided from ACER's *Youth in Transition* project – a longitudinal study of young Australians. Two cohorts were examined – one comprising people born in 1961 and the other in 1965.

### *How does TAFE affect earnings?*

In general, the paper indicated that completion of a vocational education qualification was associated with somewhat higher earnings for males and a little difference for females. This finding is consistent with some studies, but at variance with others which suggest larger effects of vocational education on earnings.

For males in full-time employment in the older cohort, take-home earnings from age 22 to age 32 were six per cent higher for respondents who had completed an apprenticeship than for respondents who had not completed Year 12 or any postsecondary qualification. Take-home earnings for respondents who had completed some other TAFE qualifications were nine per cent higher. TAFE provided higher earnings than some

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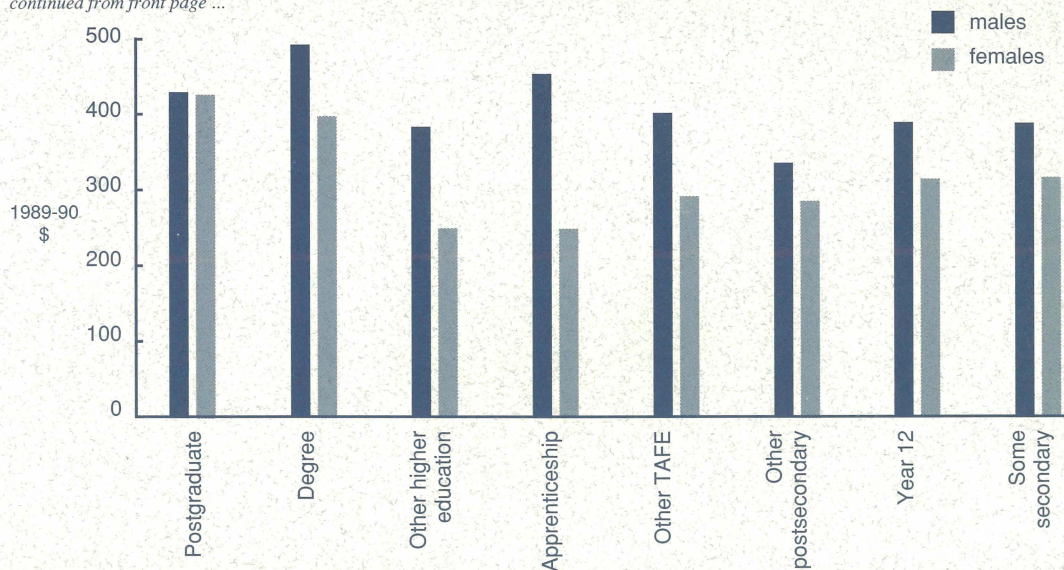


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**1993 mean weekly take-home earnings by highest level of educational attainment. Full-time workers, 1965 cohort (aged 28 in 1993), adjusted for family and school background, duration of employment and hours of work.**

other paths available to young males: completion of Year 12, non-TAFE and non-higher education qualifications and non-degree higher education qualifications.

For females, alternative educational pathways – completion of Year 12 and training through non-TAFE and non-higher education courses – were frequently associated with higher earnings than were TAFE courses. For the older cohort, completion of a non-apprenticeship TAFE qualification resulted in six per cent higher take-home earnings for females compared with those who had not completed Year 12 or any postsecondary course.

The differences in earnings found in the study are mostly associated with education systems for young people as they existed in the early to mid 1980s. There have since been changes in educational provision and participation and in the labour market which may have altered the effect of educational attainment on earnings.

Australia has experienced a rapid growth in post-compulsory education since the early 1980s. Between 1987 and 1993 the total labour force grew at two per cent per annum, but the total labour force with qualifications has grown at about four per cent per annum. Given these changes, and broader changes in the community, the results presented in this paper may not be an accurate guide for young people commencing their post school education and training in the mid 1990s.

The study used broad categories of qualifications. There is evidence from other research of wide variation in the earnings of graduates from different courses – by level of course (degree, diploma, associate diploma, and the various certificates) and field of study – both within TAFE and higher education and between the two sectors. The general findings need to be placed in the context of more detailed information about particular courses before they can be of use to intending students or management decisions within the TAFE sector.

Concerns over equity of participation in TAFE need to be considered in parallel with concerns over labour market outcomes. Policies designed to encourage greater equity of participation in a system that is already accessible to a broad range of Australians only make sense if that participation delivers increased earnings and better employment prospects. Success in the labour market will influence student demand for education and the government's willingness to finance educational expansion.

The project was jointly supported by the Australian National Training Authority's Research Advisory Council (ANTARAC) and ACER.

The Research Monograph will be available from ACER Customer Service later in the year on telephone (03) 9277 5656; facsimile (03) 9277 5678; email: sales@acer.edu.au



# ACER and University of Melbourne award educational assessment scholarship



The first University of Melbourne/ACER Postgraduate Scholarship in Educational Assessment was awarded to Mr Robert Chatfield, who is completing a Ph.D. in the Department of Psychology at The University of Melbourne.

The award was established to encourage high quality Ph.D. research in areas related to educational assessment.

Mr Chatfield's research is part of a larger project investigating decimal fraction learning potential in primary school aged students using dynamic assessment. Dynamic assessment is an interactive procedure where students are provided with problem-solving hints. The number and type of hints are then used to

construct a profile of the students' problem-solving strengths and weaknesses.

Mr Chatfield is being supervised by Associate Professor Robert Reeve of the University of Melbourne, and Dr Geoff Masters, Associate Director (Measurement) of ACER.

Mr Chatfield has already completed a Masters degree using dynamic assessment with mathematical word problems, and lectures in psychology at the Royal Melbourne Institute of Technology (RMIT).

If any schools (preferably in Victoria) are interested in participating in the study, or would like to find out more about dynamic assessment, please contact Mr Chatfield on telephone (03) 9428 0892; email: [R.Chatfield@pgrad.unimelb.edu.au](mailto:R.Chatfield@pgrad.unimelb.edu.au)

## ACER modernises procedures for assembling NOOSR tests

ACER has been working with the National Office of Overseas Skills Recognition (NOOSR) to develop software for use in assembling NOOSR's professional accreditation examinations.

NOOSR is responsible for accrediting professionals who have not qualified in Australia. The professions concerned are dentistry, dietetics, occupational therapy, pharmacy, and veterinary science. Accreditation involves testing of applicants using items drawn from a large collection maintained by the individual professions.

ACER is developing computer software that streamlines the major functions of item development, test construction, and data analysis.

Authors of items supply a wordprocessed file of each item, indicating the subject area addressed by that item. The software allows items to be stored, retrieved, viewed, and formatted with ease. On-screen selection of items means that test papers can be composed and viewed electronically, reducing the amount of printing

time and paper wastage usually involved in test preparation since only the final version needs to be printed. Page layout of items is performed automatically too, although this can be overridden manually.

Data from test papers and candidates can be imported into the item bank and analysed using inbuilt links to ACER's *Quest* test analysis software. Statistics about the items in the test are then automatically updated from *Quest*, greatly reducing the clerical aspects of maintaining an item bank.

At this stage, the completed item banking software is being tested, de-bugged, and an on-line help facility added. Although the software is being developed for NOOSR's pharmacy item bank, it eventually will be used in a range of NOOSR's professional accreditation programs.

For more information on item banking and computerised testing, contact either Ms Margaret Wu on telephone (03) 9277 5595, email: [wu@acer.edu.au](mailto:wu@acer.edu.au); or Mr Brian Doig on (03) 9277 5571, email: [doig@acer.edu.au](mailto:doig@acer.edu.au)



# Curriculum in rural secondary schools

ACER has published the results of a study of curriculum provision in rural secondary schools.

The study investigated:

- procedures for using centrally held data to describe and analyse the nature of curriculum provision for rural students at Years 10, 11 and 12;
- a comparison of in-school costs of providing junior and senior curricula in urban and rural schools;
- the extent to which rural secondary curricula provide coverage of key learning areas for their students; and
- whether gender and social background influence students' patterns of curriculum participation differently in urban and rural schools.

The Commonwealth Department of Employment, Education and Training, as it was then known, commissioned ACER to conduct the study. The Country Areas Program also provided financial support.

## Results

Information from secondary schools in Queensland and Victoria was used for the study.

On average, remote schools were likely to offer a senior curriculum that covered fewer major curriculum areas – especially Art, Music and Languages Other Than English (LOTE) - and to provide fewer subjects per curriculum area and fewer classes per subject.

Within this general pattern, however, there were some differences among schools of similar size and location in the mix of subjects they provided. This suggested that while structural and size factors were important constraints on the curriculum capacity of schools, within these constraints schools varied in the curriculum emphases they chose.

## Teacher time and class size

On average, rural and remote schools have slightly higher allocations of available teacher time to classroom teaching than urban schools. However, teachers in rural and remote schools are less specialised in their teaching loads than teachers in urban schools.

There is a positive relationship between school size and average class size which means that, on average, classes are smaller in rural and remote secondary schools than in urban schools. However, average class size appears to reach a plateau of a little over 20 students once school enrolments reach about 500 students.

Per student expenditure on teachers' salaries for Years 8-10 was about two per cent higher in rural schools than in urban schools, and about 23 per cent higher in remote schools. Costs varied more for the provision of Years 11-12. Rural schools were three per cent more expensive than urban schools, and remote schools 25 per cent more costly in terms of per student expenditure of teachers' salaries. The staffing formula tended to provide small schools with a lower student-teacher ratio and a higher proportion of teachers in promotion positions.

Despite the high level of per student expenditure on teachers' salaries in small schools, these schools were not a problem for the education budget since they enrol only a small percentage of all secondary students in Queensland.

Schools in the study spent an average of 27 per cent more per student on providing the Years 11-12 program than in providing Years 8-10. Class sizes were smaller in the senior years, and these classes were more likely to be taken by teachers in promotion positions. This cross subsidisation was particularly high in small schools, averaging 40 per cent.

This indicates that small schools may be achieving a senior school curriculum broadly comparable to that in larger schools through some narrowing of the curriculum in the junior secondary years.

## Subject choice

The data revealed some differences in the pattern of subjects studied by students according to school location. Students in remote schools were less likely than students in other schools to be studying more than one maths subject, or subjects in the physical sciences, computer studies, or LOTE. Students in remote schools were more likely to be studying subjects in the humanities and social sciences, biological sciences, economics and business, home economics and physical education.

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The report also suggests ways to collate and analyse information that is already collected from schools for administrative purposes – and to feed that information back to schools in a manner that allows them to make comparisons with the approach of schools facing similar circumstances.

The growth in retention rates, and the consequent increase in the diversity of Years 11 and 12 students, have put pressure on rural schools to broaden their curriculum. This pressure can cause particular problems for small schools that have a limited spread of staff

expertise or inadequate infrastructure resources. To overcome these problems, schools can develop strategies such as resource sharing between groups of schools, and in some cases, between schools and TAFE colleges.

The material developed through the project provides a means to monitor and evaluate the impact of policies to improve rural students' curriculum opportunities.

The report is available from ACER Customer Service (\$39.95). Telephone: (03) 9277 5656; fax: (03) 9277 5678; email: sales@acer.edu.au

## Test of English as a Foreign Language

ACER is responsible for the administration of the *Test of English as a Foreign Language* (TOEFL), *Test of Written English* (TWE) and *Test of Spoken English* (TSE) in Australia, New Zealand, Papua New Guinea and the Solomon Islands. ACER administers these tests as the representative of Educational Testing Service (ETS), America's leading testing organisation.

TOEFL is designed to measure the proficiency of non-native speakers of English seeking entry to American universities. For many years it was the only test of its kind and thus has also been used by overseas students seeking to enter university in other English-speaking countries. The test assumes a minimum age and corresponding maturity level of 17 and is oriented towards academic English.

Around 5000 candidates sit the test annually through ACER – and a total of over 800 000 worldwide.

TOEFL comprises three sections: Listening Comprehension; Structure and Written Expression; and Reading Comprehension. The test is composed entirely of multiple-choice questions.

The TWE was introduced in response to demand from faculty staff who wanted a measure of an applicant's written ability. It is now available at five of the nine administrations in the Australian region. The TWE takes the form of one 30 minute essay on a given topic.

### Computer-based test

ETS recently announced that it will introduce a computer-based TOEFL in 1998. This computer-based test will have many benefits, including:

- the opportunity to develop more authentic test items utilising visual, auditory and written stimuli;
- the opportunity to make testing adaptive (depending on a candidate's response to a question, the next item will be easier or more difficult);
- more examinee control over pace of questions;
- allowing more flexibility in scheduling test administrations – examinees can arrange a test date and time directly with testing centres; and
- greater standardisation of test administration conditions.

To ensure that candidates are not disadvantaged by the computer-based test, it will be designed to be minimally dependent upon previous computer experience. Other measures will include a computer-based tutorial that teaches the computer skills needed to take the test, and the possibility of examinees to handwriting or typing essays.

For further information about the tests, contact Ms Alayne Wright at ACER on telephone (03) 9277 5710; email: wright@acer.edu.au



# *Evaluation of the implementation of curriculum statements and profiles in South Australian government schools*

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Over the past few years, South Australian schools have adopted the statements and profiles for Australian schools as a resource in curriculum planning, programming, assessment, record keeping and reporting.

Use of the statements and profiles has been gradually introduced since 1993, and is due to be fully implemented by 1997.

Late in 1995 ACER surveyed schools to determine:

- the impact of statements and profiles on school operations;
- whether any changes needed to be made to the time line for reporting against the profiles;
- what resources best support teachers and schools in the implementation process; and
- how far schools have progressed towards the goal of achieving full implementation by the end of 1997.

The survey provided a basis for the Department for Education and Children's Services (DECS) to make appropriate responses with respect to resources and training. It also contributed to the introduction of changes to enable schools to manage the processes of implementation more easily.

While survey respondents did point out several areas needing change, a number of principals and teachers commented on the positive aspects of

curriculum review, which in some schools had not occurred to this level for a number of years.

Many principals and teachers were concerned about the amount of time and energy required during the implementation process. Many schools felt they needed longer to implement the changes. Those who had met the demands of the time line noted that this was due to the enormous efforts of their staff. Some were also concerned about the complexity of the documents – they described the guidelines as either too vague or too full of jargon.

The survey found that overall the implementation of statements and profiles has had a very significant impact on the operation of schools. The process of rethinking the what, why and how of teaching appears to have promoted valuable discussion. Some comments indicated that teaching practice in schools has become more reflective and teachers are using more diverse strategies. The process of reviewing assessment and reporting has also generated discussion and the focus on student outcomes has lent itself to forward thinking, more structured programs and attention to student achievement.

A follow-up survey is currently being conducted.

For further information contact Ms Tracey Frigo at ACER on (03) 9277 5688; email: [frigo@acer.edu.au](mailto:frigo@acer.edu.au)

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## *ACER's Test Scoring Service*

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ACER provides an excellent optical mark reader test scoring service. The service can save valuable time by:

- reading responses to tests or questionnaires;
- scoring the tests or questionnaires;
- producing a variety of reports and analyses; and
- providing quick results.

The scoring service can be used for batch scoring of tests administered to large groups, and for extensive reports on personality inventories administered to individuals.

Some of the tests that can be computer scored include: *ACER Applied Reading Test*, *ACER Mechanical Reasoning Test*, *ACER Test of Reasoning Ability*, *California Psychological Inventory*, *Differential Aptitude Tests*, *Standard and Advanced Progressive Matrices*, *16 Personality Factor Questionnaire*, *Myers-Briggs Type Indicator (MBTI)* and *Strong Interest Inventory*.

For further information or a price list please contact Ms Pauline Cowhey at ACER on telephone (03) 9277 5534; email: [cowhey@acer.edu.au](mailto:cowhey@acer.edu.au)



# ACER pays tribute to Piaget

At the 31st Annual Conference of the Australian Psychological Society in September, ACER organised a display to honour the work of the noted Swiss psychologist Jean Piaget. The display was one of many occasions worldwide this year to mark the 100th anniversary of the birth of Jean Piaget (1896-1980).

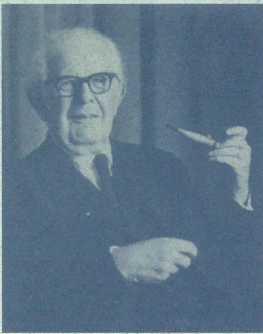
The Consul General of Switzerland in Sydney, Mr Hans Meier, opened the display.

The exhibition displayed photographs, books, posters and information on various aspects of the life and work of Piaget, with a particular

focus on Australian links with Piaget. Material from ACER's archives dating back to the 1930s included letters signed by Piaget.



ACER Sales and Marketing Manager Ms Patricia Genat thanks the Consul General of Switzerland, Mr Hans Meier



## Piaget's research in developmental psychology sought to answer the question: how does knowledge grow?

His answer was that the growth of knowledge is a progressive construction of logically embedded structures superseding one another by a process of inclusion of lower, less powerful logical means into higher and more powerful ones up to adulthood. Therefore, children's logic and modes of thinking are initially entirely different from those of adults.

## Work Potential Profile

ACER has developed a tool for the initial descriptive assessment of long-term unemployed persons and persons for whom it is difficult to find employment.

The *Work Potential Profile* (WPP), devised by Dr Helga Rowe, can be used to collect information in areas of support needs, strengths and weaknesses for employment, occupational planning, and the individual's current intervention or training needs.

On the basis of the profile obtained, it is possible to derive an assessment of the individual's freedom from major barriers to employability. It is possible to obtain a summary score that provides an indication of the client's overall effectiveness, and reflects the need for support. The instrument can also compare groups of individuals.

The WPP Questionnaire contains 171 items and will be self-administered, either individually or in a group. The items on which the descriptive assessment of the client is based are criterion-referenced. This means that they permit the interpretation of the client's performance in relation to generally understood defined dispositions, competencies or behaviours.

The WPP measures coping; freedom from major barriers to employment; social resources; abilities; motivation; and physical ability.

The WPP will be available from ACER Customer Service from early 1997. For further information contact Ms Daiva Verbyla at ACER on telephone (03) 9277 5652; email: [verbyla@acer.edu.au](mailto:verbyla@acer.edu.au)



# Conferences & Workshops

## ***Relaxation Skills for Students and a Games Approach for Developing Social Skills***

Presenter: Jennifer Rickard  
Wednesday 13 November  
9 am - 4 pm

ACER, 19 Prospect Hill Road, Camberwell

This workshop is ideal for primary and junior secondary teachers, student welfare and pastoral care coordinators, and counsellors.

Cost of \$90 includes lunch, morning and afternoon tea, workshop notes and certificate of participation.

*For further information contact Ms Margaret Taylor or Ms Virginia Thomson at ACER on telephone (03) 9277 5654; facsimile (03) 9277 5678; email: taylor@acer.edu.au*

## ***Emotional Healing and Self-Esteem for Children***

Facilitator: Mark Pearson, co-author of *Emotional Release for Children*  
Tuesday 4 March 1997  
9.30 am - 4.30 pm

ACER, 19 Prospect Hill Road, Camberwell  
Cost: \$75.00

Suitable for anyone working with or caring for children or adolescents including counsellors, teachers, child-care workers and parents.

*For a registration form contact Ms Margaret Taylor or Ms Virginia Thomson at ACER on telephone (03) 9277 5654; facsimile (03) 9277 5678; email: taylor@acer.edu.au*

## ***Teaching for Better Thinking***

### ***Strategies for all Key Learning Areas***

Presenter: Dr Laurance Splitter, Principal Research Fellow and Director of The Centre of Philosophy for Children, ACER  
March - June 1997

Venues will include capital cities and major regional centres.

These one day workshops for all teachers will explore a range of strategies dealing with:

- ethics and values issues (bullying, violence, sexuality)
- reasoning and enquiry skills
- teaching for critical, creative and "caring" thinking
- questioning as a tool for thinking and enquiry
- concepts as vehicles for better thinking
- the community of enquiry as a model for democratic citizenship.

*To receive further details please contact Ms Virginia Thomson or Ms Margaret Taylor at ACER, telephone (03) 9277 5654; facsimile (03) 9277 5678; email: taylor@acer.edu.au*

## ***Teacher Educator Workshop in Philosophy for Children***

9-17 January 1997

Sancta Sophia College (University of Sydney)

This intensive residential workshop is designed for people involved, or wanting to be involved, in teacher education in Philosophy for Children.

*For further details and expressions of interest, please contact Dr Philip Cam, School of Philosophy, University of New South Wales, Sydney 2052, telephone (02) 9385 2373; facsimile (02) 9385 1029; email: p.cam@unsw.edu.au*

## ***International Anti Violence Congress***

### ***Advance Notice***

13-20 August 1997  
Melbourne & Sydney

ACER and NRMA Insurance Ltd are jointly organising and hosting the first international congress on anti violence education. Topics covered will include: violence in the media, violence in schools; domestic violence; racial violence; violence prevention in schools and the community; and therapeutic counselling.

*To register your interest in attending or presenting, please contact Ms Trudi Nichols at ACER on telephone (03) 9277 5515; email: nichols@acer.edu.au*

## ***Workplace Skills in Practice***

Monash University-ACER Centre for the Economics of Education and Training  
Dr Cathy Stasz, NCRVE, U.S.

Friday 13 December, 2 pm

Education Faculty, Monash University, Clayton

*For bookings contact Val Newson at CEET on telephone (03) 9905 9157.*

## ***Joint Conference - Advance Notice***

Monash University-ACER Centre for the Economics of Education and Training and NCVET

6-7 March 1997

The conference will focus on the social and economic outcomes of education and training, with particular attention to lifelong learning.

*Further information is available from Fran Ferrier at CEET on telephone (03) 9905 9157.*



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