

Australian Council for Educational Research
63rd Annual Report 1992-93





Australian Council for Educational Research

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**Director's
Comment:
Effectiveness or
Economy?**



Professor Barry McGaw
Director

A SHIFT IN FOCUS

For many years the dominant goal in Australian education was equity. This reflects a particular concern about effectiveness in education—that educational provisions should be arranged in such a way that everyone has a fair chance at obtaining the benefits. In the earliest phase the concern was to assure equality of access to comparable educational provision regardless of geographical or social circumstance. By the mid-1970s, the concern went beyond access to education programs themselves to access to the benefits that education was expected to endow.

In the pursuit of these goals financial considerations played an inhibiting role when public resources could not meet growing public demand but there was always the sense that the pursuit of better provision was a worthy goal for which public resources ought to be allocated as the national capacity allowed. In the 1990s, faith in the impact of increased public resources on the quality of public education, at least the faith of those who control public expenditure, appears to have weakened.

The dominant goal is no longer effectiveness. It is economy with a strong presumption that cheaper will, by definition, be more efficient. This claim is based on a view that effectiveness (or quality) will not be sacrificed as expenditure reduction is pursued and that the result will simply be increased efficiency. The important question for the long-term consequences of this pursuit is how well founded is the view that level of expenditure is unrelated to quality.

The earlier demand for more expenditure

The belief that the quality of public education does not depend on the level of public expenditure is certainly a recent one in Australia. In the 1960s and early 1970s state ministers of education feared inter-state comparisons of educational expenditure because none wanted to be shown to be committing less than others to education. In the 1990s, it seems that ministers fear being shown to be spending more than others.

In the late 1960s, comparisons were increasingly drawn beyond Australia with other OECD member countries to build the case for more investment of national resources in Australian education. Possibilities of public discussion of levels of resource allocation to education in the states were limited, deliberately it could be argued, by forms of reporting in departmental annual reports that were clearly not designed to facilitate comparisons.

This was changed to a substantial extent by the work of the Interim Committee for the Australian Schools Commission (1973). It not only provided detailed and public comparisons of levels of state resources committed to education, but also removed the opprobrium that those less favoured by the comparisons expected to suffer. The Committee's index of resource utilisation was taken to be an index, not of what resources a government was willing to commit to education, but of what it was able to commit given the constraints of its state budget. Differential allocations of Commonwealth funds to the states were recommended to equalise the per student resource provisions across states and to do so while achieving levels beyond those that any had yet reached. States that had provided less were judged to have been unable to do better and were given the capacity to catch up and move on with the rest.

Doubts about the benefits of the increased expenditure

By the mid-1980s, after a decade of substantially increased per-student expenditure, questions began to be asked about what benefits had accrued from the higher levels of support. The Commonwealth Minister established the Quality of Education Review Committee (1985) to examine the evidence but it found little available. The authorities and agencies that had received the increased funds had tended to commit all their energies and resources to designing and implementing programs with little serious attempt at evaluation. They did little to investigate the impact of particular initiatives and undertook no comparisons among systems to investigate the consequences of differences in policy and practice.

The states often spoke, indeed still do, of the natural experimentation that is permitted by the maintenance of separate systems of education within the nation. It is presented as a great advantage of state control in preference to national control of a single system. There has, however, been very little attempt at the kind of serious investigation of differential impact that would yield benefits from this variation. Worse, when investigation has been possible it has sometimes been avoided or suppressed.

In 1967, for example, the report on the Australian data from the first international study of mathematics achievement provided inter-state comparisons. At the insistence of the New South Wales Director-General of Education, Dr Harold Wyndham, ACER was obliged to pulp the Australian national report and produce a new version giving only national results.

This reluctance continued. When the House of Representatives Select Committee on Specific Learning Difficulties arranged for a national survey of literacy and numeracy levels among school students in 1975, one of the objectives of the survey was to be 'to estimate... for Australia as a whole, and for each State in particular, the number of children who are failing to attain basic skills of literacy and numeracy' (Keeves & Bourke 1976, p. 9). Inter-state comparisons were never published. Comparisons were made between school systems (government, Catholic and other non-government), regions (metropolitan and rural), linguistic groups and sexes but, as the authors Keeves and Bourke (1976 p. 11) noted, 'For all comparisons between groups we report performance for Australia as a whole and not for the States and Territories within Australia'.

The ministers commissioned a follow-up survey in 1980 (Bourke, Mills, Stanyon & Holzer 1981) and in this one there were neither inter-state nor inter-systemic comparisons. Inter-state comparisons were not even a part of the rhetoric this time. They did not feature in the purposes of the survey. Such were the state sensitivities that the appearance of inter-state comparisons, even in the report of the 1975 survey from which they were promised, would presumably have meant the same fate as that which befell the 1967 report on mathematics achievement. The suppression of 1967 became avoidance in 1975 and 1980. In fact, opposition from the bureaucracies and from teacher organisations on both occasions was sufficient for ministers to abandon an earlier decision to maintain a regular system of monitoring beyond the 1980 follow-up.

Since 1980, the only opportunities for inter-state comparisons have been in the context of Australian participation in international studies. Inter-state comparisons of student achievements in science were published using data for upper primary and lower secondary students (Rosier & Banks 1990) and for Year 12 students (Rosier & Long 1991) from the second international science study. Though these comparisons revealed some considerable differences among states, their release generated little consternation, probably because inadequate funding had delayed the international analyses and reporting to such an extent after the data collection in 1983 that the data were almost a decade old when the Australian national reports appeared.

Although cross-state studies of achievement have seldom been made in Australia, some states have routinely conducted surveys of student achievement. Earlier surveys were documented by Spearritt (1987), and these and more recent surveys were documented by the House of Representatives Standing Committee on Employment, Education and

Training (1993). The studies yield no comparisons among states but do yield comparative data over time within states and, almost without exception, show maintenance of standards in the admittedly narrow range of literacy and numeracy skills they typically assessed.

Demand for less expenditure

Reluctance about comparisons of outcomes was almost matched by a reluctance about comparisons of inputs. The annual reports of state departments of education provided various demographic and financial statistics but the forms of reporting did not facilitate comparisons. Publications of the Grants Commission and the Australian Bureau of Statistics, however, have provided some basis for comparisons of expenditure in different categories. Within the education community itself, a national statistical working party established under the aegis of the Australian Education Council has worked at achieving consistency of definition and comparability of reporting. Progress was achieved first on less contentious matters such as a common census date for student enrolments, standard tabulations of student enrolment statistics by age and grade, and tabulations of staff numbers. Reaching agreement about reporting of more sensitive information such as average class size or the distribution of class sizes was more difficult; and about common forms of reporting financial details virtually impossible in the early stages. The appearance since 1989 of the Australian Education Council's annual *National Report on Schooling in Australia*, particularly its *Statistical Annex*, has made data on resources clear and public.

A major problem for professionals in education is that their reluctance to participate in systematic studies of the outcomes of schooling over the period when the inputs were increased may have undermined any chance to win the public debate about the benefits of higher levels of resources.

There is certainly evidence in the various state studies of achievement that standards have not declined since the 1970s, the earliest period for which comparable data are available. (See the summary in Spearritt (1987) and more recent specific studies such as McGaw et al. (1989) and Adams, Doig & Rosier (1991).) What the critics who first claimed standards were falling now demand, in the face of evidence that they have not, is that standards should be rising as a consequence of increased funding and in response to increasing social and economic demands on education.

The absence of evidence of improvement is soon enough interpreted as the presence of evidence of no improvement. The onus of proof is placed firmly on the education

providers by the critics. The most recent example is Clare and Johnston's (1993) claim that there is a serious problem with literacy levels in schools. They do not so much seek to prove that there is a problem as to establish that no one has proved that there is not one. To support their claim, they use Wickert's (1989) report on adult literacy and the House of Representatives Standing Committee's (1993) report on early intervention strategies for literacy learning. Wickert documents literacy levels among adults, argues that schools cannot alone be held responsible for literacy development, suggests that maintaining and improving literacy skills is a lifelong process for which support should be provided, and notes that the evidence suggests that literacy standards in schools have improved. The House of Representatives Standing Committee reviews the evidence provided by available monitoring programs and claims that standards have not declined. In a dissenting comment, five members of the Committee expressed dissatisfaction that there were no decent data on the levels of literacy, suggested that the figure 'could be as high as 25 per cent of students' (p. 63) and argued for the introduction of monitoring programs. In Clare and Johnston's hands (1993, p. 42) this became the assertion that 'evidence from a House of Representatives Standing Committee report estimates that around 25 per cent of children beginning secondary schooling are not able to read properly'.

EXPENDITURE ON EDUCATION

The lack of any systematic evidence of differences in levels of achievement related to differences in resource levels, over time or between states, concedes the ground in public debate too readily to those who would claim that the lack of evidence confirms that there are no differences. If there are no observable differences in outcomes, then it is argued that observable differences in resource inputs are unjustifiable. With a claim that there are no inter-state differences in effectiveness, the cheapest pattern of provision becomes, by definition, the most efficient. Analyses of inter-state differences are then used to demonstrate the extent to which some systems can cut expenditure to match the cheapest.

Differences among government systems

Some of the differences among government education systems in expenditure per student are a function of special features of the state or territory. Both the size of the land mass and sparsity of population make the costs of provision in the Northern Territory the highest in Australia. Variations among the five mainland states in levels of expenditure per student in secondary schools over a four-year period from 1988–89 to 1991–92 are shown in Figure 1.

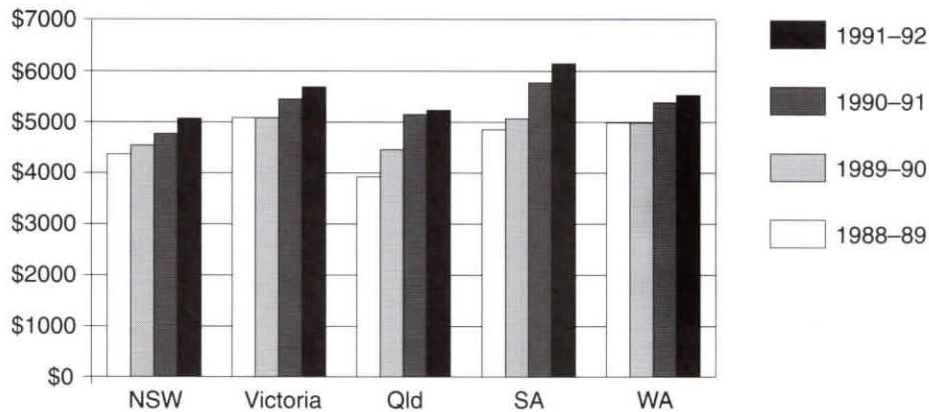


Fig. 1: Expenditure per student in government secondary schools

Source: Australian Education Council (1991a, 1991b, 1992, 1993).

This figure shows that expenditure levels per student were lowest in Queensland and second lowest in New South Wales at the beginning of the four-year period and that, at the end, these two had reversed position while remaining the lowest pair. Expenditure levels were highest in Victoria at the beginning and third highest in South Australia. By the end of the four-year period, the levels were highest in South Australia and second highest in Victoria. Western Australia was in the middle throughout.

The important question is: 'What do data like these mean?' For some they simply show how much some states can cut their expenditure without threat to quality. Pure efficiency gains are there to be made, it is asserted, on the grounds of a claim that, since there are apparently no discernible differences in quality between the systems, then cost reduction in the more expensive systems to the levels of the less expensive ones will not lower quality. The report of the Victorian Commission of Audit (1993, p. v) notes that the higher level of expenditure per student in Victoria in 1990-91 compared with New South Wales was due to smaller class sizes, less teacher-class contact (and so fewer students per teacher) and a higher proportion of teachers paid in the Advanced Skills Teacher category. The Commission said that it was unaware of any evidence that there were superior educational outcomes in Victoria as a result of any of this, so it prescribed a reduction in teacher numbers of 6000 and a reduction in the budget for teacher promotions.

Differences between government and non-government schools

Claims such as those by the Victorian Commission of Audit that public expenditure on public education should be substantially reduced and that this can be done without loss of quality are based on a strong assumption that quality in education is, at least within the limits of the reductions they propose, independent of level of resources. It is interesting to look at the levels of expenditure in non-government schools where this is more clearly a matter of private choice than of public policy to see whether the claim has broader appeal than in the public sector.

It is difficult to make direct comparisons since the published statistics on expenditure per student are for financial years for government schools and for calendar years for non-government schools. Further, the expenditure definitions are not precisely the same. Employer contributions to superannuation and costs of debt servicing, for example, are included for non-government schools but not for government schools. Privately raised funds in government schools are also not included. Operating in the other direction, however, is the fact that government schools do not control their student population in the way that many non-government schools do. Government schools deal with a much more diverse population, some members of which have quite specific needs that are costly of staff time and other resources to meet.

The data on expenditure per student in government secondary schools in the 1991-92 financial year and in non-government schools in the 1992 calendar year are shown in Figure 2. Despite the fact that precise comparisons cannot be made, it is clear that per student expenditure levels in Catholic schools is lower than that in government schools. In these schools, however, on average more than 75 per cent of the funding comes from government sources so resource levels are more a matter of public policy than private choice, except to the extent that a private choice to maintain low private contributions maximises public contributions.

In non-Catholic, non-government schools, expenditure levels per student are considerably higher than they are in government schools. In Victoria and New South Wales, the two largest states, 65 per cent of the schools' funds on average comes from private sources. The overall level of expenditure in these schools is thus largely a matter of private funding and so of private choice, presumably by people who believe that expenditure level does make a difference and that high expenditure is worthwhile. And the irony is that many of those

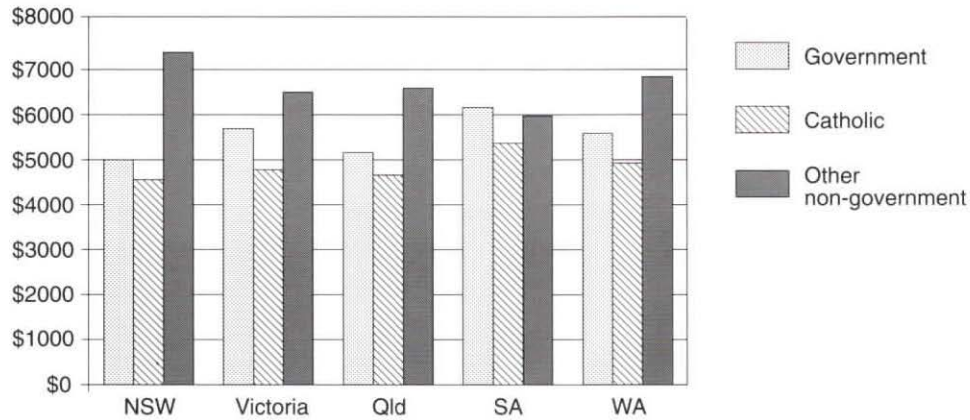


Fig. 2: Expenditure per student in secondary schools: government 1991-92, non-government 1992

Source: Australian Education Council (1993).

who press most strongly the case for reduction in public expenditure on public schools use these non-Catholic, non-government schools for their own children's education. They choose schools with per student expenditure levels well in excess of the levels from which they demand government school expenditure be reduced. In their private behaviour they display either irrationality or a belief that expenditure levels really do make a difference.

DISAPPEARANCE OF THE COMMON WEAL

It is not at all clear that the basis of the claim for reduced public funding of public education, or indeed of public services more generally, really is strong empirical evidence that funding levels can be cut because funding levels, at least within the range proposed for the cuts, do not matter. Nor is it clear that it is a matter of fiscal necessity on the grounds of incapacity of the public purse to support any higher levels of expenditure.

Australia is among the lowest taxing country in the developed world so the response to inadequate public resources for public services could as well be tax increases as expenditure cuts. One problem for public services in Australia may be that we have elections on too short a cycle since most elections now bring tax cuts. Through them we continually reduce our national capacity for corporate action. We are at risk of losing any sense of the common weal as we continuously press for reduction in resources for public

activities and retreat to private provision where those with resources can provide well for themselves while the rest cope with what the public purse and private philanthropy from others can provide.

The demand for reduced public activity is not uniquely Australian. Galbraith (1992) argues that, whereas in the past 'the economically and socially fortunate were... a small minority — characteristically a dominant and ruling handful' (p. 15), now they are a majority, at least of those who vote. They are a contented majority, not without continuing personal aspiration to do better, but living and working in a system that advantages them while disadvantaging a significant minority underclass. The contented majority, according to Galbraith, takes a highly selective view of the role of government. 'The state is seen as a burden... The need to lighten or remove this burden and therewith, agreeably, the supporting taxes is an article of high faith for the comfortable or contented majority' (pp. 22-23). While government in general is a burden, there are 'significant and costly exceptions from this broad condemnation... social security, medical care at higher income levels, farm income supports and financial guarantees to depositors in ill-fated banks and savings and loan enterprises' (p. 23).

Although the contented class clearly approves expenditure from the public purse for actions and programs of which it is a beneficiary, the general view that taxation should be reduced and government cut back derives from a perceived asymmetry in the taxation system. In general, taxes are seen to come from the contented and benefits to go to others (p. 44). In further justification of the reduction in taxation and government activity, there is built the argument that anything government does it does badly. Private provision thus becomes, not a refuge for those with a capacity to look after themselves, but a desirable goal for all for there lies efficiency. Even the word 'bureaucracy', which can as well describe the operations of large private corporations as large government agencies, tends to be preserved as a description of government, and a pejorative one at that.

CHANGING THE OWNERSHIP OF PUBLIC EDUCATION

So a number of things come together to create a strategy to change the ownership of public enterprise. Some, such as banks and airlines, are ripe for privatisation through shareholding. Others such as public schools are more problematic. There is a risk that denigration of the schools will produce defections to the private sector at a rate that will jeopardise the emerging plans for developing new forms of public 'ownership' of the public schools.

We cannot expect to emulate the North American community ownership of schools, partly because we do not fund our schools through our local community authorities and partly because our private education sector, now well supported from the public purse, is too large and well-established. Education systems throughout Australia are looking to ways of engaging the communities of public schools in a sense of ownership that will bring commitment to the institution.

The worry is that the current reductions in funding will reduce people's confidence in the institutions to such an extent that they will want only a way out themselves. In this respect, it is interesting to consider the explanations now offered for the current state of affairs in public education in Australia. The Victorian position is a good case in point. Certainly there are features of the Victorian government education system producing its higher per student expenditure levels which can be seen, as the Victorian Commission of Audit saw them, as consequences of teacher organisations winning concessions over working condition (for example, class size, contact hours, rights to return from family leave at will). There are others which reflect longstanding Victorian views about the desirable nature of the government system and carry cost disabilities for which Victorians have been willing to pay. The question now is whether the emerging unwillingness to pay is due to a communal incapacity to pay or to an unwillingness to pay by a contented, and more affluent, group which does not see these schools as serving its needs.

When Queensland decided to become a claimant state on the Grants Commission again in the early 1970s, for one part of its case it attempted to prove cost disability in comparison with the standard states of New South Wales and Victoria arising from the need to provide proportionally more small schools for a relatively more sparse population. The case foundered because of the large numbers of small schools in Victoria. Victoria also chose to provide public secondary education in an expensive way by maintaining separate high and technical schools to provide distinct streams at a time when other states adopted comprehensive provision. This required Victoria to maintain more and smaller secondary institutions than it would have had if it had amalgamated them earlier than in the late 1980s.

Shapiro and Papadakis (1993) argue this case in more general terms. They claim that the inter-state differences in per student expenditure are more likely to reveal differences in citizen preferences than differences in efficiency due to distortions inflicted by powerful

interest groups and weak authorities. Using data from a sample survey of persons identified from the electoral rolls, Shapiro and Papadakis conclude that 'the amount spent by States appears to correspond strongly with, and certainly is not more than, the amount demanded by the median voter' (p. 161).

If Shapiro and Papadakis are correct, then the expenditure reductions justified as pursuit of efficiency will lead to public disaffection. Whether that will lead in turn to protest in support of the public system or defection from it will presumably depend on the public's assessment of the likelihood of protest being successful. If Galbraith is right, then the contented majority would prefer defection and a reduced call upon public provision in order that discretionary private resources might be increased through reduced need for taxation.

Faith in public institutions is probably a fragile thing. A strong case for understanding all current action against public services as pursuit of efficiency has been built, not on evidence that the quality of services is relatively independent of level of resources, but on the absence of the contrary evidence. If the case is wrong, public institutions, including government school systems, may be damaged irrevocably. If they are, those who might have delivered the contrary evidence but chose not to for reasons of opposition to particular forms of evidence such as test results, may well be as culpable as those who actively diminish the public systems.

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Highlights of the Year for ACER

Completion of the second triennium

From July 1987 ACER has organised its program thematically on a triennial basis. June 1993 marks the end of the second triennium, so the theme coordinators' reports in this 1992-93 *Annual Report* summarise the final year of work under the themes for the second triennium. Themes are chosen to provide a sustained focus of research and development in areas of relevance and importance for Australian education and to which ACER can bring special skills.

Adaptation of themes for the third triennium

The ACER Council has decided to maintain the thematic, triennial structure for the research and development program. From July 1993 two themes will be adopted for each of the research and development divisions. They are:

Measurement Division

Improving Educational Testing

Improving Assessment Alternatives

Policy Studies Division

Pathways between Education, Training and Work

Making Schools More Effective

The themes in the Measurement Division represent emphases that will be taken up in most of the individual research and development projects. In the Policy Studies Division, the themes provide a structure under which individual projects are grouped.

Contribution to development of national profile

A significant feature of Australian education in recent years has been collaboration among the state and territory education authorities to develop a common curriculum structure expressed in national profiles in eight broad areas of study. ACER's Associate Director (Measurement), Dr Geoff Masters, has been a member of the Australian Education Council's Curriculum and Assessment Committee which has overseen this program. ACER has also played an important role in conducting empirical validations of draft profile statements. In addition, ACER staff are developing innovative assessment materials for teachers which are keyed to state and territory curricula and the national profiles.

Continued financial strength

The detailed financial statement in this *Annual Report* shows that ACER has once again had a record year. Gross turnover exceeded \$9m for the first time. A most encouraging feature of the performance in 1992-93 was that ACER's trading activities yielded a net surplus after many years of deficit.

Purchase of new building

On Friday 28 May 1993 ACER's offer to purchase a property at 19 Prospect Hill Road, Camberwell was accepted. Given ACER's current financial strength and the depressed state of the Melbourne property market, the Council decided to buy the building and land rather than build on leased land at the Clayton campus of Monash University.

Research and Development Activities

ACER's research and development program is organised somewhat flexibly into two broad divisions — a General Research Division (renamed Policy Studies Division) under the direction of Dr Trevor Williams, and a Measurement Division under the direction of Dr Geoff Masters. The overall program consists of individual projects which are placed within one of the Divisions. Staff are allocated to projects rather than Divisions, with the consequence that individual staff may be working on projects from either or both Divisions at any one time.

When ACER adopted a triennial, thematic approach to the development of its core research and development program from June 1987, this new structure was applied only to the Policy Studies Division. In the second triennium, from July 1990 to June 1993, an *Assessment and Reporting* theme was included to provide for more basic research on aspects of psychometric theory and educational measurement that will continue to underpin the substantial applied research and development program undertaken in the Measurement Division. Thus, for this current triennium, there are four themes notionally in the Policy Studies Division and one in the Measurement Division.

Some of the work in each of the themes is supported by the core grant that ACER receives each year from the Commonwealth, state and territory governments. This work is a very important part of ACER's total program since it allows for a longer term perspective to be taken than is typically possible with the commissioned projects that ACER is funded to undertake under contract by various agencies. For the Policy Studies Division, all of these commissioned projects fit within its four themes. For the Measurement Division, some fit within the *Assessment and Reporting* theme but the bulk fit within the category of Measurement Division Contract Projects described in pp. 42-49. In addition, the Measurement Division provides a number of Testing Services that are funded by user fees (pp. 50-52) and makes the major current contribution to product development work (pp. 53-54).

Overview of Themes

In June of 1993 the second triennial research and development program came to an end. In July the program for the third triennium began. At these times reflections about where we had been and where we are going in Research and Development gain particular force.

The Policy Studies Division grew from an initiative of John Keeves. In 1978 he established a division whose mandate was to engage in policy research. Through several name changes, and 15 years, the essence of this mandate has been maintained. The declared mission of the Division remains policy research, mostly under contract to Commonwealth, state and territory governments. While the importance of academic, discipline-oriented research is recognised, it is, by necessity, a secondary emphasis.

In terms of focus, the adoption in 1987 of a thematic structure was an important development since this had the effect of providing recognisable emphases for the Research and Development program. While some of the research undertaken did not fit neatly into the themes, the research strands developed over the course of the 15 years were, by and large, maintained. The most venerable of these strands reflects our interest, and the interest of government, in the interface between education and the labour force. Our multicohort longitudinal studies of youth, now in their 16th year, have provided a continuing focus in this respect. Other substantive foci have shifted somewhat over the years but, throughout, basic emphases on teachers and teaching, educational technology and cognitive processes have been maintained.

Some statistics on the past two triennia provide a perspective on the operations of the Research and Development program. During this period expenditure on projects amounted to \$7.75m, of which contract income comprised some 60 per cent. This income was spread unevenly across projects, as might be expected. Staffing levels have varied accordingly, from 14 full-time equivalent staff in 1990-91 to about 10 full-time equivalent in 1991-92 and 1992-93. During the past two triennia the Division's staff published some 52 books or monographs, 40 chapters in books, 55 articles in journals and some 125 other papers.

Staff not allocated to ACER-initiated and funded projects spent most of their time working on contract research, either seeking it or doing it, and more than half of all income came from commissioned research. However, total cost recovery for the program as a whole does not look like a feasible proposition in the near future. Staff will always spend some



Dr Trevor Williams
Associate Director

time between contracts, times in which their salaries, overheads and accommodation charges continue. Further, at times staff will be employed on difficult-to-fund projects because we believe these to be important for the field.

The Policy Studies program for 1993–96 builds on this core of experience and extends it in ways consistent with information needs identified by staff, Council, government and the education community during the consultations that precede the development of the program. For this triennium, these information needs define two themes titled: *Pathways between Education, Training and Work* and *Making Schools More Effective*. The first of these reflects the continuing interest in monitoring the pathways within and between education and the labour market. The second theme has more contemporary origins in the re-emergence of interest in the efficiency and effectiveness of schools.

Trevor Williams

Associate Director

ACER has conducted research in this theme area since July 1987. From July 1993 onwards this area of research is to be broadened in scope under the title *Pathways between Education, Training and Work*. As 1992-93 was the sixth and final year that research was conducted under the *Beyond the Compulsory School Years* theme title, this report provides an overview of the program since 1987.

In the mid-1980s when ACER was moving to develop a more focused, thematic structure for its research and development program, it was clear that a major priority area concerned the nature of upper secondary education and its linkages to tertiary education and employment. At that time most school systems were in the process of reviewing traditional arrangements for Years 11 and 12 in light of the substantial rises in retention rates that were then starting to become evident. Major concerns included the appropriateness of traditional organisational structures, curriculum models and assessment strategies for the more diverse student population that was starting to enter senior secondary school. There were also continuing concerns about high levels of youth unemployment and the role of postcompulsory education and training in preparing young people for rapidly changing social and economic circumstances. The theme area integrated different strands of ACER expertise relevant to these concerns, and contributed to policy debate and development in a more focused way than previously.

Some 30 different research projects were conducted during the period from 1987 to 1993. In total these projects involved around 35 research and development staff in full-time equivalent terms, and budgets of about \$3.5 million. There were three main substantive emphases in the program: senior secondary schooling, linkages between schools and postsecondary education, and the transition from education to work. There was considerable diversity in the types of studies that were conducted. Some studies examined the effects of social background and school factors on educational and labour market participation, others evaluated particular educational and labour market programs, while others were more concerned with critically reviewing the assumptions underpinning major policy directions.

Features of the studies have been:

- a high proportion of work commissioned or supported by external funding agencies (two-thirds of project funding has been externally generated);

Beyond the Compulsory School Years



Dr Phillip McKenzie
Senior Research Fellow
Theme Coordinator

- extensive collaboration between projects, especially in sharing data sets so as to reduce the costs of data collection and enable more intensive analyses;
- collaboration with colleagues from other institutions;
- research designs that combined quantitative and qualitative techniques.

Since 1987 projects from the theme area have produced a large number of publications in the form of books, reports to funding agencies, chapters in books, journal articles and conference papers. Non-print dissemination of project findings has also become increasingly common through press and media coverage and workshop presentations. Individual studies from the theme area have been extensively cited in the research literature, and used in policy debate and formulation.

One important indicator of the value placed on research from this area is the extent to which external funding agencies continue to commission studies. In this regard, 1992–93 presented two particular highlights. First the longitudinal study *Youth in Transition* directed by Dr Trevor Williams received funding support from the Commonwealth for its fifteenth successive year of operation. As well as being a major study in its own right, the unique database produced by this project has been an important resource for several other projects in the theme area. A second highlight occurred in May 1993 when the Commonwealth commissioned Dr John Ainley to replicate the 1990 ACER study *Subject Choice in Senior Secondary School*. The new study will document changes in the pattern of students' subject choice in Years 11 and 12 and provide data for the *National Report on Schooling in Australia* that is published by the Australian Education Council.

Phillip McKenzie

Theme Coordinator

Projects

Australian Youth Survey

ACER Staff: Trevor Williams, Michael Long, Lyn Robinson, Gladys Perkins

Development of Occupational Interests

ACER Staff: Jan Lokan, Marianne Fleming

Higher Education Series

ACER Staff: Michael Long

Infrastructure Resourcing in Schools Serving Disadvantaged Communities

ACER Staff: Phillip McKenzie

Colleague: Penny Burns (Penny Burns & Associates)

Review of the Economics of Education in Australian Education Policy

ACER Staff: Phillip McKenzie

Colleagues: Gerald Burke, Fran Ferrier, Leo Maglen, Chris Selby Smith (Monash University)

Senior Secondary Schooling in New South Wales

ACER Staff: John Ainley

Subject Choice in Senior Secondary School

ACER Staff: John Ainley, Adrian Harvey-Beavis, Marianne Fleming,

Phillip McKenzie, Linda Perry, Lyn Robinson

Colleague: Gerald Elsworth (University of Melbourne)

Youth in Transition

ACER Staff: Trevor Williams, Michael Long, Lyn Robinson, Gladys Perkins

Publications

Books

Ainley, J. & Sheret, M. (1992). *Progress through high school. A study of senior secondary schooling in New South Wales*. ACER Research Monograph No. 43. Hawthorn, Vic.: ACER.

Williams, T., Long, M., Carpenter, P. & Hayden, M. (1993). *Year 12 in the 1980s*. Canberra: Australian Government Publishing Service.

Journal Articles

Ainley, J. (1993). Participation in science courses in senior secondary school.

Research in Science and Technological Education, **11**(3), 207-23.

Ainley, J. & Sheret, M. (1993). Beyond the compulsory years: Transitions in New South Wales high schools. *Australian Journal of Career Development*, **2**(2), 15-22.

Ainley, J. & Sheret, M. (1993). Students in the senior secondary years. *Unicorn*, **19**(3), 81-88.

Lokan, J., Fleming, M. & Tuck, B. (1993). Career-related information — Australian perspectives on its importance and usefulness. *Australian Journal of Career Development*, **2**(1), 14-19.

- Long, M. (1993). Year 12 report. *Directions in Education*, 1(21), 3.
- Robinson, L. & Long, M. (1992). Student workers: New data on gender and educational differences. *Youth Studies Australia*, 11(3), 14-24.

Periodicals

- Ainley, J. (1993). Progress through high school. *ACEA Research Newsletter*, 1(1), 1.
- Long, M. (1992). Urban and rural participation. *Higher Education Series*, Department of Employment, Education and Training.

Conference Papers

- Ainley, J. (1993, June). *Curriculum choice and program specialisation in the senior secondary years*. Paper presented to the Annual Conference of the Australian Curriculum Studies Association, Brisbane.
- Ainley, J. & Sheret, M. (1992, November). *Combining qualitative and quantitative data in a study of progress through high school*. Paper presented to the Joint Conference of the Australian Association for Research in Education and the New Zealand Association for Research in Education, Geelong, Australia.
- Lokan, J.J. (1992, July). *An IRT perspective on the Work Importance Study questionnaires*. Paper presented at the Centenary Annual Conference of the American Psychological Association, Washington DC, USA.
- McKenzie, P. (1992, November). *The economics of curriculum provision for Years 11 and 12*. Paper presented to the Joint Conference of the Australian Association for Research in Education and the New Zealand Association for Research in Education, Geelong, Australia.
- Williams, T., Long, M. & Carpenter, M. (1993, April). *Australian higher education in the 1980s*. Symposium presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.

Papers of Limited Circulation

- McKenzie, P. & Burns, P. (1993, June). *Infrastructure resourcing in schools serving disadvantaged communities*. Issues paper presented to the Schools Council, National Board of Employment, Education and Training.

The major focus has been on two aspects of learning and teaching: first on the development of *good* thinking, problem solving and learning strategies, and second on educational computing.

Improving thinking, problem solving and learning

Our studies in this area address a number of issues, and only some examples can be noted here. One of our concerns is the identification of major characteristics of *higher order* cognitive skills and the development of higher order thinking and problem solving. Higher order processes, as defined in this context, are the skills and knowledge required of individuals and groups for problem solving and decision making in complex task situations, which are often dynamic rather than static. The complexity and dynamics of the task situation occur because a given set of *problems* or a learning context combine a number of factors which interact in mutually deterministic ways. The resulting *system* is often self-structuring and self-regulating as it responds to input and manipulation by individuals or groups. We are aiming to develop methodologies that elicit higher order processes with sufficient validity and reliability. Helga Rowe has conducted workshops and addressed teachers in Victoria and New South Wales on these issues.

Another focus is on *knowledge which generates knowledge*. Traditionally, there has been a tendency to view cognitive development either as the acquisition of knowledge through relatively simple but highly general learning procedures (as in learning theory views), or as radical restructurings of knowledge with time (as in stage theory views). There is room for another view of cognitive development in which the emphasis is on the formal properties of cognitive structures and processes that remain relatively invariant throughout development. One might argue that much of human cognitive development is guided by complex sets of constraints, that these are tailored for particular cognitive domains, and that the constraints sharply limit the class of naturally learnable structures in each domain. Recent advances in cognitive science and memory research provide support for such a view, which needs to be investigated and contrasted with other theories of cognitive development. This theoretical work has direct relevance to learning and teaching at all levels of schooling, for curriculum development and particularly for the structure, sampling and sequencing of learning tasks at different levels of competence. A number of empirical studies in classrooms are in progress.

The *Centre of Philosophy for Children* continued its research and development program, undertaking work on a national database covering philosophy in schools, teacher

Cognition, Technology and the Classroom



Dr Helga Rowe
Principal Research Fellow
Theme Coordinator

education in philosophy, and research activities focusing on children's dialogue, inquiry-based teaching methodologies and the impact of philosophy on improving critical and creative thinking. The ethical and social dimensions of inquiry-based teaching and learning are also being investigated. Work is continuing on the potential of the classroom community of inquiry to alleviate problems associated with violence, and on the production of a philosophy program to deal with issues of sexuality and HIV/AIDS .

The Centre continued its involvement in schools, through awareness sessions and workshops in several states. Laurance Splitter has participated in several international activities, including a residential workshop for philosophers and teacher educators in Mendham, New Jersey, a 5-day workshop for primary and secondary teachers in Singapore, and a series of workshops, conferences and awareness sessions in Belo Horizonte, Brasilia, Sao Paulo and Santa Caterina, Brazil, at the invitation of the Brazilian Center of Philosophy for Children.

The collaborative research on spatial abilities received support through a British Council Travel Grant (Academic Liaison and Interchange Scheme) to Dr John Izard in 1992. At the University of Birmingham (UK), Dr Izard and Professor Leone Burton (Mathematics and Science Education) collaborated in a study of group and individual problem-solving with three-dimensional puzzles by students in a Birmingham secondary school. As Senior Visiting Research Fellow in the Department of Mathematics at City University in London, Dr Izard continued his work with Dr Christopher Haines and his colleagues on the development and analysis of descriptor rating scales (within an item response modelling framework) for assessing university-level mathematics projects and investigations. This assessment research group now involves Mathematics and/or Computing Science Departments at 12 British universities.

Educational computing

A major focus of projects in this area is on the integration of personal computing across the curriculum. ACER's involvement in developmental work in the application of portable computers in education, which started with the Sunrise Project, continues. Advice has been provided to a number of schools which are introducing personal computers this year, on issues pertaining to classroom management, curriculum, resource requirements and means of evaluation. A general introduction to the area and a report on

the studies conducted at the Queensland Sunrise Centre at Coombabah during 1991 is available in the ACER publication *Learning with personal computers: Issues, observations and perspectives* (Rowe 1993).

Other studies in this domain are concerned with computing as a source of *cognitive tools*. Computers allow for the development, adaptation and/or delivery of tools which facilitate more effective thinking, problem solving and learning. These tools are different from normal, task-specific tools. We refer to them as cognitive tools because they are generalisable knowledge construction and facilitation tools which can be applied in most domains. Cognitive tools are defined as mental and/or technological devices which support, guide and extend the thinking processes of their users. Our research considers the role and effectiveness of computer-based tools for thinking, and how they can mediate learning.

Helga A. H. Rowe

Theme Coordinator

Projects

Problem Solving and Learning

ACER Staff: Helga Rowe, Laurance Splitter

Centre of Philosophy for Children

ACER Staff: Laurance Splitter

Spatial Abilities

ACER Staff: John Izard

Colleagues: Leone Burton (University of Birmingham), Lindsay Tartre (California State University, Long Beach)

Educational Computing

ACER Staff: Helga Rowe

Publications

Books

Izard, J.F. (1992). *Assessment of learning in the classroom*. (Educational studies and documents, 60.) Paris: United Nations Educational, Scientific and Cultural Organisation.

Rowe, H.A.H. (1993). *Learning with personal computers: Issues, observations and perspectives*. Hawthorn, Vic.: ACER.

Journal Articles

- Haines, C.R., Izard, J.F. & Berry, J.S. et al. (1993). Rewarding student achievement in mathematics projects, *Research Memorandum 1/93*. London: Department of Mathematics, City University.
- Rowe, H.A.H. (1992). Enabling new capabilities through personal computers. *Educare News*, **37**, November 1992.
- Splitter, L.J. (1992). Developing full personal awareness. *Score: A Periodical Journal for the Teaching Professions*, **2**(2), 6-7.
- Splitter, L.J. (1993). A reflective comment from Laurance Splitter. *Critical and Creative Thinking: The Australasian Journal of Philosophy for Children*, **1**(1), iv.
- Splitter, L.J. (1993). Simon: A story about being the same and being different, Chapter 1. *Critical and Creative Thinking: The Australasian Journal of Philosophy for Children*, **1**(1), 57-62. [A story about AIDS and sexuality]

Periodicals

- Rowe, H.A.H. (1993) Personal computers: A source of learning tools. *ACER Newsletter*, June 1993.
- Splitter, L.J. (1993). The Centre of Philosophy for Children, *ACER Newsletter*, March 1993.

Book Chapters

- Haines, C.R. & Izard, J.F. (1992). Learning mathematics through project work: Value added implications for student progress. In Leino, J. (Ed.) *Mathematics teaching through project work* (Research Report 27) (pp. 17-28). Hameenlinna, Finland: Department of Teacher Education in Hameenlinna, University of Tampere.
- Haines, C.R. & Izard, J.F. (1993). Authentic assessment of complex mathematical tasks. In Houston, S.K. (Ed.) *Developments in curriculum and assessment in mathematics* (pp. 39-55). Coleraine, Northern Ireland: University of Ulster.
- Izard, J.F. (1992). Patterns of development with probability concepts. In Stephens, M. & Izard, J.F. (Eds) *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Vic.:ACER.
- Izard, J.F. (1993). Challenges to the improvement of assessment practice. In Niss, M. (Ed.) *Investigations into assessment in mathematics education: An ICMI study* (pp. 185-94). Dordrecht, The Netherlands: Kluwer Academic Publishers.

- Izard, J.F. & Haines, C.R. (1993). Assessing oral communications about mathematics projects and investigations. In Stephens, W.M., Waywood, A., Clarke, D. & Izard, J.F. (Eds) *Communicating mathematics: Perspectives from classroom practice and current research* (pp. 237–51). Hawthorn, Vic.: ACER.
- Splitter, L.J. (1993). Philosophy for Children: An important curriculum innovation. In Lipman, M. (Ed.) *Thinking children and education* (pp. 385–92). Duboque, Iowa: Kendall Hunt. Reprinted from *Thinking: The Journal of Philosophy for Children*, 5(4), 1985, 47–53.

Tests

- Izard, J.F., Woff, I. & Doig, B.A. (1992). *ACER Test of Employment Entry Mathematics*. Hawthorn, Vic.: ACER.

Conference Papers

- Haines, C.R. & Izard, J.F. (1992, August). *Learning mathematics through project work: Value added implications for progress*. Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Haines, C.R., Izard, J.F. & Le Masurier, D. (1992, August). *Informative assessment strategies for mathematical modelling activities*. Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Haines, C.R. & Izard, J.F. (1993, April). *Authentic assessment*. Keynote address presented at the Second National Conference on Assessment in the Mathematical Sciences, Surfers Paradise, Australia.
- Izard, J.F. (1992, August). *Patterns of development with probability concepts (SIMULO Project)*. Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Izard, J.F. (1992, September). *Combining disparate information for selection purposes: Challenges to validity*. Plenary paper presented at the Eighteenth Annual Conference of the International Association for Educational Assessment (IAEA), Dublin, Eire.
- Izard, J.F. (1993, May–June). *Strategies for assessing projects and investigations: Experience in Australia and United Kingdom*. Plenary paper presented at the Nineteenth Annual Conference of the International Association for Educational Assessment (IAEA), Grande Baie, Mauritius.

- Rowe, H.A.H. (1992, July). *How laptop computers can affect learning processes and outcomes*. Paper presented at the Twenty-fifth International Congress of Psychology, Brussels (Published in *Proceedings*).
- Rowe, H.A.H. (1993, April). *Computing: A source of powerful cognitive tools*. Sunrise Special Lecture. Royal Melbourne Institute of Technology (invited address).
- Rowe, H.A.H. (1993, June). *Thinking about thinking: Teaching thinking skills*. Address and all day professional development delivered at Loyola College, Watsonia.
- Rowe, H.A.H. (1993, June). *Personal computing: a major tool in the pursuit of excellence*. Address and workshop conducted at *The Celebration of Excellence: A partnership in action*. One-day conference, Deakin University, Toorak Campus.
- Splitter, L.J. (1993, April). *What does it mean to bring philosophy to children?* Paper presented at the Conference on Philosophy for Children (Aprender A Pensar: Filosofia para Crianças), Brazilian Center of Philosophy for Children, Brazil.
- Splitter, L.J. (1993, April). *The explicit and implicit reasoning in Philosophy for Children*. Paper presented at the Conference on Philosophy for Children (Aprender A Pensar: Filosofia para Crianças), Brazilian Center of Philosophy for Children, Brazil.

Unpublished Papers and Papers of Limited Circulation

- Splitter, L.J. (1992). *Notes on training teachers in philosophy for children*. Presented to participants at a residential workshop, Mendham, New Jersey.
- Splitter, L.J. (1992). *The art of good questioning*. Presented to teachers at Yarra Valley School and Heidelberg School Support Centre, Melbourne.
- Splitter, L.J. (1992). *A pixie play (with apologies to all concerned)*. Presented to participants at a residential workshop, Mendham, New Jersey.
- Splitter, L.J. (1993). *Philosophy for children: Links with philosophers and philosophy*. Presented to members of the Philosophy Department, Monash University, Melbourne.
- Splitter, L.J. (1993). *A guide to ethical inquiry*. Presented to teachers at a workshop on Ethical Inquiry, ACER.
- Splitter, L.J. (1993). *Um guia para a logica em a descoberta de Ari Dos Telles*. Portuguese adaptation of *A guided tour of the logic in Harry Stottlemeier's discovery*, Sao Paulo, Brazil.

- Splitter, L.J. (1993). *Philosophy for children: A whole new way of thinking*. Part of an information package on Philosophy for Children, ACER.
- Splitter, L.J. (1993). *Philosophy for children in Australia: General background information and rationale*. Part of an information package on Philosophy for Children, ACER.
- Splitter, L.J. (1993). *Some thoughts on teacher education in philosophy for children*. Part of an information package on Philosophy for Children, ACER.
- Splitter, L.J. (1993). *Promoting cognitive excellence in the classroom*. Presented to participants at a series of workshops, ACER.

Teachers and Teaching



Dr Margaret Batten
Senior Research Fellow
Theme Coordinator

In the concluding year of the triennium, the particular emphasis in this theme was on teachers' work, with two projects focusing on the nature of teachers' work in the early years of teaching, a study of teaching practice in mixed ability classes, involvement in a study of international comparisons of teachers' work, and an exploration of three emerging areas in the debate: the area of teacher competencies, the area of teaching and learning at the interface between secondary and tertiary education, and the area of teacher self-evaluation. The year saw the publication of a research monograph central to the focus of the theme, *Knowing how to teach well: Teachers reflect on their classroom practice*.

The survey of young teachers in Queensland was completed. Teachers' views were sought on the range of tasks that comprise teachers' work outside the classroom. Data analysis is continuing, and it is planned to produce a research monograph which will present the outcomes of this study and some further analyses of an earlier study with the same teachers. Work also continued on the *First Year of Teaching* project jointly funded by the Australian Research Council (through a Monash University Small Grant) and ACER. Final interviews of the teacher-subjects were conducted and a start made on preparation of the publication which will result from this research. For the project entitled *Comparative Studies of Teachers*, permission to join the Consortium for Cross-Cultural Research in Education and its study on teacher work perceptions has been obtained, and work is expected to take place in this project in association with other Australian members of the consortium.

A recent development in education has been the expansion of links between secondary and tertiary levels, which has led to the introduction of new approaches to teaching and learning at the end of secondary education and at the beginning of tertiary education. One of these developments took place in 1993 in the Open Learning Program. The Department of Employment, Education and Training funded a pilot project to be run in conjunction with the Open Learning Program; this *Year 13 Pilot Project* provided tutorial support in a school setting for students undertaking Open Learning units. Margaret Batten was invited to be an outside consultant to the *Evaluation of the Year 13 Project*, which will conclude at the end of 1993.

In May, Margaret Batten was an invited participant in a national seminar on Researching Teacher Competencies, organised by the Australian College of Education and the National Project on the Quality of Teaching and Learning. The issue of teacher

competencies, the identification and assessment, was the subject of paper presentations and discussions by representatives of teachers, parents, teacher educators and researchers. A competency framework is being developed and validated by the National Project on the Quality of Teaching and Learning; the framework will contain statements about key areas of competence and indicators of effective performance. The production of such a framework for the teaching profession is in line with similar developments in other professions.

During the year Graeme Withers continued his consultancy with the Junior Secondary Review for the South Australian Department of Education. His main task was to conduct a small research study within the review framework, looking at actual teaching practices implemented by teachers and aimed at enhancing the education of students within mixed-ability classes. As well, he participated in the development of structural and content dimensions for a new set of curriculum frameworks to underlie college-based course development in the senior colleges of the Australian Capital Territory. Both these tasks involved the gathering and interpretation of data concerning actual teacher practice, at junior and senior secondary levels respectively.

Graeme Withers was also involved in the work of the Center for Research in Educational Accountability and Teacher Evaluation at Western Michigan University, particularly with regard to the Center's project on teacher self-evaluation. He presented a response to five papers originating in that project at a symposium within the annual meeting of the National Council for Measurement in Education in Atlanta in June.

Margaret Batten

Theme Coordinator

Projects

First Two Years of Teaching

ACER Staff: Graeme Withers

Teachers' Work

ACER Staff: Margaret Batten, Graeme Withers

Open Learning Through School Tutorials

ACER Staff: Margaret Batten

Comparative Studies of Teachers and Teaching
ACER Staff: Graeme Withers

Publications

Books

- Batten, M., Marland, P. & Khamis, M. (1993). *Knowing how to teach well*. Hawthorn, Vic.: ACER.
- Withers, G.P. (1992). *Catering for a range of student abilities in one class: What works for teachers in mixed ability classrooms?* Adelaide: Education Department of South Australia (Junior Secondary Review).

Book Chapters

- Batten, M. (1993). The identification, development and sharing of professional craft knowledge. In Day, C., Calderhead, J. & Denlico, P. (Eds) *Research on teacher thinking* (pp. 177–85). London: Falmer Press.
- Withers, G.P. (1992). Australia. In Macintosh, H.G. & Hamer, J. (Eds) *A comparative study of current theories and practices in assessing students' achievements in primary and secondary schools*. Paris: International Bureau of Education.

Conference Papers

- Batten, M. (1992, September). *Young teachers in Australia: Their views on teaching and teacher education*. Paper presented at the British Educational Research Association Annual Conference, University of Stirling, Scotland.
- Batten, M. (1993, May). *Researching teacher competencies: From the perspective of a practising researcher*. Paper presented at the Researching Teacher Competencies Seminar run by the Australian College of Education and the National Project on the Quality of Teaching and Learning, Australian National University, Canberra.
- Withers, G.P. (1992, September). *Before the Deluge? Views and experiences of Australian secondary schooling from its contemporary teachers and their students*. Paper presented at the British Educational Research Association Annual Conference, University of Stirling, Scotland.
- Withers, G.P. (1992, September). *Achieving comparability of school-based assessments used within tertiary admissions procedures — the Australian experience*. Paper presented at the International Association for Educational Assessment's Eighteenth Annual Conference, Dublin, Eire.

- Withers, G.P. (1993, February). *Curriculum frameworks*. Paper presented at a workshop and conference of the Australian Capital Territory Board of Studies Accrediting Agency, Canberra.
- Withers, G.P. (1993, April). *Teacher self-evaluation*. Reactant's paper delivered at a symposium at the Annual Conference of the National Council for Measurement in Education, Atlanta, USA.

Educational Management and Change



Dr John Ainley
Principal Research Fellow
Theme Coordinator

The ACER research program on the theme *Educational Management and Change* began in July 1990. It provided a focus for research concerned with policy issues in the provision and administration of schooling. As the end of June 1993 marks the conclusion of the first triennium for which the theme operated, it provides an opportunity to review those three years as well as to highlight major activities from 1992-93. From July 1993 onwards this area of research will be incorporated into a new theme: *Making Schools More Effective*.

It was our intention that the theme *Educational Management and Change* would contribute to understanding and knowledge of the ways in which organisation and management related to instructional practice and student learning. It emerged at a time when there were significant changes in the organisation and management of Australian school systems and schools; changes introduced on the premise that they would enhance the quality of education experienced in schools, but with little reference to a coherent body of research. As a reflection of its orientation to current issues of policy and practice, two-thirds of the projects undertaken in this theme over the triennium were commissioned by education authorities. Accordingly, a large proportion (approximately three-quarters) of the funding for the theme was externally generated. Commissioned projects in the theme totalled over \$850 000.

One of the important strands in this theme has concerned school effectiveness. ACER was commissioned by the Commonwealth and state Ministers of Education to undertake the *Effective Schools Project*. This was by far the largest single project conducted as part of the theme and was completed during 1992-93. Initially a booklet and an associated video were produced as a stimulus to discussion in community and school groups throughout Australia about what makes an effective school. There were over 7000 responses to the invitation to comment on school effectiveness. Analysis of these responses has produced a comprehensive portrayal of the expansive expectations held for our schools. The report of the study, entitled *Making schools more effective*, links the analyses of views of school effectiveness with an extensive review of research literature on the topic. The perspectives emerging from this report contribute significantly to, and advance our understanding of, the issues involved in school effectiveness. As an indication of the interest generated by the project, the report, which was published in December 1992, has already been reprinted. Associated studies of school effectiveness

have also been undertaken during 1992–93 through secondary analyses of data gathered in other ACER studies. These studies have explored the links between different indicators of school effectiveness and have focused attention on the importance of longitudinal information as a means of studying student growth.

A second continuing strand in the theme *Educational Management and Change* concerned secondary schools and the provision of education in the early adolescent years. Research by ACER has indicated the importance of the foundations established in the earlier secondary years for postcompulsory schooling. An increased emphasis on this area has been evident in the South Australian *Junior Secondary Review*, the Schools Council publication *The middle years of schooling* and in overseas projects such as the Carnegie Foundation's *Turning Points* and the Ontario Transition Years initiatives. ACER staff contributed to the case studies and surveys conducted as part of the South Australian review and have been involved in the OISE evaluation of the transition years initiatives in Ontario. In 1992–93 ACER also conducted, in collaboration with staff from the University of New England and the University of Southern Queensland, a study of curriculum provision in rural secondary schools.

During 1992–93 ACER conducted a study of the provision of *Schooling for Students with Disabilities*. This study was commissioned by the Department of Employment, Education and Training and represents an important national study of an area which attracts considerable attention but in which there has been only limited data available. The study integrates information provided by education authorities, schools (through their principals), teachers and parents to provide a comprehensive account of the state of provision in this field. It charts the complex variations, amid the common themes, in the forms of provision of education for this group of young people.

Over the course of the triennium other important policy issues in educational management have been investigated. As part of an ongoing interest in the early years of schooling, ACER has contributed to reviews of policy on school entry age and procedures. ACER conducted an initial review of research evidence related to school entry age, a study on the assessment of school readiness (which involved following children through from pre-school to the second year of school) and a survey of parent views of school entry age. An

investigation of *Equity Programs in Non-Government Schools* was conducted for the Department of Employment, Education and Training during 1990 and 1991 as part of the program of sample studies for the *National Report on Schooling in Australia*. The latter part of the year saw the commencement of work on a series of surveys for the *Queensland Review of the School Curriculum*.

John Ainley

Theme Coordinator

Projects

Effective Schools Project

ACER Staff: Barry McGaw, Kevin Piper

Colleagues: Diana Banks, Beryl Evans

Schooling for Students with Disabilities

ACER Staff: Marion de Lemos, Corinne Getty, Margaret Batten, Frank Tinney,

John Ainley

Curriculum Provision in Rural Secondary Schools

ACER Staff: Phillip McKenzie, Linda Perry

Colleagues: Ross Harrold, Andrew Sturman

Review of the Queensland School Curriculum

ACER Staff: John Ainley, Margaret Batten, Phillip McKenzie, Linda Perry

School Organisation and Quality of Schooling

ACER Staff: John Ainley

Studies in School Effectiveness

ACER Staff: Barry McGaw, John Ainley

Assessment of School Readiness and Studies of Issues Related to School Entry

ACER Staff: Marion de Lemos

Colleague: Elizabeth Mellor

Publications

Books

McGaw, B., Piper, K., Banks, D. & Evans, B. (1992). *Making schools more effective: Report of the Australian Effective Schools Project*. Hawthorn, Vic.: ACER.

Journal Articles

- Ainley, J. & Bourke, S. (1992). Student views of primary school. *Research Papers in Education*, 7(2), 107-28.
- Piper, K. (1992). National curriculum: An historical perspective. *Unicorn* (Journal of the Australian College of Education), 18(3), 20-24.
- Routley, V. & de Lemos, M. (1993). Changing trends in school entry age in Victoria. *Australian Journal of Early Childhood*, 18(2), 30-38.

Conference Papers

- Ainley, J. (1993, January). *Attitudes to school as an indication of school effectiveness*. Paper presented to the International Congress for School Effectiveness and Improvement, Norrköping, Sweden.
- de Lemos, M.M. & Mellor, E.J. (1992, July). *A qualitative study of parent comments on school entry age*. Paper presented at the Seventh Australian Developmental Conference, Brisbane.
- de Lemos, M.M. & Mellor, E.J. (1993, January). *A longitudinal study of developmental maturity, school entry age and school progress*. Paper presented at the First Australian Research in Early Childhood Conference, Canberra.
- Piper, K. (1993, January). *What makes an effective school? Public perceptions and the context of practice*. Paper presented to the International Congress for School Effectiveness and Improvement, Norrköping, Sweden.
- Piper, K. (1993, February). *Effective schools: Latest national and international developments*. Paper presented to the IARTV Seminar, Melbourne.
- Piper, K. (1993, June). *Curriculum quality and school effectiveness: Some insights from the Australian Effective Schools Project*. Paper presented to the Australian Curriculum Studies Association Conference, Brisbane.

Papers of Limited Circulation

- Ainley, J. (1992). *Parents and the transition years*. Ontario Institute for Studies in Education, Department of Educational Administration.
- de Lemos, M.M. (1993). *Schooling for students with disabilities*. Hawthorn, Vic.: ACER (mimeo).
- Piper, K. (1993). *A critical review of the Queensland curriculum in social education*. Background paper prepared for the Queensland Review Panel appointed by the Queensland Government to review the school curriculum.

Assessment and Reporting



Dr Ray Adams
Senior Research Fellow
Theme Coordinator

The currently available psychometric technology, including item response modelling and 'classical' approaches, supports a tradition of educational measurement that many educators now argue is inappropriate and irrelevant, if not harmful, to student learning. The tradition of objectively scored, multiple-choice tests that view learning as passive is being increasingly questioned by researchers from a range of disciplines. The emerging consensus is that if measurement is to validly represent the status of student learning then the existing tradition should be altered so that assessment practice is built around principles that include:

- Assessment should recognise that learning is a constructive process in which the student is an active participant in building his or her own understanding of subject matter. Assessment should focus on qualitative change in the understanding of individuals.
- Assessment tasks should be clearly related to the domain being assessed, and judgments of student performances on tasks should be made using a variety of criteria from a range of perspectives.
- Assessment should focus on the individual, in particular upon the changes in the understandings of an individual learner over time.

Accordingly, the research undertaken under this theme has continued to concentrate on the development of psychometric models that accommodate the demands of alternative assessment while providing the quality control that forms part of fair and equitable assessment practice. The models must permit a flexible approach to observation and data collection, provide useful methods of reporting and summarising student performances, and provide a framework for examining the reliability and validity of assessment. During this third year of the theme, these models and their supporting software reached a level of development that enabled their use in ACER's assessment programs.

Ray Adams

Theme Coordinator

Projects

Psychometric Models

ACER Staff: Ray Adams

Conceptual Understanding in Science

ACER Staff: Brian Doig

Publications

Books

Bowden, J. & Masters, G.N. (1993). *Implications for higher education of a competency-based approach to education and training*. Commonwealth Department of Employment, Education and Training Publications, Canberra.

Journal Articles

Ramsden, P., Masters, G.N., Stephanou, A., Walsh, E., Martin, E., Laurillard, D. & Marton, F. (1993). Phenomenographic research and the measurement of understanding: An investigation of students' conceptions of speed, distance and time. *International Journal of Educational Research*, **19**(3), 301-16.

Wilson, M.R. & Masters, G.N. (1993). The partial credit model and null categories. *Psychometrika*, **58**(1), 87-99.

Book Chapters

Masters, G.N. & Mislevy, R. (1993). New views of student learning: Implications for educational measurement. In Frederiksen, N. et al. (Eds) *Test theory for a new generation of tests* (pp. 219-42). Erlbaum.

Conference Papers

Doig, B.A. (1992, November). *Alternative approaches to science assessment — the Victorian experience*. Paper presented at the Australian Association for Research in Education Annual Conference, Deakin University, Geelong, Australia.

Doig, B.A. (1992, November). *Assessing and reporting mathematical problem solving*. Paper presented at the Australian Association for Research in Education Annual Conference, Deakin University, Geelong, Australia.

Doig, B.A. (1993, April). *Embedding assessment in the classroom: The case of teacher-selected test banks*. Paper presented at the Second Annual International Conference on Assessment in the Mathematical Sciences, Gold Coast, Australia.

Masters, G.N. (1993, April). *Certainty and probability in assessments of competence*. Paper presented at the Vocational Education, Employment and Training Advisory Committee (VEETAC) National Assessment Research Forum on Competency-Based Assessment Issues, Sydney.

Unpublished Papers and Publications of Limited Circulation

Masters, G.N. (1993). *Inferring levels of achievement on profile strands*. Paper commissioned by the Australian Education Council (AEC) Curriculum and Assessment Committee.

Measurement Division Contract Projects



Dr Geoff Masters
Associate Director
(Measurement)

During 1992-93 Measurement Division staff worked on projects across the four major areas of Divisional activity: Contracts, Testing Services, Product Development for Trading, and research and development under the *Assessment and Reporting* theme. A separate report for each of these four areas of work is provided in this *Annual Report*.

Major contracts in 1992-93 were undertaken for several state education systems. These included the *Western Australian Monitoring Standards in Education Program*, the *Victorian Social Education Achievement Study*, the *New South Wales Basic Skills Testing Program*, and the *Queensland Core Skills Tests*. All three projects involved significant new test development work undertaken by teams of mathematics/science research staff under the direction of George Morgan and humanities/social sciences research staff under the direction of Doug McCurry.

ACER also had an important role in the work of the Australian Education Council Curriculum and Assessment Committee (CURASS) to develop national statements and profiles during 1992-93. For each of the eight learning areas addressed by CURASS, ACER carried out research to investigate the validity of the profiles by setting up opportunities in schools for teachers to make judgments in relation to all profile outcomes. This project was directed at ACER by Jacqui Barley.

Another important contract for ACER was the continuing work for the Australian Bicentennial Multicultural Foundation to develop and provide the Australian Language Certificates. The numbers of schools and students participating in this project grew again in 1992-93, as did the number of languages in which Certificates were made available. The *Australian Language Certificates Project* was directed by Susan Zammit with assistance from Judy Lachele.

ACT Writing Test

Two writing tasks for Year 12 students in the Australian Capital Territory were developed by Doug McCurry. These tasks (one developed for a second special sitting) are constructed annually for the Australian Capital Territory Department of Education and administered with the Australian Scaling Test. Scripts are marked at ACER and results forwarded to the Department.

AEC Profile Validation Project

During the year, ACER was commissioned by the Australian Education Council Curriculum and Assessment Committee to conduct an empirical validation of the national profiles in English, mathematics, science, studies of society and environment, technology, health, languages other than English, and the arts. The validation exercise was directed by Jacqui Barley with the assistance of Margaret Wu and Ray Adams. As part of the exercise, special computer software was developed and data collected from teachers throughout Australia.

Australian Language Certificates

For the fourth year in succession, ACER administered the *Australian Language Certificates Project*, an initiative of the Australian Bicentennial Multicultural Foundation. Some 40 000 students from Australia and New Zealand undertook listening and reading comprehension tasks in Chinese, French, German, Indonesian, Italian, Japanese and Modern Greek at beginner's level and French at intermediate level. Participants received certificates recording a description of their levels of performance. The project was directed by Susan Zammit with assistance from Judith Lachele, Phoebe Ford and Peter Congdon.

Australian Scaling Test

The Australian Scaling Test is used for scaling Year 12 results in the Australian Capital Territory and Western Australia. The project, directed by George Morgan, develops multiple-choice questions in mathematics, science, humanities and social science organised around 'units' of test material. Doug McCurry supervised the development of the social science and humanities items for the test.

Basic Skills Testing Program (NSW)

In 1992, ACER conducted the *Basic Skills Testing Program* (BSTP) for the New South Wales Department of School Education for the fourth successive year. Literacy and numeracy tests were developed for some 120 000 students in Years 3 and 6. Individual reports were prepared and forwarded to teachers and parents, and school reports and system-wide summaries were prepared. In 1993, the tests were developed by staff of the New South Wales Department of School Education. ACER continued to carry out the data analyses and to prepare and forward the school and individual reports. Staff working on the project in 1992–93 were Jan Lokan (project director), Jacqui Barley, Imelda Carthy, Corinne Getty, John Lindsey and Margaret Wu.

Conceptual understanding in mathematics and science

The aim of this project is to explore children's understandings in mathematics and science both to further knowledge in these areas and to provide conceptual bases for the development of innovative assessment. One such exploration has been undertaken in mathematics which looked at children's beliefs and understandings of number and calculator use in primary schools. Results from data collected in Melbourne schools at Year 3 show differences between children who have had free access to calculators and those whose access has been restricted. The children with free access to calculators show more development in their understanding and knowledge of decimals and negative numbers and have a broader view of number than the other children. Further investigation is continuing. The project, which is core funded, is directed by Brian Doig.

First Steps evaluation

The *First Steps Program* is a Western Australian program designed to develop 'at risk' students' literacy skills. The program is built around a number of developmental continua which are used as frameworks for monitoring student learning and identifying appropriate learning activities. The First Steps evaluation is being undertaken for the Western Australian Ministry of Education. The project is directed by Adrian Harvey-Beavis with support from Margaret Wu. In 1992 the Spelling and the Writing Developmental Continua were empirically validated using the Rasch model. The same method is currently being used to validate the Reading Continuum. Changes made to the Spelling Continuum as a result of the 1992 phase of the evaluation are also being examined. The evaluation is now scheduled to be completed by December 1993.

Selective High Schools Entrance Test

For the fifth consecutive year, ACER developed, scored and analysed results on a battery of tests used by the New South Wales Department of School Education to select students for entry to selective and agricultural high schools in that state. Tests covered mathematical reasoning, English language and general ability. The project was directed by Susan Zammit with assistance from Peter Congdon and Phoebe Ford.

Queensland Core Skills Test

Following the Viviani review of tertiary entrance in Queensland, ACER was commissioned by the Board of Senior Secondary School Studies to develop multiple-choice questions

for the new Queensland Core Skills Test. The seven-hour test also includes a writing test and a paper composed of short-response items. ACER developed and pilot tested a pool of multiple-choice questions from which the Board selected 200 items. The project was directed by Doug McCurry, with George Morgan supervising the development of quantitative items for the test.

Queensland short-answer consultancy

In a separate project, Doug McCurry and George Morgan provided advice to the Board of Senior Secondary School Studies on its development of short-response items and contributed items of this kind for inclusion in the 1993 test.

Choosing to study a language other than English

During 1992–93 ACER undertook a project for the Department of Employment, Education and Training to investigate factors influencing students' decisions to continue or discontinue the study of languages other than English (LOTE). A special focus of the study was on the participation of boys who have traditionally been under-represented in LOTE classes. The study surveyed students throughout Australia by questionnaire and collected information on a range of school and home background variables. The project was directed by Susan Zammit with assistance from Phoebe Ford and Peter Congdon.

Third International Mathematics and Science Study

In 1994, samples of students in Years 4, 8 and 12 in all Australian states and territories will take tests in mathematics and science as part of the Third International Mathematics and Science Study (TIMSS) of the International Association for the Evaluation of Educational Achievement (IEA). During 1992–93 work was undertaken at ACER, supported by funding from all states, territories and the Commonwealth, to plan and prepare for ACER's participation in this study. The project was directed by Ray Adams with support from Yvonne Candappa.

Vic Roads consultancy

ACER was contracted to work with Vic Roads to establish the psychometric properties of Vic Roads' new Hazard Perceptions Test. It is anticipated that this test will become a component of the driver's licence test in Victoria. It is computer-administered and presents candidates with a series of road scenes in which they are required to identify

hazards by touching the screen at appropriate times. Pilot data on the new test were collected by Vic Roads and analysed by Mike Sorrell, Ray Adams and Peter Congdon. The results of analyses have been used to inform the revision of the initial Hazard Perceptions Test.

Victorian Social Education Achievement Study

This project is the third in a series of Victorian achievement studies conducted by ACER for the Victorian Ministry of Education. Previous studies were in literacy and numeracy (1988) and science (1990). The *Social Education Achievement Study* is notable because it is the first standards monitoring program in recent years in which two states have collaborated. The assessment materials developed through this project will be administered to samples of students in both Victoria and Western Australia. The focus of the study, which is being conducted by Kevin Piper, Brian Doig, Suzanne Mellor, Judy Walsh and Imelda Carthy, will be on the investigation of students' conceptual understandings and skills.

Western Australian Monitoring Standards in Education Program

Another major ongoing project in 1992 was to develop mathematics and language tests at Years 3, 7 and 10 for the *Western Australian Monitoring Standards in Education Program*. Mathematics tests were developed for the five strands of the mathematics profile: Number, Measurement, Space, Chance and Data, and Algebra. Language tests were developed in Reading by ACER and Writing by the Ministry. Through the pilot testing phase of the project, a large pool of items was trial tested at each year level, and links were established to the 1990 system-level testing to enable achievements to be compared over time. The project was managed in 1992 by Margaret Forster.

Geoff Masters

Associate Director (Measurement)

Publications

Journal Articles

Wilson, M.R. & Adams, R.J. (1993). Marginal maximum likelihood estimation for the ordered partition model. *Journal of Educational Statistics*, **18**, 69–90.

Book Chapters

- Doig, B.A. & Masters, G.N. (1992). Through children's eyes: A constructivist approach to assessing mathematics learning. In Leder, G. (Ed.) *Assessment and learning of mathematics* (pp. 269–89). Hawthorn, Vic.: ACER.
- Masters, G.N. (1993). Towards improved measures of educational attainment. In *Education issues* (pp. 69–94). Background Paper No. 27, Economic Planning Advisory Council, Canberra.
- Masters, G.N. & Doig, B.A. (1992). Understanding children's mathematics: Some assessment tools. In Leder, G. (Ed.) *Assessment and learning of mathematics* (pp. 249–68). Hawthorn, Vic.: ACER.

Tests

- Doig, B.A. & Adams, R.J. (1993). *Tapping students' science beliefs: A resource for teaching and learning*. Hawthorn, Vic.: ACER.

Computer Program

- Adams, R.J. & Khoo, S.T. (1993). *Quest: The Interactive Test Analysis System*. Hawthorn, Vic.: ACER.

Conference Papers

- Adams, R.J. (1993, April). *The test rotation design for the Third International Mathematics and Science Study: A proposal*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.
- Adams, R.J., Wilson, M.R. & Wu, M.L. (1993, April). *Multilevel item response modelling*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.
- Masters, G.N. (1992, July). *Mapping achievement in large-scale testing programs*. Paper presented at Eighth World Congress of Comparative Education, Prague, Czechoslovakia.
- Masters, G.N. (1992, October). *Alternative assessment modes and competency*. Address to Graduate Research Seminar, Victoria University of Technology, Melbourne.
- Masters, G.N. (1992, November). *Assessing the competencies*. Address to forum organised by the Centre for Advanced Teaching Studies, Hobart.
- Masters, G.N. (1992, November). *The impact of competency-based assessment and reporting*. Half-day workshop for NSW Metropolitan South-West Region.

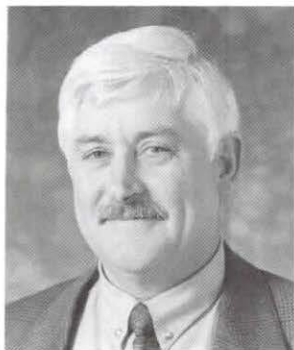
- Masters, G.N. (1993, April). *National reporting, profiles, basic skills testing*. Presentation to National Board of Employment, Education and Training, School Council's Seminar on Student Assessment, Tertiary Entrance and National Reporting of Student Attainment: The Issues, Canberra.
- Masters, G.N. (1993, June). *Assessing achievement in Australian schools*. Presentation to workshop on National Assessment of Educational Outcomes. National Industry Education Forum, Melbourne.
- Masters, G.N. (1993, June). *National reporting: Can the profiles provide reliable national reporting?* Presentation to workshop on National Statements and Profiles. National Council of Independent Schools Associations, Melbourne.
- Wilson, M.R. & Adams, R.J. (1992, July). *A multilevel perspective on the 'two scientific disciplines of psychology'*. Paper presented at the XXVth International Congress of Psychology, Brussels.
- Wu, M.L. & Adams, R.J. (1993, April). *Simulating parameter recovery for the random coefficients multinomial logit*. Paper presented at the Sixth International Objective Measurement Workshop. Atlanta.

Unpublished Papers and Publications of Limited Circulation

- Congdon, P.J. (1993). *Analysis of performances on the University of Newcastle Medical Selection Test, 1992*. Hawthorn, Vic.: ACER.
- Congdon, P.J. (1993). *Technical information regarding the linking of the 1990 and 1992 Western Australia Monitoring Standards in Education Tests and the production of a single scale for reporting performance across different year levels*. Hawthorn, Vic.: ACER.
- Lokan, J.J. & Carthy, I.E. (1993, February). *New South Wales Basic Skills Testing Program 1992: Confidential report to the Director General*.
- Lokan, J.J. (1993, April). *The Basic Skills Testing Program in New South Wales, 1992: Public report*. Sydney: New South Wales Department of School Education.
- Masters, G.N. (1992, November). *Competency-based education and training*. Address to the Bankstown Secondary Principals.
- Masters, G.N. (1992, December). *Assessment for the Victorian Certificate of Education (1992): Experiences of some independent schools*. A report prepared for the Association of Heads of Independent Schools of Australia (Victoria).
- McCurry, D. (1993). *Report on the 1992 Australian Scaling Test (AST Series A): Writing Test*. Hawthorn, Vic.: ACER.

- McCurry, D. & Morgan, G. (1992). *Short-response marking experiment: Report to the Board of Senior Secondary School Studies in Queensland*. Hawthorn, Vic.: ACER.
- McQueen, J. (1992, August). *Exploring tools for evaluating linguistic outcomes*. Paper presented at the Heidelberg School Support Centre.
- Morgan, G. & McCurry, D. (1993). *Report on the 1992 Australian Scaling Test (AST Series A)*. Hawthorn, Vic.: ACER.
- Zammit, S.A. (1992). *The challenge: Choosing to study a language other than English through high school*. A report to the Department of Employment, Education and Training under the Australian Second Language Learning Programme (National Projects).
- Zammit, S.A. (1992). *Report to the Australian Bicentennial Multicultural Foundation on the Australian Language Certificates 1992*. Hawthorn, Vic.: ACER (mimeo).
- Zammit, S.A. (1992). *Selective high schools test: Report 1992*. Hawthorn, Vic.: ACER (mimeo).
- Zammit, S.A. (1992). *The Australian Language Certificates — Intermediate Level: Handbook for language panels*. Hawthorn, Vic.: ACER (mimeo).
- Zammit, S.A. & Lachele, J.E. (1992). *The Australian Language Certificates: Teachers' test administration handbook*. Hawthorn, Vic.: ACER (mimeo).

Testing Services



Mr Mike Sorrell
Testing Services

As part of the Measurement Division, Testing Services has responsibility for three areas of ACER activity. These are:

- production, scoring and reporting on Australia-wide scholarship tests for schools;
- consultation and design of testing programs for corporate clients;
- machine scoring and reporting on a range of educational and psychological tests for schools and private clients.

Scholarship testing programs

There are two annual programs, the Cooperative Scholarship Testing Program (CSTP) and the Australian Cooperative Entry Program (ACEP).

The CSTP is used by approximately 150 independent schools around Australia to identify academically gifted students for the award of scholarships. This year more than 14 000 registrations were received. There are four CSTP tests at each of three levels: Year 6, Year 8 and Year 10. Two of the tests assess students' ability to write creatively, one measures abilities used in reasoning with quantitative material, and the other assesses abilities used in reasoning with stimulus material from the humanities and social sciences.

The ACEP program, now in its eleventh year, was devised for South Australian independent schools as both an entrance test and a scholarship test. ACEP tests are designed to be more curriculum dependent than CSTP tests and measure abilities across six areas. Reports are made to schools on a candidate's scholastic ability and scholastic achievement. Because of the breadth of assessments, ACEP is becoming more widely used as an entrance test by independent schools in other states.

Testing program for corporate clients

Special testing programs can be devised to meet client requirements. Tests may be selected from our wide range of licensed products, or be specifically constructed with customer input. ACER has been providing a test consultation, scoring and reporting service for the following clients:

- The Australian Insurance Institute
- News Corporation
- Vic Roads

Test scoring and reporting

We have a number of quality high speed optical mark read (OMR) machines which enable ACER to score tests and specially designed data entry sheets for a range of clients. Candidates mark their answers in pencil on OMR answer sheets. Standard reports listing alphabetic and merit performance, together with simple group statistics, are supplied. More detailed reports can be produced in line with customer requirements. It is hoped to expand this test scoring service through better and wider advertising, and new product development.

New initiatives

The Special Tertiary Admissions Test (STAT)

The Special Tertiary Admissions Test (STAT) replaced the old Mature Age Scholastic Aptitude Test. Now in its second year, STAT allows tertiary institutions throughout Australia to assess a range of competencies considered important in tertiary study in students who have not recently completed a standard Year 12 certificate. More than 10 000 registrations were received from around Australia in its first year.

The STAT will be available in four forms: all verbal, all quantitative, two-thirds verbal and one-third quantitative, and half verbal and half quantitative. Through the use of common items, scores on each of the forms can be accurately equated. STAT scores are reported on a scale from 100 to 200.

A fifth form of the STAT assesses candidates' ability to write creatively and constructively for one hour on one of a number of essay topics.

The Tertiary Admissions Centres in each state will coordinate the use of the STAT by their constituent institutions. Score reports from ACER will enable institutions around the country to compare and interpret candidate performance, and share data from a national database.

Research into the Cooperative Scholarship Testing Program (CSTP)

A considerable amount of data has been accumulating over the long history of this project. There is a real need to examine this data to review the performance of the tests. There would also be some very interesting follow-up studies on the subsequent careers of

candidates who had been awarded scholarships on the basis of these tests. This will provide an opportunity for schools to collaborate with ACER on certain aspects of the program of mutual interest.

A number of issues will be addressed in this work:

- What are the different sub-tests actually measuring?
- How do successful candidates perform throughout their schooling and subsequent studies?
- What careers do scholarship winners eventually take up?
- Do the tests display bias of any form: gender, cultural, language, and so on?
- How does the CSTP compare with other measures of academic ability?
- What are the major psychometric properties of the tests, including construct validity, content validity and predictive validity?

Mike Sorrell

Testing Services

This year the high level of activity in product development continued as it has in previous years. There has been a balance between work-in-progress and work-completed. In the latter category two new products came into stock, both unique in their own way.

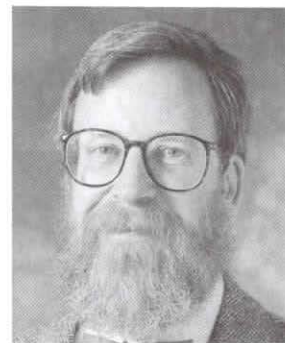
The *Profiles of problem solving* (POPS), which was foreshadowed in last year's report, was completed. A team of authors, Kaye Stacey, Susie Groves, Sid Bourke and Brian Doig, put together a unique collection of mathematics problem solving materials. The set of problem solving questions in POPS are analysed not only in terms of the accuracy and correctness of the answers, but also by the strategies used and the ways in which students communicate their answers. The information gained from this analysis is displayed on a profile. This profile allows teachers to communicate students' problem solving abilities easily and thoroughly to parents and other teachers. The teacher's manual includes many ideas for further teaching using a student's POPS data as a starting point.

Following the completion of the *1990 Victorian Science Achievement Study*, a new form of science testing was published this year. The *Tapping students' science beliefs* (TSSB) materials explore the beliefs of 10 to 15 year-old students on a range of phenomena. These include living things, light, sight, force, motion and the cosmos. Questions are embedded in stories and cartoons, and students write or draw their answers. The results of answering a particular TSSB are reported on a continuum defined for that phenomenon. The continuum describes the development of increasing understanding and the teacher's manual contains classroom ideas for furthering this understanding.

In response to many requests from schools, the *Diagnostic English Language Test* (DELTA) is being developed to assist with the assessment of newly arrived overseas students, and others who have educational and language backgrounds similar to those of the overseas students. DELTA will offer users an efficient means of identifying an individual student's strengths and weaknesses. This information will assist in making decisions on a student's readiness to enter a mainstream class or the degree and nature of English-as-a-second-language support required by the student.

The DELTA kit consists of listening, reading and writing components, all of which focus on the ability of students to cope with the language demands of everyday life in the Australian secondary classroom. Test items are designed to simulate real-life school tasks

Product Development



Mr Brian Doig
Senior Research Fellow

and interactions, and topics are based on the interests of middle to upper secondary students. Although the primary focus is on the academic language needs of the students, the importance of social interaction has been recognised in the test design. At this stage a feasibility study has been conducted, questions developed and trialled, and language needs, school levels and other necessary preliminary information collected.

DELTA is an innovative approach to the assessment and reporting of student language abilities and as such will provide a valuable resource for those responsible for the language needs of overseas students in Australia. In fact DELTA will serve as an excellent model for future developments in language testing.

Work commenced this year on the Developmental Assessment Resource for Teachers (DART). This project focuses on English and mathematics assessment. DART is aimed at upper primary students and is very innovative in both assessment instruments and reporting formats. The English assessment includes reading, writing, speaking and listening. The assessment materials are thematically linked to the Australian film *Danny's Egg* about a boy and an emu egg. The use of video- and audio-tapes, and small group discussion sets this material apart from other assessment materials in English.

Mathematics includes the five strands: Chance and Data, Measurement, Space, Number and Problem Solving. Again these materials are innovative, as they allow teachers to select the activities they wish to use for assessing their students. While some activities are for individual children, others are for pairs of children, and in some cases the teacher is part of the assessment.

The Booker Profiles are diagnostic interview protocols created by George Booker from Griffith University, Queensland. George Booker has had many years of practical experience using these instruments for diagnostic assessments of people from 7 years of age to adult. The Profiles are individually administered, and provide a detailed analysis of student understandings in numeration and computation. Details of causes of problems and remediation strategies are a feature of the administrator's manual. The Booker Profiles will be a valuable contribution to the clinician's arsenal.

Brian Doig

Senior Research Fellow

Other Activities

In addition to its research and development activities, ACER undertakes an important series of other activities which are described in the following pages.

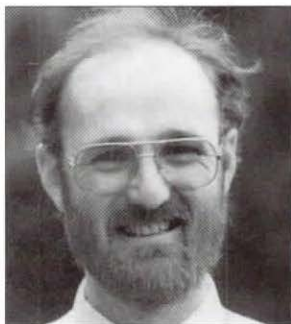
The Library and Information Services Unit maintains an exceptional specialist library to support ACER's work and also provides an important national information service through its production of the *Australian education index*, the *Bibliography of education theses in Australia* and the *Australian education directory*.

Under the Development and Training program, ACER is widening its range of activities through both training programs and conferences. The annual conferences on behaviour problems are providing an involvement with a significant group of educators with which ACER has had little prior connection.

Specific comment is made on ACER's internal management, covering progress on the equal opportunity policy and the continuing developments of the computer facilities.

ACER has long had an important role in the publication and distribution of books, tests and other materials in both education and psychology. ACER is a specialist publisher and distributor that not only seeks to address the needs of specific professional audiences such as educational researchers, teachers, psychologists and speech pathologists, but also, particularly through some of its own publications, to provide for a more general audience. Supply of ACER's books to bookshops is facilitated by Oxford University Press as ACER's distributor to the trade in Australia and New Zealand.

Library and Information Services



Mr Peter Mathews
Head of Library and Information
Services Unit

Automation

Work has continued towards full automation of the Library and Information Services Unit's operations. Staff changes during the 1992-93 year and the development of the International ERIC file have meant we have had to give priority to our publications and database products. Reclassification of a part-time librarian's position into a full-time position has enabled some reallocation of tasks and will help further reduce a backlog of materials awaiting indexing. With the planned move to Camberwell in early 1994, a special effort will be made to complete the retrospective conversion of the card catalogue. Significant progress has been made towards the development of online cataloguing of the serials collection. A circulation module for the database has been purchased and will be implemented once conversion of the catalogue is completed.

Each staff member in the Library and Information Services Unit now has a networked personal computer which has helped in improving the reliability and production of the library's databases. Solutions to the computing problems which have prevented making the catalogue available site-wide through VAX terminal sessions are being investigated.

International ERIC

In November 1993 the DIALOG Ondisc International ERIC CD-ROM will be released. This new product jointly publishes the *Australian Education Index*, *British Education Index* and *Canadian Education Index*. For many years the producers of the Australian, British, and Canadian indexes and ERIC have been working towards making the databases available in a compatible format. Late in 1992 a contract was signed between DIALOG Information Services CD-ROM Division and the producers of the indexes to produce a CD-ROM of these three databases. This is a significant development and means that the four major English language education research databases will be able to be easily searched in a consistent format using a common, well-structured user interface and powerful retrieval software. We see International ERIC and the AUSTROM CD-ROM as complementary methods of publishing the *Australian education index* file because of the different emphases of the two products — International ERIC is targeted specifically towards education users and AUSTROM is targeted more generally towards social science and humanities interests. It is anticipated that International ERIC will give the *Australian Education Index* much better exposure overseas.

A large amount of work has been done on the *Australian education index* file during 1992-93, both reformatting and editing data in selected fields to meet DIALOG's International ERIC file specification. These changes will be reflected in the AUSINET and AUSTROM versions of the database, when those files are reloaded.

Australian Thesaurus of Education Descriptors

Towards the end of 1992-93, the *Australian Thesaurus of Education Descriptors* file was loaded onto the computer network and work commenced towards producing the second edition. It is anticipated that this key tool will be routinely kept up-to-date in the future.

Australian Education Directory

Production of the *Australian Education Directory* is continuing smoothly. A detailed analysis has been made of the 1993 edition's sales, and opportunities for different marketing strategies for the 1994 edition are being considered.

Peter Mathews

Head, Library and Information Services Unit

Publications

Australian Education Directory 1993. Compiled and edited by Peter Mathews & Anne McKechnie.

Australian Education Index. Elspeth Miller (Ed.). Entries contributed by Julie Badger, Denise Balint, Margaret Findlay, Elspeth Miller & Rachel Salmond. Vol. 35 No. 2 (June 1992), No.3 (Sept. 1992) and Cumulation (1992), Vol. 36 No. 1 (March 1993).

Bibliography of Education Theses in Australia. Julie Badger (Ed.) No. 13 (1992), Judith Fawcett (Ed.) No. 14 (1992).

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Mathews, P.G. (1992). Special libraries and the 4th R. In Price, R. (Ed.) *Information service in challenging times: Challenges in special librarianship* (pp. 41-48). Adelaide, South Australia: Auslib Press.

Unpublished Paper

Mathews, P.G. (1992, September). *Subject trends in Australian education information: a preliminary analysis based on AARE papers*. Unpublished paper presented to 1992 AARE/NZARE joint conference, Deakin University, Geelong, Australia.

Development and Training



Dr John Izard
Assistant Director
(Development and Training)

Conferences

The fourth National Conference on Behaviour Problems in Schools was held at the Australian National University in Canberra in October 1992. The Canberra Behaviour Problems Network group established the local conference committee to work with ACER in arranging the conference. Attendance at the conference was high, with participants from throughout Australia and from New Zealand. The conference proceedings had been edited for publication prior to the conference; the proceedings were available at the conference. The fifth National Conference on Behaviour Problems in Schools will be held in Fremantle, Western Australia in September 1993. This conference has been arranged by ACER in conjunction with the Behaviour Problems Network group in Western Australia and the Edith Cowan University. As in the case of the 1992 conference, the papers selected for the conference are being edited for publication with the intention that they will be available at the conference.

The Second National Assessment in the Mathematical Sciences was held at Surfers Paradise in April 1993. The timing of this conference had been altered from later in the year in the hope that more teachers would attend. Those who were present gave a splendid insight into applications of school-based assessment, but the number of such participants was not as high as had been hoped. However, at this second conference there were participants from New Zealand, Malaysia and Singapore. Dr Leone Burton, Professor of Mathematics and Science Education at the University of Birmingham, and Visiting Professor at the Queensland University of Technology, gave the opening address. Other international speakers were Dr Christopher Haines, City University London, and Mr Dylan William, Institute of Education, London University. Dr Lyn English, Queensland University of Technology, gave the closing address. We acknowledge with thanks the support from the British Council Travel Grant for Dr Haines, and are grateful that Professor Burton arranged her visit to Queensland University of Technology so that she could give the opening address at the conference. The proceedings are being edited for publication later in 1993.

ACER collaborated with the Australian Association of Mathematics Teachers (AAMT) in the publication of a monograph on *Communicating mathematics: perspectives from classroom practice and current research* for the pre-convention institute arranged by AAMT in conjunction with the First International Conference of the Australian Reading Association. Contributions were invited from mathematics educators in Australia and New Zealand and the monograph was released at the meeting.

Overseas development programs

In the last report, reference was made to the restructuring of the programs of training for senior officers of South Pacific education authorities. In 1993, Dr Izard met with senior officials in Tonga, Western Samoa, Vanuatu and the Solomon Islands and former R.E. Ross Trust Fellows to review this ACER program funded by the R.E. Ross Trust, and to arrange for an expanded program to commence in 1994.

ACER maintains contact with a number of agencies commissioning projects and/or providing funding for overseas development programs. In November 1992, Dr Izard, acting on behalf of the International Association for Educational Assessment (IAEA), was joint project leader with Mr Paud Murphy of the World Bank, for an Asian Regional Seminar on National Assessment Systems. The delegates were senior policy officers and technical experts in assessment from China, India, Indonesia, Malaysia, Papua New Guinea, Philippines, Sri Lanka and Thailand. Funding for this week-long seminar at the Development Academy of the Philippines came from the IAEA, the World Bank, and the Japanese and Australian governments.

ACER has been commissioned to provide a 12-week training and attachment program for the Ministry of Education, Indonesia for 10 secondary examinations officers. This project is being managed by the International Development Program on behalf of the Indonesian Government with funding from the World Bank. ACER has been collaborating with La Trobe University and Deakin University on the part of the Indonesian Primary Teacher Education Project which involves Australia. Other members of the consortium are the Institute of Education, University of London and the University of Houston, Texas. This is an Indonesian Government project with funding support from the World Bank.

ACER also arranged a program as part of a short visit to Australia by 42 Supervisors of Primary Education from the National Primary Education Commission of Thailand. A training program on test analysis and item banking at ACER has been planned for officers from the Malaysian Examinations Syndicate.

John Izard

Assistant Director (Development and Training)

Projects

National Conferences on Behaviour Problems

ACER Staff: John Izard, John King, Yvonne Allen, Judy Bonning

Colleagues: Bill Willis (Behaviour Management Support Program, ACT Ministry of Education, Health and the Arts), Gail Whitham (St Mary's Anglican Girls' School, Karrinyup, WA), Mark Tainsh (Adelaide South Behaviour Support Unit, Education Department of South Australia)

National Conferences on Assessment in the Mathematical Sciences

ACER Staff: John Izard, Yvonne Allen, Judy Bonning

Colleagues: Max Stephens (Victorian Board of Studies)

Ross Trust Fellowships

ACER Staff: John Izard, Kevin Piper

Asian Regional Seminar on National Assessment Systems

ACER Staff: John Izard

Colleagues: Frances Ottobre (Educational Testing Service, Princeton, NJ), Paud Murphy (World Bank, Washington, DC), Jahja Umar (Centre for Examination System Research and Development, Ministry of Education and Culture, Jakarta, Indonesia), Leone Burton (University of Birmingham), Kowit Pravalpruk (National Primary Education Commission, Ministry of Education, Bangkok, Thailand), Malcolm Rosier (Consultant, Australia)

Indonesia

ACER Staff: John Izard, Kevin Piper

Colleagues: Malcolm Lovegrove, Lois Foster, Lorraine Ling (La Trobe University), Robin Matthews (Deakin University)

Malaysia

ACER Staff: John Izard, Ray Adams, Peter Congdon

Colleagues: Khoo Siek-Toon

Publications

Books

Elkins, J. & Izard, J.F. (Eds) (1992). *Student behaviour problems: Context, initiatives and programs*. Hawthorn, Vic.: ACER.

McGuinness, M., Izard, J.F. & McCrossin, P. (Eds) (1992). *Myers-Briggs Type Indicator: Australian perspectives*. Hawthorn, Vic.: ACER.

Stephens, W.M., Waywood, A., Clarke, D. & Izard, J.F. (Eds) (1993). *Communicating mathematics: Perspectives from classroom practice and current research*. Hawthorn, Vic.: ACER.

Stephens, M. & Izard, J.F. (Eds) (1992). *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Vic.: ACER.

Willis, B. & Izard, J.F. (Eds) (1992). *Student behaviour problems: Directions, perspectives and expectations*. Hawthorn, Vic.: ACER.

Book Chapters

Beck, J., Horne, D. & Izard, J.F. (1992). Interpreting the responses to the Stop, Think, Do! social skills training questionnaires. In Willis, B. & Izard, J.F. (Eds) *Student behaviour problems: Directions, perspectives and expectations* (pp. 167-75). Hawthorn, Vic.: ACER.

Conference Paper

Beck, J., Horne, D. & Izard, J.F. (1992, October). *Interpreting the responses to the Stop, Think, Do! social skills training questionnaires*. Paper presented at the Fourth National Conference on Student Behaviour Problems, Canberra.

Unpublished Reports and Publications of Limited Circulation

Izard, J.F. (1993, June). *Review of the R.E. Ross Trust Attachment Program at the Australian Council for Educational Research*. (Report to the R.E. Ross Trust based on interviews with senior officers of education authorities in Tonga, Western Samoa, Vanuatu and the Solomon Islands.)

Management Developments

Equal Opportunity Committee

The work of the Equal Opportunity Officer and the Equal Opportunity Committee over the past 12 months has been carried out in three areas: the development of the policy statement on Equal Opportunity Principles and Strategy for inclusion in the *ACER Manual of Staff Policies*; the investigation of present procedures and the development of new procedures in the area of equal opportunity at ACER; and the provision of advice when requested by individuals, staff and Council.

The Committee has provided comment on the Grievance Procedure statement and Paternal Leave statement to the Policy and Management Advisory Committee before the inclusion of these statements in the *ACER Manual of Staff Policies*. Current procedures for the use of language guidelines, job descriptions and the composition of ACER committees have been scrutinised, and consideration has been given by the Committee to the introduction of guidelines for staff recruitment, appointment and promotion.

Computing Services

The implementation of the distributed PC network (as outlined in the *Annual Report 1991-92*) has continued throughout the current year. Two-thirds of the staff are now using the new network, and the remaining users are scheduled to join in early 1994.

The delivery of a broader range of services (for example enhanced electronic mail capacity, full calendar scheduling, remote access to other Internet sites) will occur in the first quarter of 1994 when ACER moves to its new premises where the networking infrastructure will support the diversification of computing requirements of the organisation.

The current staff of Computing Services are Hilary Miller (Systems Manager) and Ian Fry (Network Manager).

The last 12 months have seen real growth for ACER as publisher and as distributor of materials from leading agencies overseas. As a result our trading position has improved markedly. Trading has gone from a deficit of \$127 757 in 1991-92 to a surplus of \$153 728 in 1992-93, a significant turnaround. Publishing and Marketing staff must be accorded great credit for their contribution over the year to this good result.

Most areas of our business expanded — not least our own royalty publishing where we experienced 18% sales growth. With imported products, the real improvement has been in tests and materials for personnel selection and human resource development and in psychological instruments. There, good and timely catalogues were instrumental in attracting strong responses from current customers and, of course, in finding new customers.

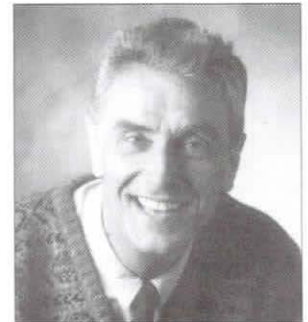
Books and software

Sixteen new book titles or new editions were published in 1992-93. Two additions to the parenting list were important and did well: Lindy Petersen's *Stop and think parenting* and Bob Myers' *Parenting teenagers in the 1990s*. Lindy Petersen's book added the key parenting dimension to the two manuals — one for teachers, the other for counsellors and psychologists — which she and co-author Anne Gannoni had already published with ACER on the STOP-THINK-DO theme. Bob Myers' book received great media coverage and sales benefited.

Several other books made a real impact, yet in their own quite different ways. Lyn Yates' *The education of girls: Policy, research and the question of gender* was soon in demand after its launch at La Trobe and media release. It tackled some of the hard questions. Do we need single sex schools? Are there women's ways of learning? Isn't the curriculum still biased towards boys? *Making schools more effective* brought together the views of over a third of the nation's schools about how to make our schools better. It was a remarkable response, providing information for everyone interested in education.

Learning with personal computers by Helga Rowe and a volume edited by Gilah Leder, *Assessment and learning of mathematics*, were published to some acclaim. Helga Rowe has a special interest in computers in education. This emerges clearly in a book which will assuredly help teachers think of ways to embed computers in the curriculum itself. Gilah Leder and her fellow writers from around Australia and from overseas challenge

Publishing, Consultant and Marketing Services



Mr Ian Fraser
Manager (Publishing and
Marketing)

the very basis of maths teaching and learning. The thread that binds the book is the strong weft between student learning, teaching method and assessment techniques.

Two new editions of successful books were released. One was the third edition of Maurice Balson's *Understanding classroom behaviour*. School principal Debra Punton considers the book has 'profoundly influenced the patterns of teacher–student relationships throughout Australian schools over the past decade'. Our sales of 12 000 copies give some substance to that. *Skilled interviewing*, by Daphne Keats, has four new chapters and has otherwise been brought up to date for its readerships.

The *Bullying in schools* video has been a success. Devised at the University of South Australia's Institute of Social Research, it has come at the right time amid growing concern here and overseas at the extent of bullying in schools and its harmful effects on children, schools and families. The authors, Ken Rigby and Phillip Slee, favour Olweus' definition of bullying which says: 'A person is bullied or victimised when he or she is exposed repeatedly, and over time, to negative actions on the part of one or more other persons'. Now we are considering other support material for teachers on coping with bullying and, we hope, for parents as well.

Three software-based packages were produced: an updated edition of *Sigi plus*®, *Quest* and *Knowledge tools*. *Sigi plus*® offers high-quality computerised career planning and is undoubtedly one of the very best packages of its kind. Conceived at ACER, *Quest* is an Australian first, providing flexible methods of test scoring and data recording for researchers. *Knowledge tools* is for those primary and secondary students who will thrive on a rich, challenging and creative computing environment.

Arrangements were made with two North American book distributors — Paul & Company (Concord, MA) and State Mutual Book (New York) — to handle ACER's books in the USA.

Assessment packages

Four very different but important test packages were published, catering for a diverse range of needs in and out of schools:

- *ACER test of employment entry mathematics (TEEM)*
- *The adolescent coping scale*

- *Profiles of problem solving (POPS)*
- *Italian and German LOTE tests*

The *Profiles of problem solving (POPS)* kit complements the *Collis-Romberg problem-solving profiles* which we released a year ago and strengthens teachers' assessment options in the difficult-to-assess area of mathematics problem solving. POPS concentrates on the upper primary and early secondary years whereas Collis-Romberg also has a Senior Version which allows meaningful testing up to seventeen years of age.

The adolescent coping scale is an exciting development. Professor Glen Evans of the University of Queensland talks of it thus: 'One can expect to see much use for this questionnaire. As more studies are done and its utility assessed, it will make a significant contribution to helping us understand adolescents and helping many of them to understand themselves'. Co-author Erica Frydenberg's own research very much focuses on how young people cope in various settings and with a diverse set of life problems, especially school and family related stress; and her research has enriched and will continue to enrich the scale.

We were pleased to appoint a new overseas test distributor this year: Psychometrics Canada, based at the University of Alberta in Edmonton. And at this end of the world Oxford University Press-NZ agreed to distribute ACER's books for the New Zealand market. We look to this to add to Oxford University Press-Australia's success in the distribution of ACER's books right across Australia.

Overseas products

We continued to import and support a wide range of materials from the UK and the USA. About half our business is associated with imported products. These imports come in the main from NFER-Nelson (UK) and from the US publishers American Guidance Service, Consulting Psychologists Press, Psychological Assessment Resources and Riverside.

Riverside supply ACER with the *Stanford-Binet intelligence scale* for which we continue to have good demand, no doubt because Australian data have been published for what is an internationally acclaimed instrument. But the single imported item for which our marketing psychologist, Daiva Verbyla, has had the largest response is the restandardised

version of the *Minnesota multiphasic personality inventory (MMPI-2)*. This was long awaited by Australian psychologists after its restandardisation, for which it was revised to address contemporary concerns while retaining its valuable traditional features.

Daiva Verbyla (Psychology) and our other three marketing consultants — John King (Education), Jo Goldsworthy (Parenting) and Peter McCrossin (Personnel) — all had a busy year promoting these imported product ranges as well as our own wide range of titles, both new and backlist. Every year, particularly in books, backlist sales seem to get harder in an era fascinated with novelty. Happily most of our publishing does not depend on the whimsy of trade sales or the fads of the day!

Ian Fraser

Manager (Publishing and Marketing)

Books, Kits and Videos

Adams, Raymond J. & Khoo, Siek-Toon (1993). *Quest*. Hawthorn, Vic.: Australian Council for Educational Research.

Quest is an interactive test analysis system for Macintosh and PC. It provides a data analyst with access to the most recent developments in Rasch measurement theory.

Ainley, John & Sheret, Michael (1992). *Progress through high school*. Monograph 43. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 138 9

This monograph is based on a large study of senior secondary schools in the late 1980s and early 1990s. A group of young people was followed from Year 9, through their schooling and on into their post-school worlds.

Balson, Maurice (1992). *Understanding classroom behaviour*, 3rd edition. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 098 6

A much-enlarged edition with well written new chapters on 'Teacher Stress' and 'Conflict Resolution'.

Batten, Margaret et al. (1993). *Knowing how to teach well*. Monograph 44. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 105 2

With its focus on cooperative learning among teachers, this positive book is what schools need for inservice programs on good teaching.

Cumming, Geoff, et al. (1993). *Knowledge tools*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 120 6 (handbook)

Excellent new learning tool for MS-DOS computers, *Knowledge tools* is an easy-to-use software/book package for upper primary to senior secondary students.

Educational Testing Service (1992). *Sigi Plus®*, 2nd Australian edition. Hawthorn, Vic.: Australian Council for Educational Research.

A flexible computerised career planning package entirely suited to Australian conditions, *Sigi plus®* is right up to date again with current employment outlook details and salaries.

Elkins, John & Izard, John (Eds) (1992). *Student behaviour problems: Context, initiatives and programs*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 126 5

A book pointing to some real progress in our schools in coping with conflict, it focuses on behaviour problems in context, inter-personal relationships, initiatives and programs in special settings.

Keats, Daphne (1993). *Skilled interviewing*, 2nd edition. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 119 2

Full of practical ideas and theoretically sound, *Skilled interviewing* is now in its second edition. Important new content will add to its success.

Leder, Gilah (Ed.) (1993). *Assessment and learning of mathematics*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 122 2

Are many teaching and assessment practices in our schools actually hindering good maths learning? Do students come to value only those maths tasks and skills made legitimate by testing?

McGaw, Barry et al. (1993). *Making schools more effective*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 135 4

A major report with national implications: a third of all schools expressed their views on how to make schools more effective.

McGuinness, Mary, et al. (Eds) (1992). *Myers-Briggs Type Indicator: Australian perspectives*. Hawthorn, Vic.: Australian Council for Educational Research.

0 86431 128 1

This book is about the MBTI in Australia, already widely used in management, organisational development, education, counselling, psychotherapy, spiritual and personal development.

- Musgrave, Peter W. (1992). *From humanity to utility: Melbourne University and public examinations 1856–1964*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 118 4
- A fascinating account of the powerful role Melbourne University played in Victoria's public exams for over a century.
- Myers, Bob (1992). *Parenting teenagers in the 1990s*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 121 4
- Here is much to support parents, teachers, youth and social workers, and probation officers in the difficult job of getting children ready for life as responsible adults.
- Owens, Lee & Barnes, Jenny (1992). *Learning preference scales*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 113 3
- This book offers simple ways to assess how teachers, students and parents respond to different ways of learning.
- Petersen, Lindy (1992). *Stop and think parenting*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 131 1
- An excellent how-to-do-it resource for all parents who want to manage situations better at home and avoid 'knee jerk' reactions to their children's behaviour.
- Richards, Llyn & Jeffery, Peter (1992). *Best of set: Junior classes*. Hawthorn, Vic.: Australian Council for Educational Research.
- A package of the best *set* features on the topic of Junior Classes — among them: How Young Pupils' Memories Work; How Do Children Learn New Words?; Keeping Safe; Promotion, Retention, Acceleration; and much more.
- Rigby, Ken & Slee, Phillip (1993). *Bullying in schools*. Hawthorn, Vic.: Australian Council for Educational Research.
- A video package for schools based on Australian research with 3000 students in the 8 to 16 years age range, it gives facts, dispels myths, and offers ways to counter bullying.
- Rowe, Helga (1992). *Learning with personal computers*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 129 X
- Helga Rowe's book tells you how and why students can learn better with computers, and how to integrate them into the school curriculum.
- Stephens, Max & Izard, John (Eds) (1992). *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 127 3
- Reform maths assessment first, the writers argue, and then we can reform the curriculum.

Willis, Bill & Izard, John (Eds) (1992). *Student behaviour problems: Directions, perspectives and explanations*. Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 134 6

There are three themes: behaviour problems and their consequences, system and school initiatives, and applying behaviour management programs in special settings.

Yates, Lyn (1993). *Education of girls: Policy, research and the question of gender*. (Australian Education Review No. 35) Hawthorn, Vic.: Australian Council for Educational Research. 0 86431 130 3

A timely book which, among other things, shows that the curriculum is still biased towards boys and that schooling continues to develop in girls markedly different futures.

Tests

Australian Cooperative Entry Program – Series Y

Test Booklets 1–3, Written Expression Test, Candidates' Information Bulletin, Registration Form, Written Expression Answer Booklet, OMR Answer Sheets (2).

Australian Language Certificates

Eight test booklets (seven languages), OMR Answer Sheet.

Australian Scaling Test

Tests 1 and 2, Sample Collection of Questions, Students' Information Bulletin, Writing Test.

ACER Test of Employment Entry Mathematics (John Izard et al)

TEEM is an individual or group test for use in the selection of apprentices, trainees, and other technical and trades people who need a facility with basic maths in their job. It is also useful in counselling individuals aspiring to such occupations.

Cooperative Scholarship Testing Program (CSTP)

Level 1: Tests 1–4, Level 2: Tests 1–4, Level 3: Tests 1–4, OMR Answer Sheets, Candidates' Information Bulletin, Registration Form, Sample Collection of Questions, Levels 1, 2 and 3 Answer Books.

LOTE Reading and Listening Tests: Italian and German (Susan Zammit)

These tests ascertain a student's language competency in listening and reading comprehension after a minimum of eighty hours teaching. They are based on Australian Language Level Guidelines.

Profiles of Problem Solving (Kaye Stacey et al)

An assessment package which enables teachers to test their students' maths problem-solving skills at two levels: upper primary and junior secondary. The POPS manual then offers lots of ideas for future learning.

Selective High School Test

Three test booklets, OMR Answer Sheet.

Special Tertiary Admissions Test (STAT)

Candidates' Information Bulletin, OMR Answer Sheets, Sample Collection of Questions, Tests A, B, C, D and E, Test E Answers Booklet.

The Adolescent Coping Scale (Erica Frydenberg, Ramon Lewis)

The ACS is a self-report inventory which assesses eighteen coping strategies. Trialled with several thousand Australian students from Years 7 to 12, it can be used with ordinary students, gifted students, students with psychosomatic disorders, students coping with exams, and students in clinical settings.

Periodicals

ACER Newsletter (Editor: Rhonda Idczak) No. 75 (October (1992), No. 76 (March 1993), No. 77 (June 1993).

Australian Education Directory 1993 (Editors: Peter Mathews, Anne McKechnie).

Australian Education Index (Editor: Elspeth Miller) Vol. 35 No. 2 (June 1992), Vol. 35 No. 3 (September 1992), Volume 35 Cumulation (December 1992), Volume 36 No. 1 (March 1993).

Australian Journal of Career Development (Editor: Meredith Shears) Vol. 1 Special Inaugural Edition (November 1992), Vol. 2 No. 1 (March 1993), Vol. 2 No. 2 (June 1993).

Australian Journal of Education (Editor: Richard Smith) Vol. 36 No. 2 (August 1992), Vol. 36 No. 3 (November 1992), Vol. 37 No. 1 (April 1993).

Bibliography of Education Theses in Australia No. 13 (1992) (Editor: Julie Badger), No. 14 (1992) (Editor: Judith Fawcett).

Psychological Test Bulletin (Editor: Richard Elkins) Vol. 5 No. 2 (November 1992): ceased publication with this issue.

set: research information for teachers (Editors: Llyn Richards, Peter Jeffery) No. 2 (1992), No. 1 (1993).

Other Publications

ACER Book Catalogue

ACER Current Projects 1992-93

Parent Education Catalogue 1992-93

Personnel Selection and Human Resources Development Catalogue 1993

Youth in Transition: (3) Questionnaires, Calendar, Christmas Card and Fridge magnet

Reprints

Reprints of 161 publications (books, test components, etc.) were published.

Staff Publications**Books**

- Ainley, J. & Sheret, M. (1992). *Progress through high school. A study of senior secondary schooling in New South Wales*. ACER Research Monograph No. 43. Hawthorn, Vic.: ACER.
- Batten, M., Marland, P. & Khamis, M. (1993). *Knowing how to teach well*. Hawthorn, Vic.: ACER.
- Bowden, J. & Masters, G.N. (1993). *Implications for higher education of a competency-based approach to education and training*. Commonwealth Department of Employment, Education and Training Publications, Canberra.
- Docker, J., Carson, N., Hughes, P., Kamien, M. & McGaw, B. (1993). *Report of the Knowledge, Skills and Attitudes Task Force*. Melbourne: Family Medicine Programme, Royal Australian College of General Practitioners.
- Elkins, J. & Izard, J.F. (Eds) (1992). *Student behaviour problems: Context, initiatives and programs*. Hawthorn, Vic.: ACER.
- Izard, J.F. (1992). *Assessment of learning in the classroom*. (Educational studies and documents, 60). Paris: United Nations Educational, Scientific and Cultural Organisation.
- McGaw, B., Boud, D., Poole, M., Warry, R. & McKenzie, P. (1992). *Educational research in Australia*. Canberra: National Board of Employment, Education and Training.
- McGaw, B., Piper, K., Banks, D. & Evans, B. (1992). *Making schools more effective: Report of the Australian Effective Schools Project*. Hawthorn, Vic.: ACER.
- McGaw, B., Boud, D., Poole, M., Warry, R. & McKenzie, P.A. (1992). *Educational research in Australia. Report of the Strategic Review of Research in Education*. Canberra: National Board of Employment, Education and Training.
- McGuinness, M., Izard, J.F. & McCrossin, P. (Eds) (1992). *Myers-Briggs Type Indicator: Australian perspectives*. Hawthorn, Vic.: ACER.
- Rowe, H.A.H. (1993). *Learning with personal computers: Issues, observations and perspectives*. Hawthorn, Vic.: ACER.
- Stephens, M. & Izard, J.F. (Eds) (1992). *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Vic.: ACER.
- Stephens, W.M., Waywood, A., Clarke, D. & Izard, J.F. (Eds) (1993). *Communicating mathematics: Perspectives from classroom practice and current research*. Hawthorn, Vic.: ACER.

- Williams, T., Long, M., Carpenter, P. & Hayden, M. (1993). *Year 12 in the 1980s*. Canberra: Australian Government Publishing Service.
- Willis, B. & Izard, J.F. (Eds) (1992). *Student behaviour problems: Directions, perspectives and expectations*. Hawthorn, Vic.: ACER.
- Withers, G.P. (1992). *Catering for a range of student abilities in one class: What works for teachers in mixed ability classrooms?* Adelaide: Education Department of South Australia (Junior Secondary Review).
- Withers, G.P. (1993). *Item writing*. Paris: UNESCO (International Institute for Educational Planning).

Book Chapters

- Batten, M. (1993). The identification, development and sharing of professional craft knowledge. In Day, C., Calderhead, J. & Denlisco, P. (Eds) *Research on teacher thinking* (pp. 177-85). London: Falmer Press.
- Beck, J., Horne, D. & Izard, J.F. (1992). Interpreting the responses to the Stop, Think, Do! social skills training questionnaires. In Willis, B. & Izard, J.F. (Eds) *Student behaviour problems: Directions, perspectives and expectations* (pp. 167-75). Hawthorn, Vic.: ACER.
- Doig, B.A. & Masters, G.N. (1992). Through children's eyes: A constructivist approach to assessing mathematics learning. In Leder, G. (Ed.) *Assessment and learning of mathematics* (pp. 269-89). Hawthorn, Vic.: ACER.
- Haines, C.R. & Izard, J.F. (1992). Learning mathematics through project work: Value added implications for student progress. In Leino, J. (Ed.) *Mathematics teaching through project work* (Research Report 27) (pp. 17-28). Hameenlinna, Finland: Department of Teacher Education in Hameenlinna, University of Tampere.
- Haines, C.R. & Izard, J.F. (1993). Authentic assessment of complex mathematical tasks. In Houston, S.K. (Ed.) *Developments in curriculum and assessment in mathematics* (pp. 39-55). Coleraine, Northern Ireland: University of Ulster.
- Izard, J.F. (1992). Patterns of development with probability concepts. In Stephens, M. & Izard, J.F. (Eds) *Reshaping assessment practices: Assessment in the mathematical sciences under challenge*. Hawthorn, Vic.: ACER.
- Izard, J.F. (1993). Challenges to the improvement of assessment practice. In Niss, M. (Ed.) *Investigations into assessment in mathematics education: An ICMI study* (pp. 185-94). Dordrecht, The Netherlands: Kluwer Academic Publishers.

- Izard, J.F. & Haines, C.R. (1993). Assessing oral communications about mathematics projects and investigations. In Stephens, W.M., Waywood, A., Clarke, D. & Izard, J.F. (Eds) *Communicating mathematics: Perspectives from classroom practice and current research* (pp. 237–51). Hawthorn, Vic.: ACER.
- Masters, G.N. (1993). Towards improved measures of educational attainment. *Education issues* (pp. 69–94). Background Paper No. 27, Economic Planning Advisory Council, Canberra.
- Masters, G.N. & Doig, B.A. (1992). Understanding children's mathematics: Some assessment tools. In Leder, G. (Ed.) *Assessment and learning of mathematics* (pp. 249–68). Hawthorn, Vic.: ACER.
- Masters, G.N. & Mislevy, R. (1993). New views of student learning: Implications for educational measurement. In Frederiksen, N. et al. (Eds) *Test theory for a new generation of tests* (pp. 219–42). Erlbaum.
- Mathews, P.G. (1992). Special libraries and the 4th R. In Price, R (Ed.) *Information service in challenging times: Challenges in special librarianship* (pp. 41–48). Adelaide, South Australia: Auslib Press.
- McKenzie, P.A. (1993). Australia: Country report. In National Institute for Educational Research *Towards research-based policy and planning for secondary education* (pp. 28–33). Tokyo: National Institute for Educational Research.
- Splitter, L.J. (1993). Philosophy for Children: An important curriculum innovation. In Lipman, M. (Ed.) *Thinking children and education* (pp. 385–92). Duboq, Iowa: Kendall Hunt. Reprinted from *Thinking: The Journal of Philosophy for Children*, 5(4), 1985, pp. 47–53.
- Withers, G.P. (1992). Australia. In Macintosh, H.G. & Hamer, J. (Eds) *A comparative study of current theories and practices in assessing students' achievements in primary and secondary schools*. Paris: International Bureau of Education.

Journal Articles

- Ainley, J. & Bourke, S. (1992). Student views of primary school. *Research Papers in Education*, 7(2), 107–28.
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Computer Programs

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Conference Papers

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- Adams, R.J., Wilson, M.R. & Wu, M.L. (1993, April). *Multilevel item response modelling*. Paper presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.
- Ainley, J. (1993, January). *Attitudes to school as an indication of school effectiveness*. Paper presented to the International Congress for School Effectiveness and Improvement, Norrköping, Sweden.

- Ainley, J. (1993, June). *Curriculum choice and program specialisation in the senior secondary years*. Paper presented to the Annual Conference of the Australian Curriculum Studies Association, Brisbane.
- Ainley, J. & Sheret, M. (1992, November). *Combining qualitative and quantitative data in a study of progress through high school*. Paper presented to the Joint Conference of the Australian Association for Research in Education and the New Zealand Association for Research in Education, Geelong, Australia.
- Batten, M. (1992, September). *Young teachers in Australia: Their views on teaching and teacher education*. Paper presented at the British Educational Research Association Annual Conference, University of Stirling, Scotland.
- Batten, M. (1993, May). *Researching teacher competencies: From the perspective of a practising researcher*. Paper presented at the Researching Teacher Competencies Seminar run by the Australian College of Education and the National Project on the Quality of Teaching and Learning, Australian National University, Canberra.
- Beck, J., Horne, D. & Izard, J.F. (1992, October). *Interpreting the responses to the Stop, Think, Do! social skills training questionnaires*. Paper presented at the Fourth National Conference on Student Behaviour Problems, Canberra.
- de Lemos, M.M. & Mellor, E.J. (1992, July). *A qualitative study of parent comments on school entry age*. Paper presented at the Seventh Australian Developmental Conference, Brisbane.
- de Lemos, M.M. & Mellor, E.J. (1993, January). *A longitudinal study of developmental maturity, school entry age and school progress*. Paper presented at the First Australian Research in Early Childhood Conference, Canberra.
- Doig, B.A. (1992, August). *Exploring mathematical beliefs*. Paper presented at the International Group for the Psychology of Mathematics Education sixteenth Annual Conference, University of New Hampshire, Durham.
- Doig, B.A. (1992, November). *Alternative approaches to science assessment — the Victorian experience*. Paper presented at the Australian Association for Research in Education Annual Conference, Deakin University, Geelong, Australia.
- Doig, B.A. (1992, November). *Assessing and reporting mathematical problem solving*. Paper presented at the Australian Association for Research in Education Annual Conference, Deakin University, Geelong, Australia.
- Doig, B.A. (1993, April). *Embedding assessment in the classroom: The case of teacher-selected test banks*. Paper presented at the Second Annual International Conference on Assessment in the Mathematical Sciences, Gold Coast, Australia.

- Doig, B.A. & Hunting, R. (1993, April). *What does research say about the critical questions to ask about making effective diagnosis?* Paper presented at the Second Annual International Conference on Assessment in the Mathematical Sciences, Gold Coast, Australia.
- Doig, B.A. & Lindsey, J. (1992, July). *Letting children design the curriculum.* Paper presented at the Mathematics Education Research Group of Australasia Fifteenth Annual Conference, University of Western Sydney, Hawkesbury, Australia.
- Elder, C., McQueen, J. & Zammit, S. (1992, March). *Rewarding second language learning achievement: the Australian Language Certificate scheme.* International Foreign Language Teachers' Conference, University of Manoa, Hawaii.
- Haines, C.R. & Izard, J.F. (1992, August). *Learning mathematics through project work: Value added implications for progress.* Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Haines, C.R., Izard, J.F. & Le Masurier, D. (1992, August). *Informative assessment strategies for mathematical modelling activities.* Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Haines, C.R. & Izard, J.F. (1993, April). *Authentic assessment.* Keynote address presented at the Second National Conference on Assessment in the Mathematical Sciences, Surfers Paradise, Australia.
- Izard, J.F. (1992, August). *Patterns of development with probability concepts (SIMULO Project).* Paper presented at the Seventh International Congress on Mathematics Education (ICME-7), Quebec, Canada.
- Izard, J.F. (1992, September). *Combining disparate information for selection purposes: Challenges to validity.* Plenary paper presented at the Eighteenth Annual Conference of the International Association for Educational Assessment (IAEA), Dublin, Eire.
- Izard, J.F. (1993, May-June). *Strategies for assessing projects and investigations: Experience in Australia and United Kingdom.* Plenary paper presented at the Nineteenth Annual Conference of the International Association for Educational Assessment (IAEA), Grande Baie, Mauritius.
- Lokan, J.J. (1992, July). *An IRT perspective on the Work Importance Study questionnaires.* Paper presented at the Centenary Annual Conference of the American Psychological Association, Washington DC, USA.
- Masters, G.N. (1992, July). *Mapping achievement in large-scale testing programs.* Paper presented at Eighth World Congress of Comparative Education, Prague, Czechoslovakia.

- Masters, G.N. (1992, October). *Alternative assessment modes and competency*. Address to Graduate Research Seminar, Victoria University of Technology, Melbourne.
- Masters, G.N. (1992, November). *Assessing the competencies*. Address to forum organised by the Centre for Advanced Teaching Studies, Hobart.
- Masters, G.N. (1992, November). *The Impact of competency-based assessment and reporting*. Half-day workshop for NSW Metropolitan South-West Region.
- Masters, G.N. (1993, April). *Certainty and probability in assessments of competence*. Paper presented at the Vocational Education, Employment and Training Advisory Committee (VEETAC) National Assessment Research Forum on Competency-Based Assessment Issues, Sydney.
- Masters, G.N. (1993, April). *National reporting, profiles, basic skills testing*. Presentation to National Board of Employment, Education and Training, School Council's Seminar on Student Assessment, Tertiary Entrance and National Reporting of Student Attainment: The Issues, Canberra.
- Masters, G.N. (1993, June). *Assessing achievement in Australian schools*. Presentation to workshop on National Assessment of Educational Outcomes, National Industry Education Forum, Melbourne.
- Masters, G.N. (1993, June). *National reporting: Can the profiles provide reliable national reporting?* Presentation to workshop on National Statements and Profiles. National Council of Independent Schools Associations, Melbourne.
- McGaw, B. (1992, July). *Developments in assessment in Australia*. Presented at seminar on Development in Assessment in the UK and Australia, Catholic Education Office, Melbourne.
- McGaw, B. (1992, August). *Educational research in the current era: Constraints and possibilities*. Deakin University, Geelong, Australia.
- McGaw, B. (1992, August). *Pathways to tertiary education*. The AVG James Lecture, Camberwell High School, Melbourne.
- McGaw, B. (1992, August). *Education futures: Right or privilege?* Paper presented at the Australian College of Education Victorian Chapter Conference, Shepparton, Victoria.
- McGaw, B. (1992, November). *Educational research in Australia*. Paper presented at the Joint Conference of the Australian Association for Educational Research and the New Zealand Association for Educational Research, Deakin University, Victoria.

- McGaw, B. (1993, April). *Competency-based assessment: Measurement issues*. Paper presented to the National Assessment Research Forum conducted by the Competency Based Training (CBT) Working Party of the Vocational Education, Employment and Training Advisory Committee (VEETAC), Sydney.
- McGaw, B. (1993, April). *Expectations of quantitative international comparative educational research*. Paper presented in a symposium, 'Key policy/research issues facing the international community: Is there consensus?', organised by the International Association for the Evaluation for Educational Achievement (IEA) at the Annual Meeting of the American Educational Research Association, Atlanta, Georgia.
- McGaw, B. (1993, June). *School-based and external assessment: International, interstate and local issues*. Paper presented at an Incorporated Association of Registered Teachers of Victoria Seminar, 'School-based and external assessment: Uses and issues in the postcompulsory years', Melbourne.
- McGaw, B. & McKenzie, P.A. (1993, May). *Educational research and development: Indicators of financial and personnel resources*. Paper presented at a joint Organisation for Economic Co-operation and Development (OECD) and Swedish National Education Agency Seminar on Educational Research and Development, Sunne, Sweden.
- McKenzie, P.A. (1992, November). *The economics of curriculum provision for Years 11 and 12*. Paper presented to the Joint Conference of the Australian Association for Research in Education and the New Zealand Association for Research in Education, Geelong, Australia.
- McNamara, T., Brown, A., McQueen, J. & Lumley, T. (1992, July). *Using Rasch techniques to map second language abilities and skill levels*. Paper presented at the Second Language Research Forum for the Pacific.
- McQueen, J. (1992, July). *The Australian Language Certificates as measures of reading proficiency*. Paper presented at the Applied Linguistics Association of Australia, Sydney.
- Mellor, S.G. (1992, May). *Student opinion of the relevance of their post-compulsory education in the light of their workforce experience*. Paper presented to the Second National Conference on Post-compulsory Education, Launceston, Australia.
- Piper, K. (1993, January). *What makes an effective school?: Public perceptions and the context of practice*. Paper presented to the International Congress for School Effectiveness and School Improvement, Norrköping, Sweden.

- Piper, K. (1993, February). *Effective schools: Latest national and international developments*. Paper presented to the IARTV Seminar, Melbourne.
- Piper, K. (1993, June). *Curriculum quality and school effectiveness: Some insights from the Australian Effective Schools Project*. Paper presented to the Australian Curriculum Studies Association Conference, Brisbane.
- Rowe, H.A.H. (1992, July). *How laptop computers can affect learning processes and outcomes*. Paper presented at the Twenty-fifth International Congress of Psychology, Brussels. (Published in *Proceedings*.)
- Rowe, H.A.H. (1993, April). *Computing: A source of powerful cognitive tools*. *Sunrise Special Lecture*, Royal Melbourne Institute of Technology (invited address).
- Rowe, H.A.H. (1993, June). *Thinking about thinking: Teaching thinking skills*. Address and all day professional development delivered at Loyola College Watsonia, Victoria.
- Rowe, H.A.H. (1993, June). *Personal computing: a major tool in the pursuit of excellence*. Address and workshop conducted at *The Celebration of Excellence: A partnership in action*. One day conference, Deakin University, Toorak Campus.
- Splitter, L.J. (1993, April). *What does it mean to bring philosophy to children?* Paper presented at the Conference on Philosophy for Children (Aprender A Pensar: Filosofia para Crianças), Brazilian Center of Philosophy for Children, Brazil.
- Splitter, L.J. (1993, April). *The explicit and implicit reasoning in Philosophy for Children*. Paper presented at the Conference on Philosophy for Children (Aprender A Pensar: Filosofia para Crianças), Brazilian Center of Philosophy for Children, Brazil.
- Williams, T. (1992, December). *Hierarchical modelling of reading literacy*. Symposium presented at the American Statistical Association meetings, Fort Lauderdale, USA.
- Williams, T. (1993, April). *Family effects on reading achievement*. Symposium presented at the International Reading Association Conference, San Antonio, USA.
- Williams, T. (1993, April). *Modelling reading literacy*. Symposium presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.
- Williams, T. (1993, June). *The IEA reading literacy study*. Symposium presented at the National Conference on Large Scale Assessment, Albuquerque, USA.
- Williams, T., Long, M. & Carpenter, P. (1993, April). *Australian higher education in the 1980s*. Symposium presented at the Annual Meeting of the American Educational Research Association, Atlanta, USA.

- Wilson, M.R. & Adams, R.J. (1992, July). *A multilevel perspective on the 'two scientific disciplines of psychology'*. Paper presented at the XXVth International Congress of Psychology, Brussels.
- Withers, G.P. (1992, August). *Before the deluge? Views and experiences of Australian secondary schooling from its contemporary teachers and their students*. Paper presented at the British Educational Research Association's Eighteenth Annual Conference, University of Stirling, Scotland.
- Withers, G.P. (1992, September). *Achieving comparability of school-based assessments used within tertiary admissions procedures — the Australian experience*. Paper presented at the International Association for Educational Assessment's Eighteenth Annual Conference, Dublin, Eire.
- Withers, G.P. (1993, February). *Curriculum frameworks*. Paper delivered at a workshop and conference of the Australian Capital Territory Board of Studies Accrediting Agency, Canberra.
- Withers, G.P. (1993, April). *Teacher self evaluation*. Reactant's paper delivered at a symposium at the Annual Conference of the National Council for Measurement in Education, Atlanta, USA.
- Wu, M.L. & Adams, R.J. (1993, April). *Simulating parameter recovery for the random coefficients multinomial logit*. Paper presented at the Sixth International Objective Measurement Workshop, Atlanta, USA.
- Zammit, S.A. (1992, July). *The challenge of the Australian Language Certificates*. Paper presented at the Modern Language Teachers' Association Annual Conference, Melbourne.
- Zammit, S.A. (1992, July). *How do YOU motivate students to continue with LOTE?* Paper presented at the Modern Language Teachers' Association Annual Conference, Melbourne.

Overview

In financial terms, ACER had another very good year in 1992-93. The operating surplus of \$828 593 allowed a further substantial allocation of \$350 000 to the Building Fund and also contributed to general cash reserves. These contributions to cash reserves, together with those of recent years, meant that ACER finally reached the position where it has been able to purchase new accommodation.

When the organisation moves to its new accommodation during 1993-94, the pressure on cash flow will be greater than in recent years because of the higher outgoings required in the operation of a modern building and because of the need to service borrowings for the building purchase. The financial discipline required in recent years to build up cash reserves, however, has established an organisational culture which should now sustain the future financial tasks of building management and loan repayment.

Overall income rose by 4 per cent in 1992-93 to \$9.2m, continuing the trend of real growth achieved in recent years. The Auditor's Report, which is reproduced in this annual report, provides details of the overall financial performance for 1991-92 and Table 1 provides a more detailed analysis of the major categories of income and expenditure.

Core grant

ACER receives an annual core research and development grant from the Commonwealth, state and territory governments. This grant, \$1 518 500 in 1992-93, provides an extremely important part of ACER's funds. With it, ACER maintains a research and development program with a relatively long range perspective and, since 1987-88, has used it to underpin the thematic focus of the program.

The level of the core grant is determined by a formula adopted by the Australian Education Council, the increase of \$83 800 in 1992-93 reflecting increases in academic salaries. In 1992-93, the core grant provided 16.5 per cent of total income (20.0 per cent if only gross profit rather than total turnover from trading is included). The contributions to the core grant are shown in Table 2. The Commonwealth government provides 50 per cent of the grant and the state and territory governments provide the other 50 per cent, each contributing in proportion to its population.

Financial Report



Mr Robert Moore
Business Manager

Table 1: Summary Profit and Loss Statement for the Year Ended 30 June

Source	1992–93	1991–92
Retained profits at beginning of financial year	750 129	578 329
Income		
Core research and development grant	1 518 500	1 434 700
Professional services	4 196 850	4 418 786
Trading	3 421 167	2 973 534
Interest	67 102	31 427
Total	9 203 619	8 858 447
Expenditure		
Core research and development program	1 451 407	1 354 042
Professional services	3 725 897	3 978 461
Trading	3 197 722	3 053 226
Total	8 375 026	8 385 729
Operating surplus	828 593	472 718
Transfer to building fund	–350 000	–300 000
Transfer from other reserve funds	8 260	–918
Funds added to reserves	486 853	171 800
Retained profit at end of financial year	1 236 982	750 129

Professional services

The activities included under professional services in Table 1 are contract research and development work and services funded by user fees. The services include testing programs and conferences. Income for professional services declined by 5.0 per cent to \$4.20m in 1992–93 from \$4.41m the previous year, after having grown virtually continuously from a low of \$0.55m in 1983–84 (\$0.93m in June 1993 dollars). The decline in 1992–93 reflects a substantial reduction in ACER's level of involvement in the New South Wales Basic Skills Testing Program, offset by continuing growth in other contract work.

Costs of projects in the professional services category declined by 6.4 per cent which is greater than the rate of decline of income and reflects a slightly increased profitability of

Table 2: Contributions to ACER Core Grant

Source	1992-93	1991-92
Commonwealth	759 250	717 350
New South Wales	259 050	244 750
Victoria	193 600	182 900
Queensland	129 200	122 100
Western Australia	73 200	69 150
South Australia	63 950	60 400
Tasmania	20 200	19 100
Australian Capital Territory	12 750	12 050
Northern Territory	7 300	6 900
Total	1 518 500	1 434 700

these activities. The operating surplus for professional services in 1992-93 was 12.6 per cent compared with 9.9 per cent in 1991-92. After allocation to the building fund, the net surplus was 8.1 per cent in 1992-93 compared with 5.9 per cent in 1991-92. The sources of contract and service income are shown in Table 3.

Trading

The most remarkable aspect of ACER's financial result in 1993-94 was the performance of trading. Turnover increased by 15.1 per cent to \$3.42m in 1992-93 (including the \$3 342 546 for sales income shown in the Auditor's Report and other income from royalties and sales of prepublication materials and associated services). Costs increased by only 4.73 per cent with the result that a net operating surplus of \$223 445 was achieved. After allocation to the Building Fund, there was a net surplus of \$123 940.

The performance of trading has been a matter of concern for several years for its slow growth and even more for its lack of profitability. ACER's involvement in sales of materials is intended to yield a surplus with which research and development activities might be funded. For many years, however, trading activities have produced a deficit and thus been a drain on the rest of the organisation's activities. The position was turned around dramatically in 1992-93.

Table 3: Sources of Income for Professional Services

Source	1992-93	1991-92
Contract Income		
Australian Education Council	117 185	138 678
Commonwealth Department of Employment, Education and Training	472 230	451 276
New South Wales Department of School Education	796 979	1 305 195
Victorian Department of School Education	209 639	129 997
Queensland Department of Education	24 212	38 179
Western Australian Ministry of Education	244 363	238 980
Australian Capital Territory Department of School Education	63 655	63 655
Queensland Board of Senior Secondary School Studies	347 073	330 305
Western Australian Secondary Education Authority	72 358	63 655
Community Services Victoria	78 948	46 852
Bicentennial Multicultural Foundation	85 646	95 000
Other	498 702	440 873
Services	1 185 860	1 070 645
Total	4 196 850	4 413 290

During 1991-92, significant staff reduction and reorganisation in marketing was undertaken. The financial benefits of this cost containment were realised in 1992-93 while, at the same time, a substantial growth in sales income was achieved. The end result was a turnaround of \$303 137 from an operating deficit of \$79 692 in 1991-92 to the operating surplus of \$223 445 in 1992-93.

Under the accounting method for product development adopted in 1990-91, costs of product development for trading are no longer expensed in the year in which they are

incurred. While development of a product continues, costs incurred are transferred to 'work-in-progress' in the Balance Sheet. When work is completed, the development costs are attributed to the product and become part of the value of inventory. Development costs are then expensed as 'costs of goods sold' as the product is sold. In the event that development costs cannot be recovered through sales, the costs will be expensed through write down of stock value.

In 1992-93, the cost of development work transferred to the Balance Sheet as 'work-in-progress' or stock value was \$74 709. Had this expenditure been written off through the profit and loss statement for 1992-93, as it would have been under the accounting method employed before 1990-91, there would still have been a substantial operating surplus for trading of \$148 736 and a net surplus of \$49 231.

Long-term trend in income

The trend in ACER's income from various sources over the last 20 years is shown in Figure 2. For trading, gross profit rather than turnover is included since that figure, as the total funds left for activities within ACER after removal of the cost of goods, is the one more directly comparable with the other income sources. The left-hand graph in the figure shows the trend in actual dollars, and the right-hand graph shows the same information in constant (June 1993) dollars.

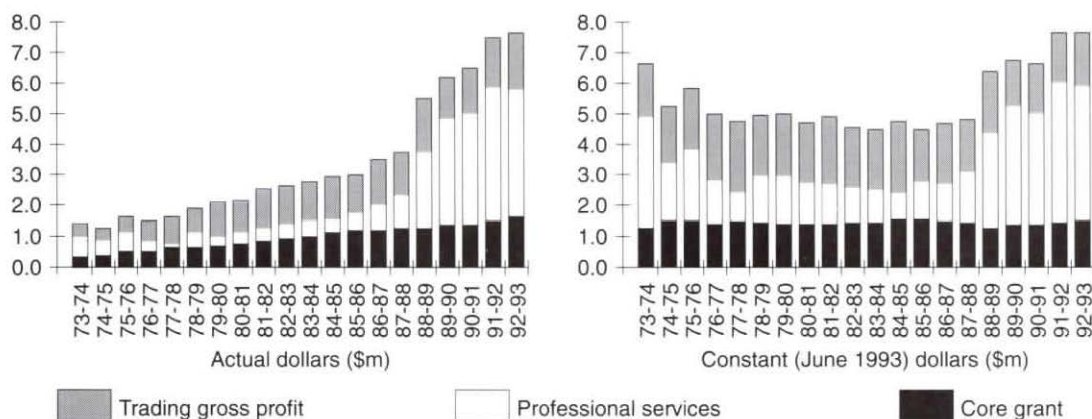


Figure 2: Trends in Income by Source from 1972-73 to 1991-92

The current dollar graph shows a general upward trend in income over the first 15 years and a quite rapid growth over the last five. When income is expressed in constant dollars, however, it is clear that there was a general downward trend over the first 15 years followed by substantial real growth in the last five years.

Over the 20-year period, the core grant has risen steadily in current dollars. In real terms, it rose in the late 1970, when the Australian Education Council adopted the current formula for its determination. Since then it has tended slightly downwards in real terms since academic salaries, on which the formula is based, have tended to increase less quickly than the inflation rate.

Income for professional services grew in current dollars through most of the 20-year period, except in the late 1970s. In real terms, as the constant dollar graph makes clear, income from professional services dropped dramatically from a high in 1973-74 over the following 12-year period before it began to grow again. The level reached in 1973-74 had been an all-time high for the organisation at the end of its first 45 years. That high has now been exceeded, in real terms, in the last five years.

Trading gross profit has varied over the 20-year period. It depends in general on sales volume but depends also on the mix of products, with the gross profit rate generally better on ACER's own products, and on the effects of currency fluctuations on the profitability of imported products. The all-time high in real terms was in 1977–78 at \$2.36m (in June 1993 dollars) and since then, despite some year-to-year reversals, there was a consistent downward trend to \$1.73m in 1985–86 (in June 1993 dollars). That trend was reversed and gross profit returned to \$1.98m (June 1993 dollars) in 1988–89, the last year in which ACER held a major US agency — which has since transferred to the Australian subsidiary of another US company that had taken it over. With the loss of that agency, gross profit dropped to \$1.46m in 1989–90, again expressed in June 1993 dollars. Growth in gross profit has been achieved over the last three years with the result for 1992–93 being \$1.82m.

The recent years: increased income and cost containment

The combined effects of the various income trends has been to produce a period of decline from the early 1970s to the mid-1980s followed by slow and then rapid growth which has brought ACER to a succession of years which have produced all-time highs in the level

of income. In recent years, this growth in income has been matched by careful financial management and cost containment which has generated the annual surpluses necessary to enable substantial investment in computing equipment and now the purchase of a new property. The task in the next few years will be to maintain the current pattern in order to repay the building loan and maintain the high quality computing environment so essential for the research and development program.

Robert Moore

Business Manager

Directors' Report

The Directors of the Australian Council for Educational Research Limited (ACER) submit the following report together with the balance sheet at 30 June 1993 and the profit and loss account for the financial year then ended.

Directors in office at the date of this report and meetings attended during year

Peter H. Karmel AC CBE BA PhD FACE FASSA	7 meetings attended
Jillian M. Maling BA DipEd BEd PhD FACE	5 meetings attended
Margaret C. Batten BA BEd PhD FACE	6 meetings attended
Ken Boston MA PhD	4 meetings attended
Heather Felton BA DipEd BEd	7 meetings attended
Barry McGaw BSc MEd PhD FACE FAPsS FASSA	5 meetings attended

The total number of meetings held was seven.

Principal activities of the company

The principal activities of the company in the course of the financial year were educational research and development and the publication and sale of educational and psychological tests and other materials. During the year there was no significant change in the nature of those activities.

Result for the year

The operating surplus before extraordinary items for the year was \$828 593 under the accounting practice introduced in 1990-91 in which costs of product development work still in progress are not expensed in the financial year in which they are incurred but are instead carried forward as work-in-progress in the Balance Sheet.

Expenditure on work-in-progress in 1992-93 was \$74 709. Had the earlier practice been followed then the operating surplus would have been reduced by this amount to \$753 884.

The operating surplus after the extraordinary write off of costs associated with the proposed building construction which will now not proceed of \$455 174 was \$373 419.

Dividends

ACER is a non-profit company and neither pays nor declares dividends.

Review of operations

The Commonwealth, state and territory governments provide ACER with an important annual grant that enables ACER to undertake a range of research and development projects for which contract funds are not normally available. Some of the projects anticipate developments for which further work can be undertaken later on contract. Others are concerned with more basic and long-term questions than the more immediate ones for which contract funding is typically available. Both types of projects strengthen the intellectual base on which all of ACER's work is built. The 1992-93 government grant was \$1 518 500 compared with \$1 434 700 in 1991-92. It provided 16.5 per cent of ACER's total income in 1992-93 compared with 16.2 per cent in 1991-92.

Income from professional services in 1992-93 was \$4 196 850, a decrease of 4.9 per cent from the \$4 413 290 achieved in 1991-92. These professional services yielded a surplus in 1992-93 of \$370 879, after allocation of funds to the Building Reserve, which represents a return on income of 8.8 per cent. This is an improvement on the rate of return of 5.9 per cent achieved in 1991-92. Professional service activities can be separated into contract work and services offered on a fee-for-service basis to users.

Contracts, which are mostly with government agencies for research and development work, yielded \$3 010 990 in 1992-93, down by 9.1 per cent from \$3 342 645 in 1991-92, the last of four years in which ACER had the major responsibility for the large New South Wales Basic Skills Testing Program. The funding for most contract projects is very tight and it is often the case that more costs are incurred for staff time than the funds provide for. In some cases, where the project is substantial and of importance to government agencies that provide the annual core grant, supplementary funds are provided from the grant.

The fee-for-service activities provided by ACER are predominantly testing services. The other activities in this category are conferences and workshops. The total income from services in 1992-93 was \$1 185 860, up by 10.8 per cent from \$1 070 645 in 1991-92.

The most remarkable feature of ACER's performance in 1992-93 was a dramatic improvement in the performance of its trading activities. Total income from sales and other activities was up by 15.1 per cent from \$2 973 535 in 1991-92 to \$3 421 158 in

1992-93. This growth was achieved at the same time as cost reductions were achieved through staff reductions in marketing and customer services. The result in 1992-93 was a net surplus of \$153 728 compared with a net deficit in 1991-92 of \$127 757, despite the allocation to the Building Reserve in 1992-93 at \$99 505 being more than double the allocation in 1991-92. The 1992-93 net surplus represents a return of 12.2 per cent on assets employed in inventory and trading debtors.

ACER's accommodation

The operating surplus of \$828 593 was more than sufficient to provide for the budgeted allocation of \$350 000 to the Building Reserve and thus strengthened the overall position of ACER's reserves at a time when the need to move to new accommodation was becoming more acute. Although it has still not been possible to sell the Hawthorn property, ACER's financial position had strengthened by October 1992 to the point where bank finance was available for construction of the proposed new premises on the Clayton campus of Monash University.

The depressed level of the commercial property market in Melbourne, however, encouraged consideration of the alternative of purchasing a property to enable ACER to own both the building and the land. After an extensive search for an appropriate property an offer for a property at 19 Prospect Hill Road, Camberwell was accepted verbally on Friday 28 May 1993.

Changes in state of affairs and likely developments

During the financial year there were no significant changes in the state of affairs of the company other than those referred to in the accounts or notes thereto.

Events subsequent to balance date

Since the end of the financial year, the only significant change in the state of affairs of the company has been settlement on the purchase of the property at 19 Prospect Hill Road, Camberwell and commencement of the design of the fitout. It is anticipated that the company will move to its new premises in March 1994 but occupy only 75 per cent of the space, leasing the rest to tenants. The total cost of the property purchase and fitout is estimated at \$5 500 000.

Directors' interest in contracts

Since the end of the previous financial year, no director has received or become entitled to receive a benefit, other than the fixed salary and benefits of the two employees of the company as disclosed in the accounts, by reason of a contract made by the company with the director or with a firm of which he or she is a member, or with a company in which he or she has a substantial financial interest.

Signed in accordance with a resolution of the Directors.

For and on behalf of the Directors



Director: P.H. Karmel



Director: B. McGaw

Date: 7 October 1993

Auditor's Report

To the Members of
Australian Council for Educational Research Ltd
ACN 004 398 145

Audit Scope

We have audited the accompanying financial statements of Australian Council for Educational Research Ltd for the financial year ended 30th June 1993 comprising the Balance Sheet, Profit and Loss Statement, Cash Flow Statement, Notes to the Accounts and the Statement by Directors. The company's directors are responsible for the preparation and presentation of the financial statements and the information they contain. We have conducted an independent audit of these financial statements in order to express an opinion on them to the members of the company.

Our audit has been conducted in accordance with Australian Auditing Standards to provide reasonable assurance as to whether the financial statements are free of material misstatement. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements, and the evaluation of accounting policies. These procedures have been undertaken to form an opinion as to whether, in all material respects, the financial statements are presented fairly in accordance with Australian accounting concepts and standards and statutory requirements.

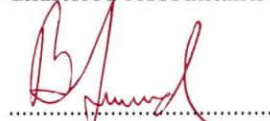
Audit Opinion

In our opinion the financial statements of Australian Council for Educational Research Ltd are properly drawn up in accordance with the provisions of the Corporations Law and in accordance with Statements of Accounting Concepts and applicable Accounting Standards, so as to give a true and fair view of:

- (i) the state of affairs of the company at 30th June 1993 and of the results of the company for the year ended on that date;
- (ii) the other matters required by Division 4, 4A and 4B of Part 3.6 of the Corporations Law to be dealt with in the financial statements.

SAWARD DAWSON WRIGHT

Chartered Accountants



Partner: Bruce Saward

7th October 1993

Box Hill, Victoria

Australian Council for Educational Research Ltd

ACN 004 398 145

(a company limited by guarantee)

Balance Sheet at 30 June 1993

	Note	1993 \$	1992 \$
Current assets			
Cash	6	2 148 348	1 163 573
Receivables	7	996 276	1 330 930
Inventories	8	939 203	895 314
Other	9	27 911	566 353
Total current assets		4 111 737	3 956 170
Non-current assets			
Property, plant and equipment	10	1 614 202	1 435 566
Total non-current assets		1 614 202	1 435 566
Total assets		5 725 939	5 391 736
Current liabilities			
Creditors and borrowings	11	1 546 168	1 633 554
Provisions	12	694 674	647 212
Total current liabilities		2 240 842	2 280 766
Non-current liabilities			
Creditors and borrowings	11	27 936	27 227
Total non-current liabilities		27 936	27 227
Total liabilities		2 268 778	2 307 993
Net assets		3 457 160	3 083 743
Members' funds			
Reserves	13	2 220 179	2 333 614
Retained profits		1 236 982	750 129
Total members' funds		3 457 161	3 083 743

The accompanying notes form part of these financial statements.

Income and Expenditure Account for the year ended 30 June 1993

	Note	1993 \$	1992 \$
Surplus from operations	2	828 593	472 718
Deficit on extraordinary items	3	(455 174)	—
Operating surplus and extraordinary items		373 419	472 718
Accumulated funds at the beginning of the financial year		750 129	578 329
Total available for appropriation		1 123 548	1 051 047
Aggregate of amounts transferred from (to) reserves	4	113 434	(300 918)
Accumulated funds at the end of the financial year		1 236 982	750 129

Notes to and forming part of the accounts for the year ended 30 June 1993**1 STATEMENT OF ACCOUNTING POLICIES**

The accounts have been prepared in accordance with applicable Statements of Accounting Concepts, applicable Accounting Standards and the Corporations Law, including the disclosure requirements of Schedule 5. The accounts have been prepared on the basis of historical costs and do not take into account changing money values or, except where stated, current valuations of non-current assets. The accounting policies have been consistently applied, unless otherwise stated.

The following is a summary of the significant accounting policies adopted by the company in the preparation of the accounts.

Income tax

The company is exempt from paying income tax in accordance with the provisions of the *Income Tax Assessment Act*.

Inventories

Inventories are measured at the lower of cost and net realisable value.

Property, plant and equipment

Plant and equipment are recorded at cost. All fixed assets, including buildings but excluding freehold land, are depreciated at applicable rates so as to allocate their cost over their estimated useful lives commencing from the time the asset is held ready for use.

Last year, in accordance with approved accounting standard AASB 1010, the directors made a downward revaluation of the land and buildings at 9 Frederick Street, Hawthorn at year end so as to ensure that these assets were not being carried in the accounts at a value greater than their recoverable amount. This resulted in a reduction to the Asset Revaluation Reserve of \$680 923.

Employee benefits

Annual leave and long service leave entitlements have been provided for in the accounts by way of provisions based on wage rates and accrued leave entitlements current at year end. Long service leave is only provided in respect of employees who have completed more than 10 years' service and is recorded as a current liability because of immediate entitlement.

Foreign exchange transactions

Overseas purchases are recorded at the rate applicable at the date of payment. At balance date, amounts payable are converted at the rate applicable at that date.

Library additions

The company adopts the policy of charging all additions to the library directly to the profit and loss account in the year in which the expenditure is incurred.

Debtors

These are valued net of any known bad debts as these are written off in the period in which they become known by a charge against the provision for doubtful debts. A provision is then raised for any doubtful debts at year end.

Accounts disclosure

Schedule 5 of the Corporations Law requires that specific headings in the Profit and Loss account and Balance Sheet be used. The directors are of the opinion that headings such as 'profit and loss', 'operating profit', 'retained profits' and 'shareholders' equity' are not appropriate in the circumstances. Accordingly, the terms 'income and expenditure', 'surplus', 'accumulated funds' and 'members' funds' have been substituted.

	1993	1992
	\$	\$
2 OPERATING SURPLUS		
a Operating surplus has been determined after:		
Crediting as income:		
Interest received		
Other persons	67 102	31 427
Charging as expenses:		
Auditor's remuneration:		
Auditing services	13 595	13 395
Other services	225	2 210
Depreciation of property, plant and equipment	192 667	164 121
Provisions:		
Holiday pay	46 075	54 028
Long service leave	1 387	1 416
b Operating revenue		
Included in operating surplus are the following items of operating revenue:		
Trading sales	3 342 546	2 877 350
Other income	29 124	59 700
Core R and D income	1 518 500	1 434 700
R and D contract income	3 010 990	3 342 645
Testing services income	1 185 860	1 070 645
Royalties	49 497	36 484
Interest received	67 102	31 427
	<u>9 203 619</u>	<u>8 852 951</u>
3 EXTRAORDINARY ITEMS		
Write off of prepaid building costs	(455 174)	-
Deficit on extraordinary items	(455 174)	-
4 MOVEMENT IN RESERVES		
Transfer from Scientific Research Fund Reserve	13	-
Transfer from Expended Building Fund Reserve	455 174	-
Transfer from Other Funds Reserve	8 247	4 578
Transfer to Scientific Research Fund Reserve	-	(5 496)
Transfer to Building Reserve Provision Fund	(350 000)	(300 000)
	<u>113 434</u>	<u>(300 918)</u>

	1993	1992
	\$	\$
5 REMUNERATION OF DIRECTORS		
Directors' remuneration:		
Income received or due and receivable by all directors from the company and any related corporations	146 385	153 753
Number of directors whose income from the company or any related corporation was within the following bands:		
\$40 000 – \$49 999	1	–
\$50 000 – \$59 999	–	1
\$100 000 – \$109 999	1	1
The names of directors who have held office during the financial year are:		
Professor Peter Karmel	Professor Jillian Maling	
Dr Margaret Batten	Professor Barry McGaw	
Ms Heather Felton	Dr Ken Boston	
Retirement and superannuation payments:		
Amounts paid to senior executives on retirement from office or to prescribed superannuation funds for the provision of retirement benefits	21 939	18 575
6 CASH		
Cash on hand	500	500
Cash at bank	2 147 848	1 163 073
	<u>2 148 348</u>	<u>1 163 573</u>
7 RECEIVABLES		
Current		
Trade debtors	608 172	1 031 424
Less: Provision for doubtful debts	(10 000)	(10 000)
	<u>598 172</u>	<u>1 021 424</u>
Sundry debtors	398 104	309 506
	<u>996 276</u>	<u>1 330 930</u>

	1993	1992
	\$	\$
8 INVENTORIES		
Current		
Stock on hand	723 253	743 787
Product development in progress	215 949	151 527
	<u>939 202</u>	<u>895 314</u>
9 OTHER ASSETS		
Current		
Prepaid building expenditure	5 311	455 174
Other prepayments	22 600	111 179
	<u>27 911</u>	<u>566 353</u>
10 PROPERTY, PLANT AND EQUIPMENT		
Freehold land — 1992 directors' valuation	800 000	800 000
Buildings — 1992 directors' valuation	200 000	200 000
Less: Accumulated depreciation	5 000	—
	<u>195 000</u>	<u>200 000</u>
Motor vehicles — at cost	78 625	61 249
Less: Accumulated depreciation	11 215	8 662
	<u>67 410</u>	<u>52 587</u>
Furniture and equipment — at cost	327 286	482 312
Less: Accumulated depreciation	229 714	356 653
	<u>97 572</u>	<u>125 659</u>
Library — 1987 directors' valuation	20 000	20 000
Computer equipment	715 304	660 408
Less: Accumulated depreciation	281 084	423 088
	<u>434 220</u>	<u>237 320</u>
Total property, plant and equipment	<u>1 614 202</u>	<u>1 435 566</u>

	1993	1992
	\$	\$
11 CREDITORS AND BORROWINGS		
Current		
Hire purchase liability	13 212	4 208
Sundry creditors	1 018 751	934 540
Amounts received in advance	514 205	694 806
	<u>1 546 168</u>	<u>1 633 554</u>
Non-current		
Hire purchase liability	<u>27 936</u>	<u>27 227</u>
12 PROVISIONS		
Current		
Provision for holiday pay	366 214	320 139
Provision for long service leave	318 460	317 073
Provision for supplementary superannuation	10 000	10 000
	<u>694 674</u>	<u>647 212</u>
12 RESERVES		
Asset Revaluation Reserve	570 949	570 949
Building Fund Reserve	1 608 694	229 366
Building Reserve Provision Fund	–	1 029 328
Expended Building Fund Reserve	–	455 174
Scientific Research Fund Reserve	40 353	40 366
Other Funds Reserve	183	8 431
	<u>2 220 179</u>	<u>2 333 614</u>

Amounts shown in the Building Fund Reserve represent funds received from Government grants for building purposes and funds set aside by the company for building purposes (which were previously allocated to the Building Reserve Provision Fund). During the year the Building Fund Reserve and the Building Reserve Provision Fund were amalgamated to form one single Reserve account. Also during the year, the Expended Building Fund Reserve was transferred back to accumulated surpluses as it related to building costs associated with a building project that will not be proceeding.

14 SEGMENT INFORMATION

The company operates predominantly in one geographical location being throughout Australia.

The principal activities of the company, which is a company limited by guarantee, are research and development in the field of education.

15 MEMBER'S GUARANTEE

Each member of the company guarantees to contribute to the assets of the company in the event of its being wound up to the extent of twenty dollars.

16 CAPITAL COMMITMENTS

During the year, the company negotiated the purchase of property requiring commitment of future capital of \$4 642 832.

Statement of cash flows for the year ended 30 June 1993

	1993	1992
	\$	\$
Cash flows from operating activities		
Receipts from customers and clients	9 289 668	8 826 578
Payments to suppliers and employees	(8 001 594)	(8 224 576)
Interest and bill discounts received	67 102	31 427
Net cash from operating activities	<u>1 355 176</u>	<u>633 429</u>
Cash flows from investing activities		
Payments for property, plant and equipment	(389 522)	(235 084)
Proceeds from sale of property, plant and equipment	19 120	0
Net cash used in investing activities	<u>(370 402)</u>	<u>(235 084)</u>
Net increase (decrease) in cash held	984 774	398 345
Cash at the beginning of the year	1 163 573	765 228
Cash at the end of the financial year	<u>2 148 347</u>	<u>1 163 573</u>

Notes to the statement of cash flows for the year ended 30 June 1993**1 Reconciliation of cash**

For the purposes of the statement of cash flows, cash includes cash on hand and in banks and investments in money market instruments, net of outstanding bank overdrafts. Cash at the end of the financial year as shown in the statements of cash flows is reconciled to the related items in the balance sheet as follows:

	1993	1992
	\$	\$
Cash on hand	500	500
Cash at bank	140 402	91 985
Deposits at call	2 007 445	1 071 088
	<u>2 148 347</u>	<u>1 163 573</u>

2 Reconciliation of net cash provided by operating activities to operating surplus

Operating profit after income tax	373 419	472 718
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Adjusted by:

Depreciation	192 667	164 121
Profit on sale of property, plant and equipment	(901)	
Change in operating related assets and liabilities		
(Increase) decrease in trade/sundry debtors	334 653	(212 434)
(Increase) decrease in inventories	(43 888)	(91 510)
(Increase) decrease in prepaid expenses	538 442	(81 962)
Increase (decrease) in creditors and accruals	93 924	115 060
Increase (decrease) in provisions	47 461	55 444
Increase (decrease) in income in advance	(180 601)	211 992
Net cash provided by operating activities	<u>1 355 176</u>	<u>633 429</u>

3 Financing facilities

Firmly committed long-term financing facilities of \$756 400 (1992: \$100 000) were available to the company at the end of the financial year. At that date, \$41 148 (1992: \$0) of these facilities were in use. Loan facilities available to the company at year end were:

Payroll encashment facility	Overdraft facility
Leasing facility	Document credit
Business Mastercard	Petty cash encashment authority

Statement by Directors

In the opinion of the directors of the company:

- 1 a The accompanying Income and Expenditure Account is drawn up so as to give a true and fair view of the surplus of the company for the financial year ended 30th June 1993.
 - b The accompanying Balance Sheet is drawn up so as to give a true and fair view of the state of affairs of the company as at 30th June 1993.
 - c At the date of this statement, there are reasonable grounds to believe that the company will be able to pay its debts as and when they fall due.
- 2 The accompanying accounts have been made out in accordance with Statements of Accounting Concepts and applicable Accounting Standards.

This statement is made in accordance with the resolution of the Board of Directors and is signed for and on behalf of the directors by:


..... Director
P. H. Karmel


..... Director
B. McGaw

President

Karmel, Peter

Vice-President

Maling, Jillian

Coopted Members

Adams, Isabelle, Dip *KTC*, BA, BEd, MEd *Murdoch*

District Superintendent, Ministry of Education, Perth South District, Western Australia

Connors, Lyndsay, BA *Syd.*, DipEd *Canberra CCAE*

Director of Schools Port Jackson, New South Wales Department of School Education Metropolitan East Region

Karmel, Peter, AC, CBE, BA *Melb.*, PhD *Camb.*, PhD *ad eundem gradum Adel.*, Hon

LLD *PNG*, Hon DLitt *Flin.*, Hon LLD *Melb.*, Hon DLitt *Macquarie*, Hon DLitt *Murdoch*, DUniv *Newcastle, NSW*, Hon LLD *Qld*, FACE, FASSA

Formerly Vice-Chancellor, Australian National University, Canberra, Australian Capital Territory

Maling, Jillian, BA, DipEd, BEd *Melb.*, PhD *Stanford*, FACE

Deputy Vice-Chancellor and Chief Executive Officer, University of Western Sydney, Nepean, New South Wales

Poole, Millicent, CE, BA, BEd *Qld*, MA *UNE*, PhD *LaT.*, FACE, FASSA, MAPsS

Pro Vice-Chancellor (Research and Advancement), Queensland University of Technology, Brisbane, Queensland

Members Appointed by the State Institutes of Educational Research

Cranston, Neil, BSc, BEdSt, MEd *Qld*, MACE

Senior Review Officer, Department of Education, Mt Gravatt, Queensland

Felton, Heather, BA, DipEd, BEd(Hons) *Tas.*

Assistant Manager, Evaluation Research, Department of Employment, Industrial Relations and Training, Hobart, Tasmania

Watson, Alan, BA *UNE*, MA, PhD *Syd.*, DipRE *MCD*

Senior Lecturer, School of Teacher Education, University of New South Wales, St George Campus, Oatley, New South Wales (to October 1992)

Members of ACER Council

Slater, Robert, BA *Adel.*, DipEdAdmin *UNE*, DipT *SA Ed Dept.*, MEd(Hons) *UNE*,
TC *SA Ed Dept*
Principal, Mitchell Park Primary School, Clovelly Park, South Australia
(from December 1992)

Official Representatives

Conference of Directors-General of Education

Boston, Ken, MA *Melb.*, PhD *Melb.*

Director-General, Department of School Education, Sydney, New South Wales
Hill, Peter, BA(Hons) *London*, DipEd, PhD *Murdoch*

Chief General Manager, Ministry of Education and Training, Melbourne, Victoria
(to October 1992)

Davis, Bruce, BArch *Melb.*

Secretary, Department of Education and the Arts, Hobart, Tasmania (from March
1993)

Commonwealth Department of Employment, Education and Training

Johnston, Neil, BEc, *ANU*, PhD *Pennsylvania*

Deputy Secretary, Department of Employment, Education and Training, Canberra,
Australian Capital Territory

National Board of Employment, Education and Training

Brennan, Max, BSc, PhD, *Syd*, HonDSc *Flinders*

Chair, Australian Research Council, Canberra, Australian Capital Territory

Staff Representative

Batten, Margaret, BA, BEd *Melb.*, PhD *Monash*, FACE

Director

McGaw, Barry, BSc, BEd(Hons) *Qld*, MEd, PhD *Illinois*, FACE, FAPsS, FASSA

Directorate*Director*

McGaw, Barry, BSc, BEd(Hons) *Qld*, MEd, PhD *Illinois*, FACE, FAPsS, FASSA

Associate Directors

Masters, Geoff, BSc, MEd *UWA*, PhD, *Chicago*

Williams, Trevor, BA, BSc, DipEd, *UWA*, MA, PhD *Toronto*, FACE

Assistant Director

Izard, John, BSc, BEd *Melb.*, MEd *Monash*, PhD *LaT.*, FACE

Executive Officer

Ramsay, Glynis, BBus (Mgmt) *Monash*

Administrative Assistant

Kay, Alison (to February 1993)

Pardo, Caterina (from April 1993)

Secretaries

Allen, Yvonne

Bates, Susan

Falkingham, Amanda, BA *Monash*, GradDipOfficeAdmin *Chisholm*

Office Services

Locock, Gloria

Research and Development*Principal Research Fellows*

Ainley, John, BSc MEd, PhD *Melb.*, FACE

Lokan, Janice, BA, DipEd *Adel.*, PhD *Ottawa*, FACE, MAPsS, MIAAP

Rowe, Helga, BA(Hons) *Qld*, PhD *Melb.*, MACE, FAPsS, MIAAP

Senior Research Fellows

Adams, Raymond, BSc(Hons), DipEd, MEd *Melb.*, PhD *Chicago*

Batten, Margaret, BA, BEd, *Melb.*, PhD *Monash*, FACE

de Lemos, Marion, BSc(Hons), MSc *Natal*, PhD *ANU*, MAPsS

**Members of ACER
Staff**

Doig, Brian, BAppSci, AssocDipMath RMIT, BEd Monash, GradDipCompEdn MCAE, Med Melb.

McKenzie, Phillip, BEc(Hons), DipEd, MEd, PhD Monash, MACE

Piper, Kevin, BA(Hons), DipEd Syd., MEd, PhD Melb.

Splitter, Laurance, BA(Hons) Monash, BPhil, DPhil Oxon, MACE

Withers, Graeme, BA Melb.

Zammit, Susan, BA(Hons) Lond., MEdSt, PhD Monash, MACE

Research Fellows

Bryce, Jennifer, BA, BEd Melb., DipArts VicColl. of Arts, GradDipCareersEd RMIT

Creese, Valdai, MA Hons, DipEd Oxon

Forster, Margaret, BA(Hons), DipEd LaT., MEdSt Monash

Hambur, Samuel, BSc(Hons) Monash, DipEd HIE

Harvey-Beavis, Adrian, BA Chisholm

Jarrett, Glenn, BSc(Hons), DipEd Wales, MACE (to June 1993)

Khoo, Siek-Toon, BSc Canterbury, NZ, DipEd Singapore, DipCompSci LaT., MEdSt Monash (to October 1992)

Lindsey, John, BSc(Hons), PhD Monash, DipEd Melb.

Long, Michael, BA(Hons) ANU

McCurry, Douglas, BA(Hons), DipEd LaT.

McQueen, Joy, BA, DipEd Melb., BEd Monash, GradDipTESL VicColl., MA Melb., MACE

Mendelovits, Juliette, BA(Hons), DipEd LaT., MA(Eng) Melb.

Morgan, George, BSc(Hons) UNSW, DipEd SCV, MSc LaT., MEd Melb.

Simpson, Brian, BSc, DipEd Melb.

Research Officers

Candappa, Yvonne, BSc Uni of Sri Lanka, DipEd GIAE, MEdSt Monash

Carthy, Imelda, BA, DipEd Melb.

Congdon, Peter, DipAppSci(Ag) VCAH

Fleming, Marianne, BSc Melb., BA Swinburne

Ford, Phoebe, BA(Hons), BEd Melb., MA, PhD Cantab

Getty, Corinne, BA, GradDipUrbResrch&Policy, GradDipSocStats Swinburne

Lachele, Judith, BA Monash

Mellor, Suzanne, BA, DipEd Melb., BEd LaT.

Perry, Linda, BSc(Hons) Monash, GradDipComp Deakin

Robinson, Lyn, BA, DipEd *Monash*, GradDipUrbResrch&Policy *Swinburne*

Walsh, Judith, BA, BEd, BSW *Melb.* (to January 1992)

Wu, Margaret, BSc(Hons), DipEd *Melb.*, GradDipComStudies *RMIT*

Testing Services

Clayton, Helen, BSc(Hons) *Monash* (to April 1993)

Sorrell, Mike, BSc, BA *Melb.*, BEd *Monash*

Administrative Officers

Aldous, Cecily, BA *Melb.*, DipEd(TESL) *LaT.*

Barley, Jacqui, BSc(Hons) *Melb.*

Library and Information Services

Head

Mathews, Peter, BSc(Hons), GradDipLib *RMIT*, AALIA

Librarians

Badger, Julie, BA, DipEd *Monash*, GradDipLib *Canberra CAE* (to February 1993)

Balint, Denise, BSocSci (Lib) *RMIT*, GradDipBus(Computing) *VicColl*

Findlay, Margaret, BA *Victoria*, AALIA (from March 1993)

Fawcett, Judith, BA(Hons) *Birmingham UK* (from May 1993)

Miller, Elspeth, BA(Hons) *LaT.*, GradDipLib *RMIT*

Salmond, Rachel, BA *Victoria, NZ*, DipNZLS, MLib *Monash*, AALIA (to June 1993)

Library Officer

Psiliakos, Lula, BBus(Trans) *RMIT*, ALIAA

Clerical Assistant

Segar, Betty

Secretary

McKechnie, Anne

Business Division

Business Manager

Moore, Robert, BCom *Melb.*

Secretary

Wilkins, Carolyn (to February 1993)

Administrative Officer

Maher, Kerin (from April 1993)

Financial Services

Accountant

Dawes, Wayne, BBus(Accounting) *Chisholm*, CPA

Car, Lyn

Evans, Dilsie

Harvey, Faye

Hodder, Gwen

Consultant Services/Marketing

Education

King, John, DipPE *Melb.*, BEd *LaT.*, TPTC *Melb.*

Parenting

Goldsworthy, Joanna, BA(Hons) *Oxon*

Personnel and Human Resources Management Consultant

McCrossin, Peter, BEc *Monash*, BA *Chisholm*, DipEdPsych *Monash*, MAPsS, CMAHRI

Psychology

Verbyla, Daiva, BEd *Melb State Coll.*, GradDipAdol&Child Psych, MEdPsych *Melb.*

Tinney, Frank, BA, MEd *Monash*, MAPsS (to September 1992)

Parent Help Program — News and Information Service

Demirdjian, Carole, AssocDipWelfare *Chisholm*, GradDipStuds-Careers *VicColl* (to April 1993)

Secretary

Lowry, Anne

Taylor, Margaret

Publishing

Burton, Barbara, BA(Hons) *Melb.* (Senior Editor)

Clark, Judith (Desk Top)

Fraser, Ian, MA *Aberdeen* (Publishing and Marketing Manager)

Griffin, Amanda

Idczak, Rhonda, BAgSci *Melb.*

Seddon, Roger (Production Manager)

Distribution Services

Wilkins, Alan (Manager) (to February 1993)

Higgins, Christine (Assistant Manager)

Birrell, Wendy (from February 1993)

Henderson, Val (from November 1993)

Manuel, June

Smith, Mattie

Store and Despatch

Gilder, Peter

O'Neill, Steven (Senior Despatch Officer)

Smith, Ian

Zaske, Paul (from August 1992)

Project Support

Davis, Helen, BSc *Melb*, DipSocial *LaT*. (Head)

Bonning, Judy

Buckley, Carole

Cowhey, Pauline

Fraser, Simon (from November 1992)

Gardiner, Jan

Koglin, Dianne

Perkins, Gladys

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Report from the Institutes of Educational Research

Roles and membership of the Institutes

The Institutes of Educational Research (IERS) are professional associations with the prime purpose of fostering research and service in education. Institutes are based in each state and the Northern Territory (New South Wales has a second institute in Newcastle). They coordinate and sponsor seminars, workshops, panel discussions, forums, lectures and publications on issues of current educational significance. Of particular focus in their activities is the role and contribution of educational research and evaluation of those issues — research methodologies, practices and findings provide the agenda for these activities. Some Institutes have an additional focus on beginning researchers.

The membership of the Institutes has remained relatively stable in most states over recent years, and membership details for 1992–93 are summarised below.

New South Wales	Newcastle Branch	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory
187	30	64	71	104	59	125	45

The size of the membership is encouraging considering the competing activities of other professional bodies in education. It may reflect a small but steady increase in the recognition of the role of research in the educational enterprise as well as an increase in the number of individuals and groups engaged in educational research and evaluation. This latter fact results, perhaps to some extent, from the recent initiatives occurring in many states and territories related to school reviews and quality assurance. More and more, teachers and parents are being invited to participate in ‘mini’ research projects in their own schools — often with limited training and expertise in the area. This may well provide the Institutes with food for thought when developing their programs in the future as there may be excellent opportunities for them to contribute directly to research activities in schools. For example, they might provide training workshops to assist school and community personnel in conducting school-level research. Such initiatives could help fill a real and increasing void as many Education Departments and Ministries of Education are reducing support at a systemic and regional level to schools, with schools

being required to use their own resources to support the professional development needs within their school communities. Institutes would have the development opportunity to promote 'best practice' in conducting educational research and evaluation projects and encourage participants to consider important issues such as 'ethics' in conducting educational research, a matter of recent interest in the ACER.

But the Institutes have a variety of other roles to play in the area of educational research, both for the developing researcher as well as the established professional. The contribution of noted educational researchers in the activities of the Institutes maintains both the Institute's profiles and reputations in their contribution to education generally and educational research in particular. Joint functions and projects with other associations and bodies have also proved to be highly successful for some Institutes.

With an increasing number of educators undertaking the growing number of higher degrees offered by tertiary institutions, the dissemination of findings and the networking of researchers are becoming issues of significance. Institutes are already making a valuable contribution in these areas with many now holding research forums which are proving to be excellent avenues for sharing research information and creating opportunities for researchers with like interests to meet and interact. Publications of a variety of forms also contribute to networking opportunities, particularly for those new to the field of educational research and others publishing their work for the first time. While some Institutes, such as Queensland, New South Wales and Western Australia, now have well established journals and bulletins serving such purposes, discussions are under way to explore the possibility of the Institutes publishing an Australia-wide publication, further promoting the 'cause' of educational research and expanding the opportunities for researchers to network and share their work.

Overview of 1992-93 Institute activities

Some of the more significant achievements and highlights of the individual Institutes are summarised below.

The Research Forum was a highlight for the NSWIER. Convened by Professor Michael Dunkin and Carmel Desmarchelier, the forum involved sixteen poster presentations,

three papers from research award winners, the presentation of prizes to five researchers, a book launch and a seminar conducted by professor David Boud on the report, *Educational Research in Australia*. The theme *Quality Assurance in Schools: Is it worth it?* was addressed at a public meeting by Dr Peter Cuttance (NSW Department of Education) and Professor Neil Baumgart (University of Western Sydney). The issue of a range of publications complemented a very successful year.

Northern Territory

The NTIER, with some 50 members, held a range of seminars and presentations during the year. Topics included *Preparing students for employment — the Finn, Mayer and Carmichael reports* (Dr Payne, NT Department of Education, Professor Watts, NT Training Authority), *Changing school culture: A case study in the identification and motivation of school culture* (Dr Waterworth, Deakin University) and *Standards in education: An English perspective* (Ms Agambar and Mr Tomlinson, Office of Standards, United Kingdom). The NTIER again sponsored an annual prize for small-scale research.

Western Australia

The second edition of the Institute's journal, *Issues in Educational Research*, was published in 1992. The journal meets the needs of both beginning and more established researchers and has received a favourable response from the educational research community. A rich variety of activities was held during the year, including a presentation by Professor Balson (Monash University), *Understanding children's behaviour: Cooperation between home and school*, and a school-based presentation, *The quality of teaching and learning*, by Robin Clarke (Belmont Senior High School) and Pamela Paton (Southwell Primary School). The WAIER continues to offer the Early Career Award and Research Awards for the respective universities in the state.

Queensland

The Institute's journal, *Queensland Researcher*, published three times a year, continues to be highly successful for the dissemination of local research. One issue is devoted to publishing the abstracts of presentations from the Research Forum, contributing to networking opportunities for members and other readers of the journal. The Research Forum was again highly successful, with Professor Stevenson (Griffith University) providing the opening address. Other successful functions included the J A Robinson

Memorial Lecture (held as a dinner activity) presented by Professor Kyle (University of Queensland), *History and its contribution to policy*, and a Public Forum held on *Tertiary entrance: Agenda for research and action*.

Victoria

The VIER has continued to publish its successful *VIER Bulletin*, featuring papers by Michael Smithson (*Should we teach ignorance?*). The latter presentation featured the 1992 Frank Tate Lecture. The history of the Institute by Max Boyce, *A view of the first sixty years of the Victorian Institute of Educational Research* continues to attract interest. Of significance has been the selection by the Executive to promote a theme, *Research on teaching and learning*, for its 1993 activities.

Tasmania

Activities in the past year have included a forum, *Finn, Mayer, Carmichael*, presented by Dr Masters (ACER) as a follow-up to an earlier presentation by Dr Caldwell on a similar topic. The Institute again awarded the G V Brooks Memorial Prize, this year to two students from the University of Tasmania.

South Australia

South Australia held a range of open meetings as well as organising invitation sessions for several broad ranging enquires relating to education, including both state and federal parliamentary enquiries and the review of educational research in Australia. The needs of educational research in South Australia were also investigated. The SAIER has held discussions with the South Australian Education Department and other agencies to review the conditions under which non-higher degree research is carried out in state schools. This represents a very positive attempt by members of the Institute to enhance the 'integrity' of research conducted in school. Open meetings have included topics such as *The South Australian Certificate of Education and its implementation and implications for the teachers and students* and *The Advanced Skills Teacher*.

Newcastle

The Newcastle IER again held a very successful annual dinner for Institute members, doctoral students and their supervisors. A prize is presented at the dinner for the best PhD thesis in Education and Psychology. A topical and stimulating Research Seminar was

presented by Drs Manning, Taylor and Killen on their project, *Predicting university student's results*. Three newsletters were also distributed to members and potential members during the year.

Activities of the Institutes' standing committee

The Institutes, through the Standing Committee, are afforded the opportunity to provide input to the work of the ACER Council through its three member representation on that body. Membership of the Institutes' Standing Committee is:

Dr Alan Watson (NSWIER) — Chair
Ms Heather Felton (TIER) — Deputy Chair
Professor Sid Bourke (Newcastle IER)
Mr Neil Cranston (QIER)
Dr Brian Devlin (NTIER)
Associate Professor Glen Rowley (VIER)
Mr Rob Slater (SAIER)
Dr Andrew Taggart (WAIER)

Dr Alan Watson who has acted as Chair of the Standing Committee for some years completed his three year term as a member of the Council earlier this year. He has made a major contribution to both the Standing Committee and the Council during that time. Neil Cranston was elected as Chair of the Standing Committee to replace Dr Watson.

Members of the Institutes' Standing Committee represented on Council are:

Ms Heather Felton (to be replaced in October by Professor Sid Bourke)
Mr Neil Cranston (until end of 1994)
Mr Rob Slater (until end of 1995)

Through representation on the ACER Council, the Institutes are able to contribute to important decision-making of ACER. Individual Institutes have also made valuable contributions to the work of ACER by providing commentary on ACER initiatives and assisting in the dissemination of a variety of information regarding ACER materials and activities.

Importantly, the Institutes were afforded the opportunity to contribute to the National education research agenda, at least that for ACER, by their participation at a combined

Council and Institutes' Standing Committee meeting early in 1993. This involved critical examination of, and suggestions for, ACER's research and development program for the 1993-96 triennium. Input, discussion and debate over two days among these groups and many of ACER's staff provided a rich and stimulating contribution to future ACER activities. The representatives of the various Institutes (through their Standing Committee) that took part in the process are unanimous in their support for a similar process in the future.

Conclusion

There continues to be a vast and ever expanding agenda for educational research. The 'effective schools' area, in which the ACER has been prominent, seems certain to continue to attract attention. And related to this is the need for research into the impact on schools and the quality of education on offer as a result of the on-going restructuring of, and changes in, education in Australia. The Institutes, through their varied membership and networking processes, can contribute to these areas as well as continuing to provide a 'local' focus in the states and territories for discussion and debate about matters of significance in educational research. They may be concerned with debates about research methodology, the research agenda of ACER and other bodies, or about the seemingly limitless range of education issues requiring research expertise to ensure they are fully explored and their implications understood as well as possible.

Neil Cranston

Chair

Institutes of Educational Research Standing Committee