59th Annual Report
1988-89

Australian Council for Educational Research

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ACER

Australian Council for Educational Research

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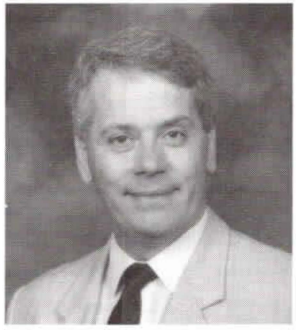


Dr Barry McGaw
Director

Schools appear to have many critics. Individual parents may be satisfied with their own children's school but the general impression given by the media is of public scepticism about the quality of schooling. In an article headlined, 'Our Education: Nothing Short of Disaster', the *Australian* (6 January 1988) called for 'radical and urgent action' to stop 'the rot' in Australia's 'second rate' and 'slipshod' school system. The author asserted that the aims of schools had become confused and diluted and that standards of student performance had declined disastrously. There are vocal critics of schools among employers and among the staff of higher education institutions who similarly assert that educational standards in schools are declining. Few of these critics or the journalists that report them provide evidence to support their assertions. Indeed, they usually place the onus of proof on those who would seek to deny the claim that standards are declining.

The critics do offer informal evidence in support of their claims and are evidently convinced by it. The difficulty with such anecdotal evidence, however, is that it may be based on inappropriate comparisons. For example, employers who assert that the quality of school leavers entering employment has declined may well be recruiting quite different types of new employees. With rapidly rising retention rates in upper secondary schools, fewer and fewer students, particularly among the more able ones, choose to leave school at the end of year 10. Those who do are not equivalent to the corresponding groups of school leavers of the past. This is particularly true of girls. The change in the nature and quality of applicants may then be misinterpreted as a more general change in educational standards. What the employer experiences as declining quality of new recruits can be a consequence of the declining attractiveness of the employment option offered.

This can also be true of entrants to higher education as an increasing proportion of each age-group proceeds beyond school to higher education. Academics who judge that standards amongst entrants have declined over the last decade or so may imagine they are commenting on the quality of secondary schooling. In fact, they may simply be noting the consequences of the change in admissions policy and

practice which has resulted in the increased proportion of the population entering higher education. About one-fifth of each age cohort will now complete a degree or diploma from an institution of higher education. Comparisons of levels of performanc of current groups of new students with the more select groups of the past will inevitably be biased in favour of the past groups.

It is not only the critics who have little systematic evidence on which to rest their claims. Those who manage the education systems have generally been in the same position. When the Quality of Education Review Committee was established in 1984 to determine whether there had been educational benefits from the substantial increase in funding for primary and secondary schools over the previous decade, it sought evidence from the system authorities, both government and non-government. The responses revealed considerable confidence that a great deal of good had been achieved and illustrations of ways in which the funds had been deployed to provide additional resources, but very little systematic evidence of beneficial outcomes (Quality of Education Review Committee, 1985).

Because neither the critics nor the supporters of the education systems have much systematic evidence about levels of achievement, it does not mean that either group is necessarily wrong, of course. It means only that the public debate proceeds according to the rhetoric of those pressing their viewpoints, without evidence for others to judge the accuracy of their claims.

Evidence about Standards

There has been some monitoring of educational standards in Australia. Some systems survey student performance levels on a periodic basis (e.g. Tasmanian Education Department, 1989). The first national survey was undertaken by the Australian Council for Educational Research (ACER) in 1975 for the House of Representatives Select Committee on Specific Learning Difficulties (1976). In this survey, ACER tested national samples of 10-year-olds and 14-year-olds on basic tasks in literacy and numeracy (Bourke & Keeves, 1977; Bourke & Lewis, 1976; Keeves & Bourke, 1976). The results were expressed in terms of the proportions of students who were able to perform the tasks satisfactorily.

ACER conducted a similar survey in 1980 for the Australian Education Council (Bourke *et al.*, 1981). This study provided similar estimations of the proportions of the two age groups achieving above defined levels of minimum competence in numeracy and literacy but it also provided comparisons between levels of achievement in 1975 and 1980. Those comparisons showed no decline in performance levels over the five years and, in some types of tasks such as reading newspaper articles, an improvement in performance.

In a recent study for the Victorian Ministry of Education (McGaw *et al.*, 1989), ACER obtained new estimates of performance levels in numeracy and literacy. This study broadened the focus of the assessment but it also permitted comparisons with the performance levels of Victorian students in the 1975 and 1980 national surveys through re-use of some of the items from 1975 and 1980 tests. Again, the clear result was that there had been no overall decline. The only exception was a modest decline by 1988 from 1980 levels in mathematics at year 9 though they remained significantly above the levels achieved in 1975. At year 5, students at the lower levels of achievement in mathematics performed at successively higher levels over the three occasions, 1975, 1980 and 1988. Schools clearly have been increasingly successful with those students who find mathematics most difficult.

Rejection of Monitoring by Professionals

The reactions to the 1975 survey generated considerable hostility to monitoring among professionals in education. Writing in the *Bulletin* under the cover story, 'Australia's Education Scandal: We're Turning Out Millions of Dunces' (15 May 1976), Peter Samuel announced that the results of the study confirmed a decline in standards in Australian schools. A subsequent letter to the *Bulletin* pointing out that inferences about decline could not properly be drawn from testing on a single occasion drew from Samuel the response that lack of evidence about deterioration 'does not mean that there has not been a deterioration'.

The experience of the 1975 testing led both Teachers' Unions and Directors-General of Education to oppose on two grounds a proposal for further national surveys of achievement to begin in 1980 (Power, 1982). One was their view that

the use of the 1975 results had revealed that no helpful discussion of educational issues would flow from such testing. The other was that the narrow focus of the testing failed to encompass the broad concerns of schools and would run the risk of distorting the curriculum by diverting attention from more important, higher level outcomes.

The Ministers did proceed with the 1980 testing but abandoned plans to establish an annual program of testing. The Australian Teachers' Federation called for a boycott on grounds similar to those on which the Directors-General had less publicly opposed the program. The call for a boycott was relatively effective only among government schools in Victoria and it did not bias the national estimates of performance (McGaw & Hogben, 1982). When the 1980 results revealed a significant improvement from 1975 on some measures and, on all others, no decline, they received little press coverage. This essentially good news received much less extensive coverage than the 1975 results had been given. That tended to confirm the view among the educational establishment that no good could come from such testing programs, although both the Directors-General and the Australian Teachers' Federation in their submissions to the Quality of Education Review Committee (1985) used the results of the 1975 and the 1980 testing to support their claims that standards had not fallen.

A Wheel Turned

The Quality of Education Review Committee (1985) was also not convinced that there was sufficient net benefit in such surveys and recommended against the implementation of a national system of monitoring. Since then, however, the case for such monitoring has been pressed more strongly and the practice is being reintroduced. The 1988 ACER survey of levels of literacy and numeracy for the Victorian Ministry of Education is one example. The 1989 ACER testing of all year 6 students and a sample of year 3 students for the New South Wales Department of Education is another. New monitoring programs being established by the Queensland Department of Education and the Western Australian Ministry of Education are others.

Approval for these new programs is not universal. The Teachers' Federation of Victoria (TFV) and its constituent unions urged teachers and schools to refuse to participate in the 1988 Victorian study of literacy and numeracy. They claimed in the *Teacher Unionist* (August 1988, p.12) that statewide testing could not validly assess the performance of the education system and argued that evaluation and reporting to school communities is properly a school-level responsibility within broader guidelines provided by the State. The New South Wales Teachers' Federation expressed opposition to the 1989 testing in New South Wales but, in the end, did not call for a boycott.

Support for monitoring programs now also cuts across traditional political divisions. The 1988 Victorian survey was commissioned by a Labor government which has since announced that it will commission ACER to survey achievement levels in science in 1990, social studies in 1992 and literacy and numeracy again in 1993. The 1989 New South Wales assessment program is the first of an annual cycle introduced in fulfilment of an election promise by an incoming Liberal-National Party government. The Labor Opposition in New South Wales has expressed its support for monitoring programs while arguing about some of the detail.

It is interesting to speculate why monitoring programs are now being established with considerably less opposition than might have been anticipated five or six years ago. One reason is that demands for accountability, particularly of public enterprises, have intensified and are more difficult to resist. Another is that, with the onus of proof of the worth of educational programs so clearly on the providers, the value of evidence is increasingly clear to system administrators.

Of course, having the information about the quality of programs and being able to use it effectively are two different things. When the 1988 Victorian survey results were released, the evidence that standards in literacy and numeracy had not declined over the previous 15 years was not taken to put at rest the claims that standards had fallen. Instead, it shifted the focus of the criticism to a complaint about lack of improvement in standards despite improved funding. An even

stronger response was a direct denial of the evidence. An ABC morning radio host, John Jost, when interviewing the Minister for Education, declared that he did not believe the results of the ACER study though he did then acknowledge that he probably should read it to see why.

A New Methodology

The growing acceptance of monitoring programs does not mean that there are no longer serious concerns about some of the potential effects of the programs. There is still the risk that any testing program is likely to be narrowly focused, both because the amount of student time committed to such testing should be limited and because the testing methodologies feasible for large scale testing programs can impose limitations. The 1975 and 1980 national surveys concentrated on basic skills in the sense of measuring performance in literacy and numeracy at levels of minimum adult competence. The 1988 Victorian and the 1989 New South Wales programs treat literacy and numeracy as skills basic to other learning but measure levels of performance through the full range achieved by students in schools.

Whether educational practice will be biased towards those aspects reflected in the tests must remain an open question but one which needs regularly to be addressed. The evidence from the 1980 testing (Power, 1982) is clearly that light monitoring at a national level intruded extremely little into the programs of schools. Whether that can be assured in monitoring programs in which all students in an age-group are tested is a separate question. Maintaining a broad focus for the testing rather than concentrating on levels of minimum competence is one important protection since it obliges an attention to a wide range of skills in each area tested.

Advances in the methodology of educational measurement have facilitated attempts to broaden the focus of testing away from a concentration upon minimum competence. In educational measurement there are no scales as simple to use as the graduated rule with which length is measured. For many years the conventional wisdom was that nothing approaching this type of measuring device could be achieved. The difficulty level of an educational test and the performance levels of

the individuals taking it interact in ways that make it apparently impossible to make independent statements about test difficulty and student performance. Students can appear to be smart simply because a test is easy. Only by comparison with the performances of others can the quality of a particular student's performance be interpreted.

This normative approach reduced all assessment to a competitive process in which students could be seen to ascend the achievement scale only by clambering over others. If the whole population of students were to be ascending the ladder, their common improvement could not be detected. To be measured, growth had to be growth relative to the performances of others.

The essentially competitive nature of educational assessment troubled many concerned with education. For them, the important consideration was not whether a particular student was better than some other but whether the student was advancing in terms of what the student could actually do. Others sought to justify competitive assessment in education on the grounds that 'life is like that' in the important worlds of work and sport. Even in sport, however, we have recently seen something of the approach for which many educators have declared a preference. Reports of the performances of Australian athletes in the Seoul Olympics emphasised whether they had achieved 'personal bests' rather than whom they had beaten or by whom they had been beaten.

Teachers can be committed to helping students to achieve personal bests but can have difficulty in showing them or others when they have done it. A 'best score ever' on a mathematics test may mean only that, this time, the teacher unintentionally produced an easy test. Soon the performances of others are being checked to see if this is so and the whole assessment process has become comparative again. In system level monitoring the same is true. Performances of one student or one school can be interpreted only with reference to the performances of others in the tradition of normative assessment. Performance levels have meaning only through their relative level.

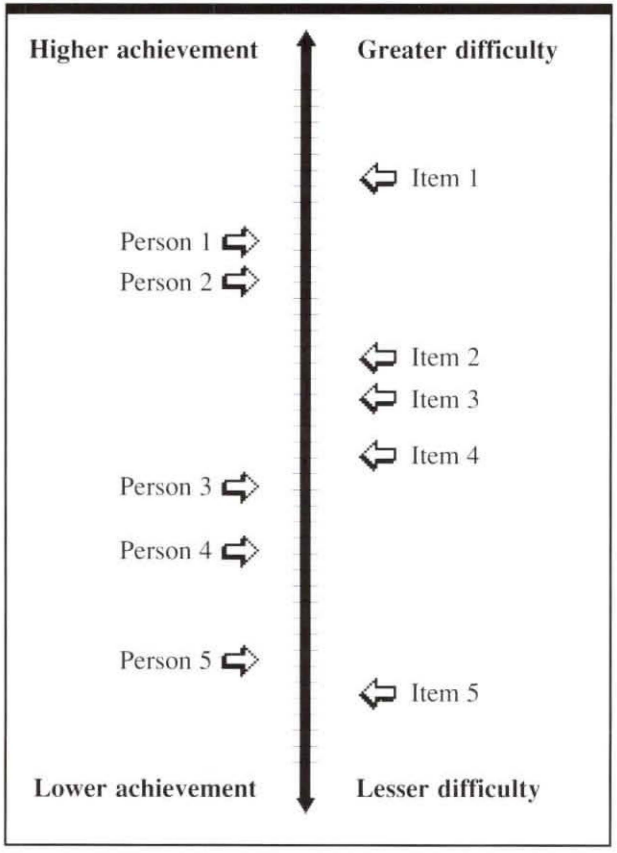
Criterion-referenced assessment was one attempt to break from the normative tradition (Glaser, 1963; Popham, 1971). Attempts were made to define standards of achievement and to design tests which measured students' performances in relation to those criteria. The 1975 and 1980 national surveys of literacy and numeracy levels stand in this tradition. The criteria were defined in terms of minimum adult competence in literacy and numeracy and the tests were designed to determine whether or not students were above or below this level.

A new measurement tradition has emerged in which the distinction between criterion- and norm-referenced measurement is broken down. It achieves what was long held to be impossible by giving the capacity to develop the educational equivalent of a ruler—actually more like a thermometer than a tape measure since the zero point on the scale is arbitrary and has to be defined. Each scale has clear units and provides a capacity to measure a readily interpretable 'more' or 'less' in terms of the properties of the scale itself. Students' performances can be interpreted in terms of the levels of skill or achievement represented by different points on the scale without necessarily referring to the levels of achievement of others. Comparisons with the performances of others can be made, just as comparisons of height can be made, but they are not fundamental to the interpretation of a student's performance.

The statistical basis for this new approach was developed relatively independently in Europe and the USA but the most widely used approach is that produced by the Danish mathematician, Georg Rasch (1960). The approach is frequently called 'item response theory' because its statistical basis is a model of the interaction of persons with individual items. Essentially the approach produces a measurement scale of the type illustrated in Figure 1 on which persons can be located according to their level of achievement and on which items can be located in terms of their difficulty. If a person is located above an item on the scale, then the person is taken to have a better than 0.50 probability of answering the item successfully. The further above an item the person is, the greater the probability that the person will answer successfully. The person's probability of success will be 0.50 on items at the same level as the person and less than 0.50 on items above the person's level.

The scales for reading, writing and mathematics in the 1988 ACER survey of literacy and numeracy levels in Victorian schools were developed in this fashion. In mathematics, for example, the 30 items in the year 5 test were calibrated onto a single scale according to their difficulty levels, as indicated by students' success on each of them. The underlying scale has the property of equal intervals which enables items to be located so that the distance between each pair represents the difference in their difficulties. A similar scale was calibrated using the 30 items in the year 9 test and, because some items were common to both tests, it was possible to locate all the items from the two tests on the same scale. Full details of the development of this scale and the scales for reading and writing are given in McGaw *et al.* (1989) and Long & Rosier (1989).

Fig. 1: Persons and Items Located on a Common Measurement Scale



All year 5 and year 9 students in the study could then be located on this scale along with the items from both the year 5 and year 9 tests. The numerical values used to refer to the locations of persons and items on the scale can be chosen arbitrarily in the same sense that the numerical values on a scale of temperature can be chosen arbitrarily. The Celsius scale, for example, is set with zero at the freezing point of water and 100 at the boiling point of water. These correspond to 32 and 212 on the Fahrenheit scale. In neither case does zero mean 'nothing'. The location of the zero point and the size of the units on each scale are arbitrary but the scales still provide very useful information. We soon learn how to interpret common points on the scales. We know, for example, that 35°C or 95°F indicates a very high atmospheric temperature.

In the Victorian study, the item difficulties were located in a numerical range from around 20 to around 60. This range was chosen to avoid confusion with scales more typically used with educational tests. It is not a percentage correct scale or a number of items correct scale. It does not have a value near

zero for any item or for any performance level of students for whom it was designed. It clearly implies that there are higher performances and more difficult items further up the scale to which numbers above 60 would be assigned and lower performances and easier items further down the scale to which below 20 would be assigned.

Fig. 2: Location of Some Items from Year 5 and Year 9 Mathematics Tests on a Common Scale

Year 9 Test Item Description	Item Difficulty	Year 5 Test Item Description
Periodicity of ringing bells	44.2	Periodicity of ringing bells
	42.8	Fraction closest 3/16
	42.4	Two numbers given sum and difference
No. of squares/No. of rows	41.9	
	41.6	Size of angle 4x, if 4x+5x is st line
	41.0	$2^3 \times 3^2$
8 boys each ate 1/10, what left	39.9	
	39.4	Difference in race times (12.4-10.8)
	38.7	Graph of car's distance by time
	38.4	Create formula 10a-3b from prose
	38.0	Approximation of 1240/29
No. steps around room	37.4	
	37.0	10% interest on $900
No.of teams of 7 from 7 teams of 9	36.8	No. of teams of 7 from 7 teams of 9

A section of the mathematics scale is given in Figure 2. Some of the items from the year 5 and year 9 tests in this region of the scale are shown. A student who answered 17 of the 30 items on the year 9 test correctly would have a score of 40 on this scale. The question referred to as 'Periodicity of ringing bells' is:

> One bell rings every 8 minutes, while another bell rings every 12 minutes. They have rung together once at the same moment. After how many minutes will they ring together again for the next time?

On this question, which has a difficulty level of 44.2 on the scale, a person with an achievement level of 40 has a probability of only 0.31 of answering successfully.

On the question requiring the calculation of ten per cent interest on $900, for which the difficulty level is 37.0 on the scale, the person with an achievement level of 40 would have a probability of success of 0.64.

The total scale can be thought of as a developmental progression along which students will move as their mastery of mathematics improves over the period from mid-primary to mid-secondary school. It does not necessarily imply the sequence in which things should be taught. It simply shows the order of difficulty of tasks. Students' locations on this scale will indicate the kinds of things they can do successfully and the kinds of things they have not yet mastered. Items above a student's location will tend to be too difficult for the student. Items below will tend to be ones the student can deal with satisfactorily. Unusual successes on items above or unusual failures on items below will indicate that there is something atypical about the particular student's learning. If such unusual patterns occur for the majority of students in a class, then the teacher will be able to detect areas of teaching strength or weakness.

Students can still be compared with one another or with mean performances for particular groups of students in terms of locations on the scale. In that sense, the results can be used normatively. More importantly, however, the students' performances can be evaluated in terms of the skills mastered and those yet to be mastered. In that sense, the results provide a criterion-referenced assessment with the potential to provide helpful diagnostic information.

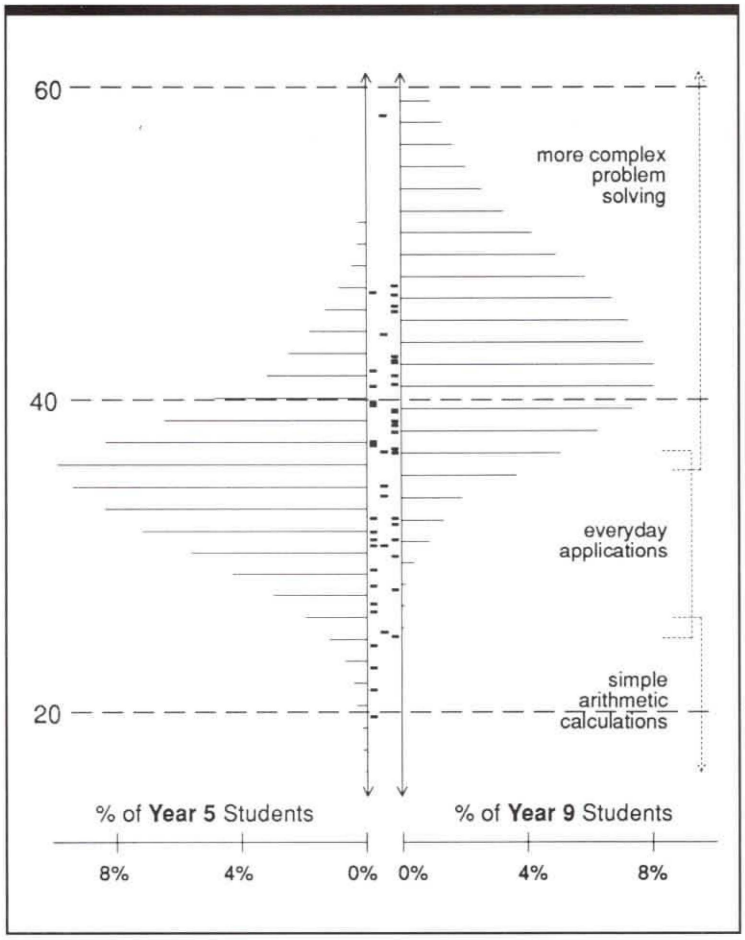
The distributions of the performance levels of all year 5 and year 9 students in the sample can be mapped ont the mathematics scale. Since the samples were representative of all year 5 and year 9 students in Victoria, this mapping shows the distribution of achievement levels of Victorian students in these school years. Such a mapping is given in Figure 3. The shading on the left shows the distribution of achievement levels for year 5 students while the shading on the right shows the distribution of achievement levels for year 9 students. The locations of individual items on the scale are shown in the band up the centre. The dots on the left of the band give the locations of items on the year 5 test. The dots on the right of the band

give the locations of the items on the year 9 test. The dots up the centre of the band give the locations of the items that were included in both year 5 and year 9 tests.

This kind of mapping has several important characteristics. It reveals the range and distribution of performance levels in years 5 and 9. It illustrates the extent of overlap between the populations of students in the two years. Perhaps most importantly, it provides a baseline against which to map changes in performance levels over time. When numeracy levels among Victorian students are surveyed again in 1993, it will be possible to produce the distributions for the year 5 and year 9 populations and to map them onto the same scale as that used in Figure 3 for the 1988 populations. This will give a direct comparison through which any changes over the five years will be evident. The comparison will not be restricted to an examination of the mean performance levels. The plots will make clear whether there are differences at all points in the distributions. For example, if the mean were to remain constant but the bottom end of the distribution were to rise and the top end were to decline, that would be clear from the comparison of the graphs but obscured in an analysis of the means.

What emerges from the new measurement methodology is a powerful technique for monitoring levels of student performances in specific subject areas in a way that uses a clear definition of a relevant scale of performance.

Fig. 3: Distribution of Student Achievements and Positions of Items on Mathematics Scale



References

Bourke, S.F., & Keeves, J.P. (1977). *Australian studies in school performance Volume III: The mastery of literacy and numeracy: Final report.* Canberra: Australian Government Publishing Service.

Bourke, S.F., & Lewis, R. (1976). *Australian studies in school performance Volume II: Literacy and numeracy in Australian schools: Item report.* Canberra: Australian Government Publishing Service.

Bourke, S.F., Mills, J.M., Stanyon, J., & Holzer, F. (1981). *Performance in literacy and numeracy: 1980.* Canberra: Australian Government Publishing Service for the Australian Education Council.

Glaser, R. (1963). Instructional technology and the measurement of educational outcomes: some questions. *American Psychologist*, **18**, 519-521.

House of Representatives Select Committee on Specific Learning Difficulties. (1976). *Learning difficulties in children and adults.* Canberra: Australian Government Publishing Service.

Keeves, J.P., & Bourke, S.F. (1976). *Australian studies in school performance Volume I: Literacy and numeracy in Australian schools: A first report.* Canberra: Australian Government Publishing Service.

Long, M.G., & Rosier, M.J. (1989). Literacy and numeracy in Victorian schools: 1988 - technical report. Hawthorn, Vic.: Australian Council for Educational Research.

McGaw, B., & Hogben, D. (1982). The testing program. In C.N. Power (Ed.) *National assessment in Australia: An evaluation of the Australian Studies in Student Performance Project.* ERDC Report No.35. Canberra: Australian Government Publishing Service.

McGaw, B., Long, M.G., Morgan, G., & Rosier, M.J. (1989). *Literacy and numeracy in Victorian schools: 1988.* ACER Research Monograph No. 34. Hawthorn, Vic.: Australian Council for Educational Research.

Popham, W.J. (Ed.) (1971). *Criterion referenced measurement: an introduction.* Englewood Cliffs, N.J.: Prentice Hall.

Power, C.N. (Ed.) (1982). *National assessment in Australia: an evaluation of the Australian Studies in Student Performance Project.* ERDC Report No.35. Canberra: Australian Government Publishing Service.

Quality of Education Review Committee (1985). *Quality of education in Australia.* Canberra: Australian Government Publishing Service.

Rasch, G. (1960) *Probabilistic models for some intelligence and attainment tests.* Copenhagen: Danmarks Pædagogiske Institut. (Reprinted by University of Chicago Press, 1980)

Tasmanian Education Department (1989). *Basic reading skills of 10-year-old Tasmanian students: 1988 survey.* Hobart: Education Department of Tasmania.

Barry McGaw

Director

Highlights of the Year for ACER

Research on Upper Secondary Education

ACER has undertaken a substantial amount of work in recent years on aspects of upper secondary education; that work in the last two years has been the focus of one of the research themes. In the 1988-89 year, Margaret Batten's important study of the significance of curriculum choices for students in years 11 and 12 was completed and her findings published as an ACER Research Monograph, *Year 12: Students' Expectations and Experiences*. This work, which has generated considerable interest, demonstrated that alternative courses in years 11 and 12 offer considerable benefits for students in terms of their views of themselves as well as of education. Complementing Margaret Batten's work, which was based in Victoria, John Ainley and Michael Sheret are continuing their longitudinal study of upper secondary education in New South Wales, investigating school factors which influence students' decisions about whether to remain at school. These major studies together with other projects in *Theme 2: Beyond Compulsory Schooling* combine to produce a comprehensive set of investigations of the issues involved in the final years of schooling.

Extensions of the Youth in Transition study

Trevor Williams' longitudinal study of the transition from school to adult life has generated the richest Australian database in this field. In 1988-89, the Commonwealth Department of Employment, Education and Training expanded the contract for this work to allow the introduction of a new sample of persons born in 1975 to add to the existing samples of persons born in 1961, 1965 and 1970. An important new feature of this work is the use of the database either as the sole base or as a supplementary base from which to address specific questions in commissioned research. This use of the database offers an economical means of conducting new studies.

Research and Development in Measurement

There has been a considerable increase in the activities of ACER's Measurement Division. The report *Literacy and Numeracy in Victorian Schools: 1988* provides the first use of item response theory in a major survey in Australia. The report provides a clear demonstration of the benefits of this approach to the development

of scales and the measurement of performance. A similar approach, with significant new developments in both scaling and reporting procedures, is being used in the New South Wales basic skills testing project. The appointment of Geoff Masters as Assistant Director (Measurement) has been an important stimulus for much of this development. He has an international reputation in the fields of educational measurement and psychometrics.

Growth in Contract Research and Development

In 1988-89 there was a remarkable growth in the level of contract research and development work being undertaken by ACER. Contract income rose by 178 per cent from $0.6m in 1987-88 to $1.7m in 1988-89.

Centre of Philosophy for Children

During 1988, ACER established a Centre of Philosophy for Children following the recruitment of Laurance Splitter to be the Director of the Centre. Dr Splitter was formerly a senior lecturer in philosophy at the University of Wollongong and he had been instrumental in the establishment of the Australian Institute of Philosophy for Children. His work represents a significant extension of ACER's program but it also has productive links with existing ACER work in cognitive processes in education (Theme 3) and on the reconceptualisation of basic skills (Theme 1).

New Focus on Development and Training

ACER has long been involved in training programs but has brought a new cohesion to its work during 1988-89 with the appointment of John Izard as Assistant Director (Development and Training). He is organising training courses and seminars in education and psychology in Australia and managing the growing number of development and training programs that ACER is offering for colleagues in the Asian-Pacific region.

Initiatives in Publishing

ACER has for many years been the major Australian publisher and distributor of educational and psychological tests and is committed to remaining so. ACER is now also expanding its range of books for the general market of parents and

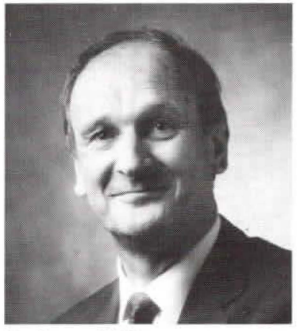
students and its more specialised offerings for higher education students and professional groups. ACER's new Publishing Manager, Ian Fraser, is also actively seeking to sell overseas rights to ACER titles to publishers in other countries and is already having success.

Retirement of Phyllis Staurenghi

Phyllis Staurenghi joined ACER as Accountant in May 1953. She retired in December 1988 but remained as a full-time consultant with continuing responsibility for financial management until the end of the financial year. In 36 years, Ms Staurenghi made many important contributions to ACER. The most significant was in her fine stewardship of ACER's resources but, at a more personal level, she contributed much to the lives of those with whom she worked. She provided warm support and wise counsel to many.

Barry McGaw
Director

Research and Development Activities



Dr Trevor Williams
Associate Director

Overview of Themes

In June 1990 the current three-year research and development program comes to an end. Some months prior to this time planning for the next triennial program will be finalised. This new research and development program will be shaped, as before, by broadly based consultation and negotiation with the educational community at large. However, since most of the substantive emphases defining the present program have not lost their currency, we do not expect a radical redirection of our research effort. Some of the present themes may well continue into the next triennium. Some projects will be wound up but others will be redefined and redirected through amalgamation to meet better the information needs of the educational community. In the first half of 1990, the form of ACER's second triennial research and development program will be made public.

The nature of the research and development program is influenced by our particular orientation to research. The model adopted is that of a research and development organisation rather than a university. ACER is in the business of generating information for its clients. These clients are Commonwealth, State and Territory governments for the most part—almost all of the contract research we do is commissioned by government agencies. The major emphasis of the program then is 'policy research' but there are significant components of more basic research, particularly in our work on cognitive processes and education.

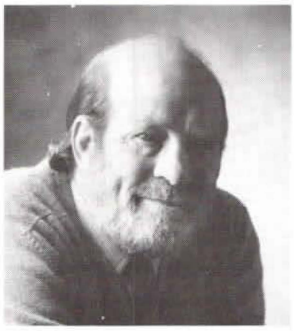
In formulating a research and development program along these lines we are broadly *proactive*. The identification of research themes through a process of consultation with the educational community focuses our research around substantive issues of national importance. Our core grant from government is extremely important in supporting our initiatives in developing new areas. At the level of specific contract projects we tend to be *reactive* in the main. Most proposals for projects are developed in response to requests for research though at times we do take on a proactive role in project definition. We are *interactive* as well. Increasingly, ongoing programs, mainly our surveys of young people in (and out of) school, are seen by agencies as vehicles for the cost-effective production of information they need. Special questions can be included in our questionnaires to take advantage

of a survey infrastructure already in place, and of the additional data that is collected for other purposes or is already in hand. Special analyses are undertaken using existing data collected in these educational surveys. 'On-call' analyses of these data are undertaken as well to address matters of urgency within the agencies. Cooperative research projects involving a joint effort of ACER and agency staff provide another facet of this enterprise.

Developments of this kind are important. They increase the cost-effectiveness of research and allow a rapid turnaround of information. In the presence of continuing surveys, agencies are able to plan their information needs knowing that a more-or-less permanent data collection infrastructure exists. Further, with the appropriate coordination of several research efforts (around the same individuals or schools, for example) all those involved are able to take advantage of a common database at less cost and with less duplication of effort than would otherwise be possible. We are beginning to explore such arrangements in interaction with those of our clients whose information needs can be met in this way.

Trevor Williams
Associate Director

Theme 1: The Compulsory Years



Dr Kevin Piper
Chief Research Officer
Theme 1 Coordinator

In reviewing the first two years of the program of research and development for Theme 1: The Compulsory Years, two things became evident. The first was that in establishing the triennial program we were rather too ambitious in our estimates of what would be possible, and what resources it would be possible to attract to an area we saw as being of key importance; the second was that, despite our failure to attract the kind of funding and resources we had hoped for, a substantial amount of useful work had been completed and set in progress to ensure that, by the end of the triennium, the contribution of the theme to the corpus of ACER's work over the triennium would be significant.

In planning the program of research into the compulsory years of schooling, our central focus was on the nature of an education for all, education which provided for diversity within a common framework and set of institutions. Within this broad focus, two more specific areas were singled out for particular attention in the program, namely continuity and change in the compulsory years of schooling, and core learning and competence. Work proceeded on both of these strands during 1988-89.

Three major projects contributed to the development of the first strand of the program, continuity and change in the compulsory years of schooling. The first of these, *Redefining the Curriculum,* was initiated during 1988-89 with a study focusing on national curriculum development and, in particular, on current moves towards the articulation of a common national curriculum framework. The second project, the *Social and Political Context of Schooling,* is represented in the program by a study of the quality of primary school life and its relationship to achievement in reading and mathematics being conducted in collaboration with the Victorian Ministry of Education. A report of the first stage of the study has been completed and the second stage, a follow-up study involving a smaller number of selected schools, will be completed during 1989-90.

The third project in the first strand is *Decision Making in Schools,* and is represented in the program by two studies, one of which, Andrew Sturman's study of the devolution of curriculum decision making, has been completed. A report of the

study, entitled *Decentralisation and the Curriculum*, has recently been published. Phillip McKenzie has also been interested in curriculum decision making, but in the context of school management and resource allocation. His study is nearing completion, and a report is scheduled to appear during 1988-89.

Two major projects contribute to the second strand of the program, core learning and competence. The first, *Reconceptualising the Basics*, is represented in the program by two studies. Graeme Withers and Doug McCurry have been compiling a National Guide to Literacy based on the documentation of exemplary practice in the teaching and assessment of literacy skills. Unfortunately, uncertainties regarding continued funding have delayed the completion of this project. A draft report of the first stage of the study has been submitted to the Curriculum Development Centre. A second study on social competence has been initiated, and will continue during 1989-90.

Australia is one of 25 countries taking part in the Second International Science Study, conducted under the auspices of the International Association for Educational Achievement (IEA). Three major reports of the international study are being finalised for publication during 1989. Two detailed reports of the Australian results arebeing finalised for publication by ACER. The first, by Malcolm Rosier and Diana Banks, deals with the results for 10-year-old and 14-year-old students; the second, by Malcolm Rosier and Michael Long, covers the year 12 level.

Kevin Piper
Theme Coordinator

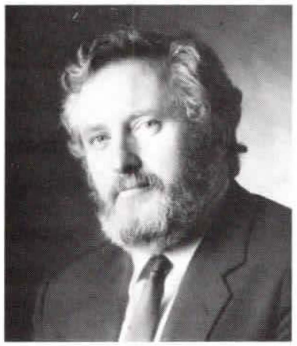
Theme 1 Projects

Continuity and Change in Compulsory Schooling
- Redefining the Curriculum
  - *ACER Staff:* Kevin Piper
- The Social and Political Context of Schooling
  - *ACER Staff:* John Ainley
  - *Colleague*: Rodney Reed (Ministry of Education, Victoria)
- Decision Making in Schools
  - *ACER Staff:* Phillip McKenzie, Andrew Sturman

Core Learning and Competence
- Reconceptualising the Basics
  - *ACER Staff:* Doug McCurry, Kevin Piper, Graeme Withers
- Second International Science Study
  - *ACER Staff:* Michael Long, Malcolm Rosier
  - *Colleague*: Diana Banks (ACT Schools Authority)

Theme 2: Beyond Compulsory Schooling

This theme involves three aspects of postcompulsory education: senior secondary schooling, postsecondary education, and transitions between education and the labour force.



Dr John Ainley
Chief Research Officer
Theme 2 Coordinator

Our work on senior secondary schooling has concentrated on a four-year longitudinal study in New South Wales which began in July 1987. It examined how school factors (in particular, curriculum policies and programs) related to student responses to school and their attainments at and beyond school. In 1987, information was gathered from all students in years 9, 10, and 11 about views of school life, educational plans, occupational plans and interests. Those in year 9 also did mathematics and reading tests. Towards the end of 1988 the longitudinal cohort of students (those who had been in year 9 in 1987) was surveyed for a second time regarding educational and occupational plans and approaches to learning. Term 2 of 1989 saw those of the group who had remained at school surveyed for a third time. Preparations are in hand for an August 1989 survey of those in the cohort who have left school. In addition, information about the schools involved has been gathered by means of questionnaires to teachers and interviews with key staff members. In 1990 the young people in our study will be followed into year 12, further education or the labour force. In addition information about the organisation and programs of the schools will continue to be monitored. The study has produced regular reports to schools and a set of four working papers.

Another aspect of our work on senior secondary schooling has been directed to curriculum developments. During the year the report of Margaret Batten's three-year longitudinal study of alternative year 12 curricula was published under the title, *Year 12: Students' Expectations and Experiences*. Its conclusion that alternative courses have beneficial effects on students has generated a great deal of interest. Also produced during the year was a review of developments in, and related research on, postcompulsory schooling.

The Youth in Transition study, with three large representative samples of young people being followed through school and beyond, continues to be a major project in the study of transitions. Surveys of the 1965 and 1970 birth cohort samples

were undertaken this year. These surveys represented respectively the eighth and fourth waves of data collections with these samples resulting in year-by-year data covering ages 16 to 23 for the older group and 15 to 18 for the younger. Funding was not available to support continuation of the surveys of the 1961 cohort sample (a group which has been followed since 1978) but contact was maintained so that future data collections may be pursued. In addition to the main surveys, two special studies have been completed this year: a study of unemployed youth and a study of participation in technical and further education (TAFE). The study of unemployed youth has produced two reports: a review of the literature on youth unemployment and an analysis of open-ended response data from the Youth in Transition surveys. The study of participation in TAFE examines the characteristics and work experiences of TAFE participants by using two of the samples from Youth in Transition.

The Youth in Transition program for the coming year involves continuing surveys of the 1965 and 1970 cohorts, and the commencement of a new cohort with the collection of achievement data from a national probability sample of some 6000 14-year-olds. In addition there is proposed a series of other studies which utilise, or extend, existing Youth in Transition data: a study of subject choice in senior secondary schools, a study of access and success in Australian higher education, a study of families' work and stress, and a study of political socialisation.

John Ainley
Theme Coordinator

Theme 2 Projects

Senior Secondary Schooling
- Senior Secondary Schooling in New South Wales
  - *ACER Staff:* John Ainley, Jane Foreman, Marina Paxman, Michael Sheret
- Curriculum Developments in Postcompulsory Schooling
  - *ACER Staff:* John Ainley, Margaret Batten

Postsecondary Education
- Evaluation of Bridging and Supplementary Courses
  - *ACER Staff:* Warren Jones

Transitions between Education and the Labour Force
- Youth in Transition
  - *ACER Staff:* Jeff Clancy, Michael Long, Hilary Miller, Trevor Williams
  - *Colleague*: Cath Blakers (Canberra)
- Vocational Interests, Aspirations and Choices
  - *ACER Staff:* Marianne Fleming, Jan Lokan

Theme 3: Cognitive Processes and Education

Dr Helga Rowe
Chief Research Officer
Theme 3 Coordinator

Research and development projects conducted within this theme are aimed at providing students and teachers with a better understanding of thinking, problem solving and learning strategies. The focus is on the acquisition of knowledge and skills, the practice of reflective, creative and critical thinking, and the development of independent, self-motivated and self-regulated learning by students of all ages and levels of school achievement.

In the best of all possible educational worlds, learners would have a well-developed repertoire of strategies. They would possess sufficient domain specific and meta-cognitive knowledge about these strategies to know when to deploy one or the other. They would know when it is appropriate to modify them and how to go about such modification. They would keep track of their cognitive activities and take executive control over strategy shifts. Highly efficient learners might be automatically strategic. They would habitually use strategies and do so by expending little cognitive effort, thus freeing the bulk of their cognitive resources for important aspects of creative thinking. Major problems relating to the education of immature learners would be solved. They could be taught strategies known to be effective. Teachers would know what knowledge about strategies to include in instruction, and how to teach monitoring so that students could regulate their learning without too much effort.

Needless to say, we are not living in the best of all possible worlds. As yet, insufficient strategies have been widely tested and demonstrated to enhance learning and performance. A major challenge is to test the many existing strategy recommendations arising from laboratory studies, to determine which techniques are effective in the real world, when and where. Progress is also required in developing appropriate strategies to meet contemporary and future educational challenges from the availability of sophisticated technology. In preparation to meet the latter challenge, this year has seen some collaborative work between Theme 3: Cognitive Processes and Education and Theme 4: Education and Technology.

Many contributions can be made to improve learning and performance, and some are being made within this theme. For example, the studies carried out by John Izard are seeking to describe how spatial information contributes to learning mathemati-

cal concepts and the implications of this for curriculum development. The strategy research conducted by Helga Rowe has led to revisions of instructional materials and methods by teachers. Learning environments are being modified in some schools as a direct result of research findings and the practical demonstrations and teacher workshops conducted by Laurance Splitter within the framework of 'Philosophy for Children'. Our work is providing increasing evidence for the view that students can be cued to use strategies which they would not produce spontaneously. Such cueing of effective strategies will lead to more efficient acquisition of curriculum content, as well as to better habits of thinking and problem solving.

Although some critics have claimed that the modification of materials, the restructure of classroom environments and cueing do not contribute to the aim of creating independent, autonomous learners and thinkers who know how to go about tasks, we believe that this claim is not defensible empirically. The alternative hypothesis we would put forward is that independent thinking, learning and autonomous use of strategies might develop as a function of the substantial strategy experience provided by modified materials, learning environments and cueing to use strategies. Students are given many opportunities to learn the components of strategies, and to discover that strategies can be effective. They will detect which approaches meet their current state of experience and level of knowledge, and come to observe the effectiveness of strategies in many different situations.

It is difficult to imagine how such experiences would impair the development of autonomous cognition. Indeed, to restructure the environment so that strategic mediators and cued strategy processing are prominent may be a reasonable first step to developing the best of all possible worlds.

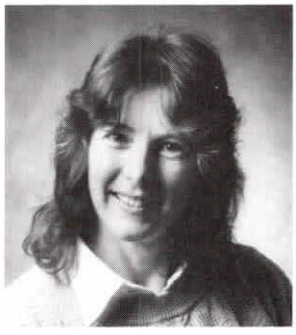
Helga Rowe
Theme Coordinator

Theme 3 Projects

Metacognition
ACER Staff: Helga Rowe

Processes Underlying Cognitive Performance
ACER Staff: John Izard, Barry McGaw, Helga Rowe

Theme 4: Education and Technology



Ms Liddy Nevile
Senior Research Officer
Theme 4 Coordinator

'Education and Technology' is worth adopting as a theme only within a framework in which technology is seen to include not just hardware and software but also knowledge about their use. Developing this kind of view of educational technology was an essential initial goal for ACER in developing the Sunrise School project. It was understood that in this new field it was important to derive theory from practice, and setting the scene for that has been a time consuming task. With the original Sunrise School established in the Museum of Victoria and involving Princes Hill Secondary College, an associated Sunrise Centre has been established at MLC in Melbourne, another is being planned for implementation by the Queensland Department of Education in Brisbane, and several others are under consideration. These operations now provide the base for teachers in the centres to develop further appropriate teaching and learning activities and for ACER staff both to work with them on that task and also to focus on the theoretical issues.

The move from intuition based description to formal definition in a suitable computer supported environment is the focus of much of the work in the Sunrise community. In order to investigate how computers might be used in this way, a common computing environment has been chosen for students in all situations: primary, post-primary and tertiary. Students and teachers have been interviewed on several occasions to ascertain what they understand to be the place and use of the computer technologies in this context. Simultaneously, participants, both students and teachers, are introduced to some of the big ideas of computer science such as abstraction (Abelson & Sussman, 1985), recursion and programs as formalisms because these are seen to represent the tools made available by the new technologies.

New ways of looking at things are possible when the formal representation is a computer program instead of an English statement. What in English might be incomplete because it is self-referential can be complete and definitive in a powerful computer environment. We are exploring the possibility that if we explicitly use levels of abstraction and the idea of revisiting the same concept at different levels of complexity (or detail) we might be more successful in teaching learners about new concepts.

Another interesting issue is the link between these ideas and recent developments in psychology (Turkle, 1988) which brings the work of the cognitive psychologists at ACER in close contact with the work of the Sunrise community. Turkle writes of the move away from the early type of computing, which involved serial, logical processing, to the more recent approach which involves integration of fragmented processing. She points to the same ideas in psychoanalysis and suggests that the recognition of the relationship between the two disciplines is improving the effectiveness of the work in the newer discipline.

The Sunrise project is directly involved in the development and testing of a new computer system being built to support these ideas. This system, *Boxer*, is being developed by diSessa at the University of California at Berkeley and has been made available to theSunrise group for experimental and developmental work.

References:

Abelson, H., & Sussman, G. (1985) *Structure and interpretation of computer programs*. Cambridge, Mass.: MIT Press.

Turkle, S. (1988) Artificial intelligence and psychoanalysis: a new alliance. In S.R. Graubard, (Ed.) *The artificial intelligence debate: false starts, real foundations*. Cambridge, Mass.: MIT Press, pp. 241-268.

Liddy Nevile

Theme Coordinator

Theme 4 Projects

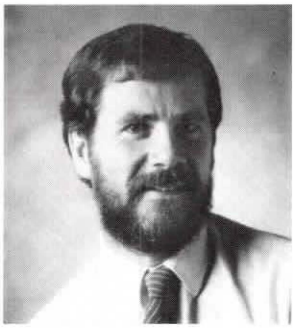
The Sunrise School - A School of the Future

ACER Staff: Judy Ballantyne, Andrew Brown, Liddy Nevile

Educational Computing Activities

ACER Staff: Judy Ballantyne, Liddy Nevile

Theme 5: Teachers in Australian Society



Mr Phillip McKenzie
Senior Research Officer
Theme 5 Coordinator

Over the past year or so, changes in teachers' promotion structures have been introduced in the government school systems of New South Wales, Victoria, the Australian Capital Territory, and in the Tasmanian primary school sector. In each of the other Australian government school systems proposals for the reform of promotion structures are currently under negotiation. These developments have significant implications for teachers' careers. By modifying the structure of the promotions hierarchy and, in some instances, the rules that govern movement through it, they alter the structure of career opportunities open to teachers.

It is probably not since the late 1960s and early 1970s that the nature of teachers' careers has received such sustained attention in Australia. There are signs, though, that the current level of activity, high though it is, is but a foretaste of the period to come. The potential that now exists for the introduction of a federal industrial award for teachers, and the endorsement by teachers' unions of the award restructuring proposals of the Australian Council of Trade Unions mean that, for the next few years at least, teachers' career structures will remain close to the top of the educational agenda.

There is a variety of factors, most of them inter-related, that have forced a re-examination of the career paths of government teachers in Australia (Maclean & McKenzie, to be published in 1990). These include the ageing of the teaching force, declining promotion opportunities, the under-representation of women in senior positions, the relative decline in teachers' salaries, the problems of difficult-to-staff schools, and political pressures to improve the performance of the education system.

The 1988 Department of Employment, Education and Training discussion paper *Teachers' Learning* (p.51) expressed the policy implications of these factors in the following terms. Because of declining demand for teachers during the 1980s, the increasingly uncompetitive nature of teaching as an occupation has been masked. As growth returns to the numbers of students in schools from 1991 onwards the pattern of the 1980s may be quickly reversed. Teaching shows every sign of being

in poor shape to compete for its share of the most able of school graduates in the 1990s. There is a need to alter the structure of rewards within teaching to provide recognition and incentives for more highly skilled and more successful teaching performance.

A further contextual factor of note is the shift in wage-fixing practices that has occurred in Australia since early 1987. The fact that employers and employees have been required to agree on processes to review industry productivity has helped to lift career restructuring up the industrial relations agenda, in education as elsewhere.

The majority of people in the teaching profession are engaged in classroom teaching and unless there is some radical restructuring of school systems and schools this situation is unlikely to change. Broadly speaking, there are three types of response to this situation: increase the number of promotion positions in schools; limit the tenure of teachers in those positions, and thereby make them available to more people; or provide professional and financial awards to people to remain basically as classroom teachers. Each of these sorts of responses is evident in the Australian scene, although up to now the first two have been more common than the third.

Any proposed change in teachers' career structures or other conditions of work runs up against the financial problems posed by the sheer numbers of teachers and the importance of spending on teachers for public sector budgets. Teachers are far and away the largest professional group in Australia. School teachers' salaries account for over two per cent of GDP and for over five per cent of all public sector outlays. Even a relatively small rise in teachers' salaries or other improvements in their working conditions has major financial implications, particularly for State governments which in aggregate employ 75 per cent of the Australian teaching force.

Given the financial constraints faced by all governments, the pressure exists for teachers' employers to seek 'trade-offs' for any improvement in teachers' career opportunities. On the basis of overseas experience, such trade-offs commonly take the form of a decrease in teachers' professional autonomy, particularly in regard to

curriculum development, student assessment, and teacher appraisal. Care needs to be taken, however, that such moves are not counter-productive. Any lessening in the opportunities for teachers to exercise professional judgement will diminish one of the major satisfactions of teaching as a job, and decrease the chances of retaining able people in the profession.

References

Department of Employment, Education and Training. (1988). *Teachers learning. Improving Australian schools through inservice training and development.* Report of the Inservice Teacher Education Project. Canberra: Department of Employment, Education and Training.

Maclean, R. D., & McKenzie, P. A. (Eds.) (in press). *Australian teachers' careers.* Hawthorn, Vic.: Australian Council for Educational Research.

Phillip McKenzie

Theme Coordinator

Theme 5 Projects

The Structure of the Teaching Force and Teachers' Careers
ACER Staff: Jan Lokan, Phillip McKenzie

Discipline Review of Teacher Education in Mathematics and Science
ACER Staff: Jenny Baker, Warren Jones, Kathiravelu Navaratnam, Leo West

Teachers' Professional Craft Knowledge
ACER Staff: Margaret Batten

Measurement Division

Dr Geoff Masters
Assistant Director
Measurement Division

During 1988–89 ACER's program of measurement research and development has been strengthened and extended to a number of important new areas of activity. Work during the past year has centred on the practical implementation of recent advances in measurement theory, the maintenance and expansion of ACER's range of testing programs, and the adaptation and development of new assessment materials.

A significant challenge to the work of the Measurement Division during the past twelve months has been a surge of government interest in the collection of reliable information about the achievements of students in Australian schools. Two research teams, one headed by Barry McGaw and the other under the leadership of Jan Lokan, have developed assessment materials and conducted studies for the Victorian Ministry and the New South Wales Department of Education. As part of its investigation, the team working on the New South Wales project has experimented successfully with a range of innovative machine-scorable question types.

An important element of both these projects has been the use by research staff of item response theory (IRT) for the analysis and reporting of students' results. Through this work, which included the investigation of ways of reporting separately to the parents and teachers of some 60,000 students in New South Wales, valuable experience in the application of IRT methods has been gained. During the year the division was approached by the Western Australian Ministry of Education and the Queensland Department of Education for help in implementing IRT methods as part of their standards-monitoring activities.

A second priority in the work of the division has been to respond to the need for a broader range of assessment materials that go beyond the kinds of learning assessed by most paper and pencil tests. Two significant initiatives in this area have been a joint project with a group of mathematics educators to develop new mathematics problem solving materials and the establishment of a project to develop listening and reading comprehension tests in Chinese, Modern Greek, Japanese, German, French and Italian. Advances have also been made in the area of assessing written composition.

With improvements in computer technology and the increased availability of computers in classrooms, ACER's Measurement Division has also pursued research into the use of computers in assessment. During 1988–89 there was progress in making some existing assessment materials accessible to teachers on microcomputers. Ongoing work will develop and study computer adaptive tests that will choose and administer questions one at a time on a screen.

In addition to ACER's continuing testing programs such as the Cooperative Scholarship Testing Program, the Australian Cooperative Entry Program, and the Australian Scholastic Aptitude Tests, the past year saw the commencement of several new projects under contract. These include the New South Wales Basic Skills Testing Program and the New South Wales Selective and Agricultural High Schools Entrance Testing Program.

Good progress has also been made during the past year in the adaptation and development of psychological and personnel tests for sale. This work will result in the release of a number of new tests in coming months including the Australian adaptation of the fourth edition of the *Stanford Binet Intelligence Scale*, the *ACER Applied Reading Tests*, and a new form of the *ACER Mechanical Reasoning Test*.

The expansion of ACER's measurement program over the past twelve months has included the appointment of twelve new members of research staff and the purchase of important new equipment. A new Optical Marksense Reader has greatly increased our ability to process large data sets and additional microcomputers have given test development staff opportunities to experiment with alternative item designs and layouts.

Geoff Masters
Assistant Director (Measurement)

Measurement Projects

Testing Programs

- Australian Cooperative Entry Program
  - *ACER Staff:* Doug McCurry, Michael Sorrell
- Australian Scholastic Aptitude Testing Program
  - *ACER Staff:* Jacqueline Barley, Doug McCurry, George Morgan
- Cooperative Scholarship Testing Program
  - *ACER Staff:* Jacqueline Barley, Doug McCurry, Michael Sorrell
- NSW Basic Skills Testing Program
  - *ACER Staff:* Brian Doig, Khoo Siek Toon, John Lindsey, Jan Lokan, Geoff Masters, Lynette Robinson, Susan Zammit
- NSW Selective and Agricultural High Schools Entrance Testing Program
  - *ACER Staff:* Jo Jenkinson
- Victorian Achievement Study - Literacy and Numeracy
  - *ACER Staff:* Michael Long, Barry McGaw, George Morgan, Malcolm Rosier

Test Publication and Studies

- Educational
  - *ACER Staff:* Brian Doig, Judy Eppinger, Geoff Masters, Andrew Stephanou, Graeme Withers
- Psychological
  - *ACER Staff:* Marion de Lemos
- Personnel
  - *ACER Staff:* Ian Woff
- Career Guidance
  - *ACER Staff:* Jan Lokan

Testing Services

- Test Development Service
  - *ACER Staff:* Michael Sorrell, Ian Woff
- Test Administration Service
  - *ACER Staff:* Noel McBean
- Test Scoring Service
  - *ACER Staff:* Jacqueline Barley

Centre of Philosophy for Children

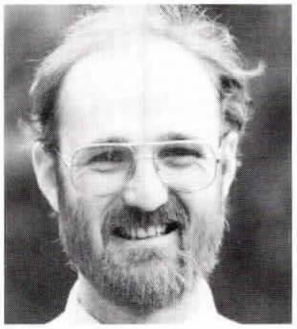
Dr Laurance Splitter
Centre Director

ACER established a Centre of Philosophy for Children in July 1988. The Centre has conducted a range of inservice activities for teachers and other educators. An increasing number of schools have become involved in Philosophy for Children through these workshops, some of which have been supported directly by government and non-government sources. Several Victorian primary and secondary schools have written philosophy for children into their future planning documents and are proceeding to trial the program. Activities in other states are proceeding with support from the Centre as appropriate, including the conduct of workshops for teachers. Through the establishment of the Centre, ACER has taken over from the Australian Institute of Philosophy for Children the distribution rights for overseas materials on philosophy for children, including classroom materials.

A major thrust of the Centre's activities is research into conceptual development in early childhood. Various conference papers and publications on this theme and the development of philosophy for children in Australia have been prepared and a large-scale pilot project involving government schools in Melbourne's western suburbs is planned for 1990.

Laurance Splitter
Centre Director

Library and Information Services



Mr Peter Mathews
Head of Library and Information Services Unit

The activities of the Library and Information Services Unit are concentrated on the collection and dissemination, on a national basis, in subject fields related to Australian education. The Unit's tasks are directed in two main areas: the maintenance and development of a significant library collection at ACER to ensure the preservation of Australian information for further and historical research, and the dissemination of this information through the Unit's products and services.

The Unit has produced the printed *Australian Education Index* (AEI) since 1957 and as an online searchable file on the AUSINET network since 1979. At the end of the

1988-89 year AEI had about 42 000 records online. The library has continued to collect policy documents for inclusion in the AEI and more than 700 have been indexed since this project began last year. While the acquisition of this material proved difficult the AEI editors will continue to acquire policy material for the Index.

The publication of the *Bibliography of Education Theses in Australia* covering theses accepted for higher degree studies in 1987 completed a 10-year coverage of this important body of research. In the time span surveyed the number of institutions granting theses has increased from 16 to 28 and the number of theses accepted annually has increased from 332 to 517.

ACER Library is the sole depository for papers of the Australian Association of Research in Education conferences held in the last three years. Since the Association ceased publishing collected editions in 1985, ACER staff have indexed and catalogued the papers and made them available through the interlibrary loan system. Arrangements are in place to process the 1989 AARE Conference papers and these records should be added to the file by March 1990.

Peter Mathews
Head of Library and
Information Services Unit

Library and Information Service Projects

Library

ACER Staff: Denise Balint, Peter Mathews, Elspeth Miller, Elizabeth Oley, Lula Psiliakos, Rachel Salmond, Betty Segar, Chris Walker-Cook

Database Development

ACER Staff: Julie Badger, Peter Mathews, Elspeth Miller, Elizabeth Oley

Development and Training

Dr John Izard
Assistant Director
Development & Training

In 1988-89 ACER's program of development and training offered a range of activities for teachers, psychologists, and professionals in related areas, as well as assisting with the Solomon Islands secondary education project funded by the Australian International Development Assistance Bureau (AIDAB) and providing an attachment program for a Department of Education officer from Western Samoa sponsored by the R E Ross Trust.

Mr Fonotele Levi of the Western Samoa Education Department's Examinations Division was attached to ACER for three months in the latter part of 1988. While at ACER he conducted analyses of data from Form 5 examination papers and prepared reports on these analyses. The R E Ross Trust has offered to sponsor further attachments at ACER and invitations have been extended to the Governments of the Solomon Islands, Western Samoa, Tonga and Vanuatu to send officers from their respective Examinations Branches to undertake a period of development and training at ACER.

Mr Francis Tagua, Head of the Guidance and Selection Unit in the Solomon Islands Ministry of Education and Training, also spent a two-month attachment at ACER as part of the Solomon Islands Secondary Education Project funded by AIDAB. His main task was to review the range of test materials (including careers instruments) that may have application in the Solomon Islands, although some time was spent planning a range of workshops on school-based assessment for provincial primary school staff and secondary teachers. Three careers teachers from the Solomon Islands spent a two-month attachment at ACER as part of the same secondary education project. While at ACER they visited agencies which provided information about careers, reviewed careers instruments, and, by arrangement with Victoria College, participated in the careers teacher education program conducted by Vona Beiers, and worked in Victorian secondary schools on three separate placements. As part of the same project Meredith Shears and Vona Beiers returned to Honiara for their second series of careers teacher workshops.

Within Australia, a program of self-funding training workshops and conferences was developed in 1988-89 with activities scheduled through to 1990. Workshops

which serve to publicise ACER products and services generally require participants to have the relevant materials. These workshops are taken by consultant services staff, by the author(s) of the materials, or by other skilled trainers.

ACER collaborated with the Board of Educational and Developmental Psychologists of the Australian Psychological Society in a weekend seminar on National Testing and Assessment at the University of Queensland in May 1989. Professor John Elkins of the Schonell Special Education Research Centre of the University of Queensland has agreed to edit an *Australian Education Review* on this topic as a follow up to the seminar. ACER, in conjunction with the Faculty of Special Education and Paramedical Studies, Victoria College, has planned a National Conference on Behaviour Problems for August 1989 in Marysville, Victoria. Registrations had reached the limit by early June 1989.

John Izard
Assistant Director (Development and Training)

Development and Training Projects

Solomon Islands
ACER Staff: John Izard
Colleagues: Vona Beiers (Victoria College), Meredith Shears (Consultant)

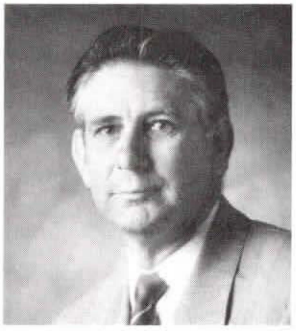
Ross Trust Fellowships
ACER Staff: John Izard, Kevin Piper

Seminar on National Testing
ACER Staff: John Izard, Geoff Masters
Colleagues: John Elkins, Alan Hayes (University of Queensland) and members of the Board of Educational and Developmental Psychologists of the Australian Psychological Society

National Conference on Behavioural Problems
ACER Staff: John Izard, John King
Colleague: Christopher Szaday (Victoria College)

Tests and Materials
ACER Staff: Marian de Lemos, Judy Eppinger, Jo Goldsworthy, John Izard, Jo Jenkinson, Ian Kendall, John King
Colleagues: Sandra Cutts (Lilydale Early Childhood Development Program), Meredith Fuller (Victoria College), Ross Harrold (University of New England), Patricia Larsen (Consultant), Ruth Webber (Institute of Catholic Education)

Consultant Services



Mr Peter Jeffery
Head
Consultant Services Division

Education

The effects of the publication of the*Test of Reading Comprehension (TORCH)* became apparent in requests in the second half of 1988 for extensive in-service education of users. Judith Eppinger conducted workshops in Perth on the *Neale Analysis of Reading - Revised and TORCH*. She also attended the summer sales meeting of American Guidance Services in the USA and finalised arrangements for ACER to produce an Australian adaptation of *KeyMath - Revised*.

In conjunction with ACER's Development and Training Division John King arranged an extensive series of workshops conducted by Ross Harrold, author of *Curriculum and Financial Management in Non-government Schools*.

Psychology

A major focus for the year was the International Congress of Psychology held in Sydney in August 1988. A substantial exhibit was mounted and the *ACER Psychological Catalogue 1988-89* was published in a totally new design in time for distribution at the Congress. *PsychNews*, a newsletter for psychologists, also appeared for the first time in 1988. It is distributed free of charge to all psychologists registered with ACER. *The Bulletin for Psychologists* ceased and was replaced with a subscription journal, the *Psychological Test Bulletin*, edited by Jo Jenkinson.

The range of products marketed by ACER was further expanded and diversified to make the widest possible selection of resources available to the profession. The effects of the supplementary catalogue prepared and distributed mid 1988 and the omnibus catalogue issued August onwards were noticeable in 1988-89 trading figures. A draft of the *Catalogue of Personnel and Human Resource Management* began to be distributed in April 1989 and a new enlarged edition of a catalogue of computer software for psychologists is being prepared.

Many meetings of psychologists throughout Australia have been supported by exhibits and attendance by consultants. One of the consultants has attended the monthly meetings in Sydney of the NSW Department of Education's Test Advisory Committee.

Parenting

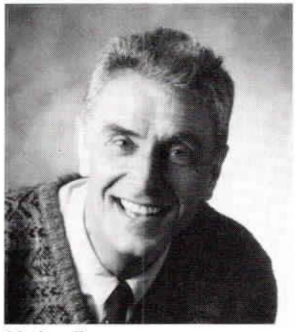
Living in a Stepfamily, ACER's first kit with a video component, as well as charts, book and leaders guide, was completed and published. Many workshops have been conducted by the author throughout Australia since the launch in March 1989. Three leadership courses were conducted for people wishing to offer parenting courses. A new *Parent Education Catalogue* was published.

Peter Jeffery
Head of Consultant Services Division

Consultant Service Projects

Educational
ACER Staff: Judith Eppinger, Peter Jeffery, John King
Psychological
ACER Staff: Sue Bell, Jo Jenkinson, Ian Kendall, Christine Martin, Ian Shephard
Parenting
ACER Staff: Jo Goldsworthy
Resource Centre
ACER Staff: Anne Lowry

ACER Publishing



Mr Ian Fraser
Publishing Manager

The range of ACER titles widened markedly during the year. It was a year that saw the publication of two multi-item kits: Webber's *Living in a Stepfamily* and the financial management package *Curriculum and Financial Performance in Non-government Schools.* The video-based *Stepfamily* kit - with *Parenting Puzzle, Your Child from One to Ten* and our edition of *From Birth to Five Years* - were further signs of our commitment to good materials for parents.

It was good to be able to sell the overseas rights to some of our titles. This prospect is always open if the quality of our books and tests remains high - and if our luck holds in a very competitive rights market. Our recent books were sent for show at the Moscow, ABA Washington and Frankfurt Book Fairs, and appeared at the Austrade stand at the Paris Book Fair.

The publishing program will remain very busy. The first title in our Theme Monograph series is due off the press late in 1989, and heralds a start for us in the tertiary education market.

Publishing initiated talks with Oxford University Press (OUP) that have led to OUP agreeing to distribute ACER's titles to the book trade, to promote those titles on tertiary and school campuses, and to sell some educational tests to schools. This agreement will take effect on 1 August 1989.

Ian Fraser
Publishing Manager

Books and Kits

Harrold, Ross (1988). *Curriculum and financial performance in non-government schools.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 019 6.

Self-contained kit which provides non-government schools with techniques to analyse the financial dimension of the school's curriculum, and which helps schools to apportion income and outlays among the different parts of the school.

Keats, Daphne (1988). *Skilled interviewing.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 033 1.

Very practical book full of ideas and information for the interviewer, and for those so often on the receiving end, being interviewed. Non-verbal communication is discussed, so too the interview of the 'difficult' case.

Balson, Maurice (1988). *Understanding classroom behaviour*. 2nd edn. Hawthorn: Vic: Australian Council for Educational Research. 0 86431 035 8.

Complete rewrite, update and redesign of Maurice Balson's successful title for the classroom teacher and for student teachers.

Lewis, Ramon & Susan (1989). *Parenting puzzle*. Hawthorn: Vic: Australian Council for Educational Research. 0 86431 036 6.

Parenting puzzle gives three modern approaches to child discipline and rearing. It helps parents choose the approach that works for them. It invites parents to be adaptable. It talks about the link between good discipline and good parent-child relations.

Webber, Ruth (1989). *Living in a stepfamily* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 038 2.

Video-based educational kit for stepparents: video, leader's manual, stepparents' handbook, wall charts, activity cards, genograms. The kit offers couples in stepparenting situations encouragement, understanding and advice.

Batten, Margaret (1989). *Year 12: Students' expectations and experiences* (ACER Research Monograph No.33). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 044 7.

Study of students in fourteen Victorian government schools, enrolled either in a traditional Group 1 course or the STC course. It seems that STC students were more positive about the benefits of their course.

Sheridan, Mary (1989). *From birth to five years*. Hawthorn: Vic: Australian Council for Educational Research. 0 86431 042 0.

ACER edition of the successful NFER-Nelson title that is widely accepted as the authoritative guide on the assessment of young children.

Lipman, Matthew (1989). *Lisa, Kio and Gus, Harry Stottlemeier's discovery*. Lipman, Matthew and Smith, Theresa (1989). *Pixie*. Hawthorn: Vic: Australian Council for Educational Research. 0 86431 049 8, 046 3, 050 1, 047 1.

ACER editions of four philosophy for children novels first published by First Mountain Foundation, USA.

Wragg, Jeffrey (1989). *Talk sense to yourself*. Hawthorn: Vic: Australian Council for Educational Research 0 86431 037 4.

Focuses on self-control and self-management skills for children and adolescents experiencing conduct problems, poor concentration and hyperactivity. A set of practical 'hands on' programs to be used in schools or clinical settings.

McGaw, Barry, Long, Michael G., Morgan, George, and Rosier, Malcolm J. (1989). *Literacy and numeracy in Victorian schools:* 1988 (ACER Research Monograph No.34). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 055 2.

Report which provides current evidence about the levels of literacy and numeracy, of Year 5 and Year 9 students, in Victorian schools. Study harks back to the 1975 and 1980 performance levels of similar groups of Victorian students.

Bowler, Peter (1989). *Your child from one to ten.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 034 X.

Lots of commonsense detail on children's development - physically, socially, educationally. The book offers bright readable information to parents, teachers, health professionals, students.

Lokan, Jan & McKenzie, Phillip (1989). *Teacher appraisal* (Australian Education Review No.28). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 045 5.

Fourteen leading authors write on the lively topic of teacher appraisal. Opinions are divided, though, on whether formal schemes for teacher appraisal should be introduced in our schools.

Tests

Australian Co-operative Entry Program Series U

Candidates' Information Bulletin, Registration Form, Test Booklets 1-3, Written Expression Test (6 components).

Australian Scholastic Aptitude Test Series Q

Candidates' Information Bulletin; Test Booklets Q1, Q2; Writing Test Booklets Q1, Q2 (5 components).

Bond University Admission Test

Admission Test, Answer Booklet (Written Expression), Answer Sheet, Supervisors' Instructions (4 components).

Co-operative Scholarship Testing Program

Candidates' Information Bulletin, Registration Form, Level 1: Tests 1-4, Level 2: Tests 1-4, Level 3: Tests 1-4 (14 components).

Department of Industrial Relations NSW (1989). *Work aspect preference scale* (microcomputer edition). Hawthorn: Vic: Australian Council for Educational Research (6 components).

NSW Basic Skills Testing Program

Year 3: Magazine, Test Booklet, Practice Answer Sheet. Year 6: Catalogue, Newspaper, Test Booklet, Practice Answer Sheet. Report Forms (10 components).

NSW Selective and Agricultural High School Entrance Tests

Test Administration Manual, English Language Test, Mathematics Test, General Ability Test, Answer Sheet (5 components).

Victorian Achievement Study

Reading Tests 1R, 2R; Writing Tests 1W1, 1W2, 1W3, 1W4, 2W1, 2W2, 2W3, 2W4; Mathematics Tests 1M, 2M; Student Questionnaire (13 components).

Periodicals

ACER Newsletter (Editor: John King)

No.63 (July 1988), No.64 (October 1988), No.65 (April 1989).

Australian Education Index (Editors: Julie Badger, Elspeth Miller, Elizabeth Oley) Vol.31 No.2 (June 1988), Vol.31 No.3 (September 1988), Vol.31 Cumulation (December 1988), Vol.32 No.1 (March 1989).

Australian Journal of Education (Editor: Millicent Poole)
Vol.32 No.2 (August 1988), Vol.32 No.3 Special Bicentennial Issue (November 1988), Vol.33 No.1 (April 1989).
Bibliography of Education Theses in Australia (1986) (Editors: Elizabeth Oley, Julie Badger)
Psychological Test Bulletin (Editor: Jo Jenkinson)
Vol.1 No.1 (May 1988), Vol.1 No.2 (November 1988).
set: research information for teachers (Editors: Llyn Richards, Peter Jeffery)
No.2 1988, No.1 1989.

Other Publications

ACER Annual Report 1987-88
ACER Current Projects 1988-89
Catalogue of Psychological Tests
Discipline Review of Teacher Education in Maths and Science (5 questionnaires)
Parent Education Catalogue
Special Education, Health and Community Services Catalogue
Youth in Transition: Calendar, 4 questionnaires

Reprints

Reprints of 200 publications (books, test components, catalogues etc) were published.

Rights and Agreements

Foreign rights to ACER titles have been sold to:

Edward Arnold, UK *(Becoming Better Parents)*
Federal Publications, Singapore *(Parenting Puzzle)*
Consulting Psychologists Press, USA *(Children's Depression Scale)*
NFER-Nelson, UK *(Neale Analysis of Reading Ability - Revised)*

Staff Publications

Books

Batten, M. (1989). *Year 12: students' expectations and experiences* (ACER Research Monograph No. 33). Hawthorn, Vic.: ACER.

Doig, B.A. (1989). *Links - A guide to maths in children's literature.* Melbourne, Vic.: Nelson.

Doig, B.A. (1989). *Young Australia Maths - Level Two: Blackline Masters.* Melbourne, Vic.: Nelson.

Lokan, J.J. & McKenzie, P.A. (Eds.) (1989). *Teacher appraisal: Issues and approaches.* Australian Education Review No.28. Hawthorn, Vic.: ACER.

McGaw, B., Long, M.G., Morgan, G. & Rosier, M.J. (1989). *Literacy and numeracy in Victorian schools: 1988 (ACER Research Monograph No.34).* Hawthorn, Vic.:ACER.

Rowe, H.A.H. (1988). *Teaching thinking and learning skills (Curriculum Issues No 15)* Sydney: Catholic Education Office. (32pp).

Rowe, H.A.H. (1988). *WAIS-R.* Melbourne: Reaux. (67pp).

Rowe, H.A.H. (1988). *WISC-R.* Melbourne: Reaux. (52pp).

Journal Articles

Ainley, J. (1989). Changing aspects of postcompulsory schooling. *Unicorn,* **15**(1), 3-16.

Batten, M. (1989). Effects of traditional and alternative courses on students in postcompulsory education. *British Educational Research Journal,* **15**(3).

Batten, M. (1989). Teacher and pupil perspectives: the positive aspects of classroom experience. *Scottish Educational Review,* **21**(1).

de Lemos, M. (1988). The ACER Higher Tests ML-MQ (Second Edition) and PL-PQ: 1983 Norms and Concurrent Validity. *Psychological Test Bulletin,* **1**(1), 8-23.

de Lemos, M. (1989). The Vineland Adaptive Behaviour Scales: Standard Score Adjustments for Australian Children. *Psychological Test Bulletin,* **2**(1), 3-15.

Doig,B.A. (1989). Book Reviews: Making the Most of 20 Minutes. *Prime Number,* **4**(3), 17.

Doig, B.A. (1989). Book Reviews: Bounce The Ball. *Prime Number,* **4**(3), 17.

Doig, B.A. (1989). Tertiary Selection - access or process? *Australian Universities' Review,* **32**(1) 25-27.

Harrold, R.I. & McKenzie, P.A. (1989). Curriculum arrangements and resource allocation in secondary schools. *International Journal of Educational Management,* **3**(3), 25-31.

Jenkinson, J. & Gow, L. (1989). Integration in Australia: A research perspective. *Australian Journal of Education.* (In press).

Jenkinson, J.C. (1989). Word recognition and the nature of reading difficulty in children with intellectual disability: A review. *International Journal of Disability, Development and Education,* **36**. (In press).

Jenkinson, J. (1989). The WISC-R Performance Scale for hearing-impaired children: A review. *Psychological Test Bulletin,* **2**.

Jenkinson, J., Stanley, G., & Smith, G. Differences in strategies for searching letter arrays by retarded and nonretarded children. (Submitted).

Masters, G.N. (1988). Item discrimination: When more is worse. *Journal of Educational Measurement,* **24**, 15-29.

Masters, G.N. (1988). Anchor tests, score equating and sex bias. *Australian Journal of Education*, **32**, 25-43.

Masters, G.N., & Hill, P.W. (1988). Reforming the assessment of student achievement in the senior secondary school. *Australian Journal of Education*, **32**, 274-286.

Masters, G.N. (1988). The analysis of partial credit scoring. *Applied Measurement in Education*, **1**, 279-297.

Masters, G.N. (1988). Educational measurement: prospects for research and innovation. *Australian Educational Researcher*, **15** (4), 23-34.

McKenzie, P.A. & Harrold, R.I. (1989). Tools for school self-evaluation: Developments in Australia. *Studies in Educational Evaluation*, **15**, 31-45.

Rosier, M.J. (1988). Science achievement in Victorian schools in an international and national setting. *VIER Bulletin*, **60**, 3-20.

Rosier, M.J. (1988). Sex differences in science achievement. *Unicorn*, **14**(4), 274-276.

Rosier, M.J. (1988). International comparisons of science achievement at the upper secondary level. *Unicorn*, **14**(2), 112-117.

Rowe, H.A.H. (1988). Metacognitive skills: Promises and problems. *Australian Journal of Reading*, **11**(4), 227-237.

Rowe, H.A.H. (1989). The teaching of critical thinking: Assumptions, aims, processes and implications. *SCAN*, **8**(2), 2-10.

Rowe, H.A.H. (1989). Teach learning strategies. *set*, **1**, Item 14.

Sheret, M. (1988). Equality trends and comparisons for the education system of Papua New Guinea. *Studies in Educational Evaluation*, **14**, 91-112.

Splitter, L. (1988). On teaching children to be better thinkers. *Unicorn*, the Journal of the Australian College of Education, **14**(1), 40-47.

Splitter, L. (1988). Species and identity. *Philosophy of Science*, **55**(3), 323-348.

Splitter, L. (1988). Discussion: Ghiselin and Mayr on species. *Biology and Philosophy*, **3**, 462-467.

Splitter, L. (1988). A guide to the logic in Harry Stottlemeier's discovery. *Analytical Teaching*, **8**(2), 71-86.

Splitter, L. (1988). Philosophy for Children and the Making of Meaning. *Looking Towards 2000: The First Years of School Conference Proceedings*, 86-103.

Splitter, L. (1989). X-rated videos: What's at stake. *The Bulletin*, **110**(5651), 28-29.

Splitter, L. (1989). The sound reasoning of good thinking. *The Age*, January 17 reprinted in the *Bulletin of the International Council for Philosophical Inquiry with Children*. **4**(1), 10-11.

Book Chapters

Masters, G.N. (1988). Partial credit model. In J.P. Keeves (Ed.), *Educational research methodology, measurement and evaluation*, (pp.292-296). Oxford: Pergamon Press.

Masters, G.N. (1988). Psychometric aspects of individual assessment. In J.H.A.L. de Jong & D.K. Stevenson (Eds.), *Individualizing the assessment of language abilities*. Multicultural Matters.

Masters, G.N. (1988). Some issues in constructing and using profiles. In C. Reynolds & A. Wheatley (Eds.), *Profiles and profiling: Issues and practices in the recording of student achievement.* (National Curriculum Issues series, No.4.) Canberra: Curriculum Development Centre.

Masters, G.N. & Andrich, D. (1988). Rating scale analysis. In J.P. Keeves, (Ed.), *Educational research methodology, measurement and evaluation,* (pp.297-302) Oxford: Pergamon Press.

Masters, G.N. (1988). Partial credit model. In *International encyclopedia of education research and studies* (pp.569-574), Supplement Number 1. Oxford: Pergamon Press.

Masters, G.N. (1989). Improving the assessment of clinical reasoning. In J.I. Balla, M. Gibson & A.M. Chang, *Learning in medical school,* Hong Kong University Press, Hong Kong.

Rosier, M.J. (1989). International science curriculum emphasis at the junior secondary level. In Unesco, *Recent developments in integrated science worldwide.* Hong Kong: International Council of Associations for Science Education (ICASE), (pp.105-123).

Rowe, H.A.H. (1988). Towards ecologically valid methods of intelligence assessment. In Graham Davidson (Ed.) *Ethnicity and cognitive assessment: Australian perspectives.* Darwin, N.T.: DIT Press.

Travers, K.J., Garden, R.A. & Rosier, M. (1989). Introduction to the Study. In D.F. Robitaille & R.A. Garden (Eds.), *The IEA Study of Mathematics II: contexts and outcomes of school mathematics.* Oxford: Pergamon Press, (pp.1-16).

Williams, T.H. (1989). How will you identify the quality achievements? In P. Hughes & G. Foster (Eds.), *The challenge of identifying and marketing quality in education.* Lisarow, NSW:Ashton Scholastic.

Withers, G.P. (1988). The language of profiling. In C.L. Reynolds and A. Wheatley (eds.), *Profiles and profiling - issues and practices in the recording of student achievement.* (National Curriculum Issues series, No. 4). (pp.24-28). Canberra: Curriculum Development Council.

Tests

de Lemos, M. (1989). *Differential Aptitude Tests (Forms V & W):Australian Manual.* Sydney: The Psychological Corporation in association with ACER.

Morgan, G. & McCurry, D. (1989). *Australian Scholastic Aptitude Test: Series R.* Hawthorn, Vic.: ACER.

SHS Tests: 1 English Language; 2 Mathematics; 3 General Ability; Test Administration Manual.

Periodicals

Doig, B.A. (1989). Smarty Maths. *GIFT. 7.*

Doig, B.A. (Series Ed.). (1989). *GIFT. 5-7.*

Jenkinson, J. (Ed.). (1988, November). *Psychological Test Bulletin.* vol.1, no.2.

Jenkinson, J. (Ed.). (1989, May). *Psychological Test Bulletin.* vol.2, no.1.

Conference Papers

Ainley, J. and Bourke, S. (1988). *Quality of life in primary schools.* Paper presented to the Annual Conference of the Australian Association for Research in Education, Armidale, NSW.

Batten, M. (1988, August). *Student perceptions of their year 12 courses.* Paper presented to the Annual Conference of the British Educational Research Association, Norwich, England.

de Lemos, M. (1988, August-September). *Effects of relative age within grade: Implications for the use of age-based norms for group tests of general ability.* Paper presented to Symposium on *Questionable Assumptions in Test Construction,* XXIV International Congress of Psychology, Sydney.

de Lemos, M. (1988, August-September). *Intelligence and season of birth: An alternative hypothesis.* Paper presented at the XXIV International Congress of Psychology, Sydney.

de Lemos, M. (1988, August-September). *The Australian restandardisation of the Standard Progressive Matrices.* Paper presented to Symposium on *Recent Research on Raven's Progressive Matrices* at the ACER Seminar on Intelligence, Melbourne and the XXIV International Congress of Psychology, Sydney.

Doig, B.A. (1989, July). *Computer adaptive testing.* Paper presented at the Mathematics Education Research Group of Australasia Annual Conference, Bathurst, NSW.

Doig, B.A. (1989, September). *Computer-based assessment.* Paper presented at the Australian Computers in Education Conference, Canberra.

Doig, B.A. (1989, September). *It thinks, therefore it is: computer adaptive testing.* Paper presented at LaTrobe University Mathematics Education Centre seminar, Melbourne.

Doig, B.A. (1989, September). *New Ways for Old Things.* Seminar paper presented to the Essendon District Kindergarten Association, Melbourne.

Doig, B.A. (1989, September). *Renewing Old Acquaintances.* Seminar paper presented at Benalla and District Teachers' In-service day, Benalla, Vic.

Izard, J.F. (1988, September). *Development of research skills to improve school-focussed research.* Keynote address at the Second Annual Conference of the Educational Research Association, Singapore.

Lokan, J.J. (1988, August). *Explorations of Holland's theory in Australia with adaptations of the Self-Directed Search and the Vocational Preference Inventory.* Paper presented at the XXIV International Congress of Psychology, Sydney.

Lokan, J.J. (1988, August). *Australian tests of a model of personality involving needs, values, and interests.* Paper presented at the XXIV International Congress of Psychology, Sydney.

Lokan, J.J. (1989, April). *The Australian contribution to the Work Importance Study.* Paper presented to the ninth international meeting of the Work Importance Study group, Lisbon.

Lokan, J.J. (1989, April). *Values and role salience across four countries.* Paper presented to the ninth international meeting of the Work Importance Study group, Lisbon.

Lokan, J.J. (1989). Explorations of Holland's theory in Australia with adaptations of the Self-Directed Search and the Vocational Preference Inventory. In *Proceedings of the XXIV International Congress of Psychology Conference* (Division of Industrial and Organisational Psychology). Amsterdam: Elsevier Science Publishers. (In press)

Lokan, J.J. (1988, December). *Incorporating computer-assisted career guidance systems into campus student services: Benefits and cautions.* Workshop session presented (twice) at the National Association of Graduate Careers Advisers Annual Conference, Roseworthy (South Australia).

Masters, G.N. (1988, September). *Using common assessment tasks in tertiary selection: Some issues.* Invited paper, Joint Meeting of The Victorian Vice Chancellors' Committee on Selection and the Victorian College of Principals' Working party on Selection, Melbourne.

Masters, G.N. (1988, September). *Towards a new generation of educational tests.* Paper presented at invitational seminar of the Victorian State Board of Education, Melbourne.

Masters, G.N. (1988, December). *Improving the assessment of clinical reasoning.* Invited paper presented at Medical Education Symposium, University of Hong Kong, Hong Kong.

Masters, G.N. (1989, March). *The Rasch Model and the future.* Invited address to Rasch Special Interest Group Business Meeting, San Francisco.

Masters, G.N. (1989, March). *Monitoring standards in education: Issues and options.* Invited address to public seminar on Monitoring Standards in Education, Curriculum Directorate, Perth.

Masters, G.N. (1989, May). *Technical Aspects of Testing and Assessment.* Invited address at the National Testing and Assessment Seminar, Brisbane.

Masters, G.N. (1989, July). *The place of student assessment in evaluation.* Evaluation seminar organised by the Division of Further Education, Victorian Ministry of Education, Hepburn Springs, Vic.

Masters, G.N. (1989, July). *Measuring conceptual understanding in physics.* Paper presented at Annual Conference of the Australian Science Teachers Association, Monash University, Melbourne.

McKenzie, P.A. (1988, December). *Secondary school size, operating costs and curriculum structure.* Australian Association for Research in Education, Armidale, NSW.

Rosier, M.J. (1988, July). *International comparisons of science curricula.* Paper presented at the Unesco Seminar on Integrated Science Education, Canberra.

Rosier, M.J. (1988, July). *Relationships between curricula and achievement in Australia.* Paper presented at the Unesco Seminar on Integrated Science Education, Canberra.

Rosier, M.J. (1988, July). *Some sex differences for Australian 14-year-old students.* Paper presented at the Annual Meeting of the Australian Science Education Research Association, Sydney.

Rosier, M.J. (1988, July). *Students' views of learning science in Australia.* Paper presented at the Annual Conference of the Australian Science Teachers Association, Canberra.

Rowe, H.A.H. (1988, August). *Using a good mind well.* Paper presented at the XXIV International Congress of Psychology, Sydney, NSW.

Rowe, H.A.H. (1989, March). *Creativity*. Keynote address to the First Australian Knowledge Engineering Program, 14-15 March, Noah's Hotel, Melbourne.

Rowe, H.A.H. (1989, April). *How can we detect thinking and learning processes in our students?* Paper presented at the SUNRISE Research Seminar held at Methodist Ladies' College, Melbourne.

Rowe, H.A.H. (1989, June). *Creativity and artificial intelligence (AI)*. Paper presented at a Colloquium of the Division of Computing and Mathematics, Deakin University.

Sheret, M., Foreman, J., & Ainley, J. (1988). *School and background influences on students' educational plans*. Paper presented to the Annual Conference of the Australian Association for Research in Education, Armidale, NSW.

Smith, G. & Jenkinson, J. (1988). *A comparison of the performance of retarded and nonretarded children on the Coloured Progressive Matrices Test*. Paper presented to the ACER Seminar on Intelligence. Melbourne.

Splitter, L. (June, 1988). *Philosophy and the acquisition of meaning*. Paper presented to the Symposium on Philosophy, Reading and the Development of Critical Thinking, Maringa, Brazil.

Splitter, L. (August, 1988). *The Community of inquiry and thinking about thinking*. Paper presented at the ACER Conference on Intelligence, Melbourne.

Splitter, L. (November, 1988). *Philosophy as a paradigm of the metacognitive*. ACER, Melbourne.

Sturman, A. (1988, December). *Structural coupling and the curriculum*. Paper presented at the conference of the Australian Association for Research in Education, University of New England, Armidale, NSW.

Williams, T.H. (1988, September). *Studying education-work transitions among Australian youth*. Paper presented to the XXIV International Congress of Psychology, Sydney.

Williams, T.H. (1988, September). *Education, employment and quality of life*. Paper presented to the XXIV International Congress of Psychology, Sydney.

Unpublished Papers and Publications of Limited Circulation

Ainley, J. & Bourke, S. (1989). *Student views of primary schooling*. Hawthorn, Vic.: ACER (mimeo).

Ainley, J., Sheret, M., & Foreman, J. (1989). *Teachers and senior secondary schooling*. (Study of Senior Secondary Schooling Working Paper Number 3). Hawthorn, Vic.: ACER (mimeo).

Ainley, J., Sheret, M., & Foreman, J. (1989). *Students in year 11: School life and curriculum*. (Study of Senior Secondary Schooling Working Paper Number 4). Hawthorn, Vic.: ACER (mimeo).

Ainley, J., Sheret, M., & Foreman, J. (1989). *Differences between high schools in their influence on students to stay beyond the minimum leaving age*. Hawthorn, Vic.: ACER (mimeo).

de Lemos, M. (1988, July). *Checknorming of the Vineland Adaptive Behaviour Scale: Outline of project and some preliminary results*. Paper presented at Workshop on Usage of Adaptive Behaviour Scales for Assessment of Intellectually Disabled Students conducted by the Mornington School Support Centre, Mornington, Vic.

de Lemos, M. (1989, June). *The Australian Adaptation of the Fourth Edition of the Stanford-Binet Intelligence Scale: Outline of changes made for the adaptation and preliminary results of Australian trial test program.* Paper presented at Workshops on the Stanford-Binet Intelligence Scale conducted by the Ringwood School Support Centre, Blackburn and the Bayside School Support Centre, Moorabbin.

Izard, J.F. & Masters, G.N. (1989, May). *COPQ Examinations Consultancy: Interim Report.* Hawthorn, Vic.: ACER.

Jones, W. (1988). *Special programs in higher education: The role of bridging, supplementary and special entry schemes.* Hawthorn, Vic.:ACER

Long, M.G., Payne, H.A. & Rosier, M.J. (1989). *Summary statistics for the Populations 3 and 3N tests and questionnaires for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 8).* Hawthorn, Vic.: ACER (mimeo).

Long, M.G. & Rosier, M.J. (1989). *Literacy and numeracy in Victorian schools: 1988. Technical report.* Hawthorn. Vic.: ACER (mimeo).

Morgan, G. & McCurry, D. (1989). *Report on the 1987 Australian Scholastic Aptitude Test (ASAT Series P).* Hawthorn, Vic.: ACER. (mimeo.)

Morgan, G. & McCurry, D. (1989). *Preliminary information on the 1988 Australian Scholastic Aptitude Test (ASAT Series Q).* Hawthorn, Vic.: ACER. (mimeo.)

McKenzie, P.A. (1989, March). *Reforming teachers' career structures. What is desirable? What is possible?* Invited address to the Annual General Meeting of the Victorian Institute of Educational Research, Melbourne.

Payne, H.A. & Rosier, M.J. (1988). *Summary statistics for the Population 1 tests and questionnaires for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 6).* Hawthorn, Vic.: ACER (mimeo).

Payne, H.A. & Rosier, M.J. (1988). *Summary statistics for the Population 2 tests and questionnaires for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 7).* Hawthorn, Vic.: ACER (mimeo).

Rosier, M.J. (1988). *Tests and questionnaires for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 2).* Hawthorn, Vic.: ACER (mimeo).

Rosier, M.J. (1989). *Sampling and administration for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 3).* Hawthorn, Vic.: ACER (mimeo).

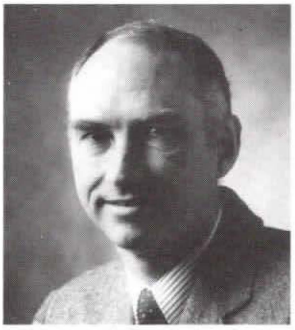
Rosier, M.J. (1988). *Codebooks for the student, teacher, school and ratings data files for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 4).* Hawthorn, Vic.: ACER (mimeo).

Rosier, M.J. (1988). *Student, teacher and school background variables for the Second International Science Study in Australia. (SISS (Australia) Report Series Number 5).* Hawthorn, Vic.: ACER (mimeo).

Sheret, M., Foreman, J., and Ainley, J. (1988). *School and background influences on students' educational plans.* (Study of Senior Secondary Schooling Working Paper Number 2). Hawthorn, Vic.: ACER (mimeo).

Splitter, L. (1988). Education and Thinking: The crucial connection. Address given on the Australian Broadcasting Corporation's *Ockham's Razor*, and distributed to members of the Victorian Association of Social Studies Teachers.

Financial Report



Mr Robert Moore
Business Manager

Income and Expenditure

ACER's research and development program and trading grew substantially in 1988-89 producing a 44 per cent growth in income as shown in Table 1. Contract income rose by 178 per cent from just over $0.6m to more than $1.7m. Income from the sale of services rose by 68 per cent from under $0.6m to almost $1.0m. Trading turnover exceeded $3.0m for the first time and yielded a gross profit of almost $1.6m, after deducting the costs of printing or purchase of goods sold, up by 17 per cent on the 1987-88 level of $1.37m.

The 1988-89 core grant provided by the Commonwealth, all State and the Northern Territory governments was frozen at the 1987-88 level. Since this decision was not finalised until October 1988, a major revision of the budget was necessary four months into the financial year. Cuts were achieved by abandoning one research project and severely reducing another, both of which were to be funded from the core grant, and redeploying staff on contract projects obtained at that time. Even with these cuts, core projects overspent the core grant as Table 1 shows and so the

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

Source	1987-88	1988-89
Income		
Core Research and Development Grant	1 143 781	1 114 156
Research and Development Contracts	623 462	1 731 030
Service Projects	570 473	961 147
Trading Gross Profit	1 367 552	1 594 328
Other Income	45 350	0
Total	3 750 618	5 400 661
Expenditure		
Core Research and Development Program	1 094 553	1 130 493
Research and Development Contracts	617 871	1 592 347
Services & Marketing	1 069 321	1 470 862
Trading	878 468	1 078 690
Extra Provision for Annual Leave	14 136	0
Extra Provision for Long Service Leave	49 269	0
Other Costs	9 132	0
Total	3 732 750	5 272 392
Operating Surplus	17 868	128 269
Provision for Accommodation	0	120 000
Funds Added to Reserves	17 868	8 269

core grant provided no contribution to ACER's accommodation provision. For 1989-90, the Australian Education Council will revert to the established formula for the grant under which it rises in line with academic salaries.

In 1987-88, the operating surplus was only $17 868 and that allowed no allocation to the Building Fund. If it had not been necessary to set aside $14 136 as an extra provision for annual leave and $49 269 as an extra provision for long service leave, the operating surplus in that year would have been $81 273, sufficient to have supported an allocation for accommodation needs.

In 1988-89, an operating surplus of $128 269 was achieved. While this is a considerable improvement on recent years, it is quite modest, representing only 2.3 per cent of the total income of $5 400 661. There is a need to improve further on this level of operating surplus in future years, both to make a realistic provision for accommodation and to rebuild ACER's cash reserves which have been depleted by the substantial investment in computer equipment in the last four years. The 1988-89 operating surplus did allow an allocation of $120 000 to the Building Fund.

ACER's accommodation has been provided for a number of years at effectively no annual cost because ACER owns its building without debt. The building is, however, now in poor condition and is increasingly inadequate in size. If ACER were in rented premises, the annual cost of rent would exceed $400 000. The Council now plans that ACER will rebuild. The governments that contribute to ACER's core grant have agreed to provide $700 000 towards that accommodation. The funds that ACER will need to borrow will require annual repayments in excess of $200 000. Although this is clearly less than the cost of rental of new space, it will make a significant new demand on ACER's annual income and expenditure. Funds set aside in the Building Fund to date will help. The evidence in the 1988-89 financial report of a growing capacity to free the funds required to provide adequately for accommodation is an important additional encouragement.

The relative contributions from the various sources of income are shown in Figure 4. The core grant declined from 33 to 21 per cent of the total while contract income rose from 17 to 32 per cent.

Fig. 4: Relative Contributions to ACER Income for Various Sources

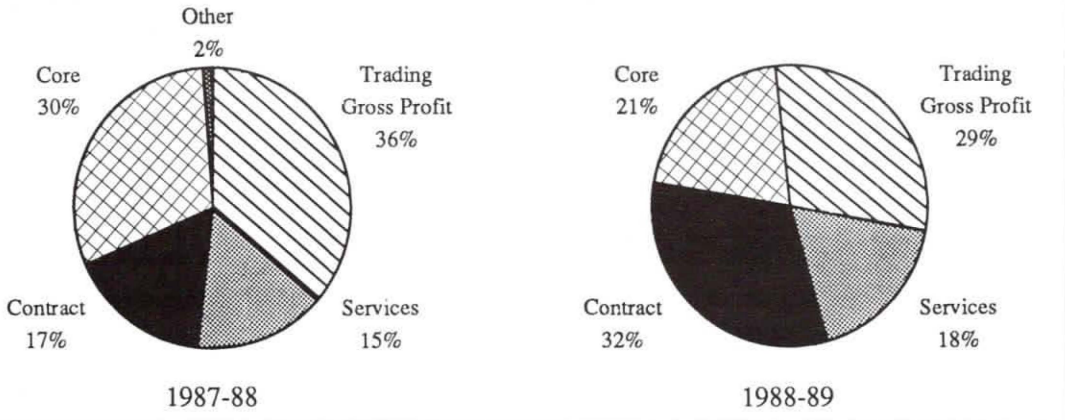


Table 2: Contributions to ACER Core Grant

Source	1987-88	1988-89
Commonwealth	562 750	554 781
New South Wales	199 865	196 115
Victoria	151 599	148 783
Queensland	94 512	90 762
Western Australia	53 847	50 097
South Australia	52 848	52 758
Tasmania	19 617	15 867
Northern Territory	8 743	4 993
Total	1 143 781	1 114 156

NOTE: The total amount of $1 143 781 in 1987-88 consisted of $1 113 781 provided as the basic Core Grant, half from the Commonwealth Government and the other half from the other governments in proportion to their populations, and $30 000 as a grant for computer equipment provided in equal parts of $3 750 by each of the eight governments.

The contributions to the annual core grant for 1987-88 and 1988-89 are shown in Table 2. The Commonwealth government provides 50 per cent of the grant and the States and the Northern Territory provide the other 50 per cent, each contributing in proportion to its population. The sources of contract income are shown in Table 3. The largest sources of contract projects are the Commonwealth and New South Wales governments from both of which there were several such projects.

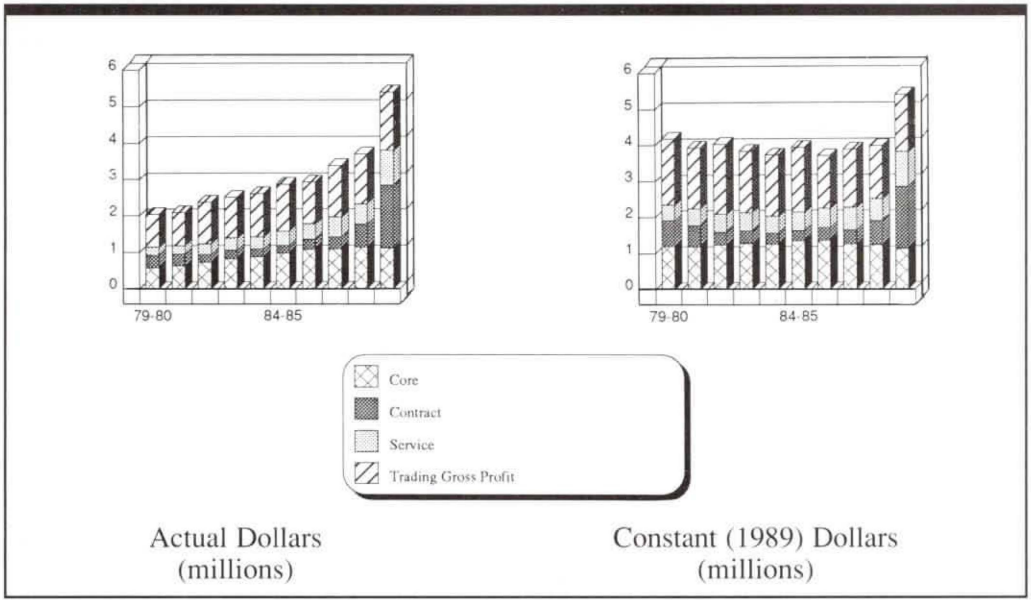
Table 3: Sources of Income for Contract Research and Development

Source	1987-88	1988-89
Australian Education Council	42 014	0
Australian Research Council	9 683	23 200
Commonwealth Curriculum Development Centre	57 837	35 027
Commonwealth Department of Education	211 434	736 549
Commonwealth Tertiary Education Commission	43 000	5 000
New South Wales Department of Education	122 705	597 891
Telematics Trust Fund	7 479	42 521
Victorian Ministry of Education	59 000	148 164
Other	70 310	142 678
Total	623 462	1 731 030

The long-term trend in income from the various sources is shown in Figure 5. The left-hand graph in that figure shows the trend in actual dollars. It shows the core grant rising in line with academic salaries until 1988-89 when it was frozen at the 1987-88 level. Contract income declined over the first half of the decade and has risen since from $0.38m in 1984-85 to $1.73m in 1988-89. Service income has risen consistently through the whole decade. Trading gross profit has been more variable, growing from $0.9m in 1979-80 to $1.1m in 1981-82 and then varying up and down from that level until 1986-87 when it moved to $1.4m and then on to $1.6m by 1988-89.

The right-hand graph in Figure 5 presents the same long-term trend, but in constant (1989) dollars. This graph makes clear that over most of the decade the total income simply remained constant, the growth in actual dollars only holding pace with inflation. The core grant has declined over recent years in constant dollars because it has risen in line with academic salaries which have risen more slowly than inflation. Contract income, which declined in actual dollars over the first half of the decade, declined even more markedly in constant dollars and rose by 1987-88 back to the level of 1979-80. The fact that there has been real growth to the 1988-89 level is evident from the graph. Trading gross profit has declined slightly in real terms over the decade. Service income has risen consistently in real terms.

Fig. 5: Trends in Income by Source from 1979-80 to 1988-89



Balance Sheet

The balance sheets at 30 June 1988 and 30 June 1989 are shown in Table 4. The Building Fund has risen by $334 540 through the receipt of $223 540 as the first government contributions towards the improvement of ACER's accommodation and the allocation of $120 000 from ACER's 198889 operating surplus, less $9 000 expenditure for the year.

Cash at Bank is $294 703 higher, but after allowing for the Building Fund, the difference is only $80 163. This relatively low level is evidence of the need to rebuild ACER's cash reserves following the recent period of investment in computing equipment.

Sundry debtors, sundry creditors and stock are all higher than last year as a consequence of the higher level of trading and general activity in 1988-89.

Table 4: Balance Sheet at 30 June

	1988	1989
Accumulated Funds and Reserves		
Accumulated Funds	436 475	456 648
Scientific Research Fund	45 082	33 178
Other Funds	20 988	20 184
Asset Revaluation Reserve	1 251 872	1 251 872
Building Fund	153 000	487 540
	1 907 417	2 249 422
Represented by -		
Fixed Assets		
Freehold Premises	1 712 923	1 704 923
Furniture and Equipment	60 000	91 603
Library	20 000	20 000
Computer	226 356	226 520
Motor Vehicle	11 570	22 136
	2 030 849	2 065 182
Current Assets		
Cash on Hand	500	500
Cash at Bank	89 664	384 367
Sundry Debtors	481 398	797 268
Short Term Deposit	0	0
Stock	472 000	576 904
	1 043 562	1 759 039
Total Assets	3 074 411	3 824 221
Current Liabilities		
Sundry Creditors	343 729	833 107
Amounts Received in Advance	351 183	216 741
Provision for Annual Leave	176 000	197 339
Provision for Long Service Leave	248 108	285 350
Provision for Supplementary Superannuation	10 000	10 000
	1 129 020	1 542 537
Deferred Liabilities		
Provision for Long Service Leave	37 974	32 262
Total Liabilities	1 166 994	1 574 799
	1 907 417	2 249 422

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Report from the Institutes of Educational Research

The first Institutes of Educational Research were established in 1930 with the objectives of promoting the cause of research in education, conducting programs of educational research, and cooperating with the Australian Council for Educational Research. Each Institute sends a representative to the governing body of the Australian Council for Educational Research. That representative participates in meetings of the Council's various advisory committees and the meeting of representatives of all Institutes for Educational Research.

Each year, the Institutes sponsor programs of seminars, workshops, panel discussions, and lectures on educational matters and issues of current interest. Presently, there are Institutes in each State and the Northern Territory, and an autonomous branch of the New South Wales Institute at Newcastle. Collectively, the Institutes appear to be at their strongest point for many years. This is reflected in the nature and level of their memberships, in the programs of activities being sponsored, and in the variety of strategies being used to meet the needs of members. The contemporary vitality of the Institutes can probably be best illustrated by examples from each of these areas.

Nature and Level of the Institutes' Memberships

The Institutes' memberships form a constituency which is remarkably diverse, both geographically and professionally. That constituency ranges from practising classroom teachers in remote country locations to experienced administrators and practising researchers in metropolitan tertiary institutions. The Institutes in Tasmania and South Australia, for example, have significant numbers of practising teachers in their memberships. On the other hand, the Institutes in New South Wales and Western Australia have higher proportions of their memberships actually engaged in educational research, either at the beginning of their careers or with established national and international reputations. The current financial memberships of each of the Institutes are shown below:

NSW	Newcastle Branch	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory
154	37	94	63	105	40	140	71

Range of Activities and Programs Sponsored by the Institutes

The Institutes sponsor a wide range of activities and programs to cater for the needs, interests and professional development of members, and to foster greater awareness and understanding of research methodology, research practice and research findings in the wider educational community.

The traditional pattern of regular lecture meetings, for example, has been retained by a number of Institutes, including New South Wales, the Newcastle Branch, Victoria and Tasmania. Special memorial lectures are also an annual feature of some Institutes' programs. Each year, the Queensland Institute presents the J A Robinson Memorial Lecture, while the Victorian Institute hosts both the Frank Tate and John Smyth Memorial Lectures.

Research forums, workshops and seminars in a variety of forms have become an increasingly important part of Institutes' programs in recent years. Frequently, these extend over one or two full days, and are directed to the needs and interests of particular groups, such as postgraduate students or classroom teachers. The Western Australian Institute pioneered the concept of the research forum, while the New South Wales and South Australian Institutes have had particular success with research workshops and seminars. The Queensland Institute, on the other hand, has used lunch-time seminars to considerable effect.

Prizes or awards for educational research are offered each year by several Institutes, as a means of stimulating interest and involvement in research practice. Both the Northern Territory and the Newcastle Branch offer prizes for educational research, while the Western Australian Institute has four awards for postgraduate or continuing education students, and an Early Career Award to encourage continuing contributions to educational research.

Highlights of the programs offered by the Institutes in 1988-89 have included:

- A conference on the integration of disabled students into the regular classroom sponsored by the New South Wales Institute, which attracted 220 participants to a program of research reports, workshop sessions, and plenary addresses presented at Macquarie University.

- The presentation of the inaugural Sir Harold Wyndham Memorial Lecture to the New South Wales Institute by Professor Hugh Philp, who recorded Sir Harold's fostering of research and the use of its findings to guide major policy decisions.
- The continued cooperation of the Newcastle Branch with other professional associations in the Hunter region in the offering of joint programs on topics of contemporary and mutual interest. In 1988-89, two of the most successful programs focussed on learning disabilities and logo and problem solving.
- The presentation of the 55th Frank Tate Memorial Lecture to the Victorian Institute by Emeritus Professor William Connell, on the topic 'Wyndham to Dawkins: Shifting Values in Australian Education'.
- The Queensland Institute's 1988 J A Robinson Memorial Lecture, which was presented by Dr Barry McGaw on the topic 'Assessing Accountability in Education: Is There a Sensible Role for Testing?'
- The 1988 WAIER Research Forum, which attracted 100 participants and included 40 individual presentations. The 1988 forum was the third sponsored by the Western Australian Institute.
- An experimental educational research workshop, run specially for those undertaking postgraduate educational research by the South Australian Institute. The highly successful workshop provided practical advice about the 'real world' of research, and enabled the students to share their experiences with each other and their supervisors.
- The establishment of a Northern Branch in Launceston by the Tasmanian Institute.
- The hosting of a one-day forum by the Tasmanian Institute, to address the issue of 'Setting an Agenda for Educational Research in Tasmania'.
- The presentation of the 1988 NTIER Research Workshop by the Northern Territory Institute, which also published the first version of its handbook 'A Guide to Small Scale Research' in 1988.

Strategies Used by the Various Institutes

There is a general concern among Institutes to provide benefits to all members, regardless of their particular interests or geographic location, and to contribute

to a greater awareness and understanding in the general community of the importance of educational research and its outcomes. The Institutes are also concerned that the breadth of interests represented in their memberships is recognised, and acts as an encouragement to membership and participation, rather than as a deterrent.

The strategies used by the Institutes to provide services to members and the wider community are varied, but it is clear that in recent years Institutes have drawn increasingly on each others' successful experience with particular programs and initiatives. The examples below are of particular current interest:

- the concept of research forums, initiated by the Western Australian Institute, has now been pursued by the Northern Territory and Queensland Institutes.
- research seminars and workshops, tailored to particular interest groups both within and without the memberships, are now offered by the Institutes in Western Australia, New South Wales, the Newcastle Branch, Victoria and the Northern Territory.
- the creation of specialist interest groups within the Institutes has been revived, as evidenced by the re-establishment of the Primary Interest Group in Victoria.
- a number of Institutes maintain significant publishing programs, such as those centred on journals, as in Victoria and Queensland, and on monographs and occasional papers, as in New South Wales, Tasmania and the Northern Territory.
- the recording of proceedings of meetings and conferences has been adopted by Institutes with significant proportions of country members, such as Western Australia and the Northern Territory, as a means of catering more effectively for the needs of those members.

Conclusion

While the Institutes collectively are currently enjoying considerable vitality and viability, they are not complacent, and are conscious of the need to maintain that vitality and viability in the future. The Institutes are unanimous in their resolve to ensure this, and see that the determinants of their future success will be

- committed and enthusiastic executives, whose membership represents a broad cross-section of the educational community;
- the delivery of programs and services to members of the Institutes, and to the general community, which are interesting, timely, relevant and meaningful;
- a continued strong association among the Institutes, so that the benefits of individual experiences and initiatives can be shared and replicated; and
- a continued close and productive association with the Australian Council for Educational Research, through participation in meetings of the Council's standing and advisory committees, and through membership of the Council itself, and through the provision of advice on priorities and issues of concern in educational research.

Richard Warry
Convener
Representatives of Institutes of Educational Research