ACER

60th Annual Report
1989-90

**Australian
Council
for Educational
Research**

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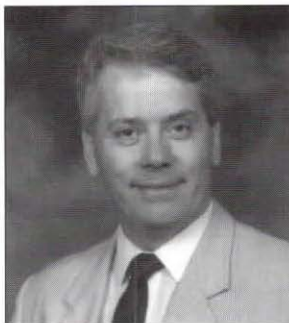
Director's Comment:
Research and Policy Development

What are the potential relationships between educational research and policy development? What claims and promises can educational researchers legitimately make and what expectations can administrators reasonably hold?

Dr Barry McGaw
Director

Expectations Created by Researchers

In many ways, researchers have created expectations that are too high. Grand claims were made in the reform era of the 1960s which oversold the capacity of the research enterprise. Failure to deliver created disillusionment among clients and a reappraisal among researchers of the scope and potential potency of their activities. The researchers have generally changed their position in internal debates about epistemological and methodological issues and have lowered their sights, but clients are not necessarily well informed about this and their expectations remain unchanged.

For several reasons the everyday view of the processes and products of social science is naive. One reason is that the phenomena with which social sciences deal are actually the stuff of everyday life and, therefore, things about which everyone has a view. The researchers' theories and language may attempt to accommodate the complexities of everyday life for which they seek an account but their clients may represent the issues quite differently. They may use the same language differently, and so misunderstand, or they may find the researchers' language impenetrable and simply not understand. The carefully qualified language of the researchers may thus have no impact on the expectations of clients.

The researchers' methodology and the scope of their questions can also create problems. They may narrow their focus to fit their new methodology but naive questions abound together with assumptions about the relevance of those methodologies presumed to be relevant. Even among sophisticated researchers from other fields, particularly in the physical sciences, educational research questions constructed in naive ways are asked, in the belief that complex variables can be manipulated to yield broad answers to grand questions. The proposals appear to be based on a view that there are general 'laws' that could be discerned to establish, for example, that some instructional method is in general superior to others. The educational researchers may no longer construct such questions but they have failed to communicate effectively their altered understanding of their enterprise.

The key to the problem is the epistemological naivety of many clients. Among social scientists there has been a great debate over the last twenty or more years about not only their methods and the questions they ask but, more fundamentally, about the nature of social inquiry itself. There are two key reasons why this debate has reached few potential clients. One is that the debate is not fully understood within the social sciences. It has, for example, been conducted more strongly in some fields than others - many psychologists seem scarcely aware of it. They have certainly not entered the debate in the way that most sociologists have.

A second reason is that clients adopt an implicit positivist approach in forming their expectations because their administrative activities are consistent with such a view. Administrators are obliged to make decision about things under their control in the expectation of producing effects. Their models will be probabilistic and not deterministic, but they will inevitably consist of presumed links between the actions of some variables as potential causes and changes in other variables as consequences. While social scientists may now search for the meanings that human participants construct in terms of which to understand their own experiences, administrative actions are based on assumptions about objective reality over which administrative decisions can be influential. The new interpretivist approach of the social scientist may seek not the causes of what people as objects do, but the meanings that people make as participants in the lives that they live. The administrative process still generally involves interventions of a more general nature in the pursuit of general effects.

Clients, as administrators, may hold positivist views of their actions but they typically live out an interpretivist epistemology, however unrecognised. Their commissioning briefs may presume positivist research and their approach to the reports they receive may be based on a view of themselves as positivists. Their response to the reports, however, is typically interpretivist. They usually add them to their own particular experiences as additional 'anecdotes' with which to inform their own personal generalisations.

Background to Present Situation

It is useful to consider the way in which social inquiry has developed in order to understand the current situation from the perspectives of both social researchers and

potential clients. A review in the domains of sociology and psychology can reveal the key features of this development.

For the sociological analysis, Finch's (1986) book on research and policy provides a valuable analysis based on developments in British research. She traces the emergence of the quantitative tradition that became so dominant over about a century and a half and that remains so dominant in the public perception of the enterprise.

Finch's analysis begins with the Royal Commission on the Poor Laws in 1832-34. The Commission used a postal ballot of people who were administering poor relief but obtained a very low response rate and so appointed 26 Commissioners and sent them into the field to interview, not poor recipients of relief, but those who administered poor relief. That preoccupation with the concerns and perspectives of administrators rather than participants is interesting in itself.

Around the same time, Kay and other members of the newly-formed Manchester Statistical Society rejected the testimony of administrators on the grounds that it simply amounted to 'opposing testimony' and provided only 'partial evidence'. They preferred instead statistical investigation. Kay's 1832 pamphlet on the moral and physical conditions of the working classes used statistical information from public reports on the conditions of houses and streets as well as information from other public offices. In addition, he added a very rich personal perspective obtained by working first as a medical practitioner and then as a Commissioner of poor relief programs. In his analyses, however, he clearly trusted the statistical data over his own personal perspectives, rich though they were. In the search for better information, the Statistical Society sought to improve statistical collections through the use of paid investigators working to complete standard forms (Finch, 1986, p.18). The data collected were taken to be 'objective facts'.

This statistical tradition was further developed during the nineteenth century and, linked to the ameliorist tradition, sought to use social research in the service of social reform. Booth's 17-volume study, *Life and Labour of the People of London*, used 1881 and 1891 Census data to obtain details on overcrowding in domestic residences. Because he judged these data to be limited, however, he obtained additional information through interviews

with people in managerial positions and through his own observations made while living in rented accommodation in poor areas. His report reflects the quantitative and the qualitative data he obtained, though it emphasises the former, and provides policy recommendations (Finch, 1986, p.20).

Booth produced a rich, but static, description of what the life of people in London was like. It provided no sense of the processes of becoming poor or of escaping from poverty. The Fabians espoused a similar research emphasis on the collection of 'facts which could speak for themselves' (Finch, 1986, p.20) but focused more on the processes of change because their primary concern was with social reform. Social research was to serve reform. Their methods were both quantitative and qualitative but the evidence from interviews and other field work was always treated as secondary to the statistical data. The audience for the reports was the powerful, because it was they who were to effect the reforms.

Many current commissioned research projects are based on briefs that appear to request facts that will speak for themselves, that will describe a system in ways that will facilitate the development by administrators of policies and administrative practices that are better for participants. These research briefs echo the Fabians' interests in social reform and their commitment to social research as the most appropriate means to inform the administrators able to implement, and even design, the reforms.

In the first half of the twentieth century, the technical aspects of social research were considerably advanced. The development of sampling theory allowed a much more precise understanding of the relationship between the characteristics of a sample investigated and the population to which reference was made. Methodologically, some of the earlier emphasis on qualitative data was lost. The essential emphasis remained on accurate, impartial collection of facts, though still with a commitment to reform. Gradually, a recognition grew that the fact/value distinction could not be sustained entirely and it was acknowledged that the choice of the issues to be investigated was value driven.

Over the last 20 to 30 years there has been a strong critique of this quantitative tradition. In methodological terms, the critique has involved a new emphasis on qualitative and naturalistic procedures, recovering in some ways a dimension of the work that was already

present last century. Interviews and observational procedures are used, though such information is given a different credence, no longer treated as subsidiary to statistical evidence. More importantly, the critique is based on an alternative epistemology. This interpretivist tradition emphasises the social construction of reality as a way of understanding social phenomena. It is concerned primarily with participants' meanings, not primarily with the administrative dilemmas of the powerful.

As this critique of the social research process developed and the new approach strengthened, there was a clear loosening of the link between research and policy considerations and a lessening of the likelihood that the research would even speak to the questions of policy change. That happened for several reasons. By the end of the 1960s, the social democratic consensus in many Western countries had collapsed, so there was no longer any agreement about what social goals were to be pursued (Finch, 1986, p.35). There was also a growing recognition that much policy change that had apparently been informed by research had had little impact. Abrams (1981) suggested that no sociologist in Britain 'believes in the sort of direct relationship between knowledge and action which inspired the monumental labours of Booth' (p.60).

The researchers themselves shifted their focus from the concerns of the administrators to the concerns of the participants because, in theoretical terms, it was the participants' understandings that became central to an understanding of social phenomena. Two other factors were also important in weakening researchers' interests in policy and program development. One was the relativist view of knowledge that almost inevitably emerges from a view of knowledge as a social construction. Once each group's knowledge is recognised as a construction of reality arising from its members' shared experiences, knowledge becomes a relative rather than an absolute thing. It is a short step to taking all knowledge to be of equal worth and having no grounds for judging any knowledge to be better than any other, and no basis for wishing to pursue any one thing in preference to another. This relativist position weakened significantly any desire to forge a link between research and social interventions that might seek to change things to make any group more like another.

The other factor was researchers' preoccupation with theory rather than policy and

practice, and an associated concern on their part with academic colleagues rather than administrators as audience. Researchers' withdrawal from concerns with policy and practice was also accompanied by, perhaps even caused by, a preoccupation with theory. The audience for the researchers became other researchers with whom they could contest theoretical issues. Their language became increasingly impenetrable as well and the whole debate became inaccessible to those outside the inner academic circle.

In some quarters in the sociological tradition, a new concern about policy seems to be emerging. The traditional quantitative sociologists, though not returned to any dominant role within the discipline as a whole, are in demand for contract research. They have always had an interest in policy questions. Among those sociologists whose theoretical perspective is interpretivist, there is a growing concern for policy relevance, according to Finch (1986, pp.223-32). The concern of this latter group for policy implications is not driven by desire to inform benevolent managers but rather, by a desire to empower participants. This group's work may be less likely than that of more traditional sociological research to attract funds through commissions since it is not primarily addressed to the concerns of those with funds to grant. It is committed to policy and pragmatic change in the hands of the participants. A good deal of current research in education stands in this new tradition, an example being the work on teachers as researchers. This work is designed to empower those working at the school and classroom level.

In psychology there has been a somewhat parallel development though, as indicated later, some of the most recent developments in cognitive psychology and, in particular, cognitive science may now be heading in a quite different direction.

The two dominant traditions in psychology from the late nineteenth century to the 1960s made it unlikely that psychological research would have substantial implications for policy or practice. Whilst this did not stop textbook authors from drawing many a long bow from the laboratory to the classroom, practitioners were not very dependant on psychological research.

The first dominant tradition in psychology in this period was behaviorism. In its experimental form it trivialised the questions asked in order to make them manipulable in

idealised situations. They could then be investigated in tightly controlled ways in a laboratory but the studies had little external validity. As a consequence, they spoke less and less to real-world issues. The second dominant tradition emerged during the first half of the twentieth century as techniques for psychological measurement were refined. Within the tradition of differential psychology there was a preoccupation with measuring people to sort and order them according to their differences. This area of work was taken to have obvious policy implications but they were restrictive and negative in their influence. It was assumed that inherited capacity determined an individual's academic and employment future to a sufficient extent for a measure of intelligence to be useful in determining the type of schooling appropriate as a preparation. This was a notion of aptitude-treatment interaction which assumed that treatment should be designed to forge a link between origins and inevitable outcomes. It was very different from the liberating notion of aptitude-treatment interaction, introduced by Cronbach (1957) and later pursued in considerable detail by Cronbach and Snow (1977) and Snow, Pat-Anthony and Montague (1980), under which treatment was to be designed to take account of individual differences in aptitude (interpreted broadly) to maximise each individual's development.

The exciting development in the last 20 years in psychology has been the substantial resurgence of cognitivist concerns. There is an adoption, from a psychological perspective, of the view that humans are active constructors of meaning from their experiences, that they link new understandings to old understandings, and that the way in which they interpret new experiences is governed in part by the cognitive structures they have already built. This view has given rise to studies of how new learning fits with old, of how knowledge representations are altered as new knowledge and expertise are acquired. An important consequence of this view is that intellectual functioning is now seen as something that can be enhanced. A preoccupation with measuring intelligence has been replaced by a concern with how to improve intellectual performance.

The adoption of a cognitivist perspective produces a very important shift in the nature of the questions asked and in the potential relevance of the answers for educational programs. Some studies are linking questions about the effects of motivation and other dispositional characteristics to this work on cognitive functioning, studying what they call 'hot cognition' and not just the 'cold cognition' provoked when persons are less engaged in and

committed to the activity involved. This represents a further move to the real world, not a retreat to the laboratory.

ACER's Research Agenda

ACER's research agenda is expressed in the broad framework provided by its major themes and more particularly in its specific research projects. No single doctrinaire view of the research process underpins the work. Indeed, there is healthy debate and disagreement among staff about the issues outlined above.

All of the work, however, is founded on a real concern with educational practice. Some of the research addresses issues from the perspective of policy developers at a system level. Some of it takes the perspective of participants in individual institutions and seeks to empower them by giving the participants new insights into their own circumstances and the potential for new control over them.

Who asks the questions that drive the research and development is a key issue in determining the impact of research and development on change. Researcher-initiated questions are potentially more tightly integrated into the theoretical perspective and the research tradition of the researchers involved. The risk is that the combined effect of the disparate individual research agendas will be too diffuse in areas of common concern, particularly areas of agreed national concern.

An obvious response is to have at least some of the questions shaped by the administrators who articulate these common concerns. The Australian Research Council does this through its special initiatives. Other agencies do it through commissioned research studies, frequently after inviting formal proposals in response to a research brief. In education, there is a newly increased level of interest in commissioning such research at both the Commonwealth and State levels. As one consequence of this, ACER's contract research income has risen from $0.2m in 1984-85, to $0.3m in 1986-87, to $1.7m in 1988-89 and to $2.4m in 1989-90.

The distinction between researcher-initiated and administrator-initiated and commissioned research just outlined is too sharp. One should ask not only who asks the questions but who

shapes the questions and, through the conjunction of those two, imply a potentially more collaborative process between administrator and researcher in shaping questions in a way that takes account of administrative and program realities and also the significant theoretical perspectives.

One major contribution of research to social policy and practice has been in changing the nature of the questions asked. This can perhaps best be illustrated with reference to questions of equity. In the first instance, research was directed to the solution of the perceived administrative problem of inequitable access to educational opportunities. As participation rates grew and access was more equitably distributed, it was researchers who shifted the focus to the distribution of outcomes. Concerns about 'equality of outcomes' were not driven by any view that outcomes should be uniform, with all individuals somehow brought to the norm. They were driven by a concern that improved access to education for groups previously limited in their access, was not matched by improved participation in the benefits. What was sought was some fairer distribution of the outcomes, sometimes articulated as a pursuit of equivalent distributions of outcomes in groups between which there was no reason to expect or to seek to justify different distributions (Quality of Education Review Committee, 1985, p.4). The male and female subpopulations, for example, are two such groups for which equality of distributions of outcomes might reasonably be expected.

Those research concerns spawned a new range of reforms and special programs designed to distribute the benefits of education more reasonably. It was the researchers who changed the question again when their investigations revealed that many of the reforms were impotent. Their conclusion was, however, not so much that the educational innovations failed to deliver more just distributions of outcomes, but that the education system actively reproduced existing patterns of privilege by actually ensuring that benefits were distributed in a manner that generally reflected existing distributions within the population.

Recent ACER research by McKenzie et al. (in press), drawing on the data from ACER's longitudinal *Youth in Transition* study conducted by Williams, reopens the debate about efficacy with evidence of more widely distributed benefits of access to education. Participation rates to the end of Year 12 are rising most rapidly for lower socioeconomic

groups, as shown in Figure 1. Questions of benefit are not fully addressed in this evidence. That will require further analyses of access to and success in higher education of the type now being undertaken by Williams with two colleagues outside ACER, Carpenter and Hayden.
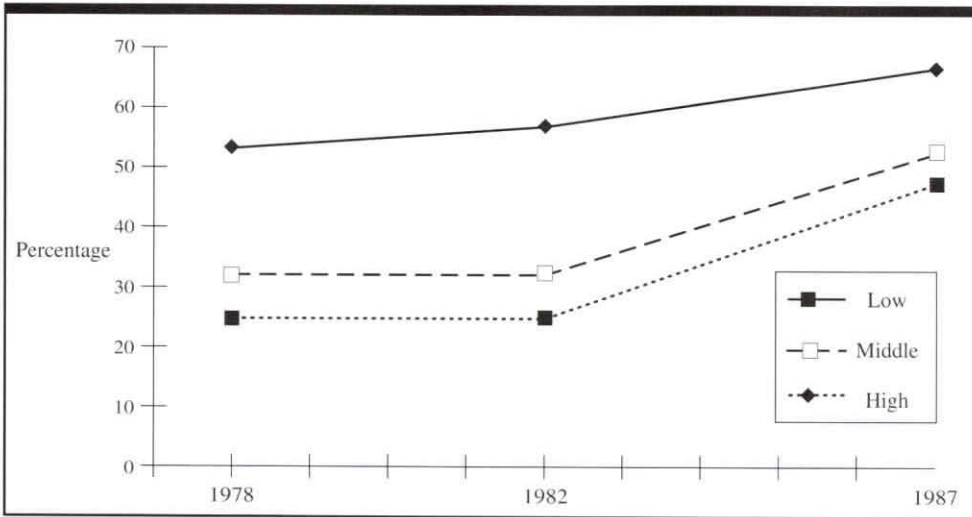
Fig. 1: Percentage of Students Completing Year 12 by Socioeconomic Status

This sequence of fundamental reorientations of the question arose both from the research findings and from the changes in the research strategies that revealed these findings. In part, it was the adoption of an interpretivist approach which led to careful exploration of the experiences of the participants in the educational programs that revealed the social reproductive nature of the programs. This in turn sharpened the questions to be addressed by would-be reformers and the criteria against which the reforms might be judged.

It is only out of dialogue between administrator and researcher and participant and researcher in asking and shaping questions that a shared focus on the key questions can emerge and a more substantial impact of research upon change be achieved.

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Barry McGaw

Director

Continued Growth of ACER's Program

ACER celebrated its 60th anniversary on 1 April 1990 in a year of continued, substantial growth in its research and development program. The reports of **Highlights of the Year for ACER**

research projects and the financial report in this year's *Annual Report* provide clear evidence of the nature and extent of this growth. The source of funding for contract work was further diversified but had also another gratifying feature. Work that had been initiated with core funding in the first year of the triennium under the theme Teachers in Australian Society was considerably extended in 1989-90 with commissioned research work. In establishing this theme, we had anticipated a growing interest in the policy questions it would address. The emergence of contracted projects in the final year of the triennium confirms the wisdom of the original choice. Alongside this development, there continued to be substantial contract work addressing issues about upper-secondary education and transitions beyond that level to further education and work.

Proposed Relocation of ACER

ACER's present accommodation in Hawthorn has grown increasingly unsatisfactory, both for its size and its quality. During the year, the Council completed negotiations with Monash University for relocation on a site on the northern boundary of the Clayton campus. Monash will retain title to the property and ACER will construct a building with rights of occupation for 50 years. The physical location is superb and the opportunities that the relocation will bring for interaction with a strong faculty in fields such as education, psychology and economics are exciting. The current anticipation is that the building will be ready for occupation early in 1992.

Restructuring of ACER Council

The Governing Council of ACER was restructured and reduced in size during 1989-90. The restructuring has increased the number of government nominees from two to four and reduced the overall Council size to 14. The membership of both the old and the new Councils is given in this report.

Establishment of Curriculum Corporation

The Commonwealth and all State and Territory governments except New South Wales have joined to establish the Curriculum Corporation as a non-profit company owned by the

Ministers of the participating governments. During 1989-90, the Ministers involved invited ACER to consider co-location and a shared Chief Executive Officer as a way of facilitating collaboration between the two organisations. The ACER Council declined the latter invitation, though was interested to pursue the former. The Curriculum Corporation has now been established and will be located in Melbourne. ACER and the Corporation both look forward to opportunities to work collaboratively in pursuit of significant educational developments for Australia.

Staff Issues

The nomenclature of research staff was changed during the year with Senior Research Officer - equivalent to Lecturer on university scales - becoming Research Fellow, and Chief Research Officer - equivalent to Senior Lecturer on university scales - becoming Senior Research Fellow. In addition, a new promotional grade of Principal Research Fellow - equivalent to Associate Professor/Reader - was created, and Dr Helga Rowe became the first staff member promoted to that level.

ACER has long provided for the professional development of its research staff through special studies programs and opportunities to participate in professional conferences. During the year a new staff development fund was established to provide opportunities for general staff to pursue relevant professional-development activities. This fund is administered by Dr John Izard as Assistant Director (Development and Training) and Mr Robert Moore (Business Manager). They provide support in response to requests from individual staff and also actively encourage staff to look for relevant opportunities for their personal growth.

Overview of Themes

In June 1990 the first three-year research and development program came to an end. This program represented something of a departure from the past.

Research and Development Activities

It was conceptualised as a three-year program with a specific thematic structure and attributes which allowed its planning and development as a sustained and focussed research effort. Additionally, the program was shaped directly by a process of broadly-based consultation and negotiation designed to highlight educational issues judged to be important by the educational community at large. The result was a structure based on five themes titled, respectively: The Compulsory Years; Beyond Compulsory Schooling; Cognitive Processes and Education; Education and Technology; and Teachers in Australian Society. Details of the activities undertaken within each theme are provided in following sections.

Dr Trevor Williams
Associate Director

The form of this research and development effort also was influenced by more pragmatic considerations. Matters of substantive focus aside, this was to be a program of 'policy research'. Moreover, as a matter of priority, it was to be a program of commissioned policy research. Over the period in question projects to the value of some $2.5m were commissioned. Our clients were principally Commonwealth and State Government education agencies. Sponsorship, as distinct from commissioned work, came from a wider variety of sources including Telecom, banks, airlines, computer companies, and schools.

Since contracted work was given first priority in the allocation of resources, and because the interests of clients turned out to be concentrated more within some themes than others, the amount of program resources invested in each theme varied. This in turn influenced considerations about the nature of themes for the second triennium - which ones should continue with a separate identity, and which should be amalgamated with others in a rationalisation of the research and development program.

The end result of this process is a set of themes for the second triennium that reflect our own experience of the first triennium, together with the views of others as to what the significant issues will be over the next three years. Our emphases on post-compulsory schooling and the transition to higher education and/or work, as well as the focus on teachers and teaching, continue as the themes Beyond the Compulsory School Years and

Teachers and Teaching. The cognitive psychology strand to the program continues as Cognition, Technology and the Classroom, and is broadened to include aspects of our special emphases on 'education and technology' and 'philosophy for children', each of which will retain a separate identity for the more developmental aspects of their work. Similarly, the Program Evaluation Unit will continue as a focus for evaluation activities. Two new themes have emerged: Educational Management and Change, a theme that will broaden our focus by directing part of our research effort specifically at the organisational aspects of schools and schooling; and, Assessment and Reporting, a theme aimed at advancing basic measurement theory while investigating improved methods of assessing and reporting student learning.

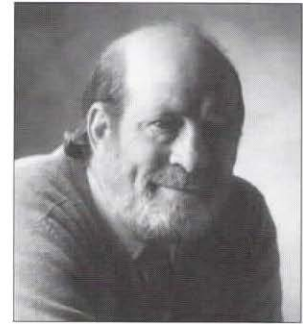**Trevor Williams**
Associate Director

In reviewing the achievements of the program of research and development for Theme 1: The Compulsory Years as we come to the end of the triennium, it becomes clear that part of the difficulty we have had in establishing a cohesive and

Theme 1: The Compulsory Years

comprehensive program in this theme area stems from the rather indirect manner in which the theme was identified and established. Having correctly identified post-compulsory schooling as an area of particular interest to policy-makers and practitioners alike, the question was quite rightly asked: But what about the compulsory years of schooling? Surely we can't ignore them! And since, of course, we quite clearly could not ignore them, Theme 1: The Compulsory Years, was established, rather more by default than targeted intent.

Dr Kevin Piper
Senior Research Fellow
Theme 1 Coordinator

In retrospect it is possible to identify two major problems arising from this indirect approach to theme identification. In the first place, the theme was too broad and unfocussed for the limited resources we were able to devote to it within the core program. The second problem is related to this: the compulsory years of schooling have not been seen as a priority area by funding agencies themselves squeezed for funds and preoccupied with the more immediate and pressing issues posed by increasing student retention and the restructuring of post-compulsory education. While this may well be regretted as a short-sighted policy - many of the issues of post-compulsory schooling have their roots in the compulsory years - it did severely limit our ability to get major projects up and running under the theme program.

These remarks should not be taken to suggest that our achievement over the triennium has been insignificant; but rather, that it has been less substantial than we had hoped for in the initial enthusiasm of theme planning and development. In planning a program of research into the compulsory years of schooling, our central focus was on the nature of an education for all, an education that provided for diversity within a common framework and set of institutions. Within this broad focus, two more specific strands were singled out for particular attention in the program, namely continuity and change in the compulsory years of schooling, and core learning and competence.

Three projects contributed to the first of these strands, continuity and change in the compulsory years. The first of these projects, *Redefining the Curriculum*, has focussed

principally on recent moves towards the articulation of a common national curriculum framework. A report of the study is in preparation, and is scheduled to appear in the Australian Education Review series. The second project, the *Social and Political Context of Schooling*, has focussed principally on the quality of primary school life and its relationship to achievement in reading and mathematics. One report of the study has appeared in the ACER Research Monograph Series and a second is in preparation. The third project, *Decision Making in Schools*, has focussed principally on curriculum decision making. A report on the devolution of curriculum decision making has appeared in the ACER Research Monograph series, and a second report, looking at curriculum decision making in the context of school management and resource allocation, has been completed and is currently being reviewed for publication.

Two projects contributed to the second strand of the program, core learning and competence. The first, *Reconceptualising the Basics*, has been principally concerned with the development of a national guide to literacy and with continuing studies of social competence and critical thinking. The project has also provided the first two volumes in the Theme Monograph series, Australian Studies in Compulsory Schooling, namely a volume on literacy edited by Frances Christie, and a volume on numeracy edited by Sue Willis. The second project contributing to this strand of the program has considered Australia's participation as one of the 25 countries in the Second International Science Study. A report of the Australian results for students in Years 5 and 9 is currently in press as an ACER Research Monograph and a second, reporting results for students in Year 12, is being reviewed for publication.

In the second triennium, research into the compulsory years of schooling will feature in the programs of the new theme areas, and a number of projects from Theme 1: The Compulsory Years - such as John Ainley's study of primary schooling, Malcolm Rosier's work on performance indicators, my own studies of national curriculum and education for social competence, and continuation of the Theme Monograph series - will continue to their completion in the program for 1990-91.

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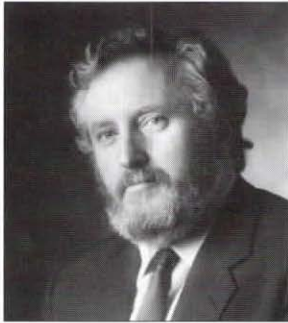Core Learning and Competence
    Reconceptualising the Basics
        ACER Staff: Doug McCurry, Kevin Piper, Laurance Splitter, Graeme Withers
    Second International Science Study
        ACER Staff: Michael Long, Malcolm Rosier
        Colleague: Diana Banks (ACT Schools Authority)

Theme 2: Beyond Compulsory Schooling

Dr John Ainley
Senior Research Fellow
Theme 2 Coordinator

The final year of our first triennial program was one that proved fruitful in bringing together a number of aspects of the theme program. A major contribution to this integration arose through a set of interrelated projects, commissioned by the Department of Employment, Education and Training. One of the projects involved a national study of subject choice in senior secondary school; another focussed on the relevance of Year 12 for those students who did not proceed to higher education; and a third concerned the challenges to teachers arising from the increased holding power of schools. The interrelationship between the projects lay in part in the connections among their substantive concerns, but was further forged through their common use of information in the substantial database provided by ACER's Youth in Transition study.

The study of subject choice was undertaken so as to provide information about the patterns of subjects studied by students in the final two years of secondary school in relation to their social and educational backgrounds. It aimed to inform policies for increasing participation in key subject areas and equity in subject choice was provided on a national basis. Results of the study show the ways in which subject area enrolments and participation in different types of course relate to a number of factors such as state, gender, and early school achievement. Some of the findings from the project have been incorporated in the forthcoming national report on education in Australia.

Rising school retention rates focussed attention on Year 12 as an interface between school and work. Our project examined the labour-market relevance of senior secondary schooling from the perspective of Year 12 school leavers who did not enrol in higher education. Results from the study indicated that completing Year 12 brought advantages in terms of job status and income. In addition, Year 12 school leavers reported low levels of unemployment, high levels of job satisfaction, and high levels of participation in further education and job training. Most indicated that Year 12 had been worthwhile, but argued that reform was needed in the quality of teacher-student relationships, the work orientation of the curriculum, and opportunities for work experience.

The project concerned with challenges to teachers arising from increased retention was formally part of another theme, but had strong connections to the two projects described above. The project documented how schools were responding to increased retention

through institutional policy, curriculum development, staff development, teaching approaches and provisions for career and personal development of students. Through a series of visits to selected schools, the project collated a rich description of a range of school practices providing for the senior secondary years.

In addition to these projects two longitudinal studies have continued. The study of senior secondary schooling in New South Wales, which began in July 1987, examines how school factors (in particular, curriculum policies and programs) relate to student responses to school and their attainments at and beyond school. Students who were in Year 9 in 1987 have been contacted each year and are now either in Year 12 or have left school. Through the study information has been gathered about their views of school life, approaches to learning, educational plans, occupational plans and interests, and achievements. In addition, information about the schools and their programs has been gathered from a range of sources including the teachers.

The Youth in Transition (YIT) study, in which several large and representative samples of young people are being followed through school and beyond, continues to be a major project in the study of transitions. Surveys of the 1961, 1965 and 1970 birth cohort samples were undertaken this year. These surveys represented respectively, the twelfth, ninth and fifth waves of data collections with these samples resulting in year-by-year data covering ages 17 to 28 for the oldest group, 16 to 24 for the next oldest group and 15 to 19 for the youngest. This year also saw the introduction of a new cohort into the program with the collection of achievement data from a national probability sample of some 6000 14-year-olds. During the year YIT data was used as part of a number of other studies including those mentioned above. It also forms the basis of 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, Linda Fink, Marina Paxman, Michael Sheret

  Subject Choice in Senior Secondary Schooling

    ACER Staff: John Ainley, Warren Jones, Kathiravelu Navaratnam

Transitions between Education and the Labour Force

  Youth in Transition

    ACER Staff: Michael Long, Hilary Miller, Trevor Williams

    Colleague: Cath Blakers (Canberra)

  Vocational Interests, Aspirations and Choices

    ACER Staff: Marianne Fleming, Jan Lokan

  Labour Market Relevance of Year 12

    ACER Staff: Katrina Alford, Phillip McKenzie, Suzanne Mellor, Lyn Robinson

The research conducted within this theme has been concerned with the development and use of thinking, problem solving and learning processes. In the first half of the triennium there was a special focus on processes underlying **Theme 3: Cognitive Processes and Education** cognitive performance and their relationship to measured intelligence (i.e. Wechsler IQ), special abilities, measures of academic achievement, time-on-task, age and level of schooling. The stated aim for this aspect of the theme in its first year was to contribute to the understanding of the concept of intelligence and its development through education.

During the second half of the triennium the focus moved more towards the investigation of the structure and function of the actual processes underlying intelligence, thinking, problem solving and learning. Individual differences in cognitive and metacognitive processes, cognitive style variables and their relation to strategy choice in problem solving, thinking and independent learning were investigated in a variety of groups and task situations. More recently, more personal variables such as motivation, interest, emotional factors and self-image were included in the research.

Dr Helga Rowe
Principal Research Fellow
Theme 3 Coordinator

The products of the empirical studies conducted within this cognitive-science-oriented aspect of the theme include the development of an initial model of human problem solving which combines cognitive processes and motivational, emotional and other personal factors. This model accounts for individual differences in terms of the problem-solving strategies used by individuals. It is capable of predicting problem-solving achievement in terms of success, failure and giving up on well-defined tasks of many kinds. A major finding is that solvers and non-solvers actually make use of the same strategies, but that they use them differently. Solvers use strategies more intelligently and strategically. The model will be tested further during the next triennium and the research will be extended to problem solving of ill-defined tasks in complex and uncertain situations. In other words, the empirical research conducted during the first triennium provides a basis for its extension to investigate truly higher-order thinking during the second triennium.

John Izard's investigations into spatial abilities are also continuing. As can be seen in the publications section of this volume, the empirical and applied research in this theme has yielded a considerable number of chapters in books, articles in refereed journals, and papers presented at conferences.

Another product of this theme is the workshops conducted for primary, secondary and special education teachers on thinking and learning, which have resulted from both the ACER research and the synthesis and application of current theoretical frameworks developed by others. These have led to the revision of some instructional materials and methods used by teachers, and the modification of some learning environments.

The third year of the triennium saw an increased cross-fertilisation and some collaboration between the staff working under this theme and Theme 4: Education and Technology. Two small projects of collaboration with colleagues at the University of Melbourne and Telecom Australia also began towards the end of the triennium. These will continue in the new triennium.

In summary, it can be said that over the triennium the research perspective within the theme broadened in four significant ways: (1) the empirical research has moved from a psychometric orientation to a cognitive science one; (2) the emphases are moving from simpler to higher-order thinking skills; (3) the focus on cognitive factors has broadened to include their interaction with personal, motivational and classroom processes; and (4) the work is becoming more interdisciplinary.

Highlights of the triennium in Theme 3 have included the very successful ACER International Seminar on Intelligence, held in Melbourne from 24 to 26 August 1988, our contributions to the XXIV International Congress of Psychology held in Sydney from 28 August to 2 September 1988, and contributions of three academics who spent their sabbatical leave working within this theme.

The Seminar on Intelligence was the ACER Council's contribution to mark the Australian Bicentennial. It was a scientific meeting aimed at disseminating and integrating the most promising results of current and most recent research on intelligence, its measurement and improvement. Speakers from 11 different countries participated. Approximately 300 registrants heard the debate between 12 invited prominent researchers in the field, chaired by Helga Rowe, and were able to ask questions in the plenary sessions each morning. The afternoons contained four streams of papers in usual conference style. Professor Glen Evans (Department of Education, University of Queensland) and Dr Susan Chambers

(Department of Psychology, Deakin University) spent the first half of 1989 at ACER. Professor Hans Aebli (Professor of Psychology and Education, University of Berne, Switzerland) worked with us from February to June 1990. We were most fortunate to have the advice and collaboration of these colleagues.

Altogether the first triennium of this theme has been exciting and productive. I think it has laid the foundations for further developments in our efforts to contribute to the understanding and training of better habits of thinking, problem solving and learning.

Helga Rowe
Theme Coordinator

Theme 3 Projects
Other ACER Staff in the Theme: John Izard, Barry McGaw, Laurance Splitter.

Projects during 1989-90:

Cognitive Processes
Learning Processes in Different Environments
Spatial Abilities
Philosophy for Children

Theme 4: Education and Technology

Ms Liddy Nevile
Research Fellow
Theme 4 Coordinator

In 1987 the Australian Council for Educational Research formally entered the arena of educational computing. ACER's adoption of Education and Technology as a theme reflected calls for investigations of such things as the value of word processors, and the effects of computers on girls. To many, these seemed to be pressing problems.

Anxiety about this was developing, however, from two points of view. Some felt that the computer's role should be evaluated precisely because some grand claims were being made for this innovation in a world where cynics had seen 'too many other innovations'. Others believed that the computer was so fundamentally different from any previous innovation that we should not seek to close quickly on the role it might have. The differences lay in expectations. The former group thought that what was happening should be evaluated, while the latter thought that standard evaluation would not give a fair account of what might happen. The latter group agitated for new ways of using computers, new types of school activities based on computers.

ACER joined those who said it was too soon to ask such questions or to attempt much formal evaluation of computers in education because there were no examples yet of the type of computing environments in which the potentially most beneficial applications could be developed. To create these, ACER turned towards the development of a 'school of the future' concept.

This terminology might have seemed pretentious so the name 'Sunrise' was adopted. The focus of Sunrise was to be learning, not computers. The question: What sorts of learning could take place in a school with computers? was to replace: What can the students learn from or about the computers? What sort of school setting should be developed to maximise the opportunities and what sort of school activities should be promoted?

The form of Sunrise would not be fixed. It would be developed and shaped through the experiences of those engaged in it. The vision was of new ways of doing things - not simply ways that things might be done, perhaps better or more cheaply, without a computer, but ways that capitalise on the power of the computer.

Since 1988, three schools have been involved. First, one class and the teachers from Princes Hill Secondary College spent the equivalent of one day a week working in a Sunrise School established in the Museum of Victoria in a venture jointly undertaken by ACER and the Museum of Victoria. Then the Principal of Methodist Ladies' College (Melbourne), in his words, 'picked up the challenging gauntlet thrown down by Sunrise'. In 1989 there was one Sunrise class at MLC, in 1990 four and in 1991 there will be ten more. In 1989, the Queensland Department of Education decided to work with the ACER Sunrise project. The aim was to confront, in at least one major project, the growing frustration that computers should be able to do more. The Queensland Sunrise Centre was established at Coombabah State Primary School in 1990 and, with funding from the Queensland Department of Education, ACER appointed Michael Ryan as a Research Fellow based in Brisbane to conduct the research program associated with that new centre.

What has happened within the Sunrise Project by the beginning of 1990 is more than had been contemplated originally. ACER had hoped that one Sunrise School with some students on a part-time basis would provide the research data for the work of the project. In fact, there are two major centres, and a closely-connected community in which ACER will now be able to undertake some research of the kind apparently not yet possible back in 1988.

The design for the Sunrise projects has been informed by a number of other smaller projects undertaken within the Education and Technology theme in the triennium. A relationship between ACER and the *Boxer* educational computing environment project at the University of California at Berkeley has led to a number of exchange visits and some *Boxer* research is now being commenced in Melbourne in conjunction with colleagues at RMIT and the University of Melbourne.

Telecom is one of several major sponsors who have supported the work in this theme. Three international scholars are able to visit ACER for each of two years and to participate in a national televideo conference as part of the Telecom Sunrise Fellows Scheme. Professors diSessa (University of California - Berkeley) and Abelson (Massachusetts

Institute of Technology) are the scholars in 1990 and Professor Glaser (University of Pittsburgh) and Dr Noss (University of London) are expected early in 1991.

Liddy Nevile

Theme Coordinator

Theme 4 Projects

The Sunrise School - A School of the Future
ACER Staff: Barry McGaw, Liddy Nevile, Michael Ryan

A Swiss professor of psychology and education, Hans Aebli, visited ACER on study leave in early 1990. He remarked one day that he was greatly puzzled by an omission from educational debate in Australia: 'Where are the **Theme 5: Teachers in Australian Society** teachers? Your debates in this country are teacher-free.' He did not mean that teachers did not participate in educational debate. Rather, he had concluded that debates about educational reform in Australia paid too little attention to the key role that teachers play in the educational process.

Certainly, there has been only limited research on teachers as an occupational group in Australia. This is somewhat surprising, if for no other reason than the numerical significance of teachers. More than 200 000 Australians are employed as teachers, and teaching is by far the largest occupation for which higher education is a prerequisite. For this reason alone the teaching profession is an important area for research. An even stronger justification for research on teachers, however, comes from their key role in the effective functioning of schools and classrooms. As Aebli had implied, until more is known about the factors that shape teachers' knowledge, attitudes and behaviour, efforts at educational reform in this country will be ineffective.

Dr Phillip McKenzie
Research Fellow
Theme 5 Coordinator

When this theme area was first developed, one of its major objectives was to improve the information base about Australian teachers. Another was to contribute research-based perspectives to areas of emerging policy importance. At that time there were indications that concerns about educational quality would lead to increasing attention on teachers, their recruitment, professional training, and work. As well, there were signs that teachers themselves were becoming concerned about the long-term status and prospects of teaching as a career. In this context it seemed that ACER could play a useful role by undertaking policy-relevant research on the Australian teaching profession. Although a number of earlier ACER studies had examined various aspects of teachers and teaching, this theme provided the first opportunity for teachers as a group to be a focus of ACER research.

The theme area was conceptualised as involving studies in three inter-related areas: the context of teaching; teacher education; and teachers' work. It commenced in July 1987 with two projects, Teacher Appraisal, and Australian Teachers' Careers. These projects were developed after a lengthy consultative process that had sought to identify key policy

issues which related to teachers. Both projects were conducted in a similar manner. ACER acted as research coordinator and provided resources to support contributions from a broad range of academics, teacher union officials, and representatives of Education Ministries. This collaborative approach enlarged the pool of resources that ACER could draw on, and provided a means of identifying future research priorities. The projects appear to have been well received. The book on teacher appraisal has sold more than 2 000 copies, and the book on teachers' careers has attracted considerable advance interest.

As the theme area developed and ACER's involvement in research on teachers became better known, we were successful in attracting several commissioned projects. The most substantial of these was the Discipline Review of Teacher Education in Mathematics and Science. ACER was the host institution for this project, which was undertaken during 1988 and 1989 for the Commonwealth government. The research commissioned by this review, the information that it collected and the recommendations that it made are likely to be major influences on the development of teacher education in this country.

Another study commissioned by the Commonwealth government was the Challenges to Teachers Arising From Increased Retention of Students. This study, which was conducted in 1989 and 1990, had a particular focus on identifying the professional development needs of teachers. A similar focus is also evident in the fifth and remaining theme project, Teachers' Professional Craft Knowledge. This project, which is jointly funded by ACER and the Schools Council of the National Board of Employment, Education and Training, is continuing into the 1990-93 triennium. This study represents a slight shift towards research that is more closely focussed on teachers' work in schools. To reflect this orientation, the theme area has been retitled Teachers and Teaching for the new triennium, and Dr Margaret Batten has been appointed Theme Coordinator.

This theme has also involved commissioning publications in significant areas that it was not possible to include in ACER's own research program. Three such books are currently in preparation, dealing with teachers' professional development, the inter-relationship between teacher unionism and Australian education, and the social origins of Australia's teachers.

The five projects conducted under Theme 5 in the 1987-90 triennium have involved a substantial contribution from approximately ten researchers either employed by ACER or seconded to it from other academic institutions. A further 30 people drawn from higher education, teacher unions and Education Ministries have written pieces for the books that have already been published or are now in preparation. The project budgets have totalled around $1 million, of which 80 per cent has been in the form of commissioned research. It is probably too early to tell whether this program of research on Australian teachers has had much impact. It is clear, though, that much still remains to be done.

Phillip McKenzie
Theme Coordinator

Theme 5 Projects

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
The Challenges to Teachers Arising From Increased Retention of Students
    ACER Staff: Margaret Batten, Doug McCurry, Cora Thomas, Graeme Withers

Measurement Division

Dr Geoff Masters
Assistant Director
(Measurement)

The considerable expansion of the Measurement Division that occurred early in 1989 was followed in 1989-90 by a period of consolidation. The research and development program of the Division during 1989-90 centred around the development and exploration of novel forms of student assessment; the practical implementation of item response theory; the expansion of ACER's range of commercial tests; the maintenance of existing scholarship and selection testing programs; and the continuing provision of ACER's test development, administration and scoring services.

Student Assessment: Research and Development

Listening and reading tests in Chinese, Japanese, Modern Greek, Italian, German and French were developed for the first time at ACER in a project directed by Susan Zammit. As part of a pilot study, tests were administered to a sample of some 9000 secondary students across Australia and New Zealand, providing important new information on second-language learning in schools. This project, which issues certificates to participating students recording their listening and reading proficiency levels, will be extended to all secondary schools in 1991. The language magazines, voice tapes and question booklets developed through this project in 1990 will be made available for purchase from ACER.

Innovative assessment materials for studying Year 5 and Year 9 students' conceptions in science were developed and investigated in a project directed by Ray Adams for the Victorian Ministry of Education. These materials, known as Tapping Students' Science Beliefs (TSSB), consist of a set of open-ended questions and tasks designed to assist teachers in the exploration of children's understandings in science. The TSSB materials are part of a package of science assessment tasks to be administered to a sample of several thousand students in Victorian government, Catholic and independent schools in 1990 to provide a statewide picture of students' science beliefs. The package includes a set of practical science tasks for Year 5 and Year 9 students developed by Malcolm Rosier.

The development of novel forms of questioning was also a feature of the Basic Skills Testing Program (BSTP) directed by Jan Lokan. Through this project, Margaret Forster, John Lindsey and Brian Doig developed test items that capitalise on optical marksense technology and explored new ways of using this technology. The test items they developed allow students to record their answers by drawing paths on maps, colouring drawings of

objects, and underlining errors in other students' writing. Within the constraints of machine scoring, the basic skills program is demonstrating the possibility of freeing standardised testing from the limitations of traditional multiple-choice questions.

Forms of assessment that might be used as alternatives to traditional paper and pencil examinations in systems of 'competency-based' assessment in the professions were considered in the report of another study commissioned by the National Office of Overseas Skills Recognition, undertaken by Doug McCurry. The report of this study comes at an important time in the Commonwealth Government's development of national occupational skill standards and related competency-based approaches to training and assessment.

On a different front, and in the context of an increasing national and international interest in system-level assessment, reporting and accountability, ACER in cooperation with the New Zealand Council for Educational Research was commissioned by the Australasian Cooperative Assessment Program to prepare a paper on methods of student assessment that might be used in association with national 'subject profiles' for schools. The proposed subject profiles would identify a limited number of aspects of each school subject and, for each aspect, a sequence of achievement levels. The development of cooperative assessment and reporting frameworks of this kind for use in different Australasian education systems is likely to be an area of continuing research interest within the Division.

Item Response Theory

A second focus of the work of the Division during 1989-90 concerned the practical implementation of item response theory (IRT). Background research was conducted into the properties of several estimation procedures for IRT models using a data simulation and analysis software system developed by ACER staff. The results of this research into conditional, unconditional and marginal maximum likelihood estimation procedures are being prepared for publication.

Work was begun during 1989-90 on an interactive test analysis system that will eventually replace the set of computer programs used for test analysis at ACER. Khoo Siek Toon and Ray Adams developed preliminary versions of the system for mainframe and personal computers. This work will extend the capabilities of ACER's existing test analysis

programs and will result in a software system that will be available for purchase by other agencies.

In addition to this work aimed at facilitating the practical implementation of IRT methods, valuable experience in the application of item response theory was gained through a number of ACER programs. These included the Basic Skills Testing Program (BSTP), the Australian Language Certificates, and cooperative work with the standards monitoring projects of the Queensland Department and Western Australian Ministry of Education. In each of these testing programs, IRT methods were used to construct and describe student achievement levels. In the case of BSTP, separate IRT-based teacher and parent reports were prepared for each of the 112 000 students tested in 1989-90. Schools also received detailed reports on the performances of their students. Jacqui Barley and Suzanne Jones were instrumental in ensuring that this major program ran smoothly.

The reports of these testing programs will provide useful illustrations of the application of item response theory in practical testing contexts. The first of these reports, *Profiles of Learning*, describes the results of the 1989 Basic Skills Testing Program in New South Wales and shows how IRT methods were used to analyse test performances and to construct individual reports. *Profiles of Learning* was designed by Andrew Stephanou to present the results of the 1989 BSTP testing in a highly-readable and widely-accessible format.

During 1989-90, IRT-based report forms developed for use in testing programs also were incorporated into ACER's commercial test range. Brian Doig adapted the form used to report BSTP results to teachers and made it a part of a new series of mathematics tests to be known as the 'Diagnostic Mathematics Profiles (DIAMAP)'. Other IRT-based reports will appear as part of ACER's new commercial tests of basic skills and second-language learning.

Commercial Product Development

Work on the adaptation and norming of psychological tests for sale by ACER continued in 1989-90 and was the responsibility of Molly de Lemos. A number of projects came to fruition during the year. New materials included the Australian adaptation and norms for

the fourth edition of the *Stanford-Binet Intelligence Scale*, the revised Australian manual and norms for the *Standard Progressive Matrices*, the *Revised Jenkins Non-Verbal Test* with manual and norms, two new forms of the *ACER Word Knowledge Test* (Forms E and F) with manual and norms, and the multiple-choice form of the *ACER Test of Reasoning Ability*.

In the area of personnel selection testing, the new *ACER Applied Reading Test* (Forms A and B) was completed by Ian Woff and became available for purchase from ACER. Work continued in 1989-90 on the development and norming of new forms of the *ACER Mechanical Reasoning Test*, the *ACER Speed and Accuracy Test*, *Advanced Test AL*, *Sixteen Personality Factor Questionnaire* and on new mathematics tests for use in personnel selection. Continuing work on the *Mechanical Reasoning Test* includes an investigation of the antecedents and correlates of mechanical reasoning ability.

Progress was also made in the development of new educational test materials for sale. The *Diagnostic Mathematics Profiles* (DIAMAP) will be released late in 1990. Work continued on the Australian adaptation of *Keymath*, a new set of classroom review tests in algebra, and new tests for the English Skills Assessment battery. Graeme Withers began work on a new concepts test for primary school children.

Scholarship and Selection Testing Programs

The year 1989-90 saw growth in the largest of ACER's scholarship testing programs, with a number of new schools entering the program. This testing program, which is run by a cooperative of schools, is directed by Mike Sorrell and now makes use of a large number of overseas testing sites. ACER's other scholarship and selection testing programs - directed by Mike Sorrell, Jo Jenkinson, Helen Clayton and George Morgan - continued to operate smoothly through 1989-90. Jo Jenkinson is carrying out a validity study of the NSW Selective and Agricultural High Schools Entrance Tests based on a sample of 1989 applicants.

Testing Services

During 1989-90 ACER's Test Development Services were contracted to develop and review tests for a number of major government and private organisations. Typical contracts

were for assistance in developing selection and licensing tests. Jo Jenkinson began work on a contract to develop a battery of tests for student selection into one Australian medical school.

Corrie Calegari administered ACER's Test Administration Service. This service administers tests provided by the Educational Testing Service in Princeton for secondary students and graduates seeking admission to colleges and universities in the United States.

ACER's Test Scoring Services provides a computerised scoring and analysis service that can be used by any organisation for its own tests, ACER tests, and some overseas psychological instruments. This service was administered in 1989-90 by Jacqui Barley and Helen Clayton.

Geoff Masters

Assistant Director (Measurement)

Measurement Projects

Testing Programs
    Australian Cooperative Entry Program
      ACER Staff: John Lindsey, Doug McCurry, Mike Sorrell
    Australian Scholastic Aptitude Testing Pogram
      ACER Staff: Helen Clayton, Doug McCurry, George Morgan
    Cooperative Scholarship Testing Program
      ACER Staff: John Lindsey, Doug McCurry, Mike Sorrell
    NSW Basic Skills Testing Program
      ACER Staff: Jacqui Barley, Brian Doig, Margaret Forster, Suzanne Jones,
      Khoo Siek Toon, John Lindsey, Jan Lokan, Geoff Masters
    NSW Selective and Agricultural High Schools Entrance Testing Program
      ACER Staff: Jo Jenkinson
    Victorian Science Achievement Study
      ACER Staff: Ray Adams, Brian Doig, Malcolm Rosier
    Australian Language Certificates
      ACER Staff: Geoff Masters, Susan Zammit

Test Publication and Studies
    Educational
        ACER Staff: Brian Doig, Jan Lokan, Geoff Masters, Graeme Withers
    Psychological
        ACER Staff: Marion de Lemos
    Personnel
        ACER Staff: Ian Woff
    Career Guidance
        ACER Staff: Jan Lokan

Testing Services
    Test Development Services
        ACER Staff: Mike Sorrell, Ian Woff
    Test Administration Services
        ACER Staff: Corrie Calegari
    Test Scoring Services
        ACER Staff: Helen Clayton

	60	61	62	63	64	65	66
Masters	✓	✓			✓	✓	✓
Zammit	✓	✓	✓	✓	✓		
Lockele, Judith			✓	✓	✓		
Ford				✓	✓		
Congdon			✓	✓	✓	✓	✓
Barley				✓			
Firth				✓	✓	✓	✓
McQuan							

Centre of Philosophy for Children

Dr Laurance Splitter
Centre Director

The year 1989-90 saw increased activity and a consolidation of growth in the Centre. The Centre conducted a series of workshop and 'awareness sessions' describing cognitive, metacocognitive and affective aspects of Philosophy for Children. Many of these were held at ACER but new areas of interest in Philosophy for Children were also established, including:

- the Northern Territory (workshops in Darwin and Alice Springs and a commitment from the NT Government to introduce Philosophy for Children into Territory schools)

- Sydney and rural NSW (including the establishment of the NSW Philosophy for Children Association)

- Brisbane and southern Queensland (3 day workshop for teachers)

- S. E. Asia (based around a 5 day workshop at the Institute of Education, Singapore, sponsored by a joint government initiative).

The Northern Territory and rural NSW workshops were funded by the Disadvantaged Schools Program.

Further activities included:

- a one day conference on the Teaching of Critical and Creative Thinking, held at the University of Melbourne and organised by the Centre. Speakers included the Victorian Education Minister and the Centre Director, and the conference attracted more than 200 participants

- a six-day workshop for professional philosophers and teacher educators, conducted by the Centre and funded by the the Department of Employment, Education and Training ('Projects of National Significance') and Australian Airlines. This workshop generated a team of support staff for introducing Philosophy for Children around Australia

- papers to the Australasian Association of Philosophy, the Australian Curriculum Studies Association, Australian College of Education, and the International Council for Philosophical Inquiry with Children (Taipei) annual conferences

- establishment of the Victorian Philosophy for Children Association.

Australian Airlines provided further sponsorship to the Centre, in the form of concessional travel up to $15,000.

Laurance Splitter
Centre Director

Significant developments in the processing and dissemination of information produced by the Unit have been achieved during the 1989-90 project year.

Library and Information Services

We took the first steps toward the integration of our database and catalogue production. By implementing the UNESCO CDS/ISIS software on our micro-VAX network, complete in-house production of the *Australian Education Index* (AEI) and the *Bibliography of Education Theses in Australia* has been achieved. This has enabled us to contain the costs of hard-copy index production, at the same time as achieving better management of this valuable data. Loading the whole of the AEI database is about to be undertaken and this will provide the basis for automation of our Library operations.
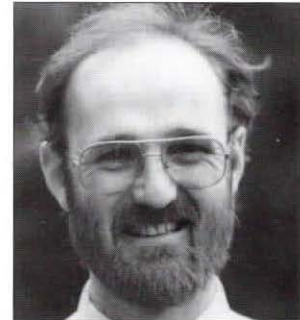
Mr Peter Mathews
Head of Library and
Information Services Unit

The significant overlap between the library collection and material indexed for AEI since 1979 will provide an efficient mechanism for commencing retrospective conversion of the Library's existing card catalogue. In the near future all ACER staff will be able access the database from their own computer terminals.

A major development in the dissemination of the AEI information has been our participation in a cooperative venture, coordinated by the RMIT Library, to produce the AUSTROM CD-ROM disk. Other participants in the project include the National Library of Australia, the Australian Institute of Family Studies and the Australian Institute of Criminology. While CD-ROM does not provide the sophisticated searching capability of online database networks, like AUSINET which hosts the AEI file, its attraction, especially

in universities, colleges and schools, lies in its ability to provide computer-based access to very large databases for a fixed cost, using relatively simple technology. At ACER, we see AUSTROM as complementing access provided to the *Australian Education Index* data through other media. Early indications are that AUSTROM is selling well.

A new direction for the Library and Information Services Unit is our move to take up publication of the *Australian Education Directory*. Formerly published by the Commonwealth Department of Education, this valuable reference has been completely revised and updated to reflect the major changes that have occurred in Australian educational organisations since the last edition was produced in 1986. The 1990 *Australian Education Directory* will be published early in the 1990-91 project year and annual editions will be follow. We expect this to be a valuable addition to ACER's information services.

Peter Mathews
Head of Library and Information Services Unit

Library and Information Service Projects
Library
    ACER Staff: Denise Balint, Anne McKechnie, Peter Mathews, Elspeth Miller,
        Lula Psiliakos, Rachel Salmond, Betty Segar
Database Development
    ACER Staff: Julie Badger, Peter Mathews, Elspeth Miller

ACER provides activities for development and training both within and outside Australia in order to make ACER expertise in research, testing, and resource selection and use, more widely available. The Development and Training Division undertakes **Development and Training** ACER development programs for Asia and the Pacific, and arranges workshops and conferences for teachers, administrators, psychologists, and parent-educators.

Dr John Izard
Assistant Director
Development & Training

In 1989-90 development and training activities included attachment programs in Australia for Solomon Islands careers teachers, and workshops in the Solomon Islands on career education and on assessment, as part of the Solomon Islands Secondary Education Project. Funding for these activities was provided by the Australian International Development Assistance Bureau (AIDAB). Five careers teachers from the Solomon Islands spent a two-month attachment at ACER. While at ACER they visited agencies which provided information about careers, attended meetings of careers teachers and, by arrangement with Victoria College, participated in the careers teacher education program conducted by Ms Vona Beiers. They visited country and city schools to participate in careers education programs and prepared student text material and teacher guidelines for use in the Solomon Islands. As part of the same project Ms Meredith Shears and Ms Beiers conducted their third series of careers teacher workshops in Honiara. Dr Kevin Piper and Mr Kevin Purcell also conducted a number of assessment workshops in Honiara for other teachers.

Three-month attachment programs funded by the R.E. Ross Trust under its program of Development Assistance for the South Pacific were provided for Ministry of Education officers - two from Vanuatu and one each from Western Samoa and Tonga. Mr Abel Olul, Mr Jacques Sese, Mr Uatisone Poka, and Mr Vise Pongi visited country and city schools, analysed curriculum documents with particular reference to assessment issues, and prepared reports for use in their own countries.

A seven-week course on school-based assessment was provided in Australia for 18 key curriculum officers and teachers from Malaysia, with funding provided by the World Bank. The course included visits to schools and other education facilities in two States as well as a study program at ACER. The Malaysian group returned to their country with

draft guidelines for in-service training on school-based assessment for Malaysian school teachers.

Within Australia, teachers and psychologists can choose from a range of courses on test administration and interpretation to ensure that instruments published or distributed within Australia by ACER are used wisely. Courses conducted have included the *Tests of Reading Comprehension (TORCH)*, the *Neale Analysis of Reading Abilities (Revised)*, the *Myers-Briggs Type Indicator (MBTI)*, and the *Stanford-Binet* (4th edition). Similar courses are offered on educational materials to teachers, psychologists, and parent-education leaders. Courses conducted have included *Living in a Stepfamily*, Leadership Skills for *STEP, Next STEP* and *STEP/Teen*, and *Talk Sense to Yourself: A program for children and adolescents.*

ACER collaborated with the Faculty of Special Education and Paramedical Studies, Victoria College to arrange the first national conference on behaviour problems. The conference, Educational Programs for Children and Adolescents with Emotional and Behavioural Problems in Regular or Special Schools, received strong support from all education systems, and participants established a Behaviour Problems Network with co-ordinators in each State or Territory. ACER has published an associated quarterly *Newsletter* (edited by John King) on a subscription basis. Selected papers from the conference (edited by Christopher Szaday) have been published in a book *Addressing behaviour problems in Australian schools* by ACER. ACER, in conjunction with the Department of Counselling and Disability Studies, School of Education, University of Western Sydney, Nepean, has planned the second national conference for July 1990 in Westmead, NSW.

In addition to scheduled courses ACER provides special purpose training under contract to Government Departments, Statutory Authorities, and other agencies. The National Office of Skills Recognition (formerly the Council for Overseas Professional Qualifications) has commissioned a series of item-writing workshops for members of Expert Panels.

Staff development activities within ACER included regular meetings of the PC-User Group and the Mass-11 Gold Key Group, and specialist workshops for general staff (usually outside ACER).

John Izard
Assistant Director (Development and Training)

Development and Training Projects
Solomon Islands
>   *ACER Staff*: John Izard, Kevin Piper
>   *Colleagues:* Vona Beiers (Victoria College), Kevin Purcell (Consultant),
>   Meredith Shears (Consultant)

Ross Trust Fellowships
>   *ACER Staff:* John Izard, Kevin Piper

Malaysia
>   *ACER Staff:* Brian Doig, John Izard, Kevin Piper, Mike Sorrell,

National Conferences on Behaviour Problems
>   *ACER Staff:* Win Boyce, John Izard, John King,
>   *Colleagues:* John Elkins (University of Queensland), Susanna Richardson (University
>   of Western Sydney, Nepean), Christopher Szaday (Victoria College)

Tests and Materials
>   *ACER Staff:* Judy Eppinger, Joanna Goldsworthy, Jo Jenkinson, John King,
>   Marion de Lemos, Peter McCrossin
>   *Colleagues:* Sandra Cutts (Lilydale Early Childhood Development Program),
>   Meredith Fuller (Consultant), Ross Harrold (University of New England),
>   Patricia Larsen (Consultant), Frances Thorsen (Victoria College), Ruth Webber
>   (Institute of Catholic Education), Jeffrey Wragg (University of Wollongong)

Consultant Services

Mr Peter Jeffery
Head
Consultant Services Division

Education

Mr Peter Jeffery, Head of the Consultant Services Division, was overseas on combined SSP and business travel from August to November inclusive. Mr John King was acting Head of Division during that period. Mr Jeffery's SSP was spent at American Guidance Services and the business travel included 20 of the psychological test publishers in the USA and the UK for whom ACER distributes in Australia.

The program in 1989-90 was characterised by an increased output of materials published by ACER for the education area, including research titles and general books. A few educational tests were published and these have enjoyed a great deal of popularity. There is a need for more new educational testing publications. The Division mounted a broad program of workshops and direct mailings to maintain the strong sales of the TORCH: Tests of Reading Comprehension, the Neale Analysis of Reading Revised and publications including the Talk Sense to Yourself program. A comprehensive Educational Resources Catalogue was prepared during the period of this annual report, though it was published just after the end of the year.

The following conferences were among those attended in 1989-90:

> Victorian Primary Principals Conference
> Catholic Education Curriculum Conference (Sydney)
> Behaviour Problems Conference (First Annual)
> Psychology Regional Conference (Brisbane)
> Australian Linguistic Society Conference
> Australian Psychological Society Conference
> Australian Remedial Education Association Conference

At each of these some sort of ACER exhibit or display was mounted for the benefit of the participants in that conference. Consultants also took part in the development and training Division workshop program, providing not only the talent for a number of the activities but also the organisational management.

The number of subscribers to set: research information for teachers declined in late 1989 to below 2000. A vigorous promotional campaign mounted in early 1990 restored the number

to 2500 and subscription is still increasing. Problems in the list management have also been attended to.

Personnel and Human Resources Management

Mr Ian Kendall left ACER's employ in August 1989 after considerably restoring the services and product range offered to the personnel and human resource management client group.

Mr Peter McCrossin took up his appointment in January 1990 and shortly afterwards the Personnel Catalogue was published, and widely distributed to psychologists and personnel training managers in industry. This market segment includes four groups of products (1) Personnel and Human Resources Testing materials, (2) Personality Test materials for use in industry and other organisations, (3) The Myer-Briggs Type Indicator (MBTI) material, and (4) Adult Career Guidance materials.

The Personnel and Human Resources market needs careful management in order to yield satisfactory results. It has the potential to generate significant income for ACER, particularly from newer ACER occupational tests for use in selection and the popular MBTI materials. The newer computer-based tests that we distribute from overseas, covering areas of personality testing, occupational stress and adult career guidance, are creating considerable interest and have the potential to earn an excellent income from the industrial market. The provision of only one consultant for the Personnel and Human Resources area means that ACER's resources for this market segment are spread thinly, but nevertheless Peter McCrossin quickly became involved in the development and training Division work for two Myers Briggs Type Indicator Accreditation courses, each of which ran for five days. Mr McCrossin has travelled interstate to attend to the needs of clients in other parts of Australia and attended several Career Guidance seminars in Victoria and interstate to display ACER's materials, particularly SIGI PLUS.

General Psychology

During 1989-90 a problem with staffing in this area developed when Mrs Sue Bell resigned and could not readily be replaced. Other staff in the Division have extended themselves in an attempt to cover the absence of a psychologist to handle general enquiries in the

psychology area and the pro-active marketing of products from this area, however the range and number of products is quite staggering, and it is imperative that the vacancy be filled as soon as possible.

It is products in this clinical and general area that face paramount competition from Harcourt Brace Jovanovich (Psychological Corporation). Not only did we lose key products sourced from that organisation when HBT ceased to distribute through us, but we now also face the increasing prospect of new products being published and marketed by them in competition with our general psychology cluster of items from other (mostly overseas) sources. ACER publishes relatively few products for general psychology.

It has been difficult to maintain the constant presence of ACER at the Test Advisory Committee (New South Wales Guidance Branch) but we have managed with various members of staff attending the monthly meetings. It is important to keep the Test Advisory Committee well informed of new tests and materials available from ACER. We have also done as much as possible in the mounting of displays and exhibits at various conferences throughout the country, but of course it has not been possible to conduct the workshop program for Development and Training Division in the general psychology area.

The release of the Stanford Binet Fourth Edition Australian Adaptation has been widely approved by Australian psychologists. They are also very interested in the availability of computer software programs for reports on a variety of psychological test instruments. A new catalogue for psychologists was prepared and distributed with appropriate pricing information and the publication of the newsletter PsychNews continued.

Mrs Christine Martin (Consultant Psychologist Tests) was employed part-time to prepare the 1990 Psychological Catalogue, which was published in June.

Parent Education

In 1989-90 five leadership skills courses in Parenting programs were offered to people wanting to implement programs in the community. This work was managed by the Consultant Services Division on behalf of the Development and Training Division. ACER was chosen in 1989-90 to establish a Parent Education Database of courses and resources

and to publish a newsletter of the Parent Help Program initiated by Community Services Victoria. Carole Finnigan was appointed Project Officer in May 1990. ACER also contributed to a Community Services Victoria report on training requirements for parent education in Victoria in a TAFE Certificate Course currently being developed. As a result of our 1989 publications in the field of Parent Education, ACER attracted several related manuscripts during the year and many of these will appear in 1990-91. Marketing preparation has been made for these. Existing products from Australia and overseas are being marketed strongly through direct mail and other mechanisms.

Test Library (Resource centre)

In January 1990 ACER discontinued the operation of the ACER Consultant Services Division Resource Centre (Test Library) as the service was deemed to be uneconomic and could not be retained. The lending of materials which ACER publishes and distributes on approval or for inspection prior to purchase has been continued. Academic studies continue to be facilitated by special arrangement for people wishing to work in the resource centre, but general loans of test materials are no longer available.

Peter Jeffery

Head of Consultant Services Division

ACER Publishing
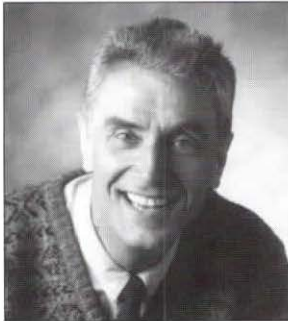
Mr Ian Fraser
Publishing Manger

During 1989-90 our new book publishing increased over the previous year: 15 new titles or editions were released. The Theme series was launched with two important new books: *Literacy for a changing world* and *Being numerate: What counts?* Both look likely to find a niche in the tertiary education market as well as to appeal to classroom teachers and opinion makers.

We were also very pleased to associate with the Tasmanian Department of Education to publish *Pathways of language development,* and to release *Profiles of learning* - the end product, in vivid two-colour format, of the NSW Basic Skills project. *Profiles* is replete with useful information for teachers and parents.

The distribution of ACER's books to the book trade, through Oxford University Press, is now on a solid footing at the end of its first year. Assisted by our own marketing efforts, OUP is ensuring that our books get into more hands.

Test publishing was more vigorous than it has been for some time. Several test packages were entirely redesigned in attractive modern formats and released with new data. The *ACER Word Knowledge* and *Reasoning Ability* tests were in this category; so too were the *Jenkins Non-Verbal* and *Standard Progressive Matrices* tests. Two new test packages filled the needs of special groups: the *Applied Reading Test* for use in apprentice and trainee selection, and a battery of *Modern Occupational Skills Tests (MOST),* first released by NFER-Nelson in the United Kingdom, and now published in editions to suit Australian conditions. *MOST* will interest personnel managers and employers generally.

Ian Fraser

Publishing Manager

Books and Kits

Ainley, John et al. (1990). *Primary schooling in Victoria* (ACER Research Monograph No. 37). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 064 1.

> Big differences show up between schools in extent to which students experience 'adventure in learning'. But most students feel good about quality of their school life.

Brennan, Barrie (Ed.) (1990). *Continuing professional education: Promise and performance* (Australian Education Review No. 30). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 056 0.

First critical appraisal of continuing professional education - with implications for all professions. Features five professions: school teaching, accounting, engineering, law, occupational therapy.

Carpenter, Peter & Western, John (1989). *Starting a career* (ACER Research Monograph No. 36). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 052 8.

About transition from school to work, and school to higher education. School leavers followed from final school year to four years down the road. Marked differences between men and women.

Christie, Frances (Ed.) (1990). *Literacy for a changing world* (Theme Monograph 1/1). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 059 5.

Fresh look at the basics - book that looks anew at basic idea of literacy. Nine skilled writers try to answer question: How are schools meeting challenge of providing those vital literacy skills?

Department of Education and the Arts, Tasmania (1990). *Pathways of language development.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 066 8.

English language guidelines for primary and secondary classrooms - practical approach to language teaching and means of building up accurate picture of each child's language development.

Edwards, Peter (1989). *Seven keys to successful study.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 053 6.

Book that helps students (secondary, postsecondary) to: organise, plan, set goals; read efficiently, skim, scan; understand graphics; prepare notes; recall for study and exams.

Gillet, Susan & Bernard, Michael E. (1989). *Reading rescue* (2nd edn). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 054 4.

Full of excellent ideas and procedures to help parents overcome their children's reading problems - especially by improving parent-child relationship and attitudes towards reading.

Johnston, Gerald L. (1990). *Social studies: In search of a rationale* (Australian Education Review No. 29). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 058 7.

Study of society contentious ever since it found place in school curriculum. Author looks at issues and tries to come up with rationale. What is right balance between citizenship training and subject content? he asks.

Masters, Geofferey et al. (1990). *Profiles of learning.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 067 6.

Best picture yet of literacy and numeracy learning in Australian schools. Book takes reader through how tests were written and how results were reported to teachers and parents: based on large basic skills testing program in NSW.

Passy, Jane (1990). *Cued articulation.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 063 3.

Devised by the author, Cued articulation is an ingenious way of cueing sounds of English. Each of 49 sounds in phonological system has separate hand sign.

Passy, Jane (1990). *Cued vowels.* Hawthorn: Vic: Australian Council for Educational Research. 0 86431 062 5.

Links with Cued articulation and describes 23 standard English vowel sounds. Books have developed from

use with children having severe speech and language disorders; now used successfully in schools and other settings.

Richards, Llyn & Jeffery, Peter (Eds) (1989). *Best of set: Discipline*. Hawthorn: Vic: Australian Council for Educational Research.

Fourteen special features on controversial topic of discipline. set, a joint NZCER-ACER venture, brings readable research to the classroom teacher.

Sturman, Andrew (1989). *Decentralisation and the curriculum* (ACER Research Monograph No. 35). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 051 X.

One of few books to attempt evaluation of administrative reform on classroom practice. Author looks at four levels of decentralisation.

Szaday, Christopher (Ed.) (1990). *Addressing behaviour problems in Australian schools*. Hawthorn: Vic: Australian Council for Educational Research. 0 86431 060 9.

Four major themes: (1) behaviour problems in context of integration and children's rights, (2) state initiatives to cope with misbehaviour, (3) programs in use, and (4) segregated special settings.

Willis, Sue (Ed.) (1990). *Being numerate: What counts?* (Theme Monograph 1/2). Hawthorn: Vic: Australian Council for Educational Research. 0 86431 061 7.

Can new context be given to mathematics in order to offer new definitions of numeracy? Writers' aim not to raise number of people labelled 'numerate', but to ensure young people are taught numeracy skills.

Tests

Australian Co-operative Entry Program Series V
Candidates' Information Bulletin, Registration Form, Test Booklets 1-3, Written Expression Test (6 components).

Australian Scholastic Aptitude Test Series R
Candidates' Information Bulletin, Sample Collection of Questions, Test Booklets R1, R2, Writing Test Booklets R1, R2 (6 components).

Blinkhorn, S.F. et al. (1990). *Modern occupational skills tests* (battery of 9 tests and associated items: 39 components). Hawthorn: Vic: Australian Council for Educational Research.

California psychological inventory. Rev. Australian edition (1990). Hawthorn: Vic: Australian Council for Educational Research.

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).

de Lemos, Marion M (1989). *Jenkins non-verbal test* (5 components). Hawthorn: Vic: Australian Council for Educational Research.

de Lemos, Marion M. (1989). *ACER Word knowledge tests, forms E and F* (6 components). Hawthorn: Vic: Australian Council for Educational Research.

de Lemos, Marion M. (1990). *ACER test of reasoning ability* (5 components). Hawthorn: Vic: Australian Council for Educational Research.

NSW Basic Skills Testing Program
Year 3: Stimulus, Test Booklet, Practice Answer Sheet, Practice Sheet Instructions to Teachers,

Teachers' Handbook, State Report.

Year 6: Stimulus, Test Booklet, Practice Answer Sheet, Practice Sheet Instructions to Teachers, Teachers' Handbook.

Report for Parents, 'How Results on the Basic Skills Tests Have Been Reported'.

(13 components).

NSW Selective and Agricultural High School Entrance Tests

English Language Test, Mathematics Test, General Ability Test, Two Answer Sheets

(5 components).

Raven, J.C. (1990). *Standard progressive matrices.* Manual: Marion M.de Lemos. Hawthorn: Vic: Australian Council for Educational Research.

Stanford Binet intelligence scale (1990). Number of components to enable Australian adaptation. Manual supplement: Marion M. de Lemos. Hawthorn: Vic: Australian Council for Educational Research.

van den Berg, Janine M. & Woff, Ian (1989). *ACER applied reading tests, forms A and B* (6 components). Hawthorn: Vic: Australian Council for Educational Research.

Periodicals

ACER Newsletter (Editor: John King)

No. 66 (July 1989), No. 67 (October 1989), No. 68 (April 1990).

Australian Education Index (Editors: Julie Badger, Elspeth Miller)

Vol. 32 No. 2 (June 1989).

Australian Journal of Education (Editor: Millicent Poole)

Vol. 33 No. 2 (August 1989), Vol. 33 No. 3 (November 1989), Vol. 34 No. 1 (April 1990).

Psychological Test Bulletin (Editor: Jo Jenkinson)

Vol. 2 No. 1 (May 1989). Vol. 2 No. 2 (November 1989).

set: research information for teachers (Editors: Llyn Richards, Peter Jeffery)

No. 2 1989, No. 1 1990.

Other Publications

ACER Annual Report 1988-89

ACER Books

ACER Current Projects 1989-90

Catalogue of Psychological Tests

Educational Resources Catalogue

Parent Education Catalogue

Youth in Transition: Calendar, Mathematics Test, English Test, Questionnaire

Reprints

Reprints of 164 publications (books, test components, catalogues etc.) were published.

Rights and Agreements

Foreign rights to ACER titles have been sold to:

Editorial Pax-Mexico, Mexico (Spanish-speaking rights to *Skilled Interviewing*, Daphne Keats; and to *The Parenting Puzzle*, Ramon & Susan Lewis).

Longman, UK (*Talk Sense to Yourself*, Jeffrey Wragg).

Rosier, M.J. (1989). Results from the Second International Science Study: Some sex differences for Australian 14-year-old students. *Research in Science Education*, **18**, 205-210.

Rosier, M.J. (1990). International comparisons in science education. *Studies in Science Education*, **18**, 87-104.

Rosier, M.J. (1990). A summary of Australian results for the Second International Science Study. *Unicorn*, **16**(2), 119-125.

Rosier, M.J. & Symington, D.J. (1990). What Year 5 teachers say they teach. *Investigating (Australian Primary Science Journal)*, **6**(2), 10-12.

Rowe, H.A.H. (1989). Teaching thinking and learning skills. Sydney: Catholic Education Office. *Curriculum Issues*, No.15 (November 1989). Whole number.

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

Splitter, L.J. (1989). Philosophy for Children and Social Education. *Ethos: Journal of the Victorian Association of Social Studies Teachers Inc.*, 39-52.

Splitter, L.J. (1989). Species and Identity. *The Philosopher's Annual*, Vol.XI, 143-186. (Reprinted from *Philosophy of Science*, **55**, as one of the ten best philosophy articles of 1988).

Williams, T. (1989). Participation in education. *set*, **2**.

Williams, T. & Carpenter, P. (1989). A comment on Toomey's 'Effects of private schooling'. *Education Research and Perspectives*, **16**, 101-103.

Williams, T. & Carpenter, P. (1990). Private Schooling and Public Achievement. *Australian Journal of Education*, **34**:1 pp.3-24.

Withers, G.P. (1990). 'I can do it!' - Student self-esteem and literacy assessment. *Education Victoria*, February, 1990, 5-6.

Withers, G.P. (1990). Profiling and Records of Achievement in Australian schools and systems - a personal view. *Curriculum Perspectives*, **10**(1), 12-15.

Withers, G.P. (1989). Three versions of 'Critical Literacy'. *English in Australia*, **89**, 72-79

Withers, G.P. (1989). Unlocking the Great Secret: Writing about Thinking. *set*, **2**, Item 6.

Book Chapters

Ainley, J. (1990). School laboratory work: some issues of policy. In E. Hegarty-Hazel (Ed.), *The student laboratory and the science curriculum*, (pp.223-241). New York: Routledge.

Jenkinson, J. (1989). Teacher preparedness for integration. In G. Marks (Ed.). *Each an individual: Integration of children into regular schools*, (pp. 79-84). Geelong, Vic.: Deakin University Press.

Masters, G.N. & Mislevy, R. (1990). New views of student learning: Implications for educational measurement. In Frederiksen, N. et al. (Eds), *Test theory for a new generation of tests*. New York: Erlbaum.

McGaw, B. (1990). The role of research and development in educational change. In National Board of Employment, Education and Training, *Taking charge of change: Restructuring the education industry*. Toowoomba: University College of Southern Queensland.

McKenzie, P.A. (1990). Information needs for decision making at the school level. In J. Chapman (Ed.), *School-based decision making and management*. Basingstoke, UK: Falmer Press.

Piper, K. (1989). School-based evaluation as a contribution to school improvement: An Australian

perspective. In D. Reynolds, B. Creemers, & T. Peters (Eds), *School effectiveness and improvement*. Cardiff and Groningen: University of Wales and Rion Institute for Educational Research.

Rosier, M.J. (1989). Introduction to the Second International Science Study. In B. Honeyman (Ed.), *Science education and the quality of life*, (pp. 176-177). Canberra: ASTA/ICASE.

Rosier, M.J. (1989). Students' views of learning science in Australia. In B. Honeyman (Ed.), *Science education and the quality of life*, (p. 182). Canberra: ASTA/ICASE.

Rowe, H.A.H. (1989). Individual differences in learning. In Peter Langford (Ed.), *Educational psychology - An Australian perspective*. Melbourne: Longman Cheshire.

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

Tests

de Lemos, M. (1989). *Jenkins Non-Verbal Test (1986 Revision): Interim Manual*. Hawthorn, Vic.: Australian Council for Educational Research.

de Lemos, M. (1989). *Stanford-Binet Intelligence Scale (Fourth Edition): Australian Supplement*. Hawthorn, Vic.: Australian Council for Educational Research.

de Lemos, M. (1989). *Standard Progressive Matrices: Australian Manual*. Hawthorn, Vic.: Australian Council for Educational Research.

de Lemos, M. (1989). *ACER Word Knowledge Test (Forms E and F): Manual*. Hawthorn, Vic.: Australian Council for Educational Research.

de Lemos, M. (1990). *ACER Test of Reasoning Ability: Manual*. Hawthorn, Vic.: Australian Council for Educational Research.

Morgan, G., & McCurry, D. (1990). *Report on the 1989 Australian Scholastic Aptitude Test: ASAT Series S*. Hawthorn, Vic: ACER. (mimeo)

van den Berg, J. & Woff, I. (1989). *ACER Applied Reading Test (Forms A and B): Interim Manual*. Hawthorn, Vic.: Australian Council for Educational Research.

Periodicals

Doig, B.A. (Series Ed.). (1990). *GIFT.5-10*.

Doig, B.A. (1990). Rasch Analysis Applied to the NSW Tests of Basic Skills, *Assessment Matters*, vol.3, no.1, Assessment Issues Interest Group of Australia, p.9.

Doig, B.A., (1990). Rasch Down Under, *Rasch Measurement SIG Newsletter*, vol.4, no.1. American Educational Research Association, pp.92-98.

Jenkinson, J. (Ed.). (1989 November) *Psychological Test Bulletin*. vol. 2, no. 2, Nov. 1989 (Special Issue: The Raven's Progressive Matrices: A Cross-Cultural Perspective); vol.3, no.1, May 1990.

Jenkinson, J. (Ed.). (1990, May). *Psychological Test Bulletin*, vol.3, no. 1

Conference Papers

Ainley, J., Sheret, M. and Paxman, M. (1989). *Between the idea and the reality: students proceeding from Year 10 to Year 11.* Paper presented to the Annual Conference of the Australian Association for Research in Education, Adelaide, Australia.

Banks, D.K. & Rosier, M.J. (1989, November). *A model of achievement in science at the upper primary level in Australia.* Paper presented at the Annual Conference of the Hong Kong Educational Research Association.

Doig, B.A. (1989, July). *The statistical component of primary bachelor of education courses.* Paper presented at Key Centre for Statistical Sciences (University of Melbourne) Statistical Education Unit Conference.

Doig, B.A. (1990, July). *New approaches to mathematical assessment.* Paper presented at the 13th Biennial Conference of the Australian Association of Mathematics Teachers, Hobart, Australia.

Izard, J.F. (1989, July). *Modelling student performance on assessment tasks involving three-dimensional models.* Paper delivered at the Fourth International Conference on the Teaching of Mathematical Modelling and Applications, Roskilde, Denmark.

Izard, J.F. & Griffin, P.E. (1989, November). *Spatial tests for tertiary selection: A pilot study.* Paper delivered at the 15th International Conference of the International Association for Educational Assessment, Sydney, Australia.

Izard, J.F. (1990, June). *Assessing achievement with non-pencil-and-paper tasks.* Paper delivered at the Fifth South East Asian Conference on Mathematics Education, Bandar Seri Begawan, Brunei Darussalem.

Izard, J.F. (1990, June). *Developing spatial skills using three-dimensional puzzles in the classroom.* Workshop conducted at the Fifth South East Asian Conference on Mathematics Education, Bandar Seri Begawan, Brunei Darussalem.

Izard, J.F. (1990, July). *Issues in the assessment of non-objective and objective examination tasks.* Paper delivered at the 16th International Conference of the International Association for Educational Assessment, Maastricht, The Netherlands.

Jenkinson, J. (1989, September). *Restrictions on the use of psychological tests: Who should use what?* Paper presented at the 23rd Annual Conference of Australian Psychological Society, Hobart, Australia.

Jenkinson, J. (1990, July). *Test user qualifications: A data base for preventing test misuse.* Symposium discussion. 22nd International Congress of Applied Psychology, Kyoto, Japan.

de Lemos, M. (1989, September). *The Stanford-Binet Intelligence Scale (Fourth Edition): Report on the Australian adaptation and trial test program.* Paper presented (in absentia) at the 23rd Annual Conference of the Australian Psychological Society, Hobart, Australia.

Masters, G.N. (1989, November). *Selection for higher education and the reform of the senior secondary school: In search of a working compromise.* Keynote Address, 15th Annual Conference of the International Association for Educational Assessment, Sydney, Australia.

Masters, G.N. (1990, February). *New directions in testing for the classroom teacher.* Invited Public Address, Institute of Education, Singapore.

Masters, G.N. (1990, May). *Planning tomorrow's tests at ACER.* Keynote Address, Annual General Meeting of the South Australian Institute for Educational Research, Adelaide, Australia.

McKenzie, P.A. (1989, November). *Secondary school size and the allocation of teacher time*. Paper presented at the Annual Conference of the Australian Association for Research in Education, Adelaide, Australia.

Nevile, L. (1989, July). *Redefining mathematics education in a Sunrise classroom*. Paper presented to the Fourth International Conference for Logo and Mathematics Education, Jerusalem, Israel.

Nevile, L. (1989, September). *Introduction to Boxer*. Paper presented at the Australian Computers in Education Conference, Canberra, Australia.

Piper, K. (1989, July) *National curriculum: Prospects and possibilities*. Paper presented to the Australian Curriculum Studies Association Conference, Canberra, Australia.

Piper, K. (1989, July) *Social competence and the core curriculum*. Input paper prepared for the workshop on New Directions in Social Education. Australian Curriculum Studies Association Conference, Canberra, Australia.

Piper, K. (1989, November) *Riders in the chariot: The teacher's role in curriculum development and reform*. Paper presented to the Malaysian-Australian Colloquium on Educational Reform, Kuala Lumpur, Malaysia.

Rowe, H.A.H. (1988, August). *Using a good mind well*. Paper presented to the 24th International Congress of Psychology, Sydney, Australia.

Rowe, H.A.H. (1989, March). *Creativity*. Keynote address presented to the first Australian Conference on Knowledge Engineering, Melbourne, Australia.

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

Rowe, H.A.H. (1989, September). *The teaching of creative and critical thinking: What can teachers do?* Paper presented to the Conference on The Teaching of Critical and Creative Thinking, Melbourne, Australia.

Rowe, H.A.H. (1990, February). *Intelligence: Can it be changed?* Invited keynote address at Meeting of Private School Deputies, Brighton, Victoria, Australia.

Rowe, H.A.H. (1990, May). *Assessing handicapped adults and children*. Invited keynote address. Qld Education Department Workshop for Psychologists, held 22-26 May, 1990, Forestry House, Brisbane.

Sheret, M., Ainley, J., & Foreman, J. (1989). *Students' perceptions of curriculum choice and favourable attitudes towards their school experience*. Paper presented to the Annual Conference of the British Educational Research Association, Newcastle, England.

Sheret, M., Ainley, J. & Paxman, M. (1989). *Characteristics of Year 11 students who initially did not intend to stay on beyond Year 10*. Paper presented to the Annual Research Seminar of the New South Wales Department of Education, Sydney, Australia.

Splitter, L.J. (1989, July). *Thinking our way through the curriculum*. Paper presented to the Australian Curriculum Studies Association Annual Conference, Canberra, Australia.

Splitter, L.J. (1989, July). *Philosophy for Children: Implications for philosophy at tertiary level*. Paper presented to the Australasian Association of Philosophy Annual Conference, Canberra, Australia.

Splitter, L.J. (1989, August). *Teaching thinking skills: The classroom as a community of inquiry*. Paper presented to the Annual Conference of the Australian College of Education, Melbourne, Australia.

Splitter, L.J. (1989, September). *Children and thinking: The central focus of schooling*. Paper presented to the Conference on the Teaching of Critical and Creating Thinking, Melbourne, Australia.

Splitter, L.J. (1990, June). *The critical thinker: Abstraction is the key*. Paper presented to the Conference on Gifted Children at Griffith University, Brisbane, Australia.

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Withers, G.P. (1990). *Verification of teacher-assessed performance indicators*. Canberra: ACT Department of Education (mimeo).

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Income and Expenditure

ACER's income from all sources rose by 13 per cent in 1989-90 to exceed $6m for the first time. Contract income increased by 38 per cent over last year to almost $2.4m. Income from sales of services rose by 20 per cent to over $1m. Gross Profit earned from trading fell by 20 per cent from $1.67m last year to $1.34m in 1989-90. Interest earned on deposits was almost $63 000, which reflects an improved operating cash position during the year as well as interest earnings on the building fund. The growth in income this year is better than the inflation rate and so represents a continuing real growth for the organisation, after the 44 per cent growth last year.

Financial Report

Mr Robert Moore
Business Manager

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

Source	1989-90	1988-89
Income		
Core Research and Development Grant	1 279 580	1 114 156
Research and Development Contracts	2 390 329	1 731 030
Testing Services	1 057 284	880 764
Trading Gross Profit	1 335 564	1 674 711
Other Income	62 742	0
Total	6 125 499	5 400 661
Expenditure		
Core Research and Development Program	1 169 007	1 130 493
Research and Development Contracts	2 285 116	1 592 347
Testing Services	846 875	727 689
Trading and Other Services	1 612 698	1 821 863
Total	5 913 696	5 272 392
Operating Surplus	211 803	128 269
Provision for Accommodation	211 803	120 000
Funds Added to Reserves	0	8 269

The annual core grant to ACER from the Commonwealth, State and Northern Territory governments in 1989-90 was $1.28m compared with $1.11m last year. The core grant has been provided on a formula basis since 1977-78 and increased annually in line with rises in academic salaries, except for 1988-89 when the grant was frozen at the 1987-88 level. In 1989-90 the grant was restored to the formula base.

In 1989-90 an operating surplus of $211 803 was achieved, which is 3.5% of the total income of $6 125 499. This is an encouraging improvement on levels of surplus in previous years, but remains quite modest and needs to be raised further to fully provide for the anticipated loan repayments for the construction of ACER's new building at Clayton, and for the rebuilding of ACER's cash reserves. The operating surplus in 1989-90 has allowed the allocation of the $211 803 to the Building Fund.

Table 2: Contributions to ACER Core Grant

Source	1989-90	1988-89
Commonwealth	636 700	554 781
New South Wales	223 200	196 115
Victoria	166 800	148 783
Queensland	107 400	90 762
Western Australia	60 500	50 097
South Australia	55 100	52 758
Tasmania	17 600	15 867
Northern Territory	6 100	4 993
Adjustment previous year	6 180	0
Total	1 279 580	1 114 156
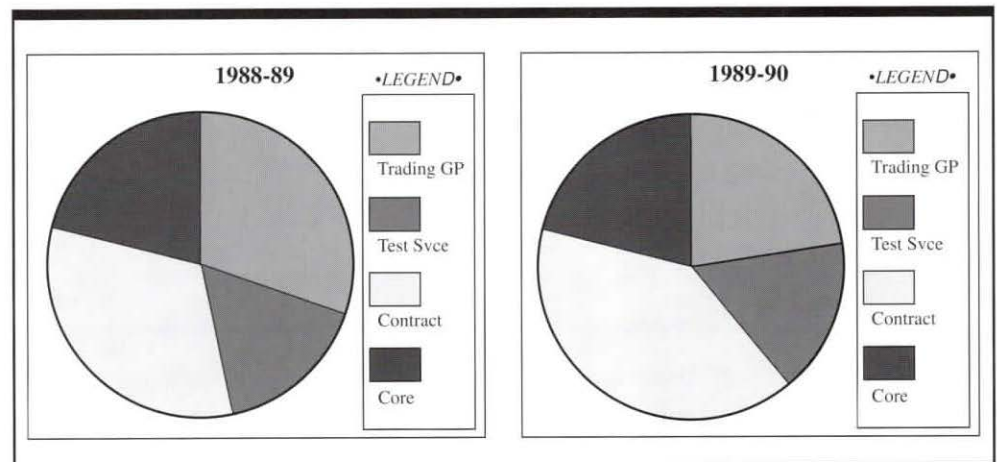
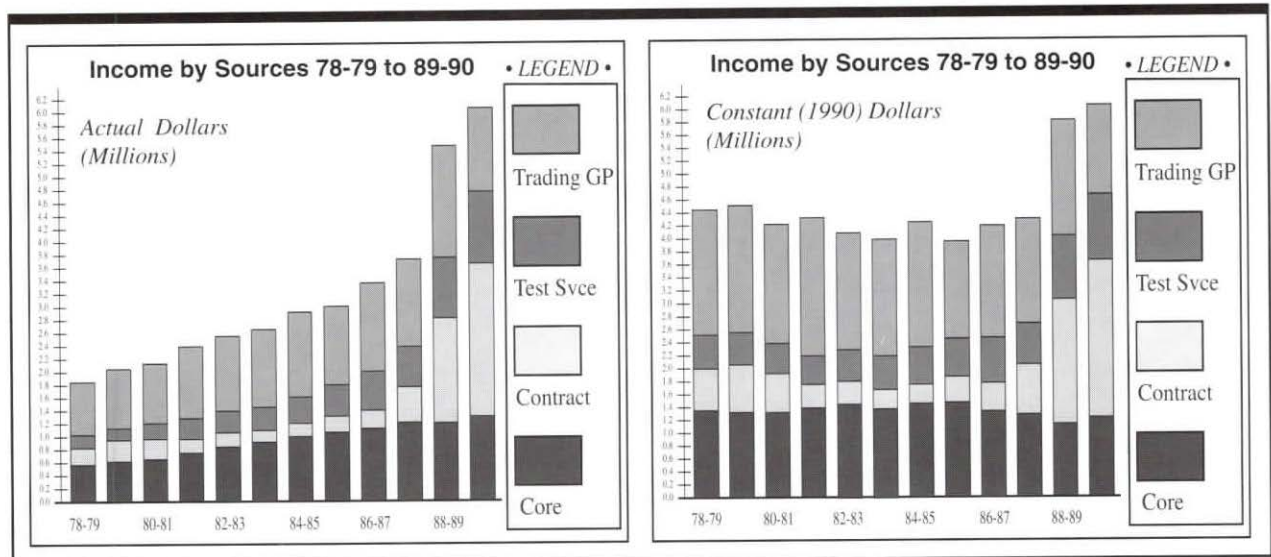**Fig 2 : Relative Contributions to ACER Income from Various Sources**

The relative contributions from the various sources of income are shown in Figure 2. In 1989-90, as in the previous year, the core grant has provided 21 per cent of ACER's income, having declined from around the 33 per cent of prior years as income from other sources has increased. Contract income has risen to 39 per cent whilst the share of Trading Gross Profit has declined to 22 per cent, mainly due to the loss of a major agency during the year, the lost sales being only partially replaced by gross profit earnings from the growth in sales of ACER and other products.

The contributions to the annual core grant for 1988-89 and 1989-90 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 New South Wales and Commonwealth governments, with several projects from each source.

Table 3: Sources of Income for Contract Research and Development

Source	1989-90	1988-89
Australian Education Council	12 014	0
Australian International Development Aid Bureau	31 190	0
Australian Research Council	21 675	23 200
BHP	5 000	0
Commonwealth Department of Employment, Education and Training	740 107	776 576
Community Services Victoria	5 035	0
Japan Foundation	8 249	0
National Office of Overseas Skills Recognition	4 000	0
NSW Department of School Education	1 159 518	597 891
Queensland Department of Education	49 600	0
Ross Trust	30 400	0
Telecom	3 000	0
Victorian Ministry of Education	113 850	148 164
World Bank via Malaysian Ministry of Education	44 529	0
Other	162 162	185 199
Total	2 390 329	1 731 030

Income by Sources 78-79 to 89-90

Actual Dollars (Millions)

• LEGEND •

Trading GP

Test Svce

Contract

Core

78-79 80-81 82-83 84-85 86-87 88-89

Income by Sources 78-79 to 89-90

Constant (1990) Dollars (Millions)

• LEGEND •

Trading GP

Test Svce

Contract

Core

78-79 80-81 82-83 84-85 86-87 88-89

Fig 3 : Trends in Income by Source from 1979-80 to 1989-90

The long-term trend in income from various sources is shown in Figure 3. The left-hand graph in that figure shows the trend in actual dollars. It shows the core grant rising in line with academic salaries, except in 1988-89 when it was frozen at the previous year's level. Contract income declined over the first half of the decade and has risen since from $0.28m in 1985-86 to $2.39m in 1989-90. 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 to $1.67m in 1988-89, and then to $1.33m in 1989-90.

The right-hand graph in Figure 3 presents the same long-term trend, but in constant (1990) dollars. This graph makes clear that over most of the decade the total income simply remained constant, the growth in actual dollars only keeping 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 real growth in the last two years 1988-89 and 1989-90 is evident from the graph. Trading gross profit has

declined slightly in real terms over the decade with the lowest contribution in real terms in 1989-90. Service income has risen consistently in real terms.

Balance Sheet

The balance sheets at 30 June 1989 and 30 June 1990 are shown in Table 4. The building fund has risen by $681 803 through the receipt of $470 000 which was the balance of government contributions towards the improvement of ACER's accommodation received in 1989-90 and the allocation of $211 803 from ACER's 1989-90 operating surplus. Cash at Bank is $121 485 higher and $492 337 is held in Commonwealth Bank Bills. Debtors have increased by $86 402. Whilst trade debtors have decreased by $166 084, service income debtors have increased by $234 261 reflecting both the growth in service income and payment for some large service projects after 30 June 1990.

Robert Moore

Business Manager

Table 4: Balance Sheet at 30 June

	1990	1989
Accumulated Funds and Reserves		
Accumulated Funds	456 648	456 648
Scientific Research Fund	36 365	33 178
Other Funds	20 184	20 184
Asset Revaluation Reserve	1 251 872	1 251 872
Building Fund	1 169 343	487 540
	2 934 412	2 249 422
Represented by -		
Fixed Assets		
Freehold Premises	1 696 923	1 704 923
Furniture and Equipment	122 549	91 603
Library	20 000	20 000
Computer	207 049	226 520
Motor Vehicle	19 264	22 136
	2 065 785	2 065 182
Current Assets		
Cash on Hand	500	500
Cash at Bank	505 852	384 367
Sundry Debtors	883 670	797 268
Bank Bills	492 337	0
Expended Building Fund	214 697	0
Stock	595 827	576 904
	2 692 883	1 759 039
Total Assets	4 758 668	3 824 221
Current Liabilities		
Sundry Creditors	686 776	833 107
Amounts Received in Advance	572 997	216 741
Provision for Annual Leave	260 502	197 339
Provision for Long Service Leave	293 981	285 350
Provision for Supplementary Superannuation	10 000	10 000
	1 824 256	1 542 537
Deferred Liabilities		
Provision for Long Service Leave	0	32 262
Total Liabilities	1 824 256	1 574 799
	2 934 412	2 249 422

President

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    Manager, Ashwood School Support Centre, Ministry of Education, Melbourne,
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Diane Koglin
Gladys Perkins

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Christine Higgins (Assistant Manager)
Customer Services
Wendy Birrell
Val Henderson
June Manuel
Mattie Smith
Mailing Services
Gwen Dobell
Printing Services
Colin Lowry
Receptionist
Bea Sciberras
Store and Despatch
Peter Gilder
Steven O'Neill (Senior Despatch Officer)
Michael Shaw

Ian Smith
John Wilson (to July 1989)

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Lindsay Monsborough

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Ian Fraser, MA *Aberdeen* (Publishing Manager)
Roger Seddon (Production Manager)
Jill Taylor, BSc, DipEd *Melb.* (Senior Editor)

Report from the Institutes of Educational Research

Since the first Institutes of Educational Research were established in 1930, each Institute has sent a representative to the governing body of the Australian Council for Educational Research. During 1989/90 major changes were made to the governing Council which included the reduction in size of the ACER Council from 26 to 14 members. This Council re-organisation resulted in a major reduction of the representation from the State Institutes of Educational Research from eight to three members on the ACER Council.

The participation of representatives from the Institutes of Educational Research, however, has been retained through the formal establishment of a Standing Committee of the ACER Council which is to meet at least once a year. This IER Standing Committee had the following membership at its first meeting in April, 1990.

Dr Leo Foster	*(VIER) - Chair*
Dr Alan Watson	*(NSWIER)*
Dr Neil Cranston	*(QIER)*
Dr Len King	*(WAIER)*
Mr Rob Slater	*(SAIER)*
Dr Heather Felton	*(TIER)*
Dr Gypsy Durling	*(NTIER)*
Dr Sid Bourke	*(Newcastle Branch of NSWIER)*

The Standing Committee elects three members to the ACER Council and initially the Standing Committee elected the following Institute Representatives for one, two and three year terms, with subsequent members to be elected for three years.

Dr Len King	*October 1990*
Dr Leo Foster	*October 1991*
Dr Alan Watson	*October 1992*

Dr Heather Felton replaced Dr King for a three year term to commence from the ACER Council meeting in December, 1990.

The Institutes of Educational Research have maintained programs of seminars, lectures, workshops and panel discussions on educational issues and the dissemination of educational research. These activities are supported by active memberships of the Institute and are best illustrated by some of the highlights of their 1990 programs.

Membership of Institutes of Educational Research

The membership of the Institutes comprises a diverse range of educational professionals including school practitioners, academic staff from tertiary institutions and education officers from the major teacher employing authorities. Some Institutes also have a number of graduate students within their membership. Generally, membership levels have remained stable despite the retirement of many long term members. The size of membership indicates a particularly strong involvement of educators in the less populous States and Territory in Australia.

The current financial memberships of each of the Institutes are shown below:

NSW	Newcastle Branch	Victoria	Queensland	Western Australia	South Australia	Tasmania	Northern Territory
161	38	80	63	140	50	130	71

Highlights of Programs: 1989-90

NSWIER

● Two conferences each with the theme, *The Prevention of Reading Failure*, were attended by 520 and 460 participants respectively. The keynote addresses were given by Professor Marie Clay and Dr Peter Freebody. Workshops on the practicalities of reading instruction were concluded.

● The annual dinner address by Professor Peter Karmel on *The Dawkins Revolution: The Future of Tertiary Education in Australia.*

QIER

● The 1989 J.A. Robinson Memorial Lecture presented by Professor Diana Davis, Professor of Education, James Cook University of North Queensland on *Listening: A Natural Environment?*

- Addresses on school organization and administration by Mr Eric Bolton, a visiting Senior Inspector from the United Kingdom and Mr John Dwyer, Chief Inspector, Department of Education, Queensland.

SAIER

A program of meetings which featured the following current issues and topics:

- Education Policy Shifts and Research

- Planning Tomorrow's Tests at ACER

- A look at the Nursing Career Structure as a Case Study for the Teaching Profession

- Progress Review of the Writing, Reading Assessment Project (WRAP), which is the South Australian program for a Literacy Audit, involving government and non-government schools.

TIER

A program of addresses which featured local researchers and visitors from other Australian States and overseas. Local speakers Lyndsay Farrell, Dr Susan Groundwater-Smith and visitor Stephen Rowland (Sheffield University) focussed on innovative ways of investigating professional practice; other overseas speakers Eric Bolton (Senior chief Inspector and Head of HMI in England), Dr Bill S (University of Leeds), David Hargreaves (Professor of Education, Cambridge University) and Charlaan Simon (Teacher, Arizona USA) along with local education staff Daryl Fishe, Jennifer Glenister and Peter Brooker covered topics of the historical basis of literacy, implications of restructuring of Education in England, qualitative research methods and an exploration of the use of fiction in investigating professional practice.

VIER

- The presentation of the 56th Frank Tate Memorial Lecture by Dean Ashenden, on aspects of restructuring teacher's work.

- The John Smyth Memorial Lecture by Dr Patrick Griffin on the topic *Monitoring Children's Growth Towards Literacy*.

- The first of the Laurie Shears Research/Education Seminars on links between

education and industry was attended by representatives of business and industry along with education administrators from tertiary institutions.

WAIER

- The fourth annual Research Forum attracted 36 presenters and an attendance of 84 participants. The main address was presented by Dr Alan Bain, University of WA who was the winner of the WAIER's Early Career Award.

- A pre-selection panel discussion with the Federal Minister of Employment, Education and Training, Mr John Dawkins attracted an audience of 70.

NTIER

A number of meetings focussed on aboriginal education and literacy. These presentations included:

- Improving Opportunities for Aboriginal Children to Learn in N.T. Urban Classrooms : Dr Stephen Harris, NT Department of Education.

- Number of Aboriginal Children in the Northern Territory without Access to Schools: Anne Richards, N.T. Department of Education.

- Adult Literacy Programs in the N.T. Prisons System: Julie Knight, N.T. University.

PUBLICATIONS

All Institutes of Educational Research are involved in publishing reports of lectures, research activities and occasional papers. Regular journal publications include *Queensland Researcher*, and *VIER Bulletin*. The WAIER re-instated its publishing component during 1989-90 and the NSWIER issued two publications during this period, namely:

- *The Integration of Children with Handicaps into the Regular School* edited by James Ward and Cecily Ferguson

- *Education Towards 2000: Common Values in a Diverse Society* edited by Alan Watson and Joe Relich.

CONCLUSION

This report illustrates the commitment of State Institute Executive Committees and their memberships to stimulating interest in educational issues and assisting in the dissemination of educational research.

The IER's now constituted as a formal Standing Committee of the ACER Council will continue to assist the promotion of ACER and its products and to identify future research activities which are seen to be of special relevance to educational practice.

Leo Foster
Convener
Representatives of Institutes of Educational Research