OECD REVIEW

EDUCATIONAL RESEARCH AND DEVELOPMENT POLICY IN NEW ZEALAND

EXAMINERS' REPORT

SEPTEMBER 2001

TABLE OF CONTENTS

INTRODUCTION

1. This review on New Zealand is the first OECD review of a member country's educational R&D policy. The Centre for Educational Research and Innovation (CERI) at the OECD has a long-standing experience in analysing the means and ends of how to improve the knowledge base for educational practice and policy-making and has published a number of report in this area as, for example, the CERI reports from 1995 and 1996 on "Educational Research and Development - Trends, Issues and Challenges" and "Knowledge Bases for Educational Policies"; and the recent work on "Knowledge Management in the Learning Society", from 2000.

2. The members of the review team were Secretary General Carl Tham, The Olof Palme International Centre, former Swedish Minister of Education and Science; Professor Martin Carnoy, Stanford University; and Professor Tom Schuller, Dean of Continuing Education, Birkbeck College. The review team was assisted by Principal Administrator Kurt Larsen, CERI/OECD. The review took place from the 19-23 March 2001.

3. Members of the review team would like to thank all those who participated in the review visit in New Zealand and gave generously of their expertise and time. We appreciated the hospitable, open and informative meetings that were held throughout the review process and the extensive documentation that each provided.

4. The views expressed in the report are those of the members of the review team and not necessarily those of New Zealand, the OECD or its Member countries.

EDUCATIONAL RESEARCH AND DEVELOPMENT IN NEW-ZEALAND: EXAMINERS' REPORT

PART 1

Background to the review

5. This is the first OECD review of a member country's educational R&D policy. This report therefore combines two functions. It reviews the policy of a specific country, New Zealand, and comes to some specific conclusions in relation to that country; but it is also exploratory, in the sense that this initial exercise can be used to refine and develop the approach for future reviews in other countries. Many of the questions we raise in this report are, we suspect, common across most OECD countries – in particular the relationship between proper educational research and policy-making. We owe our New Zealand colleagues a debt of gratitude for being the first participants in this series of reviews, and their willingness to help in developing the field.

6. The preparatory work for the review identified four main themes to be covered:

- National policies and agenda for educational R&D;
- Organisation and funding of the educational R&D system;
- Outcomes of educational R&D in terms of teaching and learning, and policy-making;
- Strategies for producer-user interaction.

7. These provided a useful framework within which to conduct the review. We have not structured the report simply according to these themes as such, but we relate many of our comments specifically to them.

8. The review also links to a parallel OECD exercise around knowledge management[1]. In line with OECD's overall mission this addresses the issue of how policies to support knowledge-based economies can be developed. Amongst other things it strongly implies that educational policies, including those on R&D, need to be located within a broader context, with a particular concern for the way knowledge is generated, validated and utilised across sectors. We refer to this at several points in the report.

9. We wish to make one thing clear from the outset. We are very aware of the size of New Zealand. It is not a large country, and its human resources are inevitably thinly stretched. Our analysis and recommendations do take this into account. If our recommendations appear ambitious it is because in our

1 . See OECD (2000), "Knowledge Management in the Learning Society", Paris.

judgement New Zealand both needs to make something of a quantum jump in its educational research policy, and is capable of it. We acknowledge that New Zealand has already begun to address these issues.

10. On UNESCO figures New Zealand has a very high fraction of its young people in post secondary education (63 percent in 1997), much higher than most European countries. The educational system as a whole is of good quality. At the same time, New Zealand invests far less in R&D of any kind than other developed countries, and has far fewer R&D personnel per million population than Australia and Western European countries**.** In other words, New Zealand is successful educationally, but is, by R&D standards, not becoming a knowledge economy.

11. In our brief (5-day) visit we spoke to a wide range of stakeholders: policy-makers in several different ministries; researchers in different roles from a number of institutions; union representatives; advisory body members; teachers from a primary school and a teacher college; details are included in Appendix 1. Inevitably there were others with whom it would have been useful to speak, but time was lacking. This report is therefore a synoptic view, and not in any sense a comprehensive analysis.

The New Zealand context

12. At a general level, New Zealand has a number of distinctive features, which shape its position on R&D.

Size and location.

13. New Zealand is a small country, with a population of less than 4 million. It has a well-developed education system, which has expanded and changed rapidly over the last decade, but its size places inevitable constraints on the volume and types of R&D which can be expected or aspired to. This is a matter of economic capacity but also of human resources; there simply cannot be enough researchers to cover even all the high research priorities in depth. The size factor is compounded by the country's geographical isolation. Even in these days of global instant communication, the fact that New Zealand is 3 hours flying time from the nearest neighbour inevitably reduces the level of natural interchange of information, ideas and people. New Zealand is therefore in a very different position from, say, a comparably-sized European country such as Denmark.

Economic structure

14. New Zealand has historically been, and remains, an economy which is heavily dependent on primary production. Its service sector is well developed, but it has never had a significant industrial sector. The country's R&D capacity has certainly been affected by this, since it has not been able to draw on the dynamism supplied elsewhere by industrial change and innovation. In quantitative terms, R&D expenditure as a percentage of GDP in New Zealand reached 1.1 per cent in 1997/98, which is low by OECD standards, and only 30 percent of all funds spent on R&D comes from the private sector[2]. Analysing the implications of this would go well beyond the scope of this report, but it constitutes a relevant background feature.

2 . New Zealand Ministry of Research, Science and Technology: "New Zealand R&D Statistics 1997/98".

Political and cultural change

15. Over the last decade and more New Zealand has engaged in political changes, which have had a major impact on the values and procedures characterising policy-making and practice. Central here has been the shift away from a society with a secure welfare foundation towards a strongly market-oriented system. These changes have been particularly evident in education. These are not matters of technical policy; they go to the heart of New Zealand society. The changes, e.g. the move to self-managing schools or competitive recruitment in higher education, appear to have been mainly driven by political conviction rather than evidence-based analysis; moreover they do not appear to have been accompanied by systematic evaluation of their impact. The emphasis on market solutions has made it harder to establish clear research priorities. Debate on future directions, and the appropriate role of marked systems is now opening up, which makes this review timely. Developing a tradition of research-based policy will take time.

16. Against this background, we see clear signs of a commitment to a strategic approach to educational R&D as a policy commitment. We have a strong sense of an evolving debate on educational priorities, and of a desire that this debate should be an open and inclusive one, involving policy-makers, researchers and practitioners. A major goal of this report is to give support and further impetus to this emerging trend.

17. The most direct evidence of this commitment (apart from the Ministry's willingness to participate in this review) is the Statement of Strategic Research Priorities: Directions and Opportunities**.** Here two strategic policy priorities are identified:

a. Reducing underachievement

b. Promoting excellence.

18. A foundation for developing the strategic approach has been laid with the commissioning of nine broad literature reviews [see appendix II]. The range encompassed is impressive, and provides a major input into any debate on future strategic directions. The process of commissioning is itself significant, since it involved drawing on international as well as domestic expertise - a laudable recognition of the need to make use of external research capacity.

19. The literature reviews have led on to a hierarchical structure for future educational research priorities, with three levels. The top level is comprised of three *themes: A*ddressing Underachievement; Building Professional Capacity; and Education for Economic and Social Achievement. Each theme is then broken down in to *Focus Areas*, and then *Strands.* It is worth reproducing this framework in outline (at the first two levels), in order to promote consistency in the debate – since the more that it is publicly available the more that stakeholders will have a common focus for their discussions - but also to enable identification of major gaps, which we shall contribute to in this report. As the work on these priorities is currently in progress, the final priorities might change.

Theme 1 Addressing Underachievement

Focus Areas: Early Foundation
Raising Achievement
Working with Diversity
Tertiary Participation and Achievement

Theme 2 Building Professional Capacity

Focus Areas: Stocktaking capability
Developing the Learning Profession

Theme 3 Education for Economic and Social Development

Focus Areas: Community Development
Lifelong Learning

20. The framework is rightly broad in its coverage. A comprehensive review would use it to map and evaluate existing research, in order to reach conclusions about the current state of play. Ours is a much more synoptic approach. What we can say at this stage is this (these three comments a.-c. can be taken into account as the work on the strategic priorities is still in progress):

a. there are some particularly obvious gaps, notably in post-compulsory education and lifelong learning – even though these figure in the themes;
b. there is a need for communication and collaboration (though not necessarily co-ordination), both within the education sector and between the education and other sectors;
c. the framework does not of itself generate the prioritisation required to give a strategic perspective; it will require active intersectoral dialogue and political support to achieve this.

PART 2

Scope and definition

21. The first issue which the review threw up was the definition of the field. There are several aspects to this:

- What counts as 'research', and how does this link to' development'?
- What is accepted as falling under the heading 'education'?
- How far is there consensus on this, and how is debate formulated?
- How do the policy and funding structures reflect this understanding?

22. These are issues, which would be applicable in most countries. The original OECD exercise which led to these reviews wrestled with definitional issues at some length[3]. In New Zealand they have specific salience.

23. On the first issue, we can map research against a hierarchy which leads from data to facts to knowledge to understanding (and then, sometimes, to wisdom). Data is important, whether quantitative or qualitative, and we have more to say about this below. But the use to which data is put, and then the reflection on it, is crucial if we are to talk convincingly of a 'knowledge society'. In other words, a knowledge society is not one which has accumulated mountains of facts, but one which knows how to sort them, make sense of them and act upon the sense it makes. A significant issue for us is how far the very substantial amounts of data being collected are effectively used. This is especially important given the difficulty of developing policies, which are based effectively on evidence and knowledge. We acknowledge that some progress have been made with the Education Indicators Framework, which has been created around three focus areas (early foundations, ready to participate and life-long learning). This Framework utilises quantitative and qualitative data from a wide range of sources that includes international and national system wide assessments and research and evaluation projects.

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[3] The eventual operational definition arrived at reads as follows:

"Educational R&D is systematic, original investigation or inquiry and associated development activities concerning the social, cultural, economic and political contexts within which educational systems operate and learning takes place; the purposes of education; the processes of teaching, learning and personal development of children, youth and adults; the work of educators; the resources and organisational arrangements to support educational work; the policies and strategies to achieve educational objectives; and the social, cultural, political and economic outcomes of education." (*OECD (1995), "Educational Research and Development: Trends, Issues and Challenges", Paris*).

24. Similarly, how do we divide 'research' from 'development'? The very phrase 'R&D' suggests a close link, even an umbilical one. But the relationship may not be simple. In our view the overall picture of R&D in New Zealand is skewed towards the D in ways which may disguise some research weaknesses.

25. The issue is one of balance. Within the overall effort put into 'research', is there an appropriate balance between fact- and statistic-gathering and the analysis and use of those data? In our view, there is some doubt as to whether the distinction (fuzzy though it is) is always appreciated in New Zealand. This has implications both for the kinds of research commissioned, and for the use made of the data. The R/D relationship poses a similar question of balance; in our view much of what appears to come under the heading 'research' is in fact development work, notably on assessment. This is not a question of being purist about research, and certainly not about ranking one activity above another; it is of clarifying the overall picture. Having noted this, we do acknowledge that there are efforts being made to address this issue, for example, the Strategic Research Initiative and the Education Indicators Framework.

26. There is a further aspect, of particular significance to New Zealand. We heard of the distinctive Maori approach to knowledge generally, and therefore to research. As we understand it (and this necessarily oversimplifies) this places great emphasis on the collective development, validation and use of knowledge, and on action-oriented modes of executing research. These are distinguished from individualised approaches to research, with weaker links to specific communities. This distinction could lead us into areas of deep epistemological debate, with a real possibility of fundamentally different paradigms. Here all we can do is encourage the strengthening and continuation an active and practical debate on different conceptions of research - including but not restricted to the Maori-Pakeha dimension - so that there can be a common understanding of different positions. This debate should be led from within the research community[4].

27. A further question concerns the extent to which 'education' refers only to what goes in the formal education system. We were impressed to read in the report. We endorse the view, well expressed in the initial report of the Tertiary Education Advisory Commission (Shaping the Vision, p. 9), that much learning occurs beyond the boundaries of formal providers, with significant implications for policy and research. It raises, though, difficulties when it comes even to producing an inventory of relevant research, once the boundaries of the formal system are breached. But in any case we saw amongst practitioners and policy-makers a conception of educational research which focuses heavily on the formal education system, and especially on schools. Research activity appears to be highly segmented even within the educational system, with little activity spanning school and post-school sectors and little awareness of activity in other sectors. We would encourage a broadening of the overall focus, and a stronger sense of the overall educational system.

Volume

28. It is worth going back to the 1990 communiqué from OECD Ministers of Education, which can be seen as the origin of this whole exercise:

29. "In general, the level of investment in research and development in education and training is far lower than in any other sector of comparable size. The potential or educational research as an integral element of improvement remains largely underdeveloped, whether at national, regional or local level." (OECD 1992 p. 35, quoted in OECD 1995 p. 8). The position may have changed somewhat over the past

[4] Blampied (2000) argues that a broader understanding of 'scholarship' and its relation to research would also help give esteem to activities which serve Maori communities such as iwi history and community development.

decade, but it is unlikely to have been transformed in most OECD countries. So there is a general picture of low capacity. Against that, however, New Zealand still appears to be lagging.

30. In OECD (1995), there is a 1991-92 estimation of educational R&D spending in New Zealand of 7 million $NZ corresponding to 95 full-time equivalent researchers (working full-time on research). These figures most likely underestimate today's educational R&D effort in New Zealand as we shall see in the following attempt to estimate its volume.

31. Assessing how much educational research is taking place is not easy, even if one confines it to research on the formal education system. This is partly because of the distinction between research and development, where we felt that the apparent amount of research was somewhat inflated by the inclusion of very substantial (and effective) development projects to do with assessment. But there are other problems, even within a small country's system.

32. Table 1 was helpfully supplied to us by the Ministry of Education, and identifies the main key components of the Ministry spending on educational R&D from the 1st July 1997 to the 30th June 2001.

Table 1: Expenditure on educational R&D 1 July 1997 - 30 June 2001 (Ministry of Education)

Source of funding	**NZ Dollars**
Budget appropriations	**16,500,000**
Budget appropriations for specific programmes and or policies	(2,300,000)
Assessment pool – reviews, R&D and evaluations	(3,200,000)
Assessment Resource Banks	(4,000,000)
National Education Monitoring Project	(7,000,000)
Funding from Research Division Operations	**3,600,000**
Funding from other Division Operations	**1,200,000**
Other (includes external funds and inter-agency)	**200,000**
Total	**21,500,000**

33. In addition to these quantitative figures in table 1, which only take into account the Ministry of Education's funding of R&D programmes, we would like to add the following points:

a. The Ministry of Education's own operational research programme, amounting this to some $NZ1.1million. This funds a series of projects tied to the Ministry's own priorities.

b. Appropriations, from Vote Education or other Votes (i.e. government budget headings), amount to significantly more. Dominant here is the National Education Monitoring Project (NEMP), a well-regarded means of feeding back to teachers in the classroom information on assessment outcomes. The allocation to NEMP is of the order of $7m. Combined with the $4m allocation to the

Assessment Resource Banks (ARBs) this represents a significant funding commitment, far outstripping the defined research component.

c. Allocation to the New Zealand Council for Educational Research. NZCER receives a core grant from the Ministry of Education of $1.43m, which it matches with income from other sources, mainly consultancy and publications.

d. General research activity carried out within tertiary institutions. This is the most difficult area to assess. One would expect academic staff, especially those in Schools or Departments of Education within universities, to be carrying out relevant research. Public funding for tertiary institutions contains an element for research, especially at postgraduate level where funded EFTS places increased by 82% between 1992 and 1999 to over 14000, almost all of it in universities. However the research funding component of the EFTS funding is not separately identified. The Ministry of Research, Science and Technology estimates the total inbuilt funding for university research to be in the order of $NZ140million per year.

34. A very crude estimate for this input side in relation to educational R&D could be made by estimating how many staff work in Education departments, taking an average salary, and applying 20% as a notional time allocation for research (recognising that this will vary widely within and across institutions). However we believe this would not give a true indication of the volume of activity. Partly this is because not all institutions, or Schools of Education, insist on research. One estimate put the proportion of staff so engaged at around 25%, and it is the case elsewhere that university academics working in education are commonly less research-oriented than most. But partly it is because the increase in student numbers coupled with a decline in the unit of resource per student over the last decade has limited the time available for research. Staff do not have the time to carry out substantial research, especially where they are involved in a major field of professional training. Getting a clearer picture of the level of activity in this sphere is important.

35. There are other components, which are outside Vote Education:

a. *Marsden Fund*. This is a substantial fund, some $26m annually, which gives awards for blue sky research, mainly to academics. However, competition is intense, with less than 10% of rated proposals being funded; social science in general gets very little of these [only around 7 per cent] The Royal Society of New Zealand's Strategic Report 2000 confirms this picture. Within that education does very poorly, so that we are aware of only a single Marsden award going for educational research. As in other respects there is a vicious circle at work here, with the minimal access to Marsden funding preventing the building-up of this kind of research capacity.

b. *Public Good Science Fund*. This fund in fact no longer exists discretely but is distributed over a number of areas as a general part of the Morst Vote. For the purposes of this report we can still refer to it, however, and note that it has increased very substantially, from $11m in 1996/7 to $25.8m in 2000/01 (RSNZ report p. 5). Yet from the point of view of educational research it has only funded very few such projects.

c. *Health Research Council*. Health has significant overlaps with education in policy and research. The overall budget for health research is substantial, at $33 million, and the HRC was commended to us as a possible model for education, notably in its recognition of specific Maori issues.

d. The Ministry of Research Science and Technology has other budget headings potentially relevant to education, notably one of $4.3m on Social Research. However we are not aware of any of this being devoted to educational issues, nor to research which is not educational but which is related to

education. Also to be noted is the specific category of Maori Knowledge and Development increased in 2000/01 to $4m.

36. Based on all the different funding sources available for educational R&D in New Zealand a very rough estimate of today's educational R&D expenditure is $NZ 12-14 million. Comparisons with other countries are difficult. However, OECD (1995) gives some indications. The level of the educational R&D as a percentage of total expenditure on education is on average 0.3 per cent in 7 OECD countries for which data is available (Australia, Canada, Finland, Ireland, Netherlands, Sweden, United Kingdom). In England, the recent figure is 0.5 per cent. Given that the total expenditure on education in New Zealand is around 7.1 billion $NZ, the educational R&D as a percentage of total expenditure on education is around 0.17-0.20 per cent. In summary we would say that the OECD's figures show New Zealand as having a relatively low expenditure on R&D generally, and the figures shown above suggest strongly that within this relatively low figure social science, and within social science education, do relatively poorly. Overall, therefore, we have to conclude that in straight volume terms the country cannot claim a strong commitment to educational research.

Distribution

Mode

37. One conventional categorisation divides research into basic or blue sky; strategic; and applied. Basic research is not tied to any specific practical goals, but is undertaken primarily to acquire new knowledge of underlying phenomena. It is largely curiosity driven. It may of course have immediate policy or practical applications, but these are not part of its design. The Marsden fund and infrastructural funding for universities are intended to support this kind of research. We saw very little sign of this in the educational field.

38. Strategic research operates between basic and applied, with a longer time horizon and broader goals than the latter. We saw evident signs that New Zealand aspires to develop a strategic approach to research. The commissioning of reviews of research covering 8 domains is a promising start; the test will come as the implications of these reviews are worked through. However a strategic approach to research should be distinguished from research which is itself strategic; the former does not necessarily imply a strong commitment to the kinds of longer-term, cumulative work which characterises the latter. So a long- or medium-term goal such as enhancing social and economic performance needs to be supported by research which is itself longer-term, as well as by projects with a more immediate focus.

39. Applied research is defined as original investigation directed primarily towards a specific practical aim or objective. Evaluation studies are a prime example of this. Our impression is that the great bulk of educational research in New Zealand is concentrated at the applied end, and particularly on assessment issues where we were made aware of an impressive array of instruments with good links to practice. This is not to downplay the value of these, and the overall intention to establish a 'culture of evaluation' is perfectly valid in order to use these evaluations to change things, i.e. with feedback loops leading to action. The point we are making here is that the balance between different types of research is a salient issue for R&D policy.

Institutional

40. New Zealand has recently created a 'level playing field' in the funding of tertiary institutions. All institutions which are recognised as providing higher education receive the same amount for a given

student in a given subject area at a given level. Little seems to be known of the impact of the new funding system on academic research generally, and educational research in particular. Those institutions which provide postgraduate education - overwhelmingly the universities - receive a higher proportion of higher-level EFTS funding, since postgraduate teaching is more research-based. However the expectation is that all degree-level teaching is in some measure research-based. This raises the questions of how far the creation of a unitary tertiary sector has entailed a dilution of research, since the entry of many new institutions means that resources are more thinly spread. This is indeed a strong a priori line of argument, and we have more to say below on the issue of critical mass. However we also heard - and not only from the Colleges themselves - that Colleges of Education were doing applied research which was of direct classroom application, and also encouraging teachers themselves to engage in small-scale research.

41. In a sense, therefore, we may be seeing the growth of more applied forms of research but a lack of concentrated strategic or basic research. This dilemma could only be resolved by an overall increase in funding.

Contract culture

42. As part of the general shift towards a more market-oriented society, the last decade has seen a major change in the procedures and formulae for funding education generally and educational research in particular. This has led in turn to a change in the sector's culture, with competition for contracts becoming far more pronounced. We could not ourselves judge the impact of the shift, but clearly most practitioners felt that the extent of it had been largely detrimental.

43. We feel it necessary to distinguish several different components: institutional competition for students; competition among researchers for research funding; and the nature of the research contracts awarded. The former is a crucial contextual factor. University funding is dominated by student recruitment, where money follows the student and EFTS is the major source of university income.[5] Even in an expanding market (total EFTS-based funding increased by 18.8% between 1991 and 1999), this has strong features of a zero-sum game, where one institution benefits mainly at the expense of another. It has led to a high degree of competition between institutions, with few geographical boundaries limiting the competition. The competition has been accentuated by the decline in EFTS funding. This has been estimated at 33% between 1980 and 1998 (Scott & Scott 2000, p. 6), with an accompanying rise in the EFTS to staff ratio of 48%, from 12.5 to 18.4. This has had two major relevant impacts: it has significantly affected the time generally available to academics for research; and it has sharpened competition between institutions.

44. The former factor – time – has an obvious direct negative impact on research activity. But competition for students need not necessarily directly affect the second element identified above, namely collaborative relationships between researchers. However we found evidence of institutions becoming so imbued with the competitive spirit that they discouraged or even debarred their members from collaborating on research with colleagues from other institutions. This obviously has an overall negative effect, especially in a limited pool.

45. We would emphasise that competition and collaboration are not polar opposites. In many contexts, including industrial ones, competition actively fosters collaboration, providing more incentives for people to get together to design or execute research. It is a question of the overall levels of energy in the

5 In 1999 the EFTS Bulk Funding System was replaced by the Universal Tertiary Tuition Allowance, with no capping of places.

system, and the norms, which govern the process. There is scope here for procedures for commissioning research to be reviewed, but also for institutional leaders to review their own practices.

46. A separate issue concerns the nature of the contracts issued. Here we refer mainly to the Ministry of Education's commissioned research. This is important not so much because of its absolute volume, but because of its preponderance in the contract research field. We were struck by the extent to which the Ministry dominance of research project funding. Naturally, and appropriately, the Ministry's research concerns tend towards the applied end, and to have a relatively short-term focus reflecting political priorities. This is not a problem when there is a wider set of research funders, but in New Zealand this is not the case. There is no autonomous research council, and very few foundations (if any) ready to provide resources for educational research. (The Wolf-Fischer Trust's support for Maori education appears to be an exception). Whilst some researchers are clearly successful in putting together a running series of research projects with Ministry funding, the short-term contractual nature of most of the work almost certainly increases fragmentation. It will also inhibit the ability to build capacity within the research community: the development of research expertise and experience, but also the ability to look beyond applied research topics and frame research questions in a longer-term context.

47. The emergence of a competitive contract culture has a wider significance. Increasingly, policy-makers and researchers are interested in the notion of social capital as a complement to human capital. Social capital is to be found in the networks and relationships, which foster trust and reciprocity towards mutual ends. The general line of argument is that individual skills and competences will only make their full contribution to a knowledge society if they are located within a functional set of social relationships (OECD, 2001). This applies as much to educational research as to other fields; it would be deeply ironic if educational research showed declining social capital in its efforts to build human capital.

Coverage

48. The framework of Themes and Focus Areas in educational R&D outlined above presents a formidable challenge. Moreover educational research can cover a huge range of topics; it can also draw on a wide range of disciplines. Even large countries have difficulties in encompassing the research possibilities generated by the challenge of developing a knowledge-based society. Nevertheless there appear to us to be some significant gaps in the coverage of New Zealand research.

49. By far the most evident is in research beyond schooling. At the schools level New Zealand covers a reasonable range of research topics, though whether these have a sufficiently broad disciplinary base may be questionable. Tertiary education is far less well covered. We are aware of some studies, for example of rates of return to university study, and of participation. But given the dramatic expansion of post-secondary education we are struck by the paucity of research on the impact of this on social chances, on the character of university provision and on its labour market implications. Moreover the broader field of lifelong learning - community and adult education, training and organisational development - appears to be largely undeveloped. Arguably, activity in this latter field is largely confined to work, which concerns the Maori community, with its emphasis on collective learning. The fact that lifelong learning is not a research priority may indeed be restricting opportunities for Maori researchers.

50. There is a growing recognition in New Zealand of the significance of lifelong learning. In his foreword to the TEAC's second report, Shaping the System, the Associate Minister of Education Steve Maharey registers a commitment to a broad and inclusive vision of lifelong learning, and to placing tertiary education at the heart of the drive for a knowledge society. There are two dimensions to this, and research is lacking in both of them. One is the distribution of educational opportunities over the lifecourse in relation to the formal education system – in other words, patterns of participation which extend beyond the entry

into tertiary education of young people from the school system. The second is the incidence and significance of learning beyond formal education, in economic organisations and in communities.

51. This raises the issue of intersectoral relationships and communication. In a small country, one might expect such communication to be relatively developed, since the members of a relatively small body of researchers and policy-makers will naturally know each other to a greater extent than in a country with a large population. We are not convinced that this advantage is properly exploited. It may also, as was pointed out to us, be a constraint, where people know each other too closely and are therefore unwilling to take risks or break ranks. The broad framework which is beginning to emerge allows these possibilities to be explored in future.

52. This is not only a question of knowing what is going on in other policy areas. A key issue for research is the interaction between policy and practice in different spheres, for example between education and the labour market, or between education and health. We understand that there have been attempts in the past to fashion a common agenda in the former area, but that this did not lead to positive outcomes.

53. As we have said, it would be wholly unreasonable to expect New Zealand researchers to cover the full gamut of research areas. Nevertheless we are clear that the current distribution is not well geared to meeting the challenges of a learning society. More work on tertiary education and lifelong learning generally is an obvious priority; and serious thought should be given to how to include wider socio-demographic issues, for instance the implications of changing proportions of Maori and Pacific Island people in the New Zealand population, or the consequences of population ageing for teaching professions at all levels.

Research capacity

Training

54. A recent exercise on mapping educational research capacity and capability was undertaken by Professor Brian Findsen of Auckland University of Technology. The Ministry of Education commissioned this work. The full results from this will be a welcome addition to the picture of educational R&D. The report points to the diversity of capacity, which exists, with distinctive forms of research capacity within different institutional types. The single tertiary sector which now exists, with all tertiary institutions funded on a similar basis, nevertheless encompasses distinctive groupings of research focus. Thus as one would expect the older universities have a stronger focus on basic research, whilst colleges of education are much more concerned with applied forms of research, with close links to practitioners.

55. The Findsen report covers trends which impact on research careers. In particular it identifies the ways in which professional development is assuming a more central role in advanced qualifications. This affects both the content of what is researched, and the mode. Part-time routes to graduate qualifications allow closer integration of research and practice, but limit the extent to which a full range of sophisticated research techniques and experience can be acquired. The growth of the professional development mode means on the one hand that more teachers are developing contact with research, both executing research themselves and becoming more closely acquainted with research processes and results. On the other hand, it means that educational research as a career is not a strongly defined pathway.

56. Once again this is a question of balance. The integration of research and classroom practice is clearly a positive. At the same time, the capacity base needs to be safeguarded and nurtured, so that there is a sufficiency of researchers with the skills and commitment to sustain a research community. Postgraduate qualifications in educational research are not the only means to achieve this, but they are likely to be

central to a successful long-term research capability. There are concerns about the quality of the graduate training programme, accentuated by the demise of the Research Affiliate Programme which used to provide a limited number of teachers with fulltime leave for research.

Expertise

57. There is a further very important aspect to this, which brings us back to the question of what constitutes research. We do not conclude that New Zealand is particularly lacking in the accumulation of data, given its size. Arguably, indeed, there is too much data to be satisfactorily handled; for example the accumulation of data on children in relation to school accountability seems to have reached saturation levels [evidence from Strengthening Education in Bangere and Otara Evaluation (SEMO)]. But we do think that there is little capacity for exploiting the data, which exists to anything like its full potential. We suspect that there is something of a vicious circle at work here. There is relatively little capacity, even amongst established academic researchers, for exploring datasets systematically.

58. This means that future generations of researchers have little chance of developing such expertise, and the opportunity for cumulative analysis and debate does not exist. Thus it is not so much a question of suggesting that large numbers of new datasets are needed, as of building the capacity to exploit existing data to a level of reasonable sophistication.

59. Part of this concerns the integration of different datasets. For example, we heard that labour market datasets held by SkillsNZ are not related to educational datasets. We should stress that these kinds of issue are not unique to New Zealand; by and large, compatibility of datasets and their effective utilisation are usually a problem in any country. But the lack of sophisticated analytical expertise accentuates the problem in relation to educational research and debate in New Zealand.

60. Capacity and culture are interrelated. We detected some signs of a bias, which is to be found in other countries also, of a disinclination on the part of educational researchers to engage in quantitative research generally, and for quantitative evidence to figure strongly in debates within educational circles. This flags up issues, which derive from the relative isolation of educational R&D from other fields and disciplines.

Intermediary capacity

61. This leads to the question of whether there should be an intermediary body between researchers and government. We have already commented on the unusual extent to which the Ministry of Education is directly involved in forming the research agenda and in commissioning research, and the way this is likely to influence content and approach. In the feedback sessions towards the end of our visit we offered the view that for reasons of size a separate fully-fledged commissioning body for educational research was not a realistic prospect. This was challenged by some members of the research community present, yet our view is that such a body would be likely to absorb precious research capacity in relatively unproductive forms of work – in other words, in organisational activity rather than actual research output. The volume of educational research is simply not sufficient to justify a separate intermediary body.

62. However, we do see a need for a mechanism, which would allow research programmes to be developed which are not directly sourced from the Ministry of Education. This is important in order both to provide a more diverse base for research than currently exists, and to provide different models for commissioning and evaluating research. There seem to us to be two possible ways forward. One is to set up a semi-autonomous research council, but one which embraced the social sciences generally, within which education would play a part. This higher level of aggregation would allow an appropriate economy of scale. It would also have the advantage of bringing education into a closer relationship with other social sciences.

The other is to develop a less institutionalised but still significant form of intermediation, such as a consultative group of researchers (from universities, NZCER and elsewhere) and other stakeholders and other disciplines, which would develop research priorities, advise on their implementation and support, and comment on progress and achievement.

Concentration/critical mass

63. All of these reinforce the case, which has already been made in more than one report, for a greater concentration of research expertise. New Zealand now has a huge number of tertiary institutions, all of which at least in principle can be engaged in research. Most obviously, there are upwards of 50 colleges of education, each of which might be claiming to do research (though only a small proportion do to any recognisable extent). We recognise that the inclusion of all such institutions in a single sector has enhanced the capacity of the sector to carry out applied work, and strengthened the links between research and practice[6]. However it is clear to us that there is a trade-off between diffusion and the capacity to carry out basic and long-term research. There is a serious need to find ways of clustering research expertise.

64. We endorse the recommendation of the Tertiary Education Advisory Committee's report, *Shaping the System:* "The system must be designed to promote and sustain world-class research capacity and capability, including that of Maori and Pacific peoples. This will require greater specialisation and concentration of research activity within the tertiary education system. The Commission recommends the establishment or recognition of national centres or networks of research excellence within the tertiary education system, with linkages to a national strategy and the international research community. They will also need strong linkages with other parts of the tertiary education system and with those outside it."

65. We particularly endorse the need to think in terms of networks as well as centres. We understand that there might be a case in some areas for concentrating researchers within a single institution. But this is not the only way forward. Turning New Zealand's size to advantage, and using new ICT, there is considerable scope for developing mechanisms, which allow intellectual concentration without physical juxtaposition.

66. Such networks and centres need not necessarily map directly to the themes of focal areas specified in the strategic framework. They should take account of current capacity in the field, and of the ambitions of active researchers (given especially that intrinsic curiosity on the part of researchers is one of the stronger guarantees of research quality). The kinds of issues to be addressed in developing them include:

- the process of identifying the key topics/themes around which they are to be built;
- the opportunity to broaden the disciplinary base of educational research, ensuring that researchers from outside mainstream education departments are involved;
- the integration of a capacity-building function into their activities, e.g. through graduate training programmes;
- a commitment to a common approach to exploring and exploiting national datasets.

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6 We understand, for example, that some of the smaller colleges which have entered the sector quite recently have been particularly relevant to the concerns of the Maori community, partly because their small size means that they can be closely related to very local communities.

67. It would, finally, be a great step forward if at least some of these centres/networks were supported out of Votes other than the Education Vote, such as Labour, Health of rRSS.

Interface with practice and policy

68. We found that overall the quality of communication between research and practice is high. This is most true at the schools level, not surprisingly given the focus of research on the school system. There are three aspects to this. First, dissemination is well handled. In particular, publications such as "SET - Research Information for Teachers" make results available in an easily accessible way, such that teachers with little time for research reading can become aware of them, and school principals can develop a good overview of research relevant to their schools. Secondly, as we have already mentioned, many teachers are undertaking professional upgrading which includes a research component. This brings them into contact with research, and may even involve them in conducting research themselves, leading to a greater sensitivity on their part to the value as well as the vocabulary of research.

69. Thirdly, there have been some interesting developments in the form of participatory research activities, linking researchers with practitioners. The most prominent example of this, which to our benefit we were able to visit, is the SEMO project addressing the problems of an underachieving area in South Auckland. Here it is evident that a process of dialogue had been established over priorities and procedures, involving principals, teachers, the parents and their representatives and the researchers. The project is clearly well placed to shape policy-making. Not all research can be designed in this way, obviously, and the expectations of practitioners about the accessibility and immediate relevance of research are not always realistic; but examples such as this can do much to promote productive communication.

70. There was much less evidence of active interface between research and practice at other levels, and especially between research and policy at all levels of the education system. Changes in the tertiary system appear to have been brought about without reference to research evidence, and without even serious commitment to evaluation or analysis after the event. We saw little sign of research influencing teaching and learning within the university system. Given the apparent lack of research beyond the formal education system, there is a fortiori little significant impact on policy or practice in adult education or lifelong learning more generally.

71. Developing a tradition of evidence-based policy-making is a major challenge[7]. It entails longish-term commitments by both policy-makers and researchers, and complex and sophisticated arrangements for developing and evaluating evidence. One important distinction we would wish to stress is that it differs substantially from the kinds of project evaluation which may be relevant and important but which do not themselves constitute policy analysis.

Conclusions and recommendations

1. We applaud recent moves to develop a strong and strategic approach to educational research in New Zealand. These foundations should be built on by promoting a wider debate on research priorities – substantive and in respect of research capacity.

[7] As with many other observations in this report, this should not be construed as implying that other countries are notably more successful in this. In the UK, for example, the former Department of Education and Science was once described by its Permanent Secretary as a 'knowledge-free zone'. A specific Centre for Evidence-based Policy and Practice has now been established.

2. Significant progress will require additional resources. This should not be seen simply as expanding the system in its current form.

3. We believe an expansion may best be seen as part of an overall expansion of funding for social sciences. Amongst other things, this should promote interaction between educational researchers and those from other disciplines.

4. Resources also need to come from more diverse sources. There is at present an overdependence on government, and especially on the Ministry of Education.

5. There is scope for intermediation between the government and the research community. A Social Sciences Research Council, with a sub-group on educational research, could mark a significant step forward. A discrete educational research council is not a realistic option.

6. The emerging framework of Themes and Focus Areas is promising. It reveals large research gaps in certain areas, notably in tertiary education and lifelong learning. Lifelong learning in particular includes community forms of learning, with special salience for the Maori community.

7. A broader view of educational research means reviewing the links between research in different policy areas, notably with labour market, health and Maori/Pacific Island affairs.

8. Attention needs to be paid to building up research capacity and infrastructure, as distinct from the commissioning of additional research. This is essential if medium- and longer-term R&D performance is to improve.

9. Some concentration of research capacity is necessary. This need not mean physical concentration, but the explicit development of critical research masses around certain themes or fields.

10. We do not think that competition and collaboration are necessarily in conflict. But we do see a need to shape the process of research formulation and execution so that it enhances rather than undermines social capital.

11. Special attention should be paid to developing the capacity to make effective use of existing databases. This entails a significant exercise in staff development for existing as well as future researchers, and for policy-makers charged with managing research.

12. Incentives could be useful in promoting research across disciplines, fields and sectors.

13. The issue of building a tradition of evidence-based policy-making in education should be explicitly addressed.

REFERENCES

BLAMPIED, N. (2000), "Scholarship: Its Nature and Significance for New Zealand Higher Education", Department of Psychology, University of Canterbury, Christchurch, New Zealand.

Ministry of Education (1999), "Strengthening Education in Mangere and Otara Education", First Evaluation Report, Research Division, Ministry of Education.

Ministry of Education (2000), "Statement of Strategic Research Priorities: Directions and Opportunities", Wellington, New Zealand.

Ministry of Education (2000), "New Zealand's Tertiary Education Sector: Profile and Trends", Wellington, New Zealand.

Ministry of Education (2001), "OECD Review of New Zealand's Educational Research and Development Systems", Background Report, Wellington, New Zealand.

Ministry of Research, Science and Technology (1998), "Building Tomorrow's Success - Guidelines for Thinking Beyond Today", Wellington, New Zealand.

Ministry of Research, Science and Technology (2000), "Transforming New Zealand: Challenges and opportunities in research, science and technology", Wellington, New Zealand.

OECD (1995), "Educational Research and Development - Trends Issues and Challenges", Paris.

OECD (1996), "Knowledge Bases for Educational Policies", Paris.

OECD (2000), "Knowledge Management in Learning Societies", Paris.

OECD (2001), "The Well-being of Nations: The Role of Human and Social Capital", Paris.

SCOTT & SCOTT (2000), "New Zealand University Funding over the Last Two Decades", The New Zealand Vice-Chancellors' Committee, Wellington.

Tertiary Education Advisory Commission (2001), "Shaping the System", 2nd Report, Wellington, New Zealand.

APPENDIX I

INTERVIEWED PERSONS
OECD REVIEW OF EDUCATIONAL R&D IN NEW ZEALAND
19-22 MARCH 2001 (AUCKLAND, CHRISTCHURCH, WELLINGTON)

Sandi AIKIN [+ 2 more persons]	NZEI (Primary Teachers' Union)
Robin BAKER	Director New Zealand Council for Educational Research
Dr. Neville BLAMPIED	Association of University Staff
Elisabeth EPPEL	Group Manager Ministry of Education
Howard FANCY	Chief Executive Ministry of Education
Dr Alison GILMORE	Education Department University of Canterbury (President: New Zealand Association of Researchers in Education)
Professor John HATTIE	School of Education University of Auckland
Margaret LEDGERTON	Association of University Teachers
Gavin LOCKWOOD [+ 2 more persons]	Manager Education Section The Treasury
Hon Steve MAHAREY	Associate Minister of Education (Tertiary Education)
Rob McINTOSH	Group Manager Ministry of Education
Dr Lindsay PARRY [+ 4 more persons]	Associate Principal Christchurch College of Education
Dr. Paul REYNOLDS	Chief Policy Analyst Ministry of Research Science and Technology

Professor Graham SMITH	International Research Institute for Maori and Indigenous people (IRI) University of Auckland
Associate Professor Lucie SMITH	International Research Institute for Maori and Indigenous people (IRI) University of Auckland
Amanda TORR [+ 1 more person]	Manager Tertiary Education Advisory Committee (TEAC)
Lynne WHITNEY [+ 2 more persons]	Research Director Ministry of Education
Cathy WYLIE	Senior Researcher New Zealand Council for Educational Research

Visit to primary school in South Auckland Strengthening Education in Mangere and Otara Evaluation (SEMO-project)

Kerrie CROSSMAN	Yendarra School
Glenda KITNEY	Yendarra School
Joan SIMPSON	Yendarra School
Colleen MURRAY	Yendarra School

APPENDIX II

"STATE OF THE ART" LITERATURE REVIEWS COMMISSIONED BY THE MINISTRY OF EDUCATION IN NEW ZEALAND

1. T*he impact of family and community resources on student outcomes: an assessment of the international literature with implications for New Zealand*. Stanford University.

2. *Early childhood education literature review*. Children's Issues Centre. Otago University.

3. *The effects of curriculum and assessment on pedagogical approaches and on education outcomes*. University of Waikato.

4. *Influence of peer effects on learning outcomes: a review of the literature*. University of Auckland.

5. *Literature review of the effects of school resourcing on educational outcomes*. BERL/Infometrics.

6. *The effects of school governance, ownership, organisation and management on educational outcomes*. John Rentoul and John Rosanowski, with Dempster N, Fisher D, Hosking N, Hunter R, Pugh G and Walford G.

7. *Human resources issues in education*. Ontario Institute for Studies in Education. University of Toronto.

8. *Monograph on quality in post-compulsory education*. Education Directions.

9. *Enterprise based education and training: a literature review*. Monash University/Australian Council for Educational Research.

APPENDIX III

OECD REVIEW TEAM

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