



# Editorial

**LLEWELYN (LLYN) RICHARDS** played the clarinet at high school, but not too well. He was a teacher in New Zealand, London, Nigeria, and New Zealand again, then an editor for the School Publications Branch of the New Zealand Department of Education. He has been Editor of *set* since 1979, but bows out with this issue.

## Research for Teachers

Researchers complain that teachers don't read research, and teachers complain that research is not worth reading. As editor of *set* I can't help saying they are both right! Teachers don't read educational research, but it isn't surprising when you see what the researchers are researching.

In Table 1 is some simple bean-counting.

Table 1

*Types of Educational Research in Australia and New Zealand, 1987-1991*

Source	Research into		
	Group 1. Philosophy, Assessment, History, etc.	Group 2. Topics which throw light on Policy	Group 3. Schools and Learning and Teaching
<i>New Zealand Journal of Educational Studies</i>			
Vol 23	7	6	2
24	8	2	3
25	4	5	1
26	6	2	5
27	4	2	2
<i>Australian Journal of Education</i>			
Vol 32	11	6	3
33	8	9	4
34	5	15	3
35	6	6	3
36	4	1	2
<i>1987 Joint Conference of the Australian and New Zealand Associations for Research in Education</i>			
NZ papers	25	29	22
Australian papers 37		40	35
<i>1992 Joint Conference</i>			
NZ papers	48	14	15
Aus papers	184	78	62
Totals	357	215	162
Totals %	48.64	29.29	22.07

A quick conclusion is that only a quarter of what 'educational' researchers are writing and speaking about is of direct interest to teachers. Of course, some research takes years to come to fruition and may involve a lot of people. So I had a look at the work NZCER is currently engaged in; See Table 2.

Table 2

*Current NZCER Research Projects*

May 1994	7	13	11
%	24	42	35

This suggests that maybe teaching and learning research is about one third of their effort. What are the other types of research?

## Group 1, Philosophy, Assessment, History...

In this grouping I have included things that teachers are interested in, as human beings, citizens, scholars, and artists. This 'grab-bag' of research includes philosophic research (titles such as: *What is the nature of education?*); mathematical research (*Percentile rank shifts on the PATs*); historical research (*Church schools in the goldfields*); and also polemic (*Constructivism undermines moral truth*); and cries of despair (*New curricula are old strait-jackets patched*).

There are a lot of similar topics being covered every day in the newspapers, the TV, magazines, clubs, societies, and in conversations round home: peace between nations and between parents, economics and unemployment, crime and punishment, Mozart and Winton Marsarlis, food and health, development and conservation, politics and morals...

I wish I had had space in *set* for more of these topics. There is some fine historical writing from university educationalists, witty and full of insights, especially when old policies reappear in drag on the political stage. Then there are the philosophical concept-busting articles I enjoy because I love a nice knock-down argument ('There's glory for you!' said Humpty-dumpty). And the 'shock-horror' tales of fatuousness-become-policy, as politicians succumb to doctrinaire simplifications. Then there are the accounts by psychometricians of how they are refining assessment techniques another notch. But there are only so many hours in the day, so many pages in *set*.

## Group 2, Policy Research.

Policy research is mostly collecting data about current situations, massaging it, and presenting it to help the formation of policy.

### Example 1. Clarinets (an invented example)

The government wants more children to learn a musical instrument — it was in their election manifesto. The educational bureaucracy immediately needs to know the effects of putting different policies into practice — it has been asked by the Minister to recommend one. How many parents want their children to learn the clarinet? Are there tutors available or will training courses need to be run? How do schools feel about it? Would it be best to put money into free clarinets, or more tutors, or correspondence courses? Will new music rooms need building? Should schools encourage withdrawal from other lessons or fund lessons after-school? Would synthesizers do instead...?

Extensive head counting, some costings, and a set of questionnaires will be needed, and some simple statistical analyses as it goes along.

Note that even an out-of-work clarinet tutor is not interested in this research **from a teaching point of view**. His or her job may be affected, his or her bargaining position, lifestyle, income, marriage, children, politics... But teaching not at all. Is it wiser to introduce dotted crotchets before triplets, or after, or together? Will alternative fingering interfere with expression though aiding rapidity? Will the embouchure look after itself? When should memorising (rather than sight-reading) be expected or encouraged? What can one do with the tone deaf pupil? With the lazy pupil? With the disruptive pupil? These are questions the clarinet teacher, **as teacher**, wants answers to.

It is also true that someone must do policy research. Education systems (Departments, Ministries, etc.) must do, or fund, policy research however, they cannot be expected to commission research which could be used against their political masters. Independent bodies, such as universities, must do the policy research no-one else will do.

Policy research is important for the nation's health. But it is not directly about learning and teaching. Those researchers who want to help teachers **teach** and children **learn** can, in particular, put away all questionnaires. On the whole, teachers are looking for research on learning and teaching and not for opinions.

## Group 3, Teaching and Learning Research.

This can include studies of places (homes, classrooms, clubs, the media) where education takes place; learning theory and practice; teaching theory and practice.

### *Pure (or Basic) educational research*

When we look at research that is of interest to teachers we find that a fair bit of it is coming from outside education. Not only that, a lot of it is pure research, not just the application of basic findings to children or classrooms. 'Pure' research is as vital to teaching as x-ray crystallography is to the construction of aircraft. Here are some examples:

### Example 2. Research on social aids (and blocks) to learning

Piling up observations of, and statistics about, working-class pupils has proved very fruitful. Paul Willis (*Learning to Labour*) and Gaby Weiner (*Just a Bunch of Girls*) in the UK; Bob Connell (*Making the Difference*) in Australia; Alison Jones (*At School I've Got a Chance*) in New Zealand, have helped prove pretty convincingly that middle-class expectations 'capture' the school curriculum and so schools build on the 'cultural capital' the middle-class children have; the rest cannot take advantage of what schools offer. This ensures that middle-class children are 'successful' in the world, and that working class and ethnic minorities get a raw deal.

Unfortunately, the only lesson for teachers seems to be that if all the poor were made rich (and middle class) some discipline and teaching problems would (probably) disappear. A lot of research doesn't get into *set* because it fails

to offer any solution to problems except, 'make everyone rich.' Alison Jones manages to be helpful to teachers as well as exposing middle-class blinkers; Paul Wood reveals another helpful idea. See

Jones, Alison, 'What really happens in the classroom' in *set* No. 2, 1987, item 7.

and  
Wood, Paul, 'Teaching our pupils: adapting teaching styles to cultural and class differences', *set* No. 2, 1992, item 9.

### Example 3. Research on memory

Memory is a vital part of learning. How the mind remembers, the different types of memory it manages, the ways in which memory handling and memory capacity change as we grow... All these are absolutely essential bits of knowledge for the teacher. When I was a teacher I had pretty elementary theories about memory, but I was using those theories every day, as I taught. Research into memory by medical researchers is getting exciting and useful results. See

Baddeley, Alan, 'Reading and working memory' in *set* No.2, 1979, item 4; and *Best of set: Reading*, 1985, item 10.

and

Morton, John, 'How young pupil's memories work' in *set* No.1, 1991, item 5.

### Example 4. Research on motivation

Why do we do some things and not others? How do actual effects, such as getting a cross for your answer '14' to the sum '2 x 3 + 4 = ?' change your actions? How is it that rules, such as 'multiplication before addition', change our actions better than experiencing effects, (such as getting the sum wrong)? Which sort of motivation is more efficient? Lasting? Effective? This research, so important to teaching, is by psychologists. See

Catania, Charles; Matthews, Byron & Shimoff, Eliot, 'Rules, rules, rules' in *set* No. 2, 1992, item 5.

### Example 5. Research on learning

What is the effect of telling someone the answer to a problem they are slow, or unable, to solve? This is an absolutely vital question for teachers but I have found no educational researchers on this trail — again it is the psychologists. And the answer seems to be: telling people the answer **inhibits** and may even **stop** their remembering it, or using it again. See

Dominowski, Roger and Buyer, Linda, 'Solving — not solving' in *set* No. 1, 1991, item 6.

Think what an effect putting that finding into practice in your average classroom would have.

Does learning in one field transfer across into other fields? What conditions encourage transfer? Can you teach anyone to make transfers or does it always come as a sudden flash as it did when Archimedes saw that what was happening to him in the bath would happen to, and test, a fake gold crown? Again vital questions for teachers, especially when the answer may mean changing your teaching practice. See

Ceci, Stephen, Rosenblum, Tina and de Bruyn, Eddy, 'A day at the stock market' in *set* No.2, 1994, item 11.

### *Mixed pure and applied educational research*

There are some educationalists working on learning but mostly their research is restricted by the culture, time and place they are working in. For example, there is a fair bit of useful classroom research about.

The best work I know in this field is by Adrienne Alton-Lee and Graham Nuthall. If they have got it right, they have a pretty good handle on what is necessary for a bit of learning to go in and stay in. Their work has not been in a subject easy to monitor, like mathematics, but in the difficult subject, Social Studies. The chances are that they have got it right, and their findings apply not only to white middle-class children but to all of us.

### Example 6. Research on learning

Adrienne Alton-Lee, and her team collected every scrap of class work by 5 typical children, matched this with every scrap of conversation the children had (caught with personal transmitters) and information on home background, etc. Tests were made before and after the lessons, then a year later. From this enormous mountain of data lots of unexpected insights emerged on the way,

such as proof positive of how the curriculum, as it is experienced by the children, encourages sexism. They also uncovered proof positive of how racism is expressed subtly and the damage it is doing.

But the main drive was towards a theory of what is needed for lasting learning to take place – the pre-requisites and the methods needed. A first article, back in 1983, was a cracker, and possibly the best article ever published in *set*. See

Alton-Lee, Adrienne 'Organising for learning', *set* No.2, 1983, item 5.

For articles on the blocks to learning (and a fully human upbringing) which racism and sexism are, see

Alton-Lee, Adrienne; Nuthall, Graham & Patrick, John 'Take your brown hand off my book', *set* No. 1, 1987, item 8.

and

Alton-Lee, Adrienne; Densem, Prue & Nuthall, Graham 'I only think of the men...' *set* No.2, 1990, item 16.

For the latest on the learning research, see, in this issue

Nuthall, Graham & Alton-Lee, Adrienne 'How pupils learn', *set* No. 2, 1994, item 2.

Keep an eye open for a follow-up with more things to do in class. It will be very interesting to see the results when similar research is done in other subjects.

### Example 7. Research on the capacity to learn

Are people born with limits to some of their mental abilities? We all recognise the gross differences, the maths whizz-kids, the intellectually handicapped Down's Syndrome children. But is IQ a real measure? It looks pretty useless outside school. See

Ceci, Stephen and Liker, Jeffrey 'A day at the races', *set* No.1, 1994, item 11.

Does it grow or decrease? See

Flynn, James (and Raven, John) 'IQ tests and cultural distance', *set* No. 2, 1990, item 3.

Can one inherit a difficulty with some intellectual activity, say, spelling? Geneticists are working on that one; see

Stevenson, Jim and De Fries, John 'Twin studies of spelling' *set* No. 2, 1991, item 2.

What about cognitive deficits, such as autism and dyslexia? Medical researchers are working on these; see

Frith, Uta 'Holes in the mind: cognitive development and cognitive deficit', *set* No.2, 1992, item 4.

### Example 8. Research on how learning is dished up

The range is enormous: you can do no teaching at all and see what nature can manage; you can try one-to-one tutoring; or classes of 30; or TV programmes to millions. Then, in school systems, there is the grouping problem: are the students grouped into classes at all? Are classes chosen by family, tribal or language affiliation? By age? By sex? By wealth? By test results? By zodiac sign? Is there rigid promotion by age, or promotion by test results, or 'readiness', or promotion when there is space for another child in the next room? At least one researcher can be found in *set*, slashing through this jungle; her work began with a demographic investigation, moved on to an analysis of the mathematics of assessment and then involved a study in anthropological-style. See

McDonald, Geraldine 'Learning to be intelligent', *set* No.2, 1993, item 2.

Different cultures organise for teaching in different ways and studying these differences is both rewarding and extremely helpful in all multicultural situations. See

Fillmore, Lily Wong 'Diverse society: diverse education?', *set* No. 1, 1990, item 5.

Close observation of real situations is tremendously revealing – research that is ecological in style. For example, the Alton-Lee/Nuthall research in Example 8, and

Pizzo, J. 'Breaking the sound barrier: classroom noise and learning style', *set* No.2, 1983, item 8.

and

Tizard, Barbara 'What Joyce learnt from her mother', *set* No.2, 1985, item 8.

Challenging the standard Western set-up for teaching (age-chunked classes of 30, desks in rows, silence, teacher instructing, competition for marks...) and examining class size, teaching by peers, co-operative learning, promotion policies, pupil-run programmes and 'peace' education, has produced some wonderful *set* items. See

Campbell, Jack and Robinson, Margaret 'Two dozen's a crowd', *set* No. 1, 1994, item 10.

and

Limbrick, Libby; McNaughton, Stuart & Cameron, Marie 'Peer power', *set* No.2, 1985, item 13.

and

Johnson, David and Johnson, Roger 'Co-operative learning strategies for mainstreaming/integration', *set* No.1, 1988, item 4.

and

McDonald, Geraldine 'Promotion, retention and acceleration', *set* No.2, 1988, item 3.

and

Cameron, Jan and Dupuis, Ann 'Dealing with conflict: mediation programmes in schools', *set* No.2, 1988, item 8.

and

Richards, Llewelyn 'Teaching peace', *set* (Australian edition only) No.2, 1984, item 4.

## Applied research

There is plenty of research which, though tied to a time, a place, a classroom, a group of children, a particular school, or a single teacher, can be of great help. Some of these projects involve simple head-counting and observation and calculating a percentage or two. Many of the best are research projects by the teachers themselves; they gave spectacular results in the teacher's own classroom, and can be adapted by other teachers.

### Example 9.

The pre-school thought that the book corner seemed under-used. Observations, note-book in hand, over a full session showed that the corner was used, but no-one stayed long. The reason turned out to be that the corner was sited near the passage to the loo, and the kids, and helpers, didn't find that nice. The corner was shifted; books were read again. See

Barney, David 'The pre-school environment: stand off and watch', *set* No.2, 1976, item 11; and in *The Early Childhood Folio*, No.1.

### Example 10.

A teacher gave her new entrants an exercise book and ball-point on their first day at school and asked them to write. None of the children were put off by this approach. She kept a log of each child's writing and found that half of what she had been going to teach was unnecessary repetition of what they could do already. A lot of wasted time and frustration on both sides was avoided. See

Giacobbe, Mary Ellen 'Kids can write the first week of school' *set* No.2, 1981, item 7; and in *Best of set: Writing*, item 3.

### Example 11.

A secondary teacher kept a diary of how each day had gone, particularly her own decisions. She discovered that all her decisions, no matter how instantaneous or off-the-cuff, were rational. Some had emotional content, and some were not always for the best, but they were all justifiable. A cheering discovery. She worked out ways to make the hundreds of quick decisions every teacher has to make each day, even better, and less stressful. See

Rosen, Juliette 'Moment-by-moment decisions', *set* No.2, 1991, item 3.

### Example 12.

Many teachers have collected lists: of what their pupils are reading; what sports they play; what pocket money they get; what their hopes and fears are; what homework they get, what homework they do; what subjects they like; what TV they watch; and so on, and on. It is all good stuff and takes the guesswork and prejudice out of judgements, estimates, assessments, demands. See, for example,

Barnhart-Thompson, Greta 'Teenage perceptions in a still nuclear age', *set* No.2, 1990, item 15.

and

Dickinson, Kym 'Teasing and Bullying', *set* No.2, 1992, item 2.

Most 'classroom' research is easily repeated in other classrooms, and so teachers can see if the results apply to them. If Mary Ellen Giacobbe can check how well her kids can write, so can I; if Juliette Rosen can check her own decisions, so can I; if Kym Dickinson can check how much bullying is going on, so can I.

## Action Research

One sort of applied research is not so easy to pin down, and certainly impossible to repeat. Where the researchers (often teachers and academics co-operating) are looking for ways to change what is being done, they may decide to check what is happening, then make changes as they go along, and check the effects straight away, as the basis for further changes. Thus the researchers do not stand back, careful not to interfere, keeping a 'scientific' objectiveness. Here teachers, children and researchers are all in action together, promoting change.

You have to be enthusiastic and sure of yourself to feel confident that you are acting as a 'proper' researcher in such situations. I can't help being a bit overwhelmed at times by the enthusiasm of action researchers and I feel any innovation is doomed to success as they charge ahead. However, big changes can be made to school practices by enthusiasm, and bold innovations are exciting to hear about. A recent example is

Poskitt, Jenny; McAlpine, Don; Ryba, Ken 'Achieve is Choice', *set* No.2, 1993, item 7.

## Mavericks

The items that do not 'belong' under any heading have been, of course, the greatest fun to find and get published. Humorous articles often make very important points; see

Perry, William Jnr. 'Examsmanship and the liberal arts', *set* No.1, 1993, item 8.

and

Bowler, Peter 'The decline in jumping standards', *set* No.2, 1979, item 8.

and

Leapman, Michael 'Dr Fox', *set* No.2, 1988, item 8.

and

Phi Delta Kappan 'Teacher evaluation form — Socrates', *set* No.2, 1992, item 10.

Quite startling have been revelations about how unequally education is spread. I found two New Zealand items; I'm sure there are Australian examples I have not found.

Hughes, David 'A great waste of talent', *set* No.1, 1992, item 14.

and

Wilson, Christine & Dupuis, Ann 'Poverty and performance', *set* No.1, 1992, item 15.

Some of the toughest to edit have been the maverick thinkers; for example, anything by John Raven is stimulating and out of the usual run, but he is hard to edit. Richard White is another who puts old ways of doing things under the rational spotlight. And recent penetrating analysis of pressures on education have come from Ray & Mickelson (No.1 this year) and Liz Gordon (in this issue). See

Raven, John 'The crisis in education', *set* No.2, 1992, item 11.

and

White, Richard 'Questionable assumptions underlying secondary school classrooms', *set* No.2, 1993, item 6.

and

Ray, Carol & Mickelson, Roslyn 'Restructuring students for restructured work', *set* No.1, 1994, item 8.

and

Gordon, Liz 'Some schools are more equal than others', *set* No.2, 1994, item 5.

Occasionally *set* has been ahead of the pack: publishing Peter Warr and Saul Levine on unemployment before it hit hard; Mintzberg on management before schools became businesses; Michael Reid on the demands of the workplace before literacy/numeracy hit the headlines; Barbara Tizard on nuclear education when peace education was still a dirty word. A few times politicians got shirty, but have since proved to be behind the times. See

Smith, Gillian Crampton, of The Family Planning Association (SW London Branch) 'Too Great a Risk!' *set* No.2, 1974, item 6.

and

Levine, Saul 'The psychological and social effects of youth unemployment' *set* (NZ edition) No.1, 1981, item 5.

and

Warr, Peter 'Work, jobs and unemployment', *set* No.1, 1988, item 8.

and

Mintzberg, Henry 'The manager's job: folklore and fact', *set* No.1, 1985, item 10.

and

Reid, Michael 'They must know their alphabet...', *set* No.2, 1984, item 15.

and

Tizard, Barbara 'The problematic aspects of nuclear education', *set* No.1, 1985, item 9.

And how does one catalogue a wonderful account of mental jujitsu in the quest for linguistic awareness, truth and beauty?

Toppins, Ann Davis 'One-pulse words: short, sweet and to the point', *set* No.2, 1985, item 7.

## Conclusions

1. Teachers expect too much of 'education' researchers – most of them are not doing, and do not set out to do, research of relevance to teaching and learning.
2. Researchers expect too much of teachers – teachers haven't the time to sort out the conclusions that apply to them in the few relevant papers. They certainly do not have time to sort through the thousands of papers by researchers in the medical, genetic, demographic, anthropological, psychological, fields.
3. It would be wise for someone to finance a continuing **search** programme. It would track down, and put onto data-bases, and publicise, teaching-useful research from other fields. I have given examples from *set*, but these I lit upon rather unsystematically; there must be lots more out there.
4. Pure research is very important to teaching. Very few 'educational' researchers are equipped to do it: questionnaires, sampling algorithms and regression analysis of variants are not enough.
5. Noting what the forward looking 'maverick' thinkers have to say is as important as noting the pure research: we do not want to become efficient at teaching what ought not to be taught — racism, consumerism, violence, over-simple economic theory, new-age science... Remember: 'They're dying in the streets, Dr Pasteur! Let's get out to help. Grab a leech!'
6. In-service courses on observation techniques plus simple statistics, followed up by doses of help and encouragement from 'Research Advisors', would boost the usefulness of teachers' enthusiasms no end.
7. University 'Education' faculties and independent research establishments, should discuss how far away from teaching and learning they want to be.
8. Is one third of research time on learning and teaching by 'education' researchers enough? If 'education' researchers cannot/will not do what teachers require, someone else should. Education ministers should be improving the efficiency of their employees by getting done the research those teachers need. And in these days of 'user-pays' perhaps teachers (through their unions?) should also be funding both pure and applied research that bears directly on day to day teaching. At least unions could insist on in-service training and access to research advisors so that teachers can do their own, useful, small scale, but enlightening classroom research.

Llyn Richards  
August 1994

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