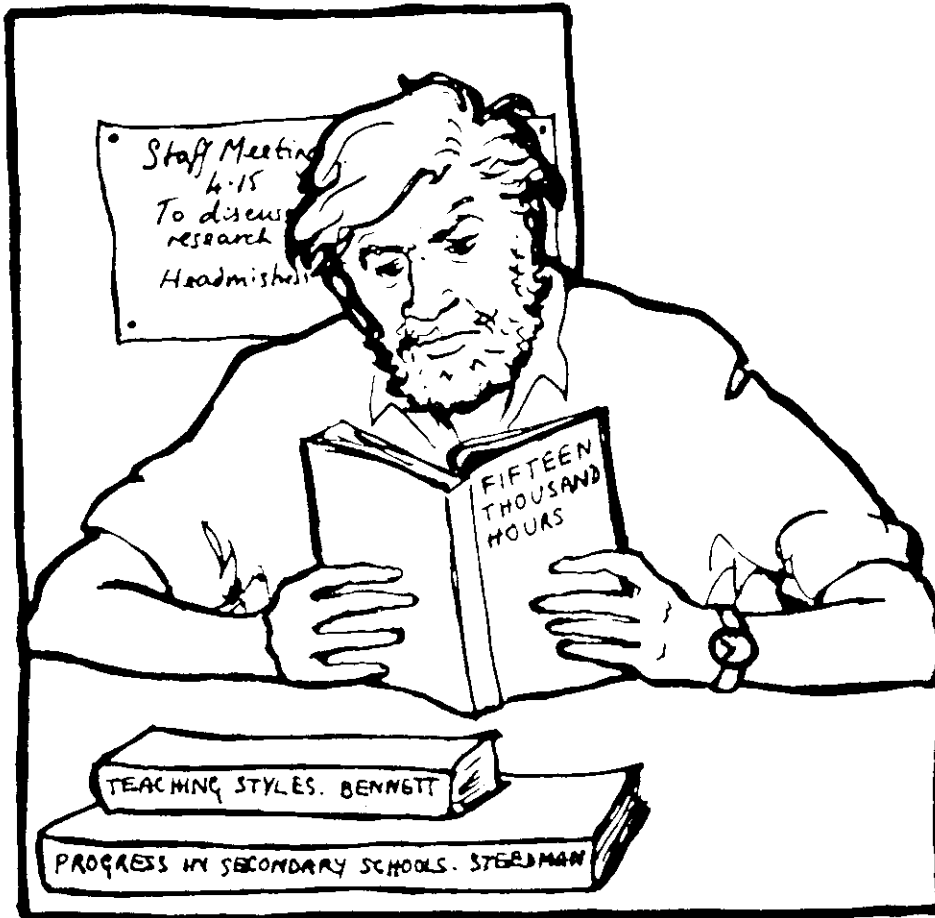


READING BETWEEN THE NUMBERS

RADICAL
STATISTICS
EDUCATION
GROUP

A CRITICAL GUIDE TO EDUCATIONAL RESEARCH



ORDER FORM

TO: Radical Statistics Education Group
c/o BSSRS, 9 Poland St, London W1V 3DG

Please send me _____ copies of **READING BETWEEN THE NUMBERS**

I enclose a cheque/PO for _____ to cover the cost and postage

Name _____

Address _____

Please make cheques payable to **RADICAL STATISTICS EDUCATION GROUP**

READING BETWEEN THE NUMBERS

A Critical Guide to Educational Research

RADICAL STATISTICS EDUCATION GROUP

Statistics lend an aura of infallibility to findings from large-scale educational research. In fact, the findings are often used to silence those wishing to speak up for their own legitimate interests.

This pamphlet is written for 'consumers' of educational research, including teachers, students, parents and administrators. It aims to make them more competent and more confident when evaluating research. Not only does it provide a checklist for assessing the statistical qualities of the research, it also shows how the social and political origins of the research and its impact must be questioned.

A feature of the pamphlet is its focus on three recent studies in education:

- * Neville Bennett's *Teaching Styles and Pupil Progress*
- * National Children's Bureau *Progress in Secondary Schools*
- * Michael Rutter et al's *Fifteen Thousand Hours*

The pamphlet points the way to more critical reading of future research, and thus aims to contribute to campaigns to improve education.

READING BETWEEN THE NUMBERS

Radical Statistics Education Group ISBN 0 9502541 9 3 Published September 1992 by BSSRS Publications Ltd. Paperback. Price £1 25 plus 25p postage and packing. Reduced price of £1 each when 10 or more copies are ordered together.

The Education Subgroups pamphlet 'Reading Between The Numbers' has had useful reviews - see this page and the next - and had sold 200 copies within the first fortnight of publication. Rush orders to 9 Poland Street...

TIMES EDUCATIONAL
SUPPLEMENT 10.9.82

Poor use of research can lead to unfounded criticism

by Philip Venning

Attacks on teachers and the education service can often be based on badly produced or wrongly-presented educational research, says a group of statisticians and researchers.

In a pamphlet on the abuse of educational research, the Radical Statistics Group says that many controversial policies - such as closing a village school or claims about the irrelevance of class size - are often justified by referring to research that does not show this.

But teachers and parents were often powerless to challenge this justification because they took little interest in the research and had to rely on over-simplified newspaper reports.

Many people were bored, confused or downright dismissive of educational research, which seemed to produce results that were either obvious or nonsense, "dressed up in incomprehensible jargon and obscure statistical techniques".

In a detailed look at three famous pieces of recent research - Neville Bennett's *Teaching Styles and Pupil*

Progress, the National Children's Bureau's *Progress in Secondary Schools*, and Michael Rutter's *Fifteen Thousand Hours* - the authors argue that each has created an educational myth. The alleged failure of informal teaching in primary schools was one such myth.

"We have often been appalled at the way statistics have been used to justify conclusions and recommendations which will clearly harm the educational system," they say.

In looking at research, teachers needed to ask, among other things, who had commissioned it. "Only in one of our three case studies could a direct link be postulated between sponsorship and finished product," say the authors.

This critique of the NCB study, by Caroline Cox and John Marks, was carried out under the aegis of the Conservative-funded Centre for Policy Studies.

Reading between the numbers: a critical guide to educational research. From: Radical Statistics Group, 9 Poland Street, London W.1 £1.50.

Bravely, in the circumstances, a group of researchers have set out to prove that all research isn't perfect. Rick Rogers reports

Trying to shed light on those academic smokescreens

THE RESULTS of educational research are used to silence the legitimate concerns of those wishing to speak up for their own interests. That's the claim of a group of researchers and statisticians drawn largely from the University of London Institute of Education and the National Children's Bureau.

Known collectively as the Radical Statistics Education Group, they include their own professions in the criticism, along with the media, politicians and policymakers. The victims of research are the consumers — teachers, parents, students and, curiously, administrators. So the Group has published a guide to help consumers check out the validity of research findings, the claims made for that research, and then make up their own minds.

The guide, *Reading Between the Numbers*, focuses on three major studies: Bennett's *Teaching Styles and Pupil Progress*, Rutter's *15,000 Hours*, and the NCB's *Progress in Secondary*

Schools. It explains what they concluded and why. Each dealt with key educational issues: formal / informal teaching methods, school effectiveness, selective / comprehensive schools.

All made a public impact, were controversial, and influence policymaking at national and school level. The guide then develops a set of criteria for checking the "statistical responsibility" both of the research and critics of the research.

Dougal Hutchison, principal statistician at the National Children's Bureau, says the problems of research are not just "real-world" ones: for example, which policy works best. Rather, you must look carefully at the way research is devised and carried out. "Bring to the surface the underlying social and political assumptions a research model is built on."

Do the indicators chosen properly reflect the concepts being tested? Would the same conclusions be reached if a different sample were used? Have all the variables been accounted for? Has the

right level of education been looked at for the study's aims — pupils, schools, local authorities? Are there discrepancies between the findings and the final set of conclusions? Is there evidence of deception: claiming something that is not in the evidence?

The three studies are briefly re-analysed to show consumers how it can be done — and to see if the studies stand up to the responsibility test. They all, in part, fail.

For example, Bennett used inappropriate indicators to test the concept of formal and informal teaching styles. The NCB study's reading test was only partly valid. It is hard to generalise nationally about the London schools used in the Rutter study.

In spite of such failings, each study remains, in part, a valuable educational document. The need, says the guide, is to be able to sort one from the other.

But there is a second stage. What the Group calls demystification. Research does not exist in a vacuum. Its ultimate use is to per-

suaide, and to produce support for policies and practice.

So consumers must ask another series of questions. Who commissioned and sponsored the research? How was it formulated — the process of selecting and rejecting areas of study to produce the conceptual framework? For example, *15,000 Hours* chose school ethos over school resources.

How far was the research presented? The guide describes, with distaste, the paperback "hyping" of the Bennett and Rutter studies. Both had massive publicity and media launch — surely a valid way of alerting many more consumers to new evidence. But after the first burst of publicity, discussion of research goes on behind closed academic doors and in small-circulation journals. The near U-turn reassessment of Bennett was largely ignored by the media.

The long-term impact should be looked at, too. How have conclusions been used, and abused? Do they merely serve the prevailing attitudes of the time? The guide

shows how decisions on resources and school closures have been "justified" by reference to Rutter or Bennett.

The Group acknowledges it is not objective either. It is "appalled at how statistics are used to justify decisions that clearly harm the education system". Thus it directs its fire at *15,000 Hours* because it played down the importance of resource allocation in school performance. The NCB study gets through relatively unscathed — the guide focuses more on the right-wing criticism of the study. However, it does discreetly wonder if the study was worth doing in the first place.

The Group also accepts that parents and teachers are right to look for guidance on good practice from research. But we are led to expect too much. Jeff Evans, senior statistics lecturer at Middlesex Polytechnic, says it is over-optimistic to expect one piece of research to prove something beyond doubt. "That would be nice. But just giving an idea of what would

be fruitful to try out should be enough."

The guide's message is that consumers should not be cowed by the complexities of statistics, nor the academic smokescreen of research. But the guide itself shows up the difficulties. For it, too, sometimes assumes a more-than-basic knowledge of statistics and a ready access to hard-to-get information.

Radical Statistics says it will give extra help if consumers make contact. But the shoe-string and peripatetic nature of the Group would seem to rule out the detailed back-up required. Still, it's a valuable beginning. Many more consumers will now be ready to start checking just what does lie behind the headlines that run, "New research shows..."

Reading Between the Numbers: A Critical Guide to Educational Research, £1.25 from bookshops or direct from Radical Statistics, c/o BSSRS, 9 Poland Street, London W1V 3DG (add 25p p & p).