

MAKING POLICY RESEARCH IN EDUCATION MORE DIRECTLY USEFUL

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The Issue: Direct Versus Indirect Use

Budget cuts and the withdrawal of government support have made educational researchers a much more introspective community in recent times. Out of their ruminations are emerging two important generalizations about the impact of research on policy, namely, that research can exert powerful indirect effects, and that the combined mass of a program of research is more likely to influence policy than the results of a single study.¹

These realizations of themselves are neither astounding nor particularly problematic. Not so, however, a rather subtle restatement in which it is contended that educational research should not be expected to be immediately useful, and that individual studies are unlikely to have much impact. The comments of Cohen and Garet are illustrative of this point of view:

Applied researchers and students of decision making generally have thought about the impact of social science on social policy in terms of the relation between discrete studies and discrete acts of government. The relationship proved to be weak, but because the assumptions used the decision-study categories, attention was focused on explaining the weakness and suggesting ways to repair it. But if policy and research are assumed to be connected by gradual interactions between traditions of inquiry on the one hand and climates of knowledge and belief on the other, then it does not seem terribly important to explain the weak effects of individual studies on individual decisions.²

Weiss is of the same frame of mind as Cohen and Garet and with reference to the expectation that research will have direct and immediate applicability writes:

Even a cursory review of the fate of social science research, including policy research on government defined issues, suggests that these kinds of expectations are wildly optimistic. Occasional studies have direct effect on decisions, but usually on relatively low-level narrow-gauge decisions. Most studies appear to come and go without leaving any discernible mark on the direction or substance of policy.³

The explanation, according to Weiss, is the widespread misconception that knowledge utilization follows a logical, linear route, namely; definition of pending decision-->identification of missing knowledge-->acquisition of social science research-->interpretation of the research for the decision context-->policy choice. The prevalence of this 'problem solving' model, in Weiss's view, accounts for much of the disillusionment about the contribution of social science research to social policy.

In accounting for the alleged failure of the problem solving model, Weiss looks towards the policy formulation and decision making circumstances, rather than the research process. She writes:

It probably takes an extraordinary concatenation of circumstances for research to influence policy decisions directly: a well defined decision situation, a set of policy actors who have responsibility and jurisdiction for making the decisions, an issue whose resolution depends at least to some extent on information, identification of the requisite informational need, research that provides the information in terms that match the circumstances within which choices will be made, research findings that are clear-cut, unambiguous, firmly supported, and powerful, that reach decision-makers at the time they are wrestling with the issues, that are comprehensible and understood, and that do not run counter to strong political interests. Because chances are small that all these conditions will fall into line around any one issue, the problem solving model of research use probably describes a relatively small number of cases.⁴

If Weiss's remarks hold true for Australia then a large proportion of the educational research effort has been wasted. Furthermore, given that research is frequently commissioned in the hope of direct spin-offs, the prognosis must be grim. But is the problem solving model so flawed, and does its application necessarily yield such inconsequential results? There is no argument that many of the reasons behind the failure to utilize research results fall outside the control of the researcher and have to do with the conditions and constraints under which policy is formulated. But equally, the researcher has much to account for, and contrary to a popular view, many of the researcher-related factors militating against the direct use of research findings are amenable to change. There is a distinct possibility that unless the poor state of research utilization is vigorously challenged, then the proposition that individual pieces of research have little direct influence will assume an inevitability, the consequence of a self-fulfilling prophecy. In the discussion that follows I explore the problem solving or direct effects model of policy research, particularly the disjunctions in, and interfaces between, the research and policy making processes.+

The 'Direct Effect' Model of Research

For the sake of facilitating discussion about the impact of research I have chosen, at the risk of oversimplification, to represent the research process in terms of a number of stages or 'blocks'.

The first stage in the problem solving or direct effect approach to policy research is problem identification (P). Some person or group must seize upon an area of interest of concern and use it as a spring-board for an empirical investigation. The second stage is problem analysis. After a consideration of the problem, questions (Q) arise which focus the study. By 'research' (R), the third stage, I have opted for a narrow interpretation of the term and refer, in particular, to information gathering and analysis. The information may be qualitative or quantitative in kind, and may be collected by various means - observation, survey, the study of documents, and so on. Following the analysis, conclusions (C) emerge which relate to the questions pursued and the information analysed. The conclusions are weighed up and implications (I) drawn. When the implications are followed through and translated into action (A) the process can be regarded to have been completed. If every stage were to occur in a more-or-less linear order the process could be represented as follows:

P --> Q --> R --> C --> I --> A

+ Before proceeding, a few points of clarification are in order. First, some definitions. By policy research I mean the collection and analysis of information for the purpose of informing persons involved in, or having responsibility for, the formulation of policy. I exclude fundamental or basic research which may ultimately influence policy, but which is not usually undertaken with any such purpose in mind. I also exclude research in which the focus is on the policy making process and not on substantive policy issues. Policy maker, for want of a better term, refers not only to the senior official in an organization who ultimately approves policy statements but also to persons engaged in the development of ideas and courses of action which form the basis of policy. Such persons may be officials in education departments, commissions and councils, but may also be representatives of interest groups who attend policy meetings. Two further qualifications are necessary. The emphasis in this paper is upon the formulation of policy at federal and state levels. This is not intended to imply that school-level policy making is not a legitimate target of policy research. Finally, the findings of research are adjudged to have contributed to policy making providing that they are considered during the policy making process; the question of whether subsequently the proclamation of policy leads to the intended change in practice is a separate, albeit important, matter.

The process is analogous to that criticized by Weiss in her conception of the 'problem solving' or 'direct application' model of knowledge utilization.

Of course this idealized sequence of events rarely occurs. A more realistic description would show feedback loops and overlapping stages. But in effective policy research, I posit that all stages occur.⁵ Criticisms of the state of direct utilization of research findings can be explained in sizable part by either disjunctions between stages or by their wholesale omission. These are problems for which researchers must assume a large measure of responsibility and which technically are not difficult to grasp.

The Direct Effects Model in Practice

The main reason why the problem solving or direct effect model appears to fail is that it is rarely fully applied. The discussion that follows considers two 'pre-research' processes that are often used instead of policy research though are sometimes mistaken for it. Also considered are five fundamental disjunctions that can occur in the application of the problem solving model.

Pre-research Approaches. Most policy decisions in education are made without any formal recourse to empirical research. Figure 1 shows the two most common approaches in terms of the stages postulated for the problem solving research model.

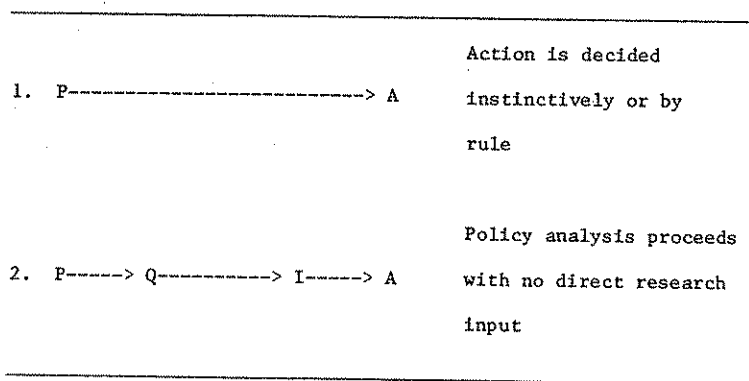


Figure 1: Pre-research Models of Policy Development

Model 1 (P-> A) is the crudest and probably the commonest problem solving approach. An issue arises and education authorities instinctively, or by rule, formulate a response. Most decisions in school systems are made, I suspect, according to this model, and without any formal resort to conventional research.

Model 2 (P-> Q-> I -> A) is several steps more sophisticated. It provides for a more formal analysis of a problem or issue and the conscious development of implications for action. Model 2 represents what is fashionably known as policy analysis. This is a process which emphasises the political nature of action and draws upon empirical research findings as only one of several inputs in the determination of policy options. A good deal of the work of research branches in State and Commonwealth education authorities falls into this category. Memoranda and correspondence are circulated for comment or advice; prompt consideration is required. The researcher-come-policy analyst becomes an expert essayist who draws together the work of others and who brings to bear skills of analysis and information processing. On an international scale, much of the work of OECD/CERI falls within this category.

An example, in my view, where the policy analysis model has been fully and successfully applied is the recent Australian Education Council sponsored study of declining school enrolments, conducted by the Centre of Policy Studies at Monash University. Within a four month period the project team summarised and analysed issues associated with changing patterns of school enrolments, identified educational policy and management implications, and submitted their report.⁶

The policy analysis model is sometimes favoured by governments and officials who have tangled with researchers in the past and found the experience not to their liking. In by-passing the empirical research stage (R---> C) time and money are saved. The popularisation of the policy analysis model as characterised above constitutes a major 'threat' to the empirical education research enterprise as we know it.

Disjunctions in the Direct Effect Model. Figure 2 shows five disjunctions in the direct effect model which commonly brings the research process to a premature end or else set it off on an unintended tangent.

In the first type (P -//- Q---> R---> C---> I---> A) a disjunction occurs during the earliest phase. The area initially demarcated by the researcher may be of mutual interest to researcher and policy maker, but the questions or issues which emerge may be of only minor practical concern. This can happen when researchers formulate the problem in such abstract or theoretical terms that there can be no immediate utility in the findings. They are encouraged to adopt this approach by their professional training which often derogates relevance and practicality. In fact, some of the foremost educational research scholars regard these qualities as downright antithetical to the proper course of educational research.⁷ Instead, are lauded the hallmarks of the natural scientist - objectivity, disinterestedness, and universality - qualities designed to keep the researcher remote from the practical implications of the problems. In the P---> Q---> R---> C---> I---> A process the R and C stages are regarded as the researchers' exclusive province, the P and Q stages are considered their prerogative, and the I and A stages are seen as of incidental interest.

1. P-//-> Q--> R--> C--> I--> A	<p>Researchers impose their own construction of the problem</p>
2. P--> Q-//-> R--> C--> I--> A	<p>The research design does not address the questions of concern</p>
3. P--> Q--> R-//-> C--> I--> A	<p>Conclusions are not drawn from the research</p>
4. P--> Q--> R--> C-//-> I--> A	<p>Implications do not follow from the conclusions</p>
5. P--- Q--- R--- C--- I-/- A	<p>Action is decided upon independently of the research</p>

Figure 2: Classical Disjunctions in the Direct Effects Model

The second type (P--> Q-//-> R--> C--> I--> A) draws attention to the class of studies which begin to come adrift after the critical questions under review have apparently been settled. This can occur when researchers deliberately impose their own questions, or adopt a research framework or methodology which limits the kinds of questions that can adequately be addressed. Very often, the negotiations between researchers and policy makers result in the reshaping of the problems so that a particular methodology can be used. In the process the original problem can become lost, at least from the policy makers' perspective. Their assent to technically written research proposals is often gained on the basis of trust that their concerns remain reflected in some form of mathematical model or abstract framework. For their part, makers are not usually looking for generalizations with scientific foundations; mostly, they are concerned with their particular problem located in its own, special set of circumstances. This can create a tension for many researchers. Mishler has noted how orthodox social science implies the search for universal context free laws and the use of "context-stripping" methods.⁸ In policy research the context may be all important and describing and accounting for it may be the most useful outcome of the study. History tells us that there are no such things as universal educational policies.

In my experience, educational research is seldom criticized by policy makers on the grounds that its findings are embarrassing or critical of their actions (though nobody likes to be publicly caned). By far the most common complaint is that research fails to recognize the practical constraints within which policy must be developed and implemented. I do not wish to argue against the place of basic or conclusion-oriented research in social science. My concern is that often the tradition of inquiry seldom fits the requirements of short-term and even middle-range policy development.

In type 3, (P---> Q---> R-//-> C---> I---> A) the disjunction occurs between the analysis of data and the drawing of conclusions. In Campbell and Stanley terms, the studies suffer from problems of internal and external validity.⁹ Sometimes the problems arise as the result of fine-grained errors of logic. Othertimes, the flaws are more comprehensive and subtle. Researchers can fall into this trap by attempting to over-simplify their findings when the data, unhappily, are so inherently complex as to preclude such reduction. Or, they may be riding their own hobby-horses during the conduct of their study and thereby have unconsciously pre-decided the explanation and imposed it on the data.

There are elements of this phenomenon in the much quoted study by Rutter and his colleagues of twelve London secondary schools.¹⁰ The conclusion, that school ethos influences student learning, is appealing, but whether it is fully supported by the data is another matter. Much of the enthusiasm for the Rutter study appears to have been generated by relief that at last, after the Coleman Report and Jencks' inspired pessimism, evidence had been procured which showed that school policies can compensate for inequalities between students in terms of their educational attainment.¹¹ This is arguably an instance of where the plausibility of research findings has been influenced by the climate of professional and public opinion. Studies which anticipate changing tides of opinion are likely to appear influential, and the technical competence of the work usually turns out to be a matter of theoretical rather than practical concern. Unfortunately, the researcher has no control over the way research is used once it is the public domain.

From many points of view, the R-//-> C disjunction is the least critical in explaining the utilization of research findings. Yet, it is the problem area into which most of the researcher's effort is usually invested. I am inclined to agree with Patton and his colleagues who, after reviewing the impact of evaluative research, conclude that improving methodological quality of itself will have little effect in increasing the utilization of findings.¹² This should not be construed as a call for less attention to rigour but rather as caveat to make sure that sufficient attention is focused on other critical stages.

The interface between drawing conclusions and proposing implications is a critical and misunderstood phase and much policy research goes awry in attempting to bridge the gap. In doing so, a type 4 disjunction (P---> Q---> R---> C-//> I---> A) occurs. A principal reason in Phillips' view is that researchers are inclined to apply a 'misconceived logic'. Different people may accept the same set of research findings yet come up with different implications for action. This happens because different sets of linking premises and assumptions have been applied. As Phillips points out:

A final complication is that many researchers do not realize that linking premises are involved in applying their theory or research findings to practice, and therefore do not state them clearly. In other words the links, which may be open to challenge, or for which alternatives may be found (thus leading to different practical implications) are often suppressed.¹³

Consider, for example, the building of open area schools. In a national evaluative study,¹⁴ the author and colleagues found that with respect to student self esteem conventional design appeared to suit schools with intakes from lower social status areas while the open area design favoured schools which drew pupils from higher and middle social status backgrounds. The study had discovered a strong aptitude-treatment interaction. The implication that some people drew from that conclusion was that education authorities should build conventionally designed schools in lower social status suburbs and continue with open area schools in the more affluent areas. Of course, it is not as simple as that. There is an array of linking premises that underly such a proposal. How important is self concept vis-a-vis other outcomes? Do the differences, though statistically significant, amount to much in practical terms? How politically acceptable and administratively feasible would such a course of action be regarded. Most policy decisions involve trade-offs of one kind or another.

Examples of type 5 disjunctions (P---> Q---> R---> C---> I-//> A), in which action is decided independently of the research process, include studies in which the research is intended to serve a demonstration or advocacy function. This is particularly the case with research carried out on behalf of minority groups. The research serves the primary purpose of drawing attention to their plight by quoting incidence figures. In special education, for example reports which indicate percentages of the population handicapped in one way or another usually lead to recommendations which could have been derived without resort to empirical research. These recommendations almost universally call for more resources to be committed to the area. Policy research projects which fall into this category have relatively high probabilities of being used.

In other instances, action has had to be taken because the research findings have arrived too late; they have followed rather than preceded critical decision-making points. The genre of evaluative research is particularly susceptible to this problem, especially large scale studies. For example, in the national evaluation of open area schools, to which reference was earlier made, the open area school design was a well entrenched idea by the time the study was commissioned. When the study reported, several years later, the concept had gained sufficient momentum that major policy options had been foreclosed for what amount to administrative and political reasons. It would have taken the disclosure of massive shortcomings to have persuaded policy makers to announce a major deviation in policy. The trade-offs would not have been worth it.

The analysis of disjunctions draws attention to some of the flaws that occur in the application of the problem solving model. In a similar way it is possible to review applications of the model in terms of omissions of stages, and in terms of the compounding of omissions and disjunctions. These are matters which receive scant attention in text books on research methods. In a sense they raise issues that relate to the management of research projects, an under-rated facet of the policy research process. The flaws are principally of human origin. There is no inevitability that they should occur. What is demanded of the researcher is an awareness of the strategic questions of policy research, and a readiness to work outside the traditional confines of the natural scientist's role.

The Interfaces Between Policy Maker and Researcher

The research regarded by policy makers as the most useful is not always the most technically proficient. Adherence to canons of scientific inquiry are not the foremost criteria by which policy makers regard the usefulness of research projects. Why, then, do policy makers use some research findings and not others?

There is an axiom that can be applied to the take-up of research findings by policy makers, namely, that the probability of take-up is a function of their ownership of, and their involvement in, the research process. This simple understanding tends to be rather problematic in practice.

In Figure 3, several modes of inquiry are represented. The first, I have called the academic style. It has no formal interface or engagement between the researcher and the potential user. Weiss, describes this approach to research utilization the 'knowledge driven model, based as it is on the assumption that the sheer fact that knowledge exists presses it towards development and use.'¹⁵ Many researchers seem to believe that their findings of their own accord will find a place in some unspecified data bank from which policy makers can draw bits and pieces of information when it suits them. Little wonder such studies have no direct effect; there was no firm intention or plan that they should.

The second mode is an embryonic policy research approach. It provides for some direct interaction with potential users at the point at which implications are being toyed with by the researcher or, perhaps, after the publication of the report. Interaction at this stage should be a sine qua non of policy research and constitutes a minimum level of contact between research and policy maker in most research units in State Departments of Education. ERDC was using this strategy to good effect; it would convene meetings of representatives from potential user groups to discuss the findings with the authors of the research. The mode presumes that the decision to examine the particular problem has been made by the researcher; what is being handed over to the policy maker is the follow-up or action.

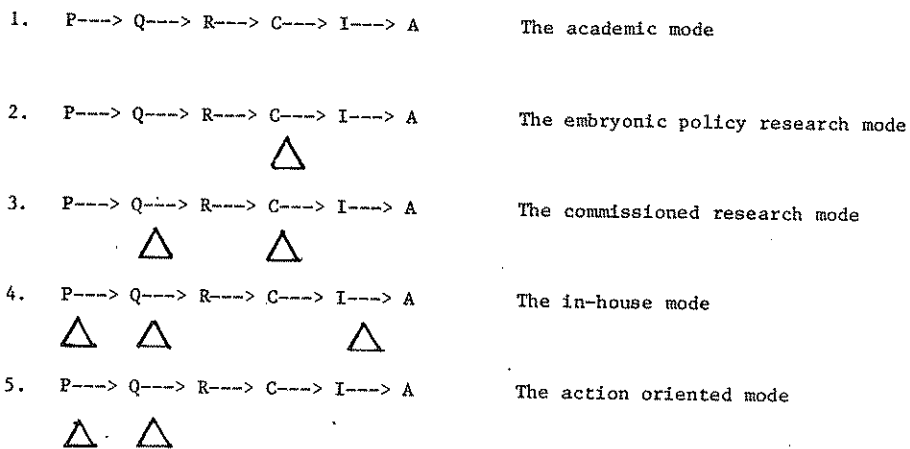


Figure 3. Interface Between Policy-Maker and Researcher in Different Modes of Inquiry

The third mode incorporates what is commonly called "commissioned research". There are two key interfaces here. The first follows the delineation of the problem area and the questions of interest. The delineation task is usually accomplished by the funding agency or the education authorities backing the research. In some cases the protocols may be very strict and, in contradistinction to the Mode 1 style, the researcher may have little latitude in renegotiating the problem area. Following acceptance of the conditions of the study, the researcher proceeds with the investigation. The second formal interface usually occurs after the receipt of a draft report. Sometimes, the commissioning body may appoint a project advisory or steering committee containing policy makers and researchers. This strategy is usually employed to keep projects on target, though it does offer opportunities for increasing the level of understanding between researchers and potential users of the research findings.

Australia has a fairly recent tradition of commissioned research. At the national level of Commonwealth Department of Education, and Commonwealth bodies such as ERDC, the Schools Commission, and CDC, have engaged in commissioning studies. The National TAFE R & D Centre will carry on the tradition. At the State level there is less. The Western Australian Education Department is one exception and has managed a co-operative research program with tertiary institutions since 1978. The Research and Evaluation Section of the ACT Schools Authority has favoured a slightly different tack. Rather than directly commissioning research it has actively encouraged masters and doctoral students from universities and CAE's to undertake research studies of mutual interest to the student and the Authority. With the abolition of ERDC, which spent the bulk of its funding on 'applicant-initiated' research of the Mode 1 variety, there are signs that commissioned research is on the ascendancy.

The fourth mode describes the interaction that often occurs with 'in-house' research. The policy maker identifies a problem and refers it to a research team. They probe around and develop the questions of interest. These, together with other aspects of the research proposal are subsequently negotiated and endorsed. The study proceeds and the results are tabled with implications at an appropriate policy development forum. Research completed for committees of inquiry is often characterized by this mode and can be quite influential in shaping the recommendations of reports.

The final mode of policy research I have labelled (somewhat tentatively) action research. In some respects the style is analogous to what is known as 'formative evaluation'. In this mode researcher and policy maker work closely from beginning to end. The roles of policy maker and researcher are blurred. For the approach to work it is essential that problem and solution are owned by the policy maker. The effect of the research is absolutely direct. There are no big surprises in the final report. In fact there may be no big final report - the effort of the researchers being concentrated on action rather than laborious report writing. The project culminates when a solution has been effected. Such an approach may seem attractive on paper but, turns out to be more difficult in practice. My guess is that it is seldom applied in policy research, at least in its fullest sense. At a general level, however, the approach is effected by full negotiation between researcher and policy maker at every stage of the process. It will be interesting to see whether the work on action research of Kemmis and his colleagues is able to influence the style of policy research conducted in this country.¹⁶

There are several reasons why researchers steer away from research modes which maximize their contact with policy makers. First, there are threats to independence. When the researcher is the client of the policy makers, and in fairly frequent contact, there can arise pressures to cut corners, make compromises, accept freshly imposed deadlines, and reorient the focus of the study. This pattern of behaviour can assume considerable nuisance value and interfere with the well laid plans of the researcher. More seriously, pressure can be applied to skate over sensitive issues or avoid disclosure of certain details in reports. The second reason is that the reward structure (for researchers in tertiary institutions, at least) is biased towards basic research. There are few plaudits for resolving short term policy expediencies. Where publications emerge from such work they shine less favourably on the researcher's vita. The third reason is that many researchers find the personal protocols required to conduct such studies tedious, and in their view, time-wasting. The dynamics of managing projects which involve, and depend upon, committee work and considerable levels of person-to-person contact are not to every researcher's liking.

The essential point being argued in the above discussion is that assessments of the efficacy of the problem solving model are half-baked unless account has been taken of the interfacing between policy maker and researcher. Weiss, and Cohen and Garet have largely ignored this dimension in their consideration of the problem solving model and its capacity to directly influence policy. They have very much in mind Mode 1 or Mode 2 styles of inquiry with the researcher well distanced from the policy making process.

The Use of Policy Research Findings

The contribution of research to policy making occurs at various levels. In its simpler form it can consist largely of factual inputs such as quantities, cost, opinions, preferences, and so on. At a higher level research can contribute new ideas, and frameworks for thinking about problems and issues. Cohen and Garet are concerned with an even broader canvas when they describe how applied research affects policy. In their terms, they distinguish between 'decisions' and 'policy', defining a social policy to be 'a system of knowledge and beliefs - ideas about the causes of social problems, assumptions about how society works and notions about appropriate solutions.'¹⁷

If the impact of a piece of research is to be judged by the degree to which the research has shifted a 'climate of knowledge' it is hardly surprising that most individual research studies are found wanting. But why judge all policy research by the extent to which it has achieved such an outcome. Broad policy arenas, such as transition to work, multiculturalism, or devolution of authority, are the exception rather than the rule as far as the administration of Australian education is concerned. The bulk of activity is governed by more pragmatic and middle-range policy making. Furthermore, there are interdependencies between policies which impose constraints upon development and change. A more down-to-earth and modest criterion is that research is properly used when it has been considered by policy making groups; that is, when it has become a factor in policy

making. This view casts educational researchers in a less elitist position than many may prefer. It acknowledges that the researcher's construction of a problem and its solution, though valuable, is only one perspective and moreover one which is not necessarily blessed with infallibility. The view also recognizes that given the complexity of many educational problems, research may contribute usefully to a particular aspect of policy under consideration without its influence ever becoming apparent.

Under these conditions, for research to be used it must appear on the private agenda of policy makers, and on the more public agenda of policy development meetings. As a corollary, officials in education organizations should be 'cultivated' and their point of view understood. Very often, the difference between the lukewarm reception and the careful consideration of a set of research findings is the championing of the research at a policy meeting by a committed official - the more senior the better. If it is accepted that policy formulation is not dependent upon the discovery of immutable truths, but rather about the supremacy of ideas and plans for action, then advocacy in support of the researcher's point of view is essential during the cut and thrust of policy and planning meetings. The way in which politics within organizations influence the utilization of knowledge has to be taken account of by researchers who are concerned about the use of their work.

The assumption disclosed by this view is that policy makers are the principal target of policy research. For policy research units established in government departments there may not seem anything particularly disputatious about such a position. Research is one source of information thrown into the policy-making mix. There is a tendency, however, for more 'academically' inclined researchers to regard the information base from which social policy is moulded to be public property; they see themselves as having a social responsibility to keep governments and 'bureaucrats' honest, and to challenge what appears to be taken for granted. I do not wish to argue against the role played by such researchers, but it should be apparent that the findings which emerge from such research travel along a rocky road towards utilization. It will take a radical change of attitude for many researchers before they will feel comfortable working in association with policy makers. The interactive modes of inquiry, with their potential for direct impact, are likely to remain outside the repertoire of many researchers for largely personal and ideological reasons.

Conclusion

Orthodox social science traditions of inquiry often militate against the generation of knowledge likely to be found directly useful by policy makers. In particular, passions for generalizability, objectivity, and independence, and the reward structure that applies in the educational research community, discourage researchers from direct contact with policy makers. If policy researchers want to see their work more directly used (and there are reasons of survival why they should) then they will have to reconsider their role in the policy development - research process. They (the researchers) must recognize that policy making is above all a political

activity concerned with reconciling the claims of different interest groups. Decisions about policy are usually made on the basis of intuition, force of argument, and finally, judgement, as much as on any 'rational' consideration of research based facts or theories.

Principally, there must be a disposition on the part of policy researchers to:

- (a) become more attentive to the strategy of conducting policy research studies and less singularly preoccupied with the technology of data collection and analysis.
- (b) establish with greater clarity the identity of the potential group of users.
- (c) share with the potential users ownership of the problem and its solution.
- (d) review the conventions of scientific method as they apply in policy research, and forego some of the rewards of academia.

Problem solving, policy research bearing these characteristics is a rare species. And, it has its special headaches. Research of this kind, however, is our best bet if we wish to establish (or restore) for educational research its reputation among policy makers as a useful activity. There is a critical first step that must occur before this can happen: researchers must intend their work to make a direct contribution to policy making.

Notes

1. Examples include: Nisbet, J. and Broadfoot, P. The Impact of Research on Policy and Practice in Education, Aberdeen: Aberdeen University Press, 1980; Power, C. The Contribution of Research to Educational Policy and Practice. Australian Educational Researcher, 1981, 8(1), 5-19; Keeves, J.P. The Research Contribution to Educational Practices; in Shellard, J.S., (Ed.) Educational Research for Policy Making in Australia. Hawthorn, Vic., ACER, 1979; and Selleck, R.J. Where Be Your Findings Now? An Essay on the Impact of Educational Research. International Review of Education, 1981, 27(2), 197-203.
2. Cohen, D. and Garet, M. Reforming Educational Policy With Applied Social Research. Harvard Educational Review, 1975, 45(1), 17-43.
3. Weiss, C.H. The Many Meanings of Research Utilization. Public Administration Review, 1979, 39, 426-431.
4. Ibid., p. 428.

5. In some versions of the problem solving model an evaluation stage is included after either the implications or action stages. If the outcome of the policy making process is judged unsatisfactory then it is 'back to base one'. Kemmis and his colleagues (Kemmis, S., et al. The Action Research Planner Waurin Ponds: Deakin University Press, 1981) quote Lewin in describing action research as proceeding in a spiral of steps: general idea; reconnaissance; general plan; developing the first action step; implementing the first action step; evaluation; revising the general plan; developing the second step; etc. Though focused on action at school level, I see no necessary incompatibilities in applying the model at system level to policy research exercises.
6. Burke, G., and Hudson, H. The Changing Patterns of School Enrolment and Their Implications for Educational Policy and Management. Report to the Australian Education Council Prepared by the Centre for Policy Studies, Monash University. Canberra: AGPS, 1981.
7. Kerlinger, F.N. The Influence of Research on Education Practice. Educational Researcher, 1977, 6(8), 5-11.
8. Mishler, E.G., Meaning in Context: Is There Any Other Kind? Harvard Educational Review, 1979, 49(1), 1-19.
9. Campbell, D.T. and Stanley, J.C. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally and Co., 1963.
10. Rutter, M., Maughan, B., and Mortimore, P., and Outston, J., Fifteen Thousand Hours: Secondary Schools and Their Effects on Children. London: Open Books, 1979.
11. The debate about whether attending a particular school makes much difference in the long term to a student's life chances was precipitated by the Coleman Report. (Coleman, J.S., Campbell, E.Q., Hobson, C.H., McPartland, J., Mood, A.M., Weinfield, F.J., and York, R.L., Equality of Educational Opportunity. Washington, DC: US Government Printing Office, 1976.). Among the more controversial re-analysis of the Coleman data was that of Jencks and his colleagues (Jencks, C., Smith, M., Acland, H., Bane, M.J., Cohen, D., Gintis, H., Hegnes, B., and Michelson, S. Inequality: A Reassessment of the Effect of Family and Schooling in America. New York: Basic Books, 1972). The notion engendered by these findings, namely, that massive injections of public funding into the education system are not likely to influence the outcomes of schooling, ran counter to common sense and public sentiment. Considerable critical attention was focused on the methodology of these studies, and the family of studies that they spawned. It was only a matter of time before a body of research was accumulated which supported an opposite point of view.

12. Patton, M.Q., et al. In Search of Impact: An Analysis of the Utilization Federal Health Evaluation Research. In Weiss, C.H., (Ed.), Using Social Research in Public Policy Making. Lexington: Health Lexington Books, 1977.
13. Philips, D.C. What Do the Researcher and the Practitioner Have to Offer Each Other? Educational Researcher, 1980, 9(11), 17-24.
14. Angus, M.J., Beck, T.M., Hill, P.W., and McAtee, W.A. A National Study of Open Area Schools: An Evaluative Study of Teaching and Learning in Primary Schools of Conventional and Open Area Design in Australia. ERDC Report No. 21, Canberra: ACPS, 1979.
15. Weiss, C.H. Op. cit., p. 427.
16. See for example, Kemmis, S. Action Research in Retrospect and Prospect. A Paper Presented at the Annual Meeting of the Australian Association for Research in Education Sydney, November 6-9, 1980.
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