# THE IRRESISTIBLE NEED FOR EDUCATIONAL RESEARCH

## The value of educational research questioned

No one would seriously question the usefulness of scientific research in almost all the fields in which man is seeking to compel the forces of nature to serve him and to improve the quality of life, especially where his bodily health is concerned; yet some people are still demanding, more or less aggressively, what could be the need for or value of educational research. The clearest evidence of this doubt and disbelief may be seen in the infinitesimal amounts which many European countries are prepared to invest in this kind of research.

Even in countries like the United States, the United Kingdom and Sweden, where research effort has been considerably greater, doubts remain and disappointments arise, often extending to education itself.

It has been observed that, like those philosophers who believe that all a man needs, in order to become virtuous, is to learn the difference between good and evil, there are some educators who believe that progress proceeds from education, that research can teach us how to educate people correctly, and that those in power should accordingly be moved to supply the resources needed to ensure progress. It has also been observed that the rising percentage of the gross national product spent on education in many member states of the Council of Europe has gone hand in hand with rising doubts as to the worth of educational practices and establishments. Many who feel these misgivings about the school lump research under the same heading, and maintain that neither corresponds to the true needs of contemporary society.

Disheartening as it is, there is much truth in this diagnosis. It refers to two things: school and research.

Obviously, schools have not kept pace with events and have not adjusted to the dramatic cultural crisis which the world is now traversing, but it is not for me to go into that problem at this meeting.

The criticism of educational research, on the other hand, concerns us directly, and in view of the present rather aggressive attitude adopted by some authorities and opinion groups towards scientific research in general and educational research in particular, I think it is a matter of urgency to react. Not because we may feel threatened personally or in respect of our job, but because whole countries, no less than individuals, are in danger of suffering incalculable loss.

Two things must be made clear: firstly, it is profoundly unjust to proclaim that educational research has failed when in fact it has never yet achieved the dimensions and scope required for it to become effective. Secondly, research cannot be asked to impose standards.

The role to be expected of educational research

Expecting research to set standards is tantamount to claiming that scientific investigation can discover the one effective means of achieving an educational goal, and that once that means has been discovered, every teacher and every pupil will hasten to adopt it. This fails to take account of several decisive factors:

1. In educational matters, the most important decisions never flow from objective analysis or rigorous quantification, but from value judgments.

2. In almost every case, there is more than one path to learning.

3. The educational process is so complex and fluid that every instance might almost be called unique: a particular teacher works with a particular pupil or group in order to achieve a particular objective in particular circumstances.

This being so, the function of research is either to perfect the tools of education or manufacture new ones - and these tools are then turned over to the craftsmen, that is the teacher, for him to use according to the needs and material he is helping to shape - or to evaluate observed or surmised results for the information of teachers and pupils. In short, research opens up perspectives and informs, but does not decide.

Conditions necessary for the development of educational research

The other mistake made by those who hold educational research in contempt is their failure to realise the conditions required for it to become effective have still not been met - not even in the very few countries in the world in which it has been permitted to develop to any significant degree - let alone in our own countries, most of which do not even possess a research policy worthy of the name.

What conditions are required for educational research to develop normally? In trying to answer this question, as I did a short time ago in Hamburg (1), I should like to begin with the highly pertinent remarks of R N Bush at Stanford University (1975).

The first requirement is that research shall be able to investigate the whole of the education system and all its components, not just certain aspects of it which are arbitrarily selected because they correspond to the political or philosophical climate of the moment, or because they are so restricted that even researchers with meagre resources can tackle them, all other problems being simply out of their reach. This is clearly not the right way to set about it. The bulk of investment for research must be covered by a medium- and long-term policy; priorities must be established explicitly, co-ordination must be ensured - I shall return to this point - and the essential resources must be made available to achieve these ends. Otherwise, things will remain as they unfortunately all too often are in our countries. This does not mean that we should systematically prevent researchers from tackling problems which appear

./.

(1) All-European Conference for Directors of Educational Research Institutions, Hamburg, August (April) 1976.

trifling or unrelated to the social preoccupations of the moment. Free research must continue to exist, for the greatest discoveries sometimes spring from issues that may seem to be of infinitesimal interest. This brings us back to the eternal question of the relationship between basic and decision-oriented research, and our committee has talked about that enough for me to say no more about it.

The second prerequisite for the normal development of research is the existence of a critical mass of researchers. By critical mass I mean a minimum number below which a team cannot validly tackle an educational problem of the usual type. At the national level, I mean a number of researchers large enough to be able to transmit information through the various communication channels as well as handling the problems arising. But what is the situation now? In academic language, it is the custom to avoid strong words. Nevertheless, I would make bold to say, after analysing the present conditions in many European countries that one is hard put not to speak of an intolerable, even tragic deficiency. Two years ago I catalogued the resources allocated to experimental research in the field of education in Europe, and the number of qualified researchers in each country. A student writing his first dissertation or end of course paper is not, obviously, a researcher; nor can a teacher who has had no preparation for research and has simply been seconded for a few months to help carry out some study be termed a qualified researcher. Let there be no misunderstanding: in many cases such associates are necessary. They have their part to play and at their level they perform an important function, but we must not mix everything up together. There can be a world of difference between the experimental qualifications of a good laboratory operative, a teacher and a leading researcher. But when we begin to stiffen our demands regarding training in experimental methods, knowledge of statistics and technical capacities, we find in a number of European countries that the researchers able to satisfy these criteria are few and far between. Let each of you try to name the highly qualified researchers in your own country. I am willing to wager that except as regards a few fortunate countries of which you are well aware, your list will be short. In such circumstances it is quite absurd, as well as unfair, to accuse a country's bare handful of researchers of failing to improve the entire education system and produce solutions to avert the impending collapse of civilisation. And how dare we abandon some university professor to his solitide, possibly aided by one assistant (albeit for several years more often assisted than assisting), and imagine that these meagre resources will enable the university to contend with the problems of an entire region or country! True, isolated researchers may have intuitions and strokes of genuis which carry forward our knowledge and this can happen in education too. But as Sixten Marklund (1) has told us on many occasions, one of our major obligations at this point is to assist those who are responsible for policy decisions in education, and at that level it is not the poor lone researcher tucked away in his university laboratory who is going to be able to meet the demand.

The third conditon for success is that research teams should be interdisciplinary. This subject was discussed at length in Hamburg, but there is no harm in mentioning it again. A few minutes ago, for example, we spoke of the need for new statistical methods better suited to contemporary psychometrics. How many educational researchers today - even the highly qualified ones - know enough mathematics to cope with their problems?

./.

(1) Chairman of the Committee for Educational Research in 1973 and 1974.

How many educational researchers' work would have come to a halt without the help of language specialists or sociologists? How is it possible to undertake educational research which will influence national policy when we know absolutely nothing of the true social conditions or cultural evolution of our time? Interdisciplinarity is not a choice, it is an imperative. Nevertheless, at the risk of wearying you, I also want to repeat that we must be very much on our guard against ready-made assumptions about interdisciplinarity. Seating a statistician, a sociologist, an anthropologist, a psychologist, a paediatrician and an educational researcher around a table will not make them suddenly and miraculously agree, speak the same language, draw up a harmonious work programme, construct a solid and coherent theoretical framework without encountering any obstacle and, like the happiest of couples, stroll off into the sunset towards eternal and imperishable bliss, carrying mankind on to glory as they go.

If we are not careful, interdisciplinary meetings simply bring us back to the conditions we knew so well in kindergarten, where each child tells his own story and considers it so much more important than the others that he does not even bother to listen to what anyone else may be trying to say. That form of interdisciplinary work, needless to say, does not interest us. Working in an interdisciplinary context is something one has to learn, like working in groups, and as far as education is concerned I have the impression that we have a long way to go in this respect.

The next, essential point: the educational reality, or full knowledge of that reality, must be the starting point for educational research. Education is a human venture par excellence, and so it is also, par excellence, a realm of contingencies. Since this is so, how can we accept reforms dreamed up at the head of some administration or in the secrecy of a research laboratory, with no knowledge of social realities, the particular situation of schools or the condition of teachers? Yesterday we were reproached for not talking of those who have to "face the class" every day, and I think that to some extent the criticism was justified. Until we have some fairly precise information regarding the teacher's cultural baggage, frustrations and needs and real problems, and his intellectual limitations, we can hardly progress further.

Teachers and educational research

A Yates (1) recently pointed out that communication between researchers and teachers cannot be one-way only. Certainly, we must find means of getting across to teachers; but it is at least as important for teachers to get across to us. We know little about them. And even when they do communicate with us, their proposals or comments are often misinterpreted, because we do not know the conditions in which they were first expressed.

Nevertheless, there are certain difficult and painful truths which must be stated. In some places it is still possible to find teachers whose training has not equipped them to read the scientific publications containing psychological information which is basic to their activities. This is an unpalatable truth. If you do not believe it, visit the schools of Europe and keep your eyes and ears open. You will appreciate better the distance between the issues of concern to us, and that reality. This is not the rule, I am happy to say, but is it really the exception? I see some startled glances. What is there to prevent us from carrying out an investigation here in Europe today which will get to the bottom of things and show what is actually going on in many schools.

./.

(1) Director of the National Foundation for Educational Research in England and Wales.

If we did, I am not sure we would dare to publish the results of our observations, simply because they would lend themselves to sensationalism, add fuel to the fire of the school's enemies and, most of all, unfairly point a finger at the teachers who are themselves victims of the social and institutional system. This being so, however, it is outrageous to criticise researchers for employing an esoteric language and not ensuring full reciprocal communication when, in a number of cases which it would be most desirable to calculate, they have to communicate with teachers who have not even read the basic psychological or educational texts, either during initial training or afterwards. To drive this point home, just ask, whenever you get the opportunity, how many teachers are capable of reading a research report relating directly to their own practice, in the original text and accompanied by a minimum of statistical data.

This brings me to my next point: if research is to have any influence, its findings must not only be publicised, they must also be used. And these are two distinct matters. Publicising the results of research entails finding the machinery, procedure and methods that will enable a communication which is intelligible and has not been stripped of its essence to reach its intended recipient. However, even if this is done satisfactorily - which is by no means the case - it remains for that intended recipient to accept the communication and convert it into action in his everyday work. Not only must the need to use the information be felt, but in a sense it must be perceived as a personal message; this implies a sufficient level of open-mindedness and an ability to criticise one's own actions. The problem of communicating research findings, therefore, is two-fold, and it is important to remember both aspects.

However, if you will forgive the truism, we must take things as they are, and for years to come a great many teachers will go without a thorough grounding in the educational sciences.

For those whose spirits sink at the sight of a statistic, we have to invent tactics for transmitting our information bit by bit, pre-digested and pre-selected - or else reveal it through the use of active methods whose nature might very profitably be studied. But this situation, which is a historical accident, cannot last. The teachers of the future have passed through the recognised university system, that is, people whose initial training has familiarised them with scientific thinking, language, techniques and tools, just as though they were engineers, doctors, agronomists or any other highly qualified specialists. We cannot continue to train teachers in such a way that the day they receive their diploma or certificate, we have to hand them, along with it, an invitation to their first refresher course.

Problems of communication and co-operation

Another prerequisite of effective research is feedback. We may have made an exhaustive study of results observed in the laboratory or in a small-scale research project, but we cannot really predict the outcome in the school setting. What happens to innovations for which we may be partly or wholly responsible? Continuous liaison between teachers and researchers is indispensable.

But once again, what are we to do when we have over a million pupils, a hundred thousand teachers, and ten or twenty researchers? Here too there is such a thing as a critical mass, and it seems unlikely that we will achieve effective action and communication until we achieve a minimum ratio of one qualified researcher to every hundred teachers. This researcher will generally not spend his time in a laboratory. He will spend it in a school, where he will be working with the teacher every day, carrying out operational research, taking measurements during the learning process, helping to make diagnoses and define therapy.

We also need information from our colleagues in educational research; this is the reason for the necessity of systems such as EUDISED, which are designed to set up a network of rapid and efficient communication between us.

Yet another crucial point is concentration of effort. The complexity, difficulty and vastness of the problems to be faced and the great poverty of present resources are such that no single research team can tackle all problems. We are not omniscient, not supermen. There are only 24 hours in the day, and we cannot convert one franc into a million dollars. Therefore, we must restrict our efforts to one or two fields. Our choices need not be final, but they must be provisional. This explains the need for regional and national co-ordination, for long-term planning. School development plans do exist in our countries. There are also here and there plans governing the distribution of schools. Methodology in this area is fortunately becoming more precise. But where can we find a medium- and long-term programme for educational research? Improvisation reigns virtually everywhere, and it is our duty to say so, especially to the political authorities. However, concentration and co-ordination at national level are not enough, and this meeting is here to cross national frontiers. Pending happier days, we must create a European plan as quickly as possible.

But before indulging in such dreams of grandeur, we might at least set up inter-regional groups within our own small Europe. Through them areas of co-ordination could be quickly established and, with the help of the Council of Europe and other European institutions, we might also create poles of attraction for educational development. These would serve to solve crucial problems in certain regions of Europe, and would at the same time become centres of activity and training of researchers. They might perhaps be able to shake minds and institutions out of their feeling of intellectual comfort and immobility.

Resources for educational research

Lastly, if research is to function, be credible, and gain the support of political and scientific authorities (for we must not forget that the politicians are not the only ones who doubt the usefulness of educational research), our work must be seen, so too our thinking and the use we make of the resources allocated to us. If we were ever able to learn every country's exact budget for scientific research in education, and simply published the relevant figures in the press alongside the list of major unsolved educational problems besetting the public, perhaps we might touch off a psychological shock-reaction which would have an impact upon decision-makers and politicians. It is high time we broadcast the fact that in some member countries of the Council of Europe less than one-thousandth per cent of the education budget is invested in research.

In the crisis our society is now experiencing, it must make some agonising reappraisals of its basic values (and as a result, its spending habits); but simply chopping away at education, adopting negative decisions in regard to one of our major sources of progress, is cutting off the roots of the tree we are trying to make grow. There is the risk of incalculable, possibly irreparable harm. Unproductive or unprofitable spending must cease, but it is also important, especially in a time of crisis, to redistribute resources so that they can act as powerful investments, create a new dynamic and generate energy.

In conclusion, I am deeply convinced - not because it is my job but because it is the fate of our children and thus of our nations that is at stake - that it is of the very first importance for us to invest heavily in educational research. In this context the committee has a major part to play in informing those with executive power; politicians, administrators, the world of science, and especially the science academies which usually know nothing or next to nothing of our work, or which contest its value. Perhaps this committee can do more. It can show proof of imagination and energy. I should like to end on this note, asking you to think of these few considerations, not as a conclusion or as the farewell speech of an outgoing chairman, but as an invitation to follow new lines of reflection and an urgent appeal to all for help, for generosity, for energy.