

The Impact of Evaluation Studies: The Researcher's View

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Abstract

One frequently encounters claims that evaluation has little impact on the educational practice. Surveying the educational literature one may identify three types of approaches vis-à-vis this claim. The *apologetic* approach denies this claim or blames others for its under-utilization. The *entrepreneurish* approach suggests ways of increasing the utilization of evaluation findings, while *epistemological* approaches recommend to broaden the meaning of "impact", and demonstrate that empirical findings have a cumulative effect and jointly with other facilitating factors, they do affect action.

1 Introduction

In the last three decades both producers and users of scientific research payed much attention to the phenomenon of knowledge explosion. New disciplines and areas of studies have emerged, and the scope of knowledge in subjects of the traditional curriculum has tremendously grown. It is quite natural that also in the field of educational research one could observe an increase in the scope of published studies.

In his presidential address delivered in 1966 at the conference celebrating the twenty-fifth anniversary of the American Educational Research Association (AERA) Bloom (1966) indicated that the Education Index, at that time, contained references to approximately 70 000 printed documents, articles, and books. In 1966, a new information base for educational research and development publications was established, which became known as the ERIC (Educational Resource Information Center) system. It has provided an easy access to professional publications for experts across the whole world. During approximately three decades of its existence it has grown by an annual yield of about 40 000 new entries, so that at the beginning of the 1990s it contained

approximately one million entries. This information base is supported by a carefully planned and continuously updated classification scheme, which is clearly presented in a sophisticated multi-purpose thesaurus. Its companion bulletin, the *Current Issues of Journals in Education (CIJE)* contains a full index of 800 journals and periodicals in education.

Parallel to such growth of knowledge, one also could observe signs of doubts concerning the impact of research publications on the practice of education. Governments have reduced budgets allocated to research, and teachers have expressed doubts about the practical benefits derived from reading research publications. Finally, the researchers themselves have been plagued by doubts about the merit of their work, and question its contribution to the improvement of education (e.g. Tyler 1994).

This article examines the reaction of researchers in education to the doubts expressed by others and by themselves about the worth of their own work.

The ideas presented in this article are based on an analysis of statements made by researchers about the practical value of empirical studies in the field of education. The articles, reports, presentations, and books, reviewed in this article were selected by a method which experts in sampling would describe as the "snowball method", by which is meant that the list of references in one item served as a pointer to other items. Examination of these items reveals three main varieties of reaction on the part of the research community to doubts described above. They are termed here as apologetic, entrepreneurial and epistemological reactions.

2 The Apologetic Approach

2.1 Accusatory Reaction

Accusatory reactions admit that research has little impact on practice, and blame others (and not the researchers) for this shortcoming. They claim, for instance, that research does not have recognizable impact because the research budget is insufficient. Thus, Stiles (1972) observes that of the 17 billion dollars allocated by the U.S. Congress for research and development in 1972, 8.3 billion dollars was devoted to defence, 3.2 billion to atomic research, 1.2 billion to space research and only 122 million dollars to education. Stiles also noted that the research allocation was 4.7 percent of the health budget, 1.5 percent of the agriculture budget but only 0.4 of the education budget. Alternatively, it is claimed that teachers are reluctant to change the pattern of

their work and for this reason research has little influence in schools. The educational bureaucracy, too, is not eager to introduce innovations. Thus the budget, teachers, or the bureaucracy are to be blamed and not researchers or their work.

2.2 Repudiative Reaction

Repudiative comments are to prove that research is effective in changing educational practice. Bloom (1966), for instance, in his above mentioned address claimed that in educational research, no less than in other areas of research enterprise, only 1 out of about 1 000 studies contains ideas which have practical consequences. Therefore, claims Bloom, one may assume that of the 70 000 entries which are listed in the Education Index (in 1966) approximately 70 studies have had practical consequences. In his attempt to demonstrate the influence of research on educational practice Bloom mentions a few examples. Research provided evidence about the influence of learners' home environments on their educational achievement; and that the teaching method in itself is not a decisive factor in explaining the achievement level of learners - thus teachers should be free to select whatever teaching method suits them.

Probably the most systematic effort to provide evidence for the practical value of research appears in a book edited by Suppes (1978), which contains a series of articles documenting the impact of research in various areas of education. Chapters are devoted to topics like intelligence testing, vocabulary studies, and the ideas of Skinner, Piaget and psychoanalytical theory.

Another example of repudiative argument suggested by Getzels touches on the studies of Thorndike and Woodworth (1901) about transfer of training. Getzels (1978) reminds the reader that at the beginning of the century "the training of the mind was seen as analogous to the training of the body. Just as muscular power could be strengthened through arduous physical exercises, ... so the faculties of mind could be strengthened through arduous educational exercises which have no knowledge value in themselves" (p. 483).

Getzels attributes to this belief the persistence of Latin as a subject taught in American schools. Educators, according to Getzels, believed that studying Latin was a useful mental exercise since it developed mental abilities useful in various career areas like business and administration. Since Thorndike and Woodworth disproved the theory of transfer of training, researchers predicted that Latin would gradually fade out, and indeed since 1901 one may observe a decreasing interest in the study of Latin.

Getzels' example may illustrate the impact of research on classroom practice, but it fails to provide evidence for a causal relation between the research findings and the diminishing interest in Latin.

It may be useful to refer here to other studies which deal with the decline of Latin in schools. Thus, for example, Brubacher (1947) mentions some reasons why Latin could not compete with the vernacular. "Kings in their endeavour to build up national states at the expense of former feudal nobility found the encouragement of the vernacular tongue a strong ally of national cohesion. Much later, in the 18th and 19th centuries, the democratic and industrial revolutions with their emphasis on the common man also elevated the importance of the vernacular as to encroach even more ominously on the monopoly of the humanities as the main avenue to culture".

In summary it can be said that researchers list numerous instances in which research findings changed educational practice. Some of these examples are quite convincing. Unfortunately, however, researchers, who in their empirical work apply rigorous methods in proving the correctness of their hypotheses, tend to provide less satisfactory evidence for the veracity of their statements when they deal with the effect of research findings on educational practice.

3 The Entrepreneurial Approach

The adherents of the entrepreneurial approach admit that research has little effect on school practice, but they claim that if one follows their advices, than research findings will more effectively promote changes in the practice. Three different entrepreneurial arguments can be identified: methodology, persuasion and utilization research.

3.1 Methodology

An example of advice of this type is Platt's (1964) suggestion that the researcher should first identify areas of study wich have a potential for new discoveries. He attributes the success of research in molecular biology to the ability of researchers to distinguish between areas of high and low potential, and the withholding of investment resources from the latter.

Platt likens research activity in a particular field of inquiry to the form of a tree with its branches. One has to assess the likelihood of each branch bearing fruit. He refers to the systematic exploration of a field as "strong inference",

implying that there are situations when one has to infer from the results of a study that a particular pathway of inquiry should be discontinued.

Looking for instances of "strong inference" in educational research, and striving to identify branches where research should be discontinued, Bloom (1972) identifies the relation between a teacher's personality and student learning as a branch that has not borne fruit and therefore does not deserve further research investment.

An additional idea suggested by Platt touches on hypothesis testing. Platt suggests that formulating multiple hypotheses and devising studies which test all of them simultaneously is superior to testing individual hypotheses. He says (1964) that "it differs from simple working hypotheses in that it distributes the effort and divides the affections ... Each hypothesis suggests its own criteria, its own means of proof, its own method of developing the truth and, if a group of hypotheses encompass the subject on all sides a total outcome of means and of methods is full and rich" (p. 4).

Platt ridiculed studies described as "adding another brick to the temple of science", since, according to his view, "most of such bricks just lie around the brickyard without being used".

In summary the proponents of this approach believe that changes in the organizational pattern of studies which provide a clear definition of the problem and coordinated systematic efforts may strengthen the link between research and action.

3.2 Persuasion

The proponents of persuasion believe that the impact of research is hindered by the communication gap between researchers and decision makers. They contend that the researcher should initiate contact with decision makers and persuade them to use research findings.

This idea is by no means a new one. The dissemination of new knowledge has been studied intensely, and some theories dealing with this topic have become widely known. The most common approach is to use mediators between knowledge producer and potential user.

In the field of educational research there have been several attempts of such mediation. For instance, the Australian Educational Research Association jointly with the New Zealand Educational Research Association have been producing a series of publications for teachers in which a person with a general knowledge of educational sciences summarize research findings about a

particular topic in education in a way that may be useful for teachers in their work. This series covers topics like homework, study skills, and vocabulary development.

Also the U.S. Office of Education has published a series of booklets entitled *What Works*, which puts together research findings in a way that may be easily translated into suggestions for action. Books dealing with issues like school effectiveness and compensatory education have been widely distributed. The importance attached to these publications is evident from the fact that the first book has an introduction signed personally by the President of the U.S.A. (United States of America, Department of Education 1987).

3.3 Utilization Research

For researchers the most opportune initiative for promoting knowledge utilization is in conducting research into this topic. Indeed, there has been a big increase recently in research related to studying knowledge utilization. Thus, for example, Patton (1985) emphasized the importance of keeping close contact with the potential users of information and of agreeing upon a desired pattern of communication. Alkin, Dillak & White (1979) identified three groups of variables which may affect information utilization: organizational factors, extra-organizational factors, and the management style of the potential users.

4 The Epistemological Approach

Some adherents of the epistemological approach try to clarify the meaning of the major terms appearing in the discourse related to knowledge utilization. Some of them focus on the concept of impact, others focus on the term "knowledge", and assert that due to the unique characteristics of knowledge generated by the social sciences, the question of impact is void of importance. They claim that the worth of knowledge does not necessarily depend on its use.

4.1 The Nature of Impact

In an attempt to clarify the meaning of impact, Alkin contrasts the narrow definition of utilization, which refers to the visible and immediate use of knowledge with a broader definition of the same term, which refers also to

cases of multiple causation (i.e. the research findings together with other factors affect action), and instances of impact appearing only later as a result of accumulated research findings. Research findings may enhance predispositions to act in a particular way. Its impact may remain covert, for a given period of time, but even so it is not negligible.

4.2 The Value of Knowledge

The value of knowledge is not determined by its utility only. Buchmann (1985) noted that "American Indians know a lot about reptiles that they do not use for purposes of cooking, nor for show or display. Pueblans have an elaborate Taxonomy of coniferous trees of no discernible use to them, and pygmies can distinguish leaf eating habits of many species of bats ... The so called primitives are not driven by theoretical or material interests. They explore the world around them to make it intelligible. Variations of life and form in nature give people a sense of wonder that feeds on the capacity to name and order things. One never knows when such knowledge may come in handy".

But not only simple folk accumulate knowledge which does not serve any practical purpose. Basic research in science also examines phenomena without considering the practical consequences of the findings.

Also Getzels (1978) affirms that basic research is interested in establishing laws and is not concerned with their utility. He quotes a story about Faraday's work from Chandreshekkar 1975, p. 107).

"The invention of the electric dynamo would not have been possible if someone had not posed the prior basic problem (a problem that surely did not trouble anyone in any immediate practical way): what is the nature of electromagnetic induction? Quite typically, many of Faraday's contemporaries looked upon his investigations with skepticism and considered them useless. In fact, Gladstone the Chancellor of the Exchequer interrupted Faraday while he was describing his work to ask impatiently: 'But after all what use is it?' Faraday's response was: 'Why, Sir, there is every possibility that you will soon be able to tax it'".

5 Concluding Comments

This article reviewed the reaction of researchers to the claim that the transfer of knowledge from scientific publications to the educational practice suffers from shortcomings and that there is a gap between the findings of empirical

research and the educational practice. Various reactions were described. Some researchers fully reject such claims and present examples of research findings which greatly changed school practice. Others admit the existence of such a gap and come up with suggestions for reducing it. A third group of researchers maintain that knowledge originating from professional studies in the social sciences in itself cannot, and should not, constitute a sufficient basis for determining its value. According to this view the worth of knowledge is not fully dependent on its use.

If one accepts the view that professional studies in education are designed to create knowledge which may lead the improvement of education, one should keep in mind that it would not be right to claim that it is the researcher's responsibility to put the new knowledge to use. Educational authorities, too, should have a share in this responsibility. The researchers' primary responsibility is to produce valid findings which have implications for action. Using them is the primary responsibility of those who are in charge of making decisions about, or implementing changes.

In this respect educational systems do not differ from other areas of life. A researcher in medicine is responsible for producing valid findings. If such findings of medical research do not receive sufficient attention in the medical practice, nobody should blame for this the medical research. Eventually, those responsible for making decisions about health policy will have to learn how to read a research report, or rely on others to keep them informed of the implications of research findings for routine work in hospitals (Lewy 1980).

To demand those who conduct professional inquiries in the social sciences to put their research findings to use, implies that researchers may need to reduce the scope of their professional work in order to take care of the dissemination of their findings. And we all know, that a successful sale is not necessarily a guarantee for the quality of the product.

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