WHY NOT USE THE DATA WE ALREADY HAVE?

DAVID TURNEY

**Assistant Dean for Instruction and Graduate Studies,
College of Education, Kent State University, Kent, Ohio**

MANY educators have assumed and still apparently believe that researchers through the years have accumulated an impressive array of data which, if put into practical application, would revolutionize both the practices and the outcomes of education. One often hears quoted, in this connection, the story of the farmer who refused any help from the agricultural college because he already knew how to do more than he was able to accomplish. Unfortunately, this anecdote does not, for a number of reasons, accurately reflect the dilemma of educational practitioners.

Studies Completed by Graduate Students

First of all, the vast bulk of the studies we have available were not completed by seasoned and highly skilled researchers. They are, instead, the product of graduate students and usually represent their first attempt at educational problem solving. Even though some of these studies are carefully conceived and designed, they must always be suitable for completion in a rather short period of time and be rather sharply focused and narrowly defined. Since these studies are fundamentally learning experiences for the graduate student, they usually, and quite properly, represent aspects of an educational problem that are of specific interest to a particular student.

While one occasionally sees a series of related studies completed by a group of graduate students who focus their attention on a number of aspects of a central problem, such team approaches to educational research at this level are a rarity. Dissertation studies developed under the Kellogg Foundation's Cooperative Program in Educational Administration serve as one example of the student team approach to educational research (Kimbrough 1953, Merrill 1952, Wilson 1952).

Funded Research

Unfortunately, the idiosyncratic approach to educational research has been generally perpetuated through the early sixties by the nature of federal research grants. The university professor, interested in research and hopeful of improving his professional status, usually develops a proposal growing out of *his*

special interests, receives financial support for his proposal on the basis of its merits as a sound design, and produces another set of findings that are not likely to bear much relationship to any central problem facing educators in the classroom.

Since most of such studies proceed independently using unique designs and instrumentation, the results of such investigations are rarely comparable to other studies of similar problems. While no one would wish to eliminate the independent investigator from the educational research scene, the lack of any coordinated attack on problems of central concern results in a maze of seemingly contradictory findings pointing in all directions like an omnidirectional navigational device.

Attempts at Synthesis

Both practitioners and researchers have been aware of the weaknesses inherent in the nature of our educational research output and have attempted to remedy this defect through the production of various types of syntheses of research findings. The most impressive of these attempts is the Encyclopedia of Educational Research published at ten-year intervals by the American Educational Research Association.

While this monumental effort gives the researcher a comprehensive catalog of important studies by specific research area, it has little to say to the practitioner as far as tested reliable procedures are concerned. Intermediate reviews published by the same Association are equally unsatisfactory as a guide to practice, and indeed, were not designed for such use.

A further attempt to present summaries of research findings in a way that will be more usable to classroom teachers is illustrated by the series of pamphlets under the title, *What Research Says to the Teacher,* published jointly by the Department of Classroom Teachers and the American Educational Research Association.

In these pamphlets one is more likely to find a résumé of current practice than any solidly research-based principles that the classroom teacher can use. For example, we quote here from the pamphlet in this series entitled, *Teaching Arithmetic,* (Spitzer, 1962): *How Can Verbal Problem-Solving Ability Be Improved?*

. . . There does, however, seem to be fair agreement that the use of formal analysis (What is given? What is to be found? etc.) is of doubtful value as a problem solving improvement program. It also seems clear that children use no one pattern in the solution of verbal problems and that textbook programs for improving word problem solving are too meager to expect satisfactory growth in this area of arithmetic. On the positive side there is fair evidence that use of oral presentation and non-pencil-and-paper solution tends to increase facility in solving verbal problems, that pupil understanding of arithmetic and the ability to solve problems show a high relationship, and that intensive use of a few specific problem solving improvement procedures (e.g., finding the number question of problems, the formulation of word problems, etc.) over a relatively long period of time (one semester) will markedly improve pupil achievement.

While the information in the statement quoted is undoubtedly valid and surely good for a classroom teacher to know, is there any reason why a teacher should not be rather unimpressed by

this statement? What, we wonder, constitutes "fair evidence"?

A more recent attempt at synthesis should be mentioned here. Bloom (1964) has been able, through the use of highly sophisticated research techniques, to compare along a series of dimensions a number of longitudinal studies of pupil growth that were completed by separate researchers employing different designs and different instrumentation. This appears to be the first example in existence of this kind of treatment of research data from a number of sources. As a consequence of this work, we now have a series of generalizations about the growth characteristics of pupils that at last appear to be substantial enough to give us some dependable leads for action. Many more studies of this kind are desperately needed.

At the present time, the most usable attempts to synthesize the bulk of research findings are found in educational textbooks. Our best writers continually try to assemble those bits and pieces of knowledge around topics of general concern and to present them in a form that will constitute a reliable guide to practice. In general, textbook authors are life-long students of educational research and often are competent researchers in their own right. Still the consequences of all of these attempts to use educational research findings are less than we wish them to be.

Another medium through which research findings can affect educational practice is the professional instruction available in colleges and universities. Presumably a major goal of such instruction would be to inform students about and give them practice in using understandings, approaches, techniques and general methodology that would reflect current research findings.

Unfortunately, curriculum revision at this instructional level proceeds at a very slow pace. Perhaps even more important is the fact that many instructors at this level received their professional education at a time when research did not appear to offer as much potential for improvement of educational practice as we now believe it does. Many instructors have not had the kind of experiences that would adequately equip them to serve as interpreters of the research we believe carries information essential for effective teaching.

It would appear from this brief discussion that we are making a considerable attempt to use the data we have to improve the education of children in our schools. Yet we must confess that these efforts still leave us far short of our objectives. What, then, might we do that would bring us closer to our desired goals?

Improving the Quality of Data Available

One of our greatest needs would appear to lie in the area of problem identification. We need to know with much greater precision the specific weaknesses of our present educational systems.

At present we tend to discard procedures and approaches simply because something new has become available without knowing the exact nature of the results produced by the methods we now employ. Such information must be available for specific school systems and also for the totality of our educational effort so that large scale research

studies can be launched that will be directed to problems of crucial significance. A national assessment of our educational systems is one way to arrive at such problem identification.

Because the effects of educational processes are progressive and cumulative, problem· identification must be longitudinal in nature and must tell us at what points in time the problems appear, chart the course of the development of such problems, and identify the specific variables suspected of being related to the problems identified.

Once such specifications are available, we can then proceed to develop the kinds of research that should yield data reliable enough to serve as a trustworthy guide for designing appropriate curriculum change.

The regional research laboratories now in the process of development under Title IV of Public Law 89-10 are potentially the kinds of organization that can come to grips with the truly significant problems once they are adequately specified. Through such organizations, a vast array of talent and resources can be focused on the basic and fundamental difficulties imbedded in our present approaches to the education of youth.

Our piecemeal approach to educational research has not fulfilled the expectations we held for it. We must marshal our finest minds and our available resources with great care and then furnish them with the kind of information that will direct their attention to the crucial difficulties faced by the classroom teacher and the learner. To do less than this will mean that we have failed to use properly the means at our disposal, and that we have failed to fulfill our responsibilities to the future citizens of our nation.

References

Benjamin S. Bloom. *Stability and Change in Human Characteristics*. New York: John Wiley and Sons, Inc., 1964.

Ralph B. Kimbrough. "The Operational Beliefs of Selected Leaders in a Selected County." Unpublished Ed.D. thesis, University of Tennessee, June 1953.

Edward C. Merrill. "Communication and Decision-Making Related to the Administration of Education." Unpublished Ph.D. thesis, George Peabody College for Teachers, August 1952.

Herbert F. Spitzer. *Teaching Arithmetic*. Washington, D.C.: Department of Classroom Teachers, National Education Association. Revised edition, 1963. p. 20.

L. Craig Wilson. "Community Power Pressure and Control in Relation to Education in a Selected County." Unpublished Ph.D. thesis, George Peabody College for Teachers, August 1952.