

Translating Research into Action?

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TEACHERS and supervisors are faced with many uncertainties when they attempt to translate research into action. If the research on an educational idea or program has been limited to a laboratory setting, then one can only guess at the implications for practice in classrooms. The necessary intermediate steps of translating the results of laboratory studies into classroom research first in special classrooms and then in regular classrooms are extremely difficult. The intermediate research is seldom conducted in universities and research organizations; teachers and supervisors can hardly be expected to do it alone. Because of the lack of intermediate research, there will be little discussion in this article of promising results from laboratory studies.

Neither will there be a discussion of research on teaching skills. Although one frequently reads that teachers should be indirect, ask questions on higher cognitive levels, encourage more student talk, and appeal to the interests of students, the data base for these "shoulds" is very thin. Comparatively few studies have been conducted in this area, and most of them are correlational studies. The results of these correlational studies are very useful for suggesting experimental studies and new correlational

studies, but are not very helpful in suggesting practices for teachers.¹

The lack of experimental studies on teaching skills in which regular teachers teach regular classes is distressing.² Thousands of teachers have received in-service training in a variety of teaching skills, yet one seldom learns the effect of this training. To be sure, there are reports which demonstrate that teachers modified their behavior as a result of training, but were there concomitant changes in student achievement or attitudes? This has seldom been studied.

¹ Barak Rosenshine. *Interpretative Study of Teaching Behaviors Related to Student Achievement*. Philadelphia: Temple University, 1970. (ERIC: ED 051 116); Barak Rosenshine. *Teaching Behaviours and Student Achievement*. Windsor, Berkshire, England: National Foundation for Educational Research in England and Wales, 1971; Barak Rosenshine and Norma Furst. "Research on Teacher Performance Criteria." In: B. Othanel Smith, editor. *Research in Teacher Education: A Symposium*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971. pp. 37-72.

² Barak Rosenshine. "Experimental Classroom Studies of Teacher Training, Teaching Behavior, and Student Achievement." Urbana: Bureau of Educational Research, University of Illinois, 1970.

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Even when an experimental study has been conducted in which a large group of teachers used Curriculum A, and the results were significantly superior to the results for a comparison group of teachers who used Curriculum B, the results still are difficult to translate into action. The reports on these studies seldom describe the specific problems which different teachers met and how they solved them; the reports seldom describe *how* the curricula were used in classrooms; and the reports seldom describe the enormous variations in the way the programs were implemented in different classrooms and different schools.^{3,4}

The lack of study in the past of these aspects of teacher training and curriculum implementation is unfortunate, but it is more important to ensure that detailed research on student change will be conducted in the future.

New Developments in National Curriculum Programs

Several new procedures for research and development in national curriculum programs promise to provide teachers and supervisors with more detailed information on the use of curriculum programs in regular classrooms. These innovations are cumulative because they were developed on the basis of thoughtful study of previous investigations and because they were developed to answer some of the questions that earlier studies had neglected.

One series of studies is currently being conducted in Head Start and Follow Through

³ For reports on within-program variation, see: Thomas P. Evans. "A Category System for Teacher Behaviors." *American Biology Teacher* 31 (4): 221-26; April 1969. See also: James J. Gallagher. "A 'Topic Classification System' for Classroom Observation" and "Three Studies of the Classroom." *Classroom Observation*. American Educational Research Monograph No. 6. Chicago: Rand McNally & Company, 1970. pp. 30-73, 74-108.

⁴ For a discussion of research on curriculum implementation, see: Barak Rosenshine. "New Directions for Research on Teaching." In: *How Teachers Make a Difference*. U.S. Office of Education, Bureau of Educational Personnel Development, Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, 1971.

programs under the general title of Planned Variation. Several programs, or models, which have been tried and judged to be successful in special classrooms with special teachers have been selected for study in regular classrooms across the country. The models incorporate in varying degrees the ideas developed in laboratory research, the inventions and intuitions of experienced teachers, and the modifications made on the basis of feedback obtained in the tryout phases of the programs.

One innovation in this research is the monitoring of the degree of implementation of each model. For example, in one report on the first year of the Head Start Planned Variation Study,⁵ it was noted that, in the fall, only five percent of 61 observed classrooms were coded as "high implementations" of the model being tested. By the spring, 41 percent of the classrooms were coded as "high implementations," and it was noted that high implementation was more easily achieved in some models than in others. These figures are important to illustrate the difficulty of implementing new programs according to the intentions of program developers, the futility of treating all programs within a model as appropriate exemplars of that model, and the uselessness, at least for this sample, of comparisons among student gain measures obtained in any model. Without data on implementation, comparative data on outcomes are meaningless.

Other investigators are observing Follow Through programs using general observational instruments and are attempting to discover empirically which variables differentiate the programs, as well as what relationships exist between classroom events and student achievement across programs.⁶ Still

⁵ Joan S. Bissell. *Implementation of Planned Variation in Head Start. I. Review and Summary of the Stanford Research Institute Interim Report: First Year of Evaluation*. Washington, D.C.: Office of Child Development, U.S. Department of Health, Education, and Welfare, 1971.

⁶ Robert S. Soar. "An Empirical Analysis of Selected Follow Through Programs: An Example of a Process Approach to Evaluation." *Early Childhood Education*. 71st Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1972.

other investigators are studying one of the model programs and are attempting to find out the extent to which each of the implementation criteria is related to student gain.⁷

All of these efforts make an impressive package. At the end of a three-year study, educators may have information not only on the comparative effects of the Head Start and Follow Through models, but also on the comparative effects on students of high, average, and low implementations of the models, and on the relationship between classroom events and student gain within each model and across the models. In addition, we may obtain information on the difficulty of helping some teachers become high implementers of a model, and on whether changing a teacher from a low to a high implementer results in enhanced student gain (and in what areas).

The preceding paragraph is visionary. We will probably have to settle for less, be left with data of limited generalizability, and then discover more research problems which are currently unanticipated. Yet research such as that currently being undertaken in Planned Variation is an excellent way to accumulate more knowledge.

Similar research and development are also going on in other curriculum programs.⁸ The term "quality assurance" is now being used to refer to efforts at monitoring to ensure that the curriculum is implemented as intended, and that the promised results are

⁷ Martin Siegel and Barak Rosenshine. "Teacher Behavior and Student Achievement in the DISTAR Program." Urbana: Bureau of Educational Research, University of Illinois, 1971.

⁸ James L. Olivero. *Developing the Oral Language Program*. Albuquerque, New Mexico: Southwestern Cooperative Educational Laboratory, undated; Fred C. Niedermeyer. *Developing Exportable Teacher Training for Criterion-Referenced Instructional Programs*. Inglewood, California: Southwest Regional Laboratory for Educational Research and Development, 1970; Robert T. Reeback and Helgi Osterreich. *Progress Report on the Oral Language Program*. Albuquerque, New Mexico: Southwestern Cooperative Educational Laboratory, 1971; Paul E. Resta and Ralph A. Hanson. *Installation Requirements for the SWRL First-Year Communication Skills Program: Evaluation Data, 1968-69*. Inglewood, California: Southwest Regional Laboratory for Educational Research and Development, 1971.

indeed obtained. The term "exportable" is related to quality assurance. It refers to the capability of a program to yield similar beneficial effects in different school districts around the country. The specific terms are relatively unimportant, but the increasing use of these and similar terms reflects the increasing responsibility being taken by curriculum developers for offering training and supplementary aids to ensure the programs' effectiveness.

We cannot leave the area of national curriculum developments without discussing some problems which remain. There is still a tendency to talk about programs, models, and new developments in terms of good guys and bad guys. Proponents of each program talk about the advantages and the unanticipated, beneficial side effects of their own program, and the unanticipated, harmful side effects of Other Programs. I find it unfortunate that the Planned Variation research has not yet produced a model in which half the time is spent in a program such as the Bank Street model of open education and half the time in an academic, structured model such as that of Engelmann and Becker. Perhaps we will gain more information by focusing upon the things which each program does particularly well and incorporating these things into a school program.

School Based Programs

Program development in education is not such an esoteric art that it must be limited to universities and research organizations. Some school districts have developed apparently excellent programs in some areas, and these developments are relatively unknown.

With funding from the USOE, the American Institutes for Research have completed a number of studies of exemplary programs in the areas of compensatory education, childhood education, and reading. All these reports are readily available in the ERIC collection. Most of the elementary and secondary school exemplary programs in compensatory education and in reading were developed within school districts. As I have read the reports on reading programs developed in schools, I have been impressed with

the programs and their ability to enhance student achievement in reading.⁹

The AIR reports are recommended to the reader for study. The 17 reports on model reading programs are filled with inventions of practicing teachers. Yet, even though many of these programs involved 500 and 1,000 students and were clearly successful across two or more years, one hesitates to abstract ideas from the reports for translation into action because one does not know how many other programs were basically similar to these, but unsuccessful. There are too many unknowns. Certain cities appear consistently throughout the AIR reports—New York, Hartford, Milwaukee, Buffalo—and some other cities never appear. Almost all of the ideas listed under "Methods and Materials for Instruction" in each booklet have been mentioned elsewhere. The ideas include: use of a variety of reading materials, encouraging teachers to develop innovative techniques, language games, material rewards, use of audiotapes, special reading centers, reading resource teachers, enrichment activities, phonics worksheets, frequent praise and positive reinforcement, special training for teachers, and individualized instruction. In fact, reading about any four of these school based programs seems sufficient to give the flavor and ideas of the entire group. This list of methods and materials is not unique, unknown, or unavailable.

The booklets on model reading programs are a puzzle. If the ideas worked to improve student achievement and attitudes signifi-

cantly in some school districts, why have they not worked in all? In 1968, a group of AIR reviewers attempted to compare 18 successful programs in compensatory education with 27 similar programs which were labeled unsuccessful.¹⁰ (New York and Milwaukee appeared in both groups.) The 18 comparisons are fascinating and appear to support several generalizations and recommendations. Since that report was completed, a search of ERIC documents through 1971 has shown that AIR has reported 11 new successful programs in compensatory education, 27 new programs in childhood education, and 17 new programs in reading, but no supplementary comparison of successful and unsuccessful programs has been made. An updated report is now needed.¹¹

Further studies comparing successful and unsuccessful programs in a variety of areas are desperately needed. The programs that "work" are balanced by apparently similar programs that "do not work," and we do not know why.¹² It is possible that sufficient data to pinpoint reasonable causes for unsuccessful programs will not be found in final reports because sufficient data on classroom transactions were not recorded. It is for this reason that new research which focuses upon program implementation, quality assurance, direct observation, and exportability is so important. Hopefully, when we know why some programs are successful and why similar programs are unsuccessful, we will have research which we can confidently translate into action. □

⁹ David G. Hawkrige, Albert B. Chalupsky, and A. Oscar H. Roberts. *A Study of Selected Exemplary Programs for the Education of Disadvantaged Children*. Parts I and II. Palo Alto, California: American Institutes for Research, 1968. (Part I: ERIC: ED 023 776, Part II: ERIC: ED 023 777); David G. Hawkrige and others. *A Study of Further Exemplary Programs for the Education of Disadvantaged Children*. Palo Alto, California: American Institutes for Research, 1969. (ERIC: ED 036 668.) The reports on model programs in early education and in reading were not issued in a single volume. The individual reports on model programs in childhood education are available in the following ERIC reports: ED 045 211 to 222, 045 251 to 254, 045 328 to 330, 045 528, 045 599, 045 780 to 785, 045 892, 045 893. The individual reports on model programs in reading are available as ED 053 881 to 890.

¹⁰ David G. Hawkrige, G. Kasten Tallmadge, and Judith K. Larsen, with Debbra D. Michaels. *Foundations for Success in Educating Disadvantaged Children*. Palo Alto, California: American Institutes for Research, 1968. (ERIC: ED 037 591.)

¹¹ Those interested in the generalizations and recommendations made in 1968 may see: *Ibid.*, pp. 17-20.

¹² This problem has appeared before. See Guy L. Bond and Robert Dykstra's report, *Reading Research Quarterly* 2 (4): 1-141; Summer 1967. They noted that in the Cooperative Research Program in First-Grade Reading Instruction, student achievement in some schools and cities was consistently superior to other schools and cities no matter what reading method was used (even after adjustment had been made for pre-instruction reading capabilities of the students).

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