As one of its institutional missions, the P.K. Yonge Laboratory School at the University of Florida focuses on the problem of utilization of research and development for the improvement of instruction. In an effort to reduce the time lag between the discovery of new information and the general adoption of practices based on that information, the School has developed a model for educational change which begins with problem identification and continues through classroom-based research to utilization of research results in the state public school system. Steps identified in this process are: (1) problem determination; (2) search of existing information for possible solutions; (3) formulation of a research project if no solutions already exist; (4) implementation of the project in the Laboratory School; (5) field testing and modification of the project in selected public schools; (6) compilation, publication, and distribution of a report to the state school system; (7) receipt of feedback from educators; (8) drive-in conferences and workshops for school personnel interested in implementing the project; and (9) maintenance services (consultation, sharing sessions, etc.) for schools using the project products. Activities of the Yonge Laboratory School since 1970, when research and development for public education was made its main mission, illustrate the fact that it has a workable model for utilizing research and development processes to improve instructional programs. (MJB)
RESEARCH AND DIFFUSION PROCESS

P. K. YONGE LABORATORY SCHOOL

UNIVERSITY OF FLORIDA

GAINESVILLE, FLORIDA

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How can research and development be made to serve as a vital force for the improvement of education in America's elementary and secondary classrooms? How can classroom practice become consistent with the best information available from research concerning teaching and learning? How can schools effectively use scholarly processes as a basis for constructively changing their educational programs?

Research and development are indispensable tools to business and industry. New information and products emanating from research and development in business and industry quickly become the basis for process and product change.

In education, many millions of dollars are invested each year in research and development to improve teaching and learning, but the impact of new information produced by this investment is disappointingly meager. When changes do occur as a result of educational research and development, there is usually a time lag of many years between the discovery of new information and the general adoption of practices based on that information.

The P. K. Yonge Laboratory School at the University of Florida has for the past several years focused on the problem of utilizing research and development for the improvement of instruction. Since 1970, when research and development for the benefit of public education was made its primary mission (SUS of Florida, 1969), the Laboratory School
has been deeply involved in forming a link between research concerning
teaching-and-learning, and practice in public elementary and secondary
classrooms in Florida.

The model which has evolved (see Figure) provides that the Laboratory School employ scholarly research and development procedures
as a means of improving its own instructional program and that its
research and development projects be formulated and implemented by its
teaching faculty.

Four steps are characteristic of the model: (1) generating
relevant, researchable ideas; (2) conducting pilot studies in the Laboratory School; (3) verifying results through field tests in public schools; and (4) assisting public schools in Florida in utilizing findings and products of the Laboratory School's research and development to improve their own instructional programs.

The School's philosophy and objectives provide a framework and direction for its research and development. All projects evolve from the faculty's instructional improvement processes. As individual teachers and teacher groups identify researchable problems and needs in their efforts to make the School's instructional program more effective in attaining goals for its students, these problems and needs become subjects for research and development projects.

Those teachers who identify problems and needs conduct the research and development aimed at their solution. Their own classrooms become the settings for the implementation of projects. Resource assistance is provided, as needed, by a specialist in curriculum research and an evaluation specialist.
Model for Educational Change through R & D at the P. K. Yonge Laboratory School
University of Florida

Philosophy and Objectives of the Laboratory School
(stated in "Values, Beliefs and Goals Underlying the Program
of P. K. Yonge Laboratory School")

Instructional Program for the 900 students enrolled in the Laboratory School's Grades K - 12

→ Problems Identified

→ Solutions Sought through information Explorations

→ Research Project Designed around Plausible Solution

→ Research Project Implemented

→ Project Field tested in selected Public Schools
and Modifications made as Indicated by Field Tests

→ Research Report and Materials published and distributed to Public Schools in Florida
   (may include Teachers' Guides and/or Student instructional material)

← Feedback Obtained from Public Schools
   (Evaluation of Report and Interest in Utilizing Project's Products)

← Drive-In Conferences Conducted for Public School Teams
   (Teacher, Principal, Supervisor Teams)

← Workshops Conducted for Public School Personnel Desiring to utilize project product(s)

← Maintenance Services Provided for Schools Utilizing Project Product(s)
   (Consultation, Sharing Sessions, etc.)
The first step after identification of a problem or need is for the teacher to explore possible solutions. From this exploration, the teacher, in consultation with the curriculum research specialist, builds a research design around a plausible solution. This solution is then tested, with the aid of the evaluation specialist, in the teacher's own classroom. If there is a need for new materials, these are developed and tested as part of the instructional and research process.

If findings from pilot testing prove to be positive, the project is then field tested in selected public schools in the State. The Florida Educational Research and Development Council, a consortium of public schools and state universities associated with the university's College of Education, has provided valuable assistance in locating public schools to cooperate in field testing.

Following initial field testing, modifications are made and, if necessary, additional field tests are conducted.

At this point, the project director prepares a description of the materials and processes utilized in the project and reports research findings. This information is published in a research monograph; and if there are accompanying teacher guides and student materials, these are published in one or more resource monographs. These monographs are then distributed to educational leaders in public schools throughout Florida.

Periodically, an evaluation form is distributed along with the monographs as a means of obtaining feedback from public school personnel. This instrument provides continuing input to the Laboratory School as to the relevance of its projects, the clarity of its communications with the public schools, and the credibility of its findings. Furthermore, it provides a linkage for the next step in the dissemination process by
asking recipients of the monographs to indicate whether they desire additional assistance in applying the project's findings and products in their schools.

Those schools and school systems reporting interest in additional assistance are invited to send instructional teams to one-day drive-in conferences. As a general rule, admission is limited to teams, preferably consisting of a classroom teacher, a principal, and a central office instructional supervisor, because it has been found that innovative programs are most likely to succeed when these three levels within the institutional structure are represented (Guttinger and Corbett, 1977).

In the early stages of the Laboratory School's dissemination program, many enthusiastic teachers returned to their schools to find inadequate support for implementation of new programs and processes about which they had learned in the conferences.

The drive-in conferences provide participants with more detailed information than is contained in the monographs and the opportunity to discuss the projects in relation to their specific school situations. The conferences are conducted by teacher-directors of the projects, as are all dissemination procedures.

At the conclusion of the drive-in conference, those interested in using the project in their schools are invited to attend a three- or four-day workshop. These workshops are designed to provide the detailed information and skills required for the program's implementation. The workshop deals not only with the products and findings of specific projects but also with strategies found to be useful in the change process in a school or school system. Such practical information as projected cost of implementation is also included.
Even after the public school begins a program based upon one of the Laboratory School's research and development projects, contact is maintained between the Laboratory School's project director and the public school's implementor. Contacts are continued through consultations, visits to the school, suggestions distributed through newsletters, group problem-solving meetings and sharing sessions, and other appropriate procedures.

It is noteworthy that, as field test and dissemination procedures are implemented, an ongoing cooperative relationship is established between those schools involved and the Laboratory School. From these relationships, feedback is obtained for the extension of previously conducted research to cover newly identified problems. Participating teachers, principals, and supervisors from field test schools and those schools in which new projects are first implemented frequently become staff members for later dissemination workshops and conferences. Thus, the circle is completed as cooperating schools collaborate not only in the establishment of the products of the Laboratory School's research and development in public school classrooms, but also in identifying new problems to be researched in the Laboratory School, and in the dissemination processes of the School.

Some of the School's accomplishments to date are as follows:

More than 50 research and development projects, dealing with practical problems of public schools, have been completed. Many others are presently underway.

In order to check the validity of their findings in a variety of situations, 28 faculty have field
tested projects in 212 public schools with 761 teachers and 53,177 students participating.

There have been 33 monographs published and more than 60,000 copies have been distributed, without charge, to public school educators.

Laboratory School faculty have conducted 341 workshops to help public school personnel use the products of their R & D. Those workshops have been attended by more than 10,000 teachers and administrators. There are 152 instances in which schools are known to have adopted programs developed and tested by P. K. Yonge faculty. At least 55,000 pupils are being taught in experimental programs created by the Laboratory School.

In more than 300 instances, Laboratory School personnel have visited public schools in order to help in establishment of P. K. Yonge experimental programs. At least 125 papers describing P. K. Yonge research projects have been presented at state and national conventions, and more than 4,000 public school educators have visited the Laboratory School in order to observe its programs.

While carrying out these dissemination activities, the P. K. Yonge Laboratory School has at the same time been able to demonstrate to visiting educators and to students enrolled in the College of Education at the University of Florida that it has a workable model for utilizing research and development processes to improve an instructional program. Many University of Florida students have become involved in these processes and have acquired a commitment to these processes and the skills required for their implementation.
REFERENCES
