

A Basis for Change

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Extension workers think of themselves as "change agents." But if they are to remain effective agents of change, they must be inquirers as well as evangelists; they must recognize the importance of educational research in their roles as educators. Such research will significantly influence their future professional lives. Research related to Extension education will certainly increase. As new findings develop into usable innovations, Extension workers must understand and appreciate this research in order to make the innovation operational. The author discusses the importance of educational research and its implications for Extension.

EDUCATIONAL RESEARCH will significantly influence further developments in the Cooperative Extension Service. Potentially it can drastically change the professional life of the Extension practitioner. And it promises to do just that. It is not the research itself, but rather the application or lack of application of the results of such research which can support or threaten the practitioner, depending on his efforts to understand the meaning and implications of these results.

As used here, educational research refers to that research which advances knowledge about the practice of education (including Extension education). This research may be conducted by "educationalists" or by personnel in other areas (such as the behavioral sciences, including psychology, sociology, anthropology, economics, history, and political science).¹

To establish the importance of educational research in the activities of the Extension practitioner, certain assumptions must be made:

1. The Extension Service is by definition and general practice an educational organization, and it will likely become even more

¹ Bernard Berelson and Gary A. Steiner, *Human Behavior: An Inventory of Scientific Findings* (New York: Harcourt, Brace and World, Inc., 1964), p. 11.

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- concerned with education and less with social service or information dispensing.
2. The Extension Service will continue to expand its subject-matter resources beyond the traditional subjects in agriculture and home economics.
 3. With its roots in the Land-Grant University, the Extension Service will find it increasingly necessary to conduct educational activities in which the subject-matter content is of a higher academic level.
 4. Extension must continue to invent, design, test, and install innovations in the practice of education, and must adopt such innovations at an ever-accelerated pace.² (Multi-county area agent staffing is one illustration of such an innovation.)
 5. Educational research results will be generated at a rapidly increasing rate in the decade ahead.

RELEVANCE OF EDUCATIONAL RESEARCH

While education per se is generally highly valued, Extension education is less highly regarded and, as a result, must "earn" the respect of its clientele and the general public. An effective educational program is the means for earning this respect and esteem.

There has been increasing concern for improving the quality of teaching at all levels of education. Even though the "educational establishment" has been characterized as the most unchanging institution in our society (except possibly the church), there are clear signs of change.³ For example, the Higher Education Act of 1965, Title VI, provides for financial assistance to improve undergraduate instruction at universities.⁴

This inherent need for Extension personnel to be effective teachers, and the increasing awareness of the need to improve the quality of instruction at colleges, clearly point to educational research as the basis for improving education. Extension is concerned with developing educational programs for the economically and culturally disadvantaged. In the attempt to reach these people, the need is not for technical agricultural and home economics subject matter, but

² W. L. Fishel, G. W. Cullings, and O. Wilhelmy, "An Objective Evaluation of the Present and Potential Structure and Functions of the Ohio Cooperative Extension Service," Research Report (Columbus, Ohio: Battelle Memorial Institute, 1964).

³ David L. Clark, "Educational Research: A National Perspective," in Jack A. Culbertson and Stephen P. Henchley (eds.), *Educational Research: New Perspectives* (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1963), pp. 7-18.

⁴ 89th Congress, *Higher Education Act of 1965*, Public Law 89-329, H.R. 9567, November 8, 1965, pp. 14-36.

for concepts, principles, and research results from the behavioral sciences.⁵

Perhaps the educational research area with the greatest potential impact on Extension is research on the process of educational change. In a recent issue of the *Journal*, Scheel has chided Extension personnel for not taking advantage of opportunities to use educational innovations.⁶

Most Extension Service staff members are acquainted with research on the adoption of agricultural and homemaking practices by clientele, and with studies on willingness of clientele to change or accept new ideas. However, we have not applied all of the relevant principles to our own practice.

We speak at great lengths of the need to understand social change. In fact, the Cooperative Extension Service has served as the laboratory for a substantial amount of research related to social change. We think of ourselves as "change agents." However, this concept has been directed primarily toward changes in our clientele.

The time is long overdue for the entire educational system, including adult educators, to actively develop innovations to make educational efforts more effective and efficient. Adult education and Extension education have been least resistant to change throughout the years. They have operated in the "real world" to a greater degree than have the other components of the educational system, and thus are more sensitive to the need for change. Both Extension and adult education have had to "earn their way" with clientele. However, instead of being content with this history of innovations, Extension personnel should recognize the imperative need to develop new ideas in education.

Clark and Guba identify a classification schema of the processes necessary for change in education:⁷

1. *Research*: advance knowledge.
2. *Development*: invention—formulate a new solution to an operating problem; design—order and systematize the components of the invented solution.

⁵See Irene Beavers, "The Disadvantaged," *Journal of Cooperative Extension*, III (Winter, 1965), and Frederick C. Fliegel and Emory J. Brown, "Low-Income Farm People," *Journal of Cooperative Extension*, IV (Spring, 1966).

⁶Jean W. Scheel, "Vitality in Innovation," *Journal of Cooperative Extension*, IV (Spring, 1966), 3-4.

⁷Egon G. Guba and David L. Clark, "An Examination of Potential Change Models in Education," SEC Newsletter on Strategies for Educational Change, Vol. I, No. 2 (Columbus, Ohio: School of Education, The Ohio State University, October, 1967).

3. *Diffusion*: dissemination—create widespread awareness of innovations; demonstration—afford opportunity to examine and assess operating qualities of the innovation.
4. *Adoption*: trial—become familiar with the invention and provide a basis for assessing its utility in a particular situation; installation—fit characteristics of the invention to characteristics of the adopting unit; institutionalization—assimilate the invention as an integral and accepted component of the system.

Preliminary investigation indicates that this process schema is applicable to the Cooperative Extension Service. It is clear that educational research not only provides the touchstone of an educational innovation but also is central to the development and adoption of these new ideas in Extension.⁸

As a result of this increased interest in education, millions of dollars have recently become available for educational research. Many private foundations have heavily committed their resources to research and development programs dealing with improving the practice of education.

IMPLICATIONS

1. Practitioners at all levels of education must have a working knowledge of the methods of research. They need not be educational researchers, but they must be able to interpret, understand, and utilize results of this research.

2. Extension practitioners must look both to their specialized technical field and to the behavioral science fields. Achieving a working balance in utilizing information from these two fields will not be easy. A National Extension Curriculum Task Force, working with Ralph W. Tyler, Director of the Center for the Advanced Study of the Behavioral Sciences, Stanford University, is currently engaged in a project aimed at developing interdisciplinary graduate curricula for Extension personnel. Among other things, this task force is exploring ways in which knowledge from the technical fields and the behavioral sciences can be integrated into a meaningful graduate curriculum for the Extension practitioner.

3. Practitioners must realize that the continuous adoption of innovations in educational programs will be the norm of the future. These innovations will be developed not only on a county by county basis, but on a state, regional, or perhaps national basis.

⁸S. L. Mathur, "The Role of Cooperative Extension Personnel and Advisory Committees in the Adoption of Program Innovations" (unpublished Ph.D. dissertation, The Ohio State University, Columbus, Ohio, 1966).

4. Educators must develop at least minimal skill in conducting evaluative research. Guba indicates that evaluation is useful as a tool for process control and as a steering mechanism to adjust and refine a program long before final performance data have been analyzed.⁹

5. Practitioners must not become anti-intellectual, a charge recently leveled at them. They must in part be inquirers, not just evangelists.¹⁰ Understanding the processes and results of educational research should help them move in this direction.

6. Each practitioner must engage in individual study in the area of behavioral science. Reading the *Journal of Cooperative Extension* is an important part of this self-development.

SUMMARY

Research related to the practice of Extension education will certainly accelerate. If the Extension practitioner is to remain an effective agent of change, he must utilize the results of this research from the behavioral sciences in his role as an educator.

Although new research findings must be packaged and designed into usable innovations, the Extension practitioner will need to better understand and appreciate research in order to make the innovation operational. He must also be able to use research methods as he evaluates the effectiveness of such an innovation in a practical situation. New levels of effectiveness are possible for the Extension educator who can understand and utilize the results of educational research.

⁹ Guba G. Guba, "Methodological Strategies for Educational Change," paper presented at the Conference on Strategies for Educational Change, Washington, D.C., November, 1965. School of Education, The Ohio State University, Columbus, Ohio (mimeographed).

¹⁰ Lee J. Cronbach, "The Role of the University in Improving Education," *Phi Kappa Kappan*, XLVI (June, 1966).

WE, AS THE EDUCATIONAL ARM of applied sciences, are able to view our society from many angles—technical, economic, social, and cultural. This places unique opportunities and responsibilities upon us to evaluate the strengths and weaknesses of all educational programs. This is a marked change from dispensing information or developing local skills. New roles are inevitable. There is an urgent need for Extension people to take this overview. —L. C. PAUL