DOCUMENT RESUME

ED 043 829 AC 008 611

AUTHOR	Kreitlow, Burton W.; MacNeil, Teresa
TITLE	A Model for Educational Improvement in Extension. Theoretical Paper No. 26.
INSTITUTION	Wisconsin Univ., Madison. Research and Development Center for Cognitive Learning.
PUB DATE	Apr 70
CONTRACT	OEC-5-10-154
NOTE	11p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS	*Educational Improvement, *Educational Innovation, *Models, *University Extension

ABSTRACT

Originally designed to describe change in school systems, a model for educational improvement is generalized here in terms of university extension. An assumption is made that Extension is also an open system, where an observable improvement process occurs. The model permits an idea to be traced from the point where it enters the system to where it becomes part of the organization's action program. The flow may proceed through the stages of research, development, diffusion, and on to adoption. An essential part of the model is its social change mechanism which includes (in the case of university extension systems) administrators, specialist staff, program participants, and a governing board. An example illustrates the importance of interaction between representatives of these groups if commitment decisions are to be reached about improvements in the system. (Four figures are included.) (Author/LY)

A MODEL FOR EDUCATIONAL IMPROVEMENT IN EXTENSION

TERMINAL REPORT FROM THE ADULT EDUCATION PROJECT

WISCONSIN RESEARCH AND DEVELOPMENT

CENTER FOR COGNITIVE LEARNING

UNIVERSITY OF WISCONSIN
Madison, Wisconsin

Sponsored by the
Office of Education
Project No. C-12
U.S. Department of Education

RESEARCH COGNITIVE LEARNING DEVELOPMENT

Theoretical Paper No. 26

A MODEL FOR EDUCATIONAL IMPROVEMENT IN EXTENSION

By Burton W. Kreitlow and Teresa MacNeil

A Terminal Report from the Adult Re-Education Project

Max R. Goodson, Burton W. Kreitlow, and Warren O. Hagstrom,
Principal Investigators

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin

April 1970

The research reported herein was performed pursuant to a contract with the United States Office of Education, Department of Health, Education, and Welfare, under the provisions of the Cooperative Research Program. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education and no official endorsement by the Office of Education should be inferred.

Center No. C-03 / Contract OE 5-10-154

NATIONAL EVALUATION COMMITTEE

Samuel Brownell
Professor of Urban Education
Graduate School
Yale University

Henry Chauncey
President
Educational Testing Service

Elizabeth Koontz
Wage and Labor Standards Administration, U.S. Department of Labor, Washington

Patrick Suppes
Professor
Department of Mathematics
Stanford University

Launor F. Carter
Senior Vice President on Technology and Davelopment
System Development Corporation

Martin Deutsch
Director, Institute for Developmental Studies
New York Medical College

Roderick McPhee
President
Punahou School, Honolulu

***Benton J. Underwood**
Professor
Department of Psychology
Northwestern University

Francis S. Chase
Professor
Department of Education
University of Chicago

Jack Edling
Director, Teaching Research Division
Oregan State System of Higher Education

G. Wesley Sowards
Director, Elementary Education
Florida State University

RESEARCH AND DEVELOPMENT CENTER POLICY REVIEW BOARD

Leonard Berkowitz
Chairman
Department of Psychology

Russell J. Hosler
Professor, Curriculum and Instruction

Stephen C. Kleene
Dean, College of Letters and Science

B. Robert Tabachnick
Chairman, Department of Curriculum and Instruction

Archie A. Buchmiller
Deputy State Superintendent
Department of Public Instruction

Clauston Jenkins
Assistant Director
Coordinating Committee for Higher Education

Donald J. McCarty
Dean
School of Education

Henry C. Weinlick
Executive Secretary
Wisconsin Education Association

Robert E. Grinder
Chairman
Department of Educational Psychology

Herbert J. Klausmeier
Director, R & D Center
Professor of Educational Psychology

Ira Sharkansky
Associate Professor of Political Science

M. Crawford Young
Associate Dean
The Graduate School

EXECUTIVE COMMITTEE

Edgar F. Borgatta
Brittingham Professor of Sociology

Robert E. Davidson
Assistant Professor, Educational Psychology

Russell J. Hosler
Professor of Curriculum and Instruction and of Business

Wayne Otto
Professor of Curriculum and Instruction (Reading)

Anne E. Buchanan
Project Specialist
R & D Center

Frank H. Farley
Associate Professor, Educational Psychology

***Herbert J. Klausmeier**
Director, R & D Center
Professor of Educational Psychology

Robert G. Petzold
Associate Dean of the School of Education
Professor of Curriculum and Instruction and of Music

Robin S. Chapman
Research Associate
R & D Center

FACULTY OF PRINCIPAL INVESTIGATORS

Vernon L. Allen
Professor of Psychology

Frank H. Farley
Associate Professor of Educational Psychology

James Moser
Assistant Professor of Mathematics Education; Visiting Scholar

Richard L. Venezky
Assistant Professor of English and of Computer Sciences

Ted Czajkowski
Assistant Professor of Curriculum and Instruction

Lester S. Golub
Lecturer in Curriculum and Instruction and in English

Wayne Otto
Professor of Curriculum and Instruction (Reading)

Alan Voelker
Assistant Professor of Curriculum and Instruction

Robert E. Davidson
Assistant Professor of Educational Psychology

John G. Harvey
Associate Professor of Mathematics and of Curriculum and Instruction

Milton O. Pella
Professor of Curriculum and Instruction (Science)

Larry Wilder
Assistant Professor of Curriculum and Instruction

Gary A. Davis
Associate Professor of Educational Psychology

Herbert J. Klausmeier
Director, R & D Center
Professor of Educational Psychology

Thomas A. Romberg
Associate Director, R & D Center
Professor of Mathematics and of Curriculum and Instruction

Peter Wolff
Assistant Professor of Educational Psychology

M. Vere DeVault
Professor of Curriculum and Instruction (Mathematics)

Donald Lange
Assistant Professor of Curriculum and Instruction

B. Robert Tabachnick
Chairman, Department of Curriculum and Instruction

MANAGEMENT COUNCIL

Herbert J. Klausmeier
Director, R & D Center
V.A.C. Henmon Professor of Educational Psychology

Thomas A. Romberg
Associate Director

James Walter
Director
Dissemination Program

Dan G. Woolpert
Director
Operations and Business

Mary R. Quilling
Director
Technical Development Program

* COMMITTEE CHAIRMAN

STATEMENT OF FOCUS

The Wisconsin Research and Development Center for Cognitive Learning focuses on contributing to a better understanding of cognitive learning by children and youth and to the improvement of related educational practices. The strategy for research and development is comprehensive. It includes basic research to generate new knowledge about the conditions and processes of learning and about the processes of instruction, and the subsequent development of research-based instructional materials, many of which are designed for use by teachers and others for use by students. These materials are tested and refined in school settings. Throughout these operations behavioral scientists, curriculum experts, academic scholars, and school people interact, insuring that the results of Center activities are based soundly on knowledge of subject matter and cognitive learning and that they are applied to the improvement of educational practice.

This Theoretical Paper is from the Models for Effecting Planned Educational Change Project in Program 3. General objectives of the Program are to develop and test organizations that facilitate research and development activities in the schools and to develop and test the effectiveness of the means whereby schools select, introduce, and utilize the results of research and development. Contributing to these Program objectives, the main objective of the Planned Change Project is to develop and test system-wide mechanisms which local school systems can employ in utilizing knowledge and innovations of the type generated by the Center. Change-agent teams have been organized in area school systems and their effectiveness is being evaluated.

CONTENTS

LIST OF FIGURES

ABSTRACT

Important improvements within any organization require profound adjustments throughout the entire system. The authors propose that the Model for Educational Improvement is a suitable instrument for describing the change process within the context of university extension systems. Originally designed to describe the change process in school systems, the Model is generalized here to describe the flow of the change process in an extension system. In doing so an assumption is made that Extension is also an open system, with a specific internal structure, where an observable improvement process occurs. The Model permits an idea to be traced from the point where it enters the system, to where it becomes part of the organization's action program. The flow may proceed through the stages of research, development, diffusion, and on to adoption. An essential part of the Model is its social change mechanism which includes, in the case of university extension systems, administrators, specialist staff, program participants, and a governing board. An example illustrates the importance of interaction between representatives of these groups if commitment decisions are to be reached about improvements in the extension system.

I
INTRODUCTION

Implementation of improvement within a university extension system requires the active involvement of many persons representing a wide variety of positions. The improvement process is complex, but it does occur. Ideas for improvement within the university extension system may be isolated and traced from the point where they are first introduced into the system, through their establishment as policy concerns, and on to the stage where they are implemented in program action. A model has been developed to describe the process of improvement. It is designed to graphically portray the human purpose, action, and interaction that occurs when a problem is identified and a solution sought, and when an idea for improvement moves from the point where it is identified as a possible solution to the point where it is adopted as a practice of the system. It is believed that this Model for Educational Improvement describes the social concept of educational improvement.

The model was originally designed to describe the improvement process in public schools. The same graphic structure may also serve to describe improvement in university extension systems. This transition requires the assumption that the process and the structure are generalizable across institutional lines. The assumption is made and appears viable.

ORIGIN OF THE MODEL

The Model for Educational Improvement is derived from two major sources of data: models for the change process developed by social scientists and field studies of change within school districts. Earlier models which contributed to the Model for Educational Improvement were those of Egon Guba and David Clark (Classification Schema of Processes Related to and Necessary for Changes in Education); R. L. Bruce (The Supply and Demand-Activated Extension Systems); Hendrick D. Gideonse (An Output-Oriented Model of Research and Development and Their Relationship to Educational Improvement); George Beal and Joseph Bohlen (The Diffusion Process); and Burton W. Kreitlow (Periods and Conditions in Community Change).

Attempts to validate the model were carried out in the context of a study of change within three experimental and two control school districts. Change Agent Teams were formed in each of the districts and the school improvement-oriented action was either observed or tape recorded for later analysis. This experimental setting was not established for the exclusive purpose of model-building. The experimental and control schools were formed in order to determine the differences in the improvement which might have resulted from "inputs" to the experimental systems by Wisconsin's Research and Development Center for Cognitive Learning.

Within the context of the school system are characteristic structural organizations and improvement processes which, the authors of this paper contend, are similar to the processes operating in university extension systems. It is the purpose of this paper to describe the model within the context of university extension.

II
STRUCTURE OF THE MODEL

Figure 1 is a representation of a three-dimensional conceptual schema of the university extension as a social system. It is an open system with access of resources "outside" and room for outsiders to get "inside." The internal structure is the area where the educational program takes shape and is accomplished. The "mechanism for change" within the space is that part of the regular internal structure of university extension where arrangements are made to meet the developing needs of the institution. This is the cauldron of change which every service-focused institution requires in order to function in a dynamic society. It is the social change mechanism within the university extension system.

Figure 2 on page 4 is an enlarged diagram of the central social change mechanism and is called the "Improvement Module." Its key ingredients are those human resources which have the greatest responsibility for positive production by the system. In university extension there

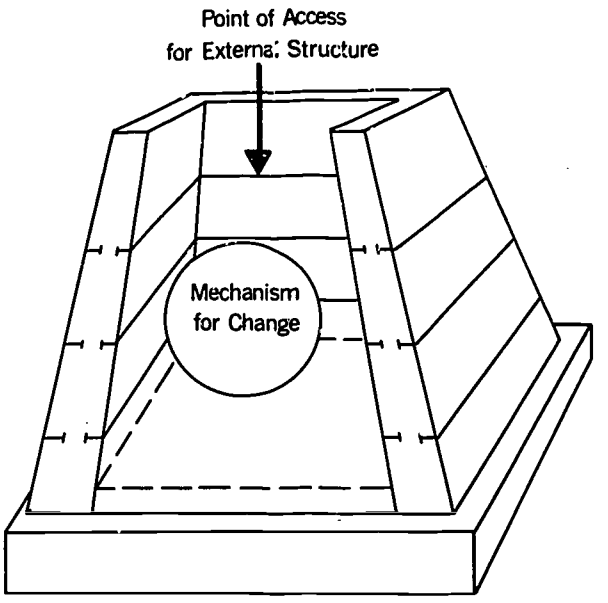

Fig. 1. University Extension as a Social System

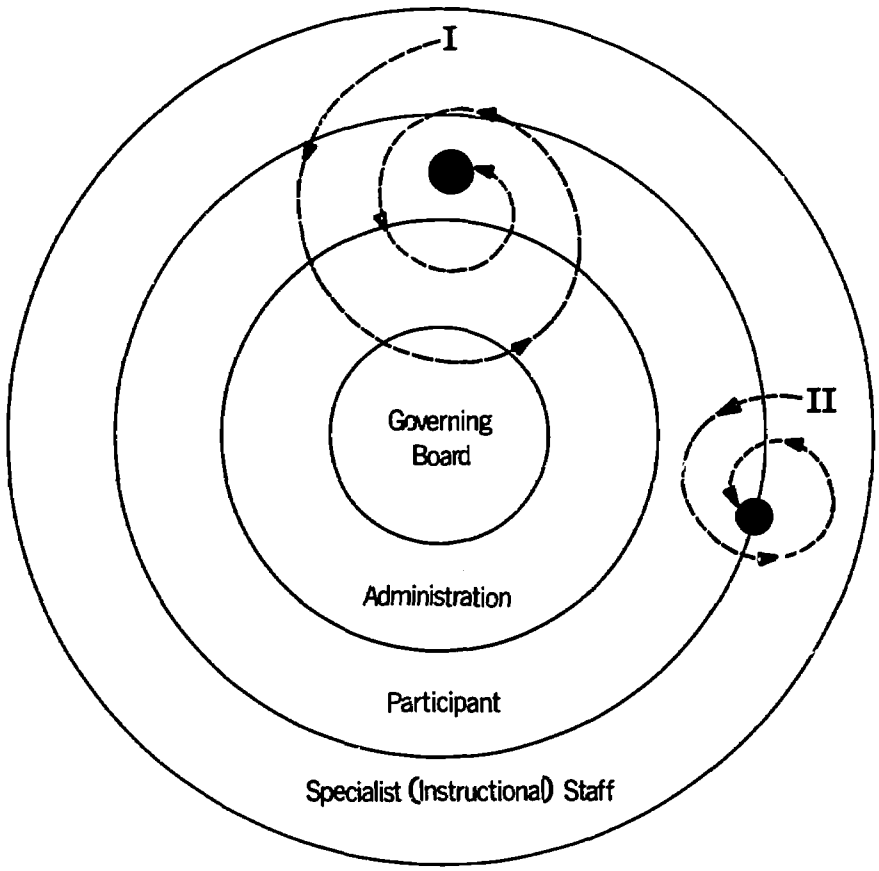

Fig. 2. The Improvement Module: A Mechanism for Change

are a number of such resource groups. In Figure 2 they are identified as: administration, specialist staff (instructional), program participant (present or potential student), and the governing board. Through formal or informal interaction among representatives of these key groups comes the initial commitment decision on improvements to be made within the extension system. This overall interaction is illustrated in Figure 2 at Point I. Interaction which does not include all key groups is illustrated at Point II. In this instance it is interaction between staff and participants. It is possible for limited improvement to take place with a limited number of interacting groups. The authors have observed extension systems that do not have a complete interacting Improvement Module as in the Figure 2 Module at Point I. More frequently observed are extension systems where a number of Mini-Modules operate, similar to the one illustrated at Point II of Figure 2. It is reasonable to expect the outcome of mini-modules to be mini-improvement.

Thus far in this paper the authors have made two assumptions about university extension systems: that there is access to resources outside the system; that there is a specific internal structure made up of a variety of resource groups. A final assumption about university extension systems is that an observable improvement process occurs within them. The arrows in Figure 3 illustrate the way the process flows from problem identification through to solution and implementation.

A number of alternatives may occur as the process proceeds from a concern with purposes, problems, and needs to solutions and action. These alternatives are indicated in Figure 3. First, the input from either inside or outside the system may not be acted upon.

GPO 818-026-3

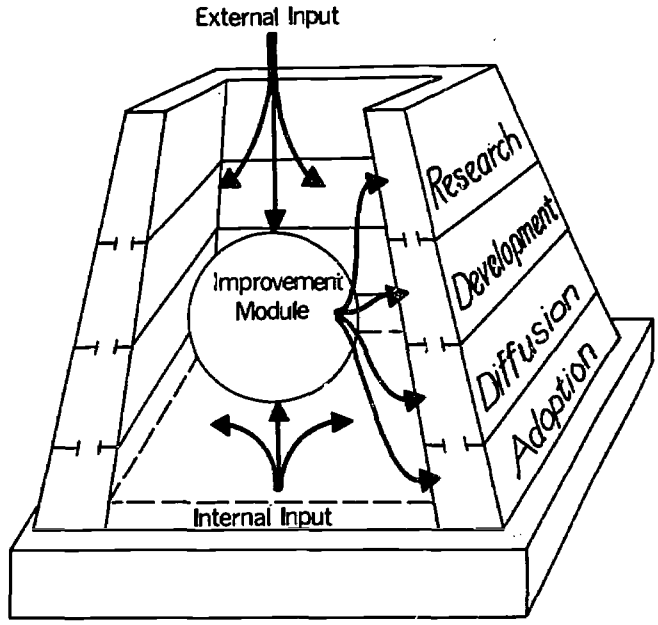

Fig. 3. The Improvement Process in Extension

The entire area of the internal structure surrounding the Improvement Module is symbolic of all educational agencies. It is that space where inefficiency dominates. These are places where improvement ideas can get lost. Thus input often gets lost before it touches the Improvement Module. In an extension system where there is no organization for improvement, the chance for inefficiency is greater than that shown in Figure 3. In other words, there is more room for ideas to get lost. Secondly, if the input is acted upon (gets into the Improvement Module) and a commitment decision is made with its subsequent administrative decision, the action can next move to any level surrounding the internal structure. These are levels of research, development, diffusion, or total adoption. It is not necessary for the flow of action to proceed in sequence from one level to the next. The model is structured to permit the vertical flow from level to level depending upon the operational requirements of the agency. Thus an idea may move from Research to Diffusion without having to stop at the Development level.

III
OPERATION OF THE MODEL

A review of tape recordings of meetings of committees within the Improvement Module of public schools cooperating in the project gives evidence that the structure and process depicted in Figures 1, 2, and 3 do operate. The model shows where improvement ideas come from, where they move within the system, where they get lost, and the point of institutionalization.

Figure 4 places in a single drawing the total structure and process as they have been described. It should be noted that a few additional words are added to the model. The base of the pyramid includes the philosophy, values, and traditions of extension. Both the external and internal input sources are identified as being "supply-" or "demand-" oriented. The use of supply and demand in this context indicates whether the solution to a problem is sought by the system (demand) or whether it is available (supply) with an attempt made by the supplier to have the

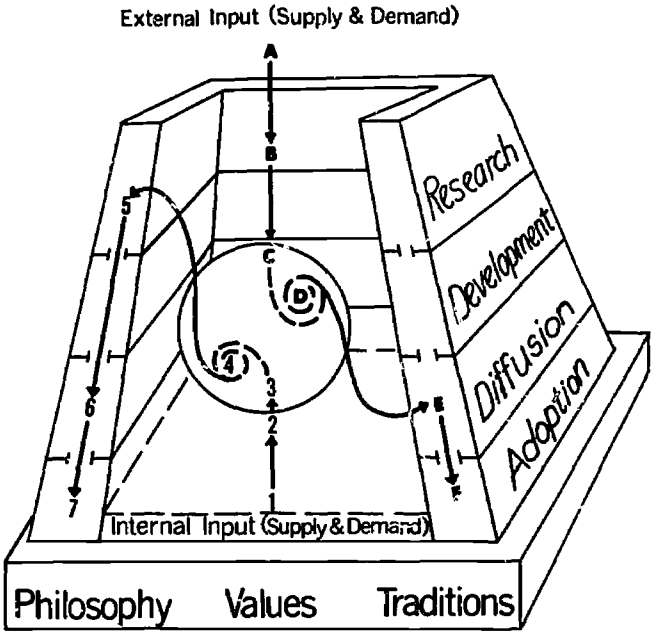

Figure 4. A Model for Educational Improvement in Extension

system put it to use. Whether a problem or proposal comes from the inside (internal) or enters from without (external), it may be traced through the system as indicated by Figure 4.

The process flow of an external input (supply oriented) is demonstrated by the Points "A" through "F" in Figure 4. In this instance a piece of research completed under the auspices of the Office of Economic Opportunity dealt with criteria for effective recruiting of the disadvantaged for manpower training programs. The researcher, convinced that the findings had broader application than to manpower training alone, decided (Point "A") to disseminate the criteria (supply) in a number of professional journals. It is at this point—"B"—that these criteria entered the university extension system and a staff member who read the report did something about it. It was moved from Point "B" into the Improvement Module "C". After considerable discussion of the potential use of these criteria in new programs developed in extension, "D" a commitment decision and recommendations were made and administration encouragement given to diffuse ("E"), the criteria, into the system so that the staff of the developing program would be acquainted with its potential. At Point "F" the determination is made to adopt the idea and put it into general practice when recruiting disadvantaged.

An example of an internal input (demand-oriented) in the same extension system is shown by the numbers 1 through 7 in Figure 4. Beginning near the bottom of the model at "1" an extension staff member in political science is concerned about a problem of communication he experienced in dealings with community groups. Believing it may be a simple problem to solve, he began asking his colleagues for suggestions. The more he asked, the more apparent it became that it was a general problem, not his alone. Following these informal discussions, the chairman of his department brought the question to a committee ("2") making up part of the Improvement Module. There was no guarantee that any consideration would be given to the staff member's very real question. In this case, preliminary discussion of the problem led to the conviction that a communications problem existed for the entire department and a decision was made to work on a solution of the problem ("3"). The resources used to determine a solution to the problem came from both "inside" and "outside" of the system. None of the potential solutions transferred easily to the community setting with which the staff was concerned. Thus, they believed it wise to select a solution most likely to work and adapt it to their own setting. On this basis the working committee within the Improvement Module ("4") proposed and received the administrative "go-ahead" for three staff members to try to develop ("5") the suggested communications ideas during 1968-69. If the ideas worked well, they were to be diffused through the system as soon as possible ("6") and if there was continued success, the ideas were to be fully adopted ("7"). However, if the ideas did not work well they could return to either the research or development levels for further attention.

SUMMARY

The value of a model to the practitioner is in the number of aspects it will help explain about the operation of an educational system. Initial testing of the Model for Educational Improvement in public schools indicates that the Model suitably describes the improvement process. Observations of school districts in action can be related to both the structure and process of the Model. The Model has a potential for use as a guide to appraise the improvement process. The structure and process of university extension are such that the Model transfers easily.

The administrator, board member, extension agent, and program participant examining the Model for Improvement is asked to compare his system for improving extension's educational program with the Model described in this paper. Is there a structure in your extension system which encourages the improvement process? Would the potential for educational improvement be greater if your extension system operated as does the model?

GPO 818-026-2