

INFORMATION TO USERS

This reproduction was made from a copy of a document sent to us for microfilming. While the most advanced technology has been used to photograph and reproduce this document, the quality of the reproduction is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help clarify markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure complete continuity.
2. When an image on the film is obliterated with a round black mark, it is an indication of either blurred copy because of movement during exposure, duplicate copy, or copyrighted materials that should not have been filmed. For blurred pages, a good image of the page can be found in the adjacent frame. If copyrighted materials were deleted, a target note will appear listing the pages in the adjacent frame.
3. When a map, drawing or chart, etc., is part of the material being photographed, a definite method of "sectioning" the material has been followed. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.
4. For illustrations that cannot be satisfactorily reproduced by xerographic means, photographic prints can be purchased at additional cost and inserted into your xerographic copy. These prints are available upon request from the Dissertations Customer Services Department.
5. Some pages in any document may have indistinct print. In all cases the best available copy has been filmed.

**University
Microfilms
International**

300 N. Zeeb Road
Ann Arbor, MI 48106

PREVIEW

8410347

Wolf, Thomas Edwin

USING THE CONCERNS BASED ADOPTION MODEL AS A FRAMEWORK
FOR STUDYING TEACHER IMPLEMENTATION OF STRUCTURAL CHANGE IN
ONE SCHOOL: VALIDATING A RESEARCH MODEL IN A UNIQUE SETTING

University of Massachusetts

Ed.D. 1984

University
Microfilms
International

300 N. Zeeb Road, Ann Arbor, MI 48106

PREVIEW

PREVIEW

PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy.
Problems encountered with this document have been identified here with a check mark ✓.

1. Glossy photographs or pages _____
2. Colored illustrations, paper or print _____
3. Photographs with dark background _____
4. Illustrations are poor copy _____
5. Pages with black marks, not original copy _____
6. Print shows through as there is text on both sides of page _____
7. Indistinct, broken or small print on several pages ✓ _____
8. Print exceeds margin requirements _____
9. Tightly bound copy with print lost in spine _____
10. Computer printout pages with indistinct print _____
11. Page(s) _____ lacking when material received, and not available from school or author.
12. Page(s) _____ seem to be missing in numbering only as text follows.
13. Two pages numbered _____. Text follows.
14. Curling and wrinkled pages _____
15. Other _____

University
Microfilms
International

PREVIEW

USING THE CONCERNS BASED ADOPTION MODEL AS A FRAMEWORK FOR STUDYING
TEACHER IMPLEMENTATION OF STRUCTURAL CHANGE IN ONE SCHOOL:
VALIDATING A RESEARCH MODEL IN A UNIQUE SETTING

A Dissertation Presented

By

THOMAS E. WOLF

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

February 1984

School of Education

• Thomas E. Wolf

All Rights Reserved

PREVIEW

USING THE CONCERNS BASED ADOPTION MODEL AS A FRAMEWORK FOR STUDYING
TEACHER IMPLEMENTATION OF STRUCTURAL CHANGE IN ONE SCHOOL:
VALIDATING A RESEARCH MODEL IN A UNIQUE SETTING

A Dissertation Presented

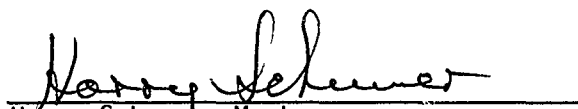
By

THOMAS E. WOLF

Approved as to style and content by:


Jack Hruska, Chairperson of Committee


Sheryl Richmann, Member


Harry Schumer, Member


Mario D. Fantini, Dean
School of Education

ACKNOWLEDGEMENT

The author is not sure if the following is an acknowledgement or dedication, but he would like to thank some people. His committee, Jack Hruska, Sheryl Riechmann, and Harry Schumer were not only supportive but pushed him so that he learned as well as finished. Karen Thatcher retained her sense of humor and efficiency despite the author's revisions and last minute changes of mind. His family was just that, gently participating in his prolonged conspiracy of silence, prodding him when he needed it, and each growing and making their own meaning out of the move to Amherst. Lastly, the Smith School staff, who are real risk takers in their willingness to commit themselves to teaching, a profession marked by uncertain rewards and change.

ABSTRACT

Using the Concerns Based Adoption Model as a Framework for Studying
Teacher Implementation of Structural Change in One School:
Validating a Research Model in a Unique Setting

(February 1984)

Thomas E. Wolf, B.A., Yale University

M.A.T., Harvard University, Ed.D., University of Massachusetts

Directed by: Professor Jack Hruska

The Concerns Based Adoption Model is a conceptual framework for studying teacher adoption of educational innovations developed by the Center for Research in Teacher Education in Austin, Texas. The framework is based upon a theory which assumes that innovation adoption is a developmental process, should be studied at the point of adoption (the teacher), and is only a focused piece of a larger ill-defined change process. Two instruments have been developed by the Center: the Stages of Concern Questionnaire which assesses the concerns individual teachers have as they implement a particular innovation; and the Levels of Use Interview which assesses the way in which individual teachers use a particular innovation.

This study used both instruments to assess the Smith Elementary School teachers' implementation of school-wide structural innovation based upon developmental theorists such as Erikson and Piaget. The SoC Questionnaire and LoU Interview were administered to the teachers at regular intervals over a two year period. The effectiveness of

the CBAM framework for assessing the Smith School teachers' innovation adoption is discussed in light of the patterns of the dependent (SoC and LoU) variables over time as posited by the CBAM theory and established by previous research on the model in other settings.

Generally, the results of the two year study at the Smith School show that the CBAM framework is an effective framework for tracking innovation adoption. It is sensitive to both the developmental patterns of the adoption process and the contextual variables which influence that process. Further research is suggested on the nature of the interrelationships of the developmental stages posited by the CBAM theory; the relationship between the SoC and the LoU and their relationships to interest (SoC) and action (LoU); and, the need to develop a taxonomy of innovations and an understanding of how different types of innovations impact on the CBAM model of adoption.

In light of the current turbulent social context and the demands for change it places on schools, the author found his research on CBAM theory and techniques were helpful not only in understanding a particular innovation setting but also in learning about pre-conditions for successful innovations, possible characteristics of successful innovations, and ways of knowing and discussing the process of change.

TABLE OF CONTENTS

ACKNOWLEDGEMENT	iv
Chapter	
I. THE RESEARCH QUESTION AND RATIONALE	1
Introduction	1
The Research Question	2
A Brief Context	3
The Educational Context	7
The Effectiveness of Recent Educational Innovation . .	10
A Perspective for Looking at Educational Innovation .	14
A Personal Note	17
Chapter I Notes	18
II. A REVIEW OF THE LITERATURE	20
Introduction	20
Historical Background	21
The Conceptual Frame	25
The CBAM System	32
Stages of Concern Concept	34
The Levels of Use Concept	37
Other Adoption Models	41
Other fields	41
Education	47
A Brief Summary	50
Chapter II Notes	52
III. AN OVERVIEW OF THE SMITH SCHOOL INNOVATION	56
Introduction	56
The Smith School: An Introduction	56
Program	57
Staffing	61
Other special features	62
The Innovation	62
Some Concluding Remarks	65
Chapter III Notes	68
IV. THE METHODOLOGY	69
Introduction	69
The Research Question	70

The SoC Questionnaire--Development, Reliability and	
Validity	70
Development	70
Reliability	73
Validity	73
The LoU Interview--Development, Reliability and	
Validity	80
Development	80
Reliability	82
Validity	83
Data Gathering and Training for the SoC	
Questionnaire	85
Data Gathering and Training for the LoU Interview . .	87
Overall Review of the Data Gathering Design	91
Data Analysis	93
SoC	94
LoU	96
Chapter IV Notes	97
V. STAGES OF CONCERN QUESTIONNAIRE	98
Introduction	98
The Questionnaire Administration	99
Profile Analysis	99
Total Staff Profile Analysis	103
Total Staff Highest and Second Highest Stage Scores .	107
Role Group Analysis	112
Role Group Profile Analysis	117
Role Groups Highest and Second Highest Stage Scores .	121
Analysis of Variance	124
Conclusions	124
Issues for Further Discussion	129
Chapter V Notes	131
VI. LEVELS OF USE INTERVIEW	132
Introduction	132
Interview Administration	132
LoU Analysis	133
Conclusions	141
Issues for Further Discussion	143
Chapter VI Notes	144

VII. A DISCUSSION OF THE CBAM THEORY: CONCLUSIONS AND IMPLICATIONS BASED UPON THE RESEARCH	145
Introduction	145
CBAM Theory	146
SoC and LoU instruments	146
Smith School data and the CBAM theory	148
R&DCTE's analogous study	154
Conclusions	156
Questions for Further Study	160
Chapter VII Notes	165
VIII. AFTERWORD	166
Introduction	166
Preconditions for Innovation	167
Understanding the Nature of the Innovation	171
Knowing About Innovations	174
Chapter VIII Notes	179
.	
BIBLIOGRAPHY	181
APPENDIX A: The Stages of Concern Questionnaire and Scoring Instructions	188
APPENDIX B: The Levels of Use Interview and Scoring Instructions	199
APPENDIX C: Chronological Development of SoC and LoU	219
APPENDIX D: Initial Stages of Concern and Levels of Use	227

LIST OF FIGURES

II.1	Conceptual Structure and Functional Process Organization of CBAM Components	33
II.2	Stages of Concern About the Innovation	36
II.3	Levels of Use of the Innovation: Behavioral Indicators	39
II.4	Overview of Branching Format of the LoU Interview . . .	40
III.1	A Procedure for Identifying Innovation Configurations .	64
IV.1	Correlations Between VARIMAX Factor Scores and Scale Scores on the Pilot Stages of Concern Questionnaire--Analysis of 150 Items, 363 Respondents	72
IV.2	Coefficients of Internal Reliability for the Stages of Concern Questionnaire, N = 830	74
IV.3	Test-Retest Correlations on the Stages of Concern Questionnaire, N = 132	75
IV.4	Correlation of Peak Score Estimates and Rank Order of SoC Percentile Scores	77
IV.5	Consensus Profiles for Workshop and Nonworkshop Groups	79
IV.6	Concerns About a Preschool Thinking and Reasoning Program Assessed at Three Points in Time	81
IV.7	Proposed SoC Interview Schedule	86
IV.8	Proposed LoU Interview Schedule	89
V.1	Completed Questionnaires by Teacher and Date of Administration	100
V.2	Hypothesized Development of Stages of Concern	102
V.3	Profiles for Total Staff for Four Administrations of SoC Questionnaire	104
V.4	Highest and Second Highest Stage Scores for First Administration (Year One, Second Transition Period) .	108
V.5	Highest and Second Highest Stage Scores for Second Administration (Year One, Fourth Transition Period) .	109
V.6	Highest and Second Highest Stage Scores for Third Administration (Year Two, First Transition Period) .	110
V.7	Highest and Second Highest Stage Scores for Fourth Administration (Year Two, Third Transition Period) .	111
V.8	SoC Profiles by Role Groups for Year One, Second Transition Period	113
V.9	SoC Profiles by Role Groups for Year One, Fourth Transition Period	114

V.10	SoC Profiles by Role Groups for Year Two, First Transition Period	115
V.11	SoC Profiles by Role Groups for Year Two, Third Transition Period	116
V.12	Highest and Second Highest Stage Scores for Third Administration (Year Two, First Transition Period) .	122
V.13	Highest and Second Highest Stage Scores for Fourth Administration (Year Two, Third Transition Period) .	123
V.14	Analysis of Co-Variance with Stages of Concern as Dependent Variable, Role as Independent Variable, and Time as Co-Variant (n = 59)	125
VI.1	Completed and Scored Interviews by Teacher and Date of Interview	134
VI.2	Total Group LoU Interview Ratings Presented by Time (n = 17)	136
VI.3	Early Learning Center Levels of Use by Time	138
VI.4	South Learning Center Levels of Use by Time	138
VI.5	North Learning Center Levels of Use by Time	139
VI.6	Workshops Levels of Use by Time	139
VI.7	Support Staff Levels of Use by Time	140
VI.8	Contingency Table for LoU by Time of Administration with Chi-Square Statistic	142
VII.1	CBAM Theory as Reflected in the SoC and LoU	149
VII.2	SoC and LoU Scores Year One Second Transition Period (n = 11)	150
VII.3	SoC and LoU Scores Year One, Fourth Transition Period (n = 11)	151
VII.4	SoC and LoU Scores Year Two, First Transition Period (n = 17)	152
VII.5	SoC and LoU Scores Year Two, Fourth Transition Period (n = 17)	154
A.1	Stages of Concern Questionnaire	191
A.2	Statements on the Stages of Concern Questionnaire Arranged According to Stage	194
A.3	Examples of Raw Scores Converted to Percentiles . . .	197
A.4	Percentiles for Figure Recorded on Concerns Chart to Forms Concerns Profile	198

B.1	LoU Chart	202
B.2	Overview of Branching Format of the LoU Interview . .	206
B.3	Interview Questions and Purposes	207
B.4	Sample Interview	211
B.5	Levels of Use Rating Sheet (CBAM 1975)	215
B.6	LoU Interview	217
C.1	History of Stages of Concern Instrument Development .	220
C.2	History of Levels of Use Instrument Development . . .	223
D.1	Stages of Concern About the Innovation	228
D.2	Levels of Use of the Innovation	231

CHAPTER I

THE RESEARCH QUESTION AND RATIONALE

Introduction

Chapter I proposes the rationale for the research question through a discussion of three areas: the recent social context and history of educational change and innovation; the characteristics of the CBAM model that make it an effective tool for studying educational change; and, the characteristics of the particular innovation at the Smith School that makes the study potentially fruitful. While there remains a commitment to educational change, there are growing societal concerns about the difficulty of implementing planned change in a complex, turbulent social environment and about the apparent lack of success of much of recent educational innovation. Clearly, effective models for studying educational innovation need to be developed and tested. The CBAM model offers such an effective framework for studying educational innovation precisely because it is a model that is sensitive to both individual adoption of innovations and the social context in which innovations are tried. The dissertation proposes a research question focused on the study of educational innovation which uses the Concerns Based Adoption Model as the theoretical base.

The Research Question

This dissertation proposed the following research question:

To what extent is the Concerns Based Adoption Model an effective diagnostic framework in assessing the Smith School teachers' implementation of the structural innovation in their school?

The Concerns Based Adoption Model is a conceptual framework for studying the implementation of educational innovations developed by the Center for Research in Teacher Education in Austin, Texas. Two instruments have been developed by the Center: the Stages of Concern Questionnaire which assesses the concerns individuals have as they implement a particular innovation; and, the Levels of Use Interview which assesses the way in which individuals use a particular innovation. This study proposed to use both instruments to assess the Smith School teachers' implementation of the structural innovation in their school. A time series research design was used over a period of two years. The SoC Questionnaire and LoU Interview were administered to the Smith School staff at regular intervals during the study period. The analysis of the data from each instrument was conducted according to the procedures established by the Concerns Based Adoption Model and determined how both the dependent variables of teacher concerns about the innovation (SoC) and their use of the innovation (LoU) changed over time. The effectiveness of the CBAM

framework for assessing the Smith School teachers' implementation of the structural innovation at their school is discussed in light of how the dependent variables changed or remained constant according to patterns posited by the theory and established by previous research on the model in other settings.

There are three questions that serve as background and introduction to the research. What is the social context for and the recent history of implementation of education innovations? What are the characteristics of the Concerns Based Adoption Model that make it a potentially useful theoretical framework for studying educational change? What is the nature of the innovation at Smith School that sets it apart from previous studies which have used the Concerns Model, thus offering the possibility of the study being able to provide new insights into the validity and usefulness of the model? These questions are interlocking. By discussing each in turn, the author presents not only a brief social context for the research question but also a discussion of the conceptual framework and an introduction to the proposed focus of the study.

A Brief Context

The idea of social scientists participating in and actively influencing the planning and implementing of social change has been a center of controversy in America since the emergence of the idea in the late nineteenth century. The idea of social planning and governmental employment of experts is, of course, much older. But the differentiation of the more behaviorally oriented social sciences . . . gave new

impetus to the Baconian dream of a New Atlantis governed by scientific thinkers and doers.¹

These words begin the authors' book, The Planning of Change, an anthology of writings that approach the issues of innovation and change from a wide range of perspectives and in a wide range of fields. As the authors suggest, the idea of social change and innovation is not a new one. In fact, the theme of society breaking new ground and shaping its own destiny has been a central one in this country's history. Today, it manifests itself in one way through innovative social programs to meet the needs of a changing people. Weiss (1972) talks about this country's long tradition of social programs in a wide range of areas that focus "to improve human condition and alleviate attendant ills" and our continuing response to problems by setting up new programs.² Much of the writing in management science has focused on planned change and innovation. Systems theory, the Delphi model of forecasting, computer models, simulations, satisficing models, taxonomic inquiry have all been used as techniques for planning change in recent years.

Issues surrounding innovation have become increasingly problematic as the society has become more complex, itself seemingly more susceptible to growth and less predictable and stable. Emery and Trist (1973) describe four types of social fields, or environments. These are: the placid random, the placid clustered, the disturbed reactive, and the turbulent. It is the turbulent field that most

resembles the social environment of today:

These are environments in which there are dynamic processes arising from the field itself which create significant variances for the component systems. Like the disturbed reactive and unlike the placid random and placid clustered, they are dynamic environments. Unlike the disturbed reactive, we are postulating dynamic properties that arise not simply from the interaction of the systems, but also from the field itself.³

The authors point out that the emergence of turbulent environments seems to be a natural concomitant of a number of factors: the increasing size of systems, their interdependence, the explosion of knowledge and its application, and the increasing sophistication of communication systems. For whatever reasons, they assert that "these fields are so complex, so richly textured, that it is difficult to see how individual systems can, by their own efforts, successfully adapt to them."⁴

Schön approaches organizational effectiveness and the necessity for managing change and innovation from another perspective. He points out that the questions that organizations ask themselves about their effectiveness have changed over the last fifty years. From, "Is the firm well organized?" through, "Does the organization foster individual creativity, and with it, invention and discovery?" and "Is the organization innovative?" to, "Is the organization able to manage change?" the author points out that the demands and expectations for change have become a necessity rather than a response to an isolated

problem. If one looks at the first question, its demands upon the organizations are analogous to those of a placid clustered environment (Emery and Trist) might make upon it. Similarly, the demands implicit in the fourth question are analogous to those of a turbulent environment. Schön goes on to draw an even more pointed comparison to turbulent environments:

But the discontinuities and zones of turbulence we used to think about as occasional events in the background--events we had to endure as part of the price of getting to the stable place on the other side--now have become foreground. We can no longer conceive of future action simply as a linear extension of the past.⁵

These two ideas, that the planning of social change and innovation is important and that it is an increasingly complex and problematic task, given our society, are widely held and discussed in a number of areas. Lindblom's article, "The Science of Muddling Through," in which he points out the folly of rational planning in a complex society sparked a great deal of acrimonious debate among management theorists.⁶ Authors like Robert Coles, Thomas Cottle and Erik Erikson have written about the uncertainty's effect on children.⁷ The anomie and hostility that many see in youth has been popularized in any number of articles and books. One can choose from a bewildering array of self help books in psychology and sociology. Consultants are available to help organizations deal with these issues. Writers like Walter Schumacher (1973),⁸ politicians who appeal to a