DOCUMENT RESUME

ED 128 930 95 EA 008 703

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TITLE Concerns of Teachers About Implementing the Innovation of Team Teaching. Procedures for Adopting Educational Innovations Project.
INSTITUTION Texas Univ., Austin. Research and Development Center for Teacher Education.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 75
NOTE 16p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Adoption (Ideas); Changing Attitudes; *Educational Innovation; Elementary Secondary Education; Factor Analysis; Graphs; *Models; Post Secondary Education; *Teacher Attitudes

ABSTRACT

This paper describes a study that developed and tested a research measure for investigating the concerns of teachers at different stages in the adoption of educational innovations. Through a review of the literature, the staff of the Procedures for Adopting Educational Innovations project identified seven different stages of teacher concern about innovations and then developed a 35-item Stages of Concern Checklist for assessing the concerns of individual innovation users. The checklist was first verified in a reliability study involving 132 professors and classroom teachers and then administered to a stratified sample of 411 teachers involved with the adoption of team teaching. The checklist data were factor analyzed to compare teachers' primary concerns with their years of experience with team teaching. The analysis verified the utility of the stages of concern model and found that teachers' concerns progress through different stages as they gain more experience with an innovation. (JG)

CONCERNS OF TEACHERS ABOUT IMPLEMENTING THE INNOVATION OF TEAM TEACHING

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Spring 1975

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The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the authors and do not necessarily reflect the position or policy of the National Institute of Education, and no endorsement by the National Institute of Education should be inferred.

An earlier version of this paper was presented at the annual meeting of the American Educational Research Association, Washington, D. C., April 2, 1975.

CONCERNS OF TEACHERS ABOUT IMPLEMENTING THE INNOVATION OF TEAM TEACHING[1,2]

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The trauma of change is increasingly a part of our environment. For educators, whether they are classroom teachers, professors, or administrators, change has become a particularly demanding pressure. All are bombarded with new ideas and inventions (innovations) that promise to easily cure present ills. What happens when practical attempts are made to implement these innovations is not clear. All too often innovation adopters are confronted with a morass of unanticipated happenings and deficiencies that make implementing the simplest innovation take on the appearance and effect of a poorly planned invasion. Major breakthroughs in understanding and managing change are critical if schools and colleges are to be the adaptive and responsive institutions that society is led to expect.

In this paper, we are reporting on one dimension of our research which illustrates several of the reasons why change is so traumatic and why in many cases so little is actually different following the "adoption" of an innovation. The research is based on the assumption that meaningful change is a process that takes time (years) rather than being a singular event or decision point.

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We are hypothesizing that individuals have different stages of concern about their involvement with a change at different times. By being aware of the kind of concerns that an innovation user has at a given time, the person(s) who is managing the change process can better prescribe relevant interventions.

An extensive body of research and theory already exists in relation to change in general and the adoption of innovations in particular. Experts in rural sociology, marketing and technological areas have researched the "diffusion" of many kinds of innovations (e.g., Rogers and Shoemaker, 1971). Many of the ideas and findings from this research have been applied to the study and analysis of change in educational institutions (e.g., Miles, 1964; Havelock, 1973). Experts in administration research and theory have also addressed the phenomena of change (e.g., Owens, 1970). For several reasons, much of the change research in education has been of the case-study type (e.g., Smith & Keith, 1971; Charters, Everhart, Jones, Packard, Pellegrin, Reynolds, & Wacaster, 1973). Unfortunately, it seems that application of these findings to practice has been spotty. This is probably due to inherent problems in communicating knowledge (which means that change researchers and theorists have not been effective in getting their ideas out and used), as well as the limitations of generalizing from case study and non-educational-based research.

The recent development and spread of organizational development-type training experiences (e.g., Schmuck & Runkel, et al., 1972) and the emphasis on the "innovation free" change agent (Havelock, 1973) have contributed insights into the identification of system problems and possible solutions to these problems. In all too many instances, however, it appears that principals and teachers are still left on their own to implement and effectively use the selected solution.

The Theory

The focus of the NIE-funded Procedures for Adopting Educational Innovations (PAEI) Project is on researching the highly personal experiences and phenomena encountered by educators in schools and colleges as they "adopt" the selected educational innovations. Two key developmental dimensions of innovation user growth have been identified, described and defined as basic independent variables for monitoring innovation implementation. These dimensions serve as cornerstones of the Concerns-Based Adoption Model (CBAM) (Hall, Wallace & Dossett, 1973) which represents the process of innovation implementation as a systemic/adaptive/developmental process. The two dimensions, Levels of Use of the Innovation (Hall, Loucks, Rutherford & Newlove, 1975) and Stages of Concern about the Innovation, are hypothesized to be critical indicators of an individual's level of performance.

Seven different Stages of Concern (SoC) about the innovation have been identified and defined. Expanding on Frances Fuller's (1969) findings about the concerns of teachers toward teaching, it is hypothesized that innovation users' initial concerns about use of an innovation are somewhat egocentric. Users initially have more questions regarding what use of the innovation will actually entail and how it will affect them personally than questions about effects of its use. Following these "self" concerns, users become more concerned about the "tasks" related to using the innovation. Once these concerns are resolved, users become more concerned about the "impact" of the innovation on pupils.

The Study

As part of initial empirical verification of the CBAM, the PAEI Project staff has developed a measure (the SoC Checklist) for assessing the Stages of Concern of individual innovation users. This measure is being used in conjunction with additional measures in a series of cross-sectional and longitudinal

studies of teachers and professors as they adopt innovations such as teaming and instructional modules.

Initial identification and definition of the Stages of Concern were based on the research literature, the research of Frances Fuller, and the extensive field experiences of adoption agents. The Stages were then explored systematically through a set of case studies and critiques by researchers and adoption agents. Subsequently, development began on a quick-scoring, paper-pencil measure. Items were generated and then Q-sorted according to Stage of Concern. During the spring of 1974, a prototype measure consisting of 195 items was administered to a stratified sample of 366 classroom teachers and college faculty who were involved with the adoption of identifiable innovations. The resultant data were then factor analyzed, and the factors rotated toward the hypothesized structure (i.e., the defined SoC). The 35-item Stage of Concern Checklist was then constructed by selecting from among the strongest items (factor loadings greater than 0.5) on the rotated factors.

Brief definitions of the hypothesized stages are listed in Exhibit 1. A reliability study of the SoC Checklist involving a total of 132 professors and classroom teachers was conducted in September 1974. The raw score test-retest correlations ranged from a low of .65 to a high of .86 on the seven factors, and the internal consistency (alpha coefficients) of the stages ranged from .80 to .93. The alpha coefficient for the total score was .96.

During the fall of 1974, a total of 411 public school teachers from three states completed the SoC Checklist with regard to their use of teaming. The teachers represented a stratified sample according to their years of experience with teaming. The teachers sampled were in one of five groups: (0) no experience with teaming; (1) first year of teaming; (2) second year of teaming; (3) third year of teaming; or (4) fourth or later year of experience with teaming.

Exhibit 1. Brief Definitions of Stages of Concern About the Innovation

0 UNAWARENESS: Unconcerned about the innovation.

1 INFORMATIONAL: Concerns about general characteristics of the innovation and what is required to use it.

2 PERSONAL: Concerns about one's role and possible conflicts between that role and anticipated demands of the innovation.

3 MANAGEMENT: Concerns about time, organizing, managing and making the innovation work smoothly.

4 CONSEQUENCE: Concerns about student outcomes.

5 COLLABORATION: Concerns about working with others in use of the innovation.

6 REFOCUSING: Concerns about finding another and even more effective way.

The resultant data were analyzed to answer three questions:

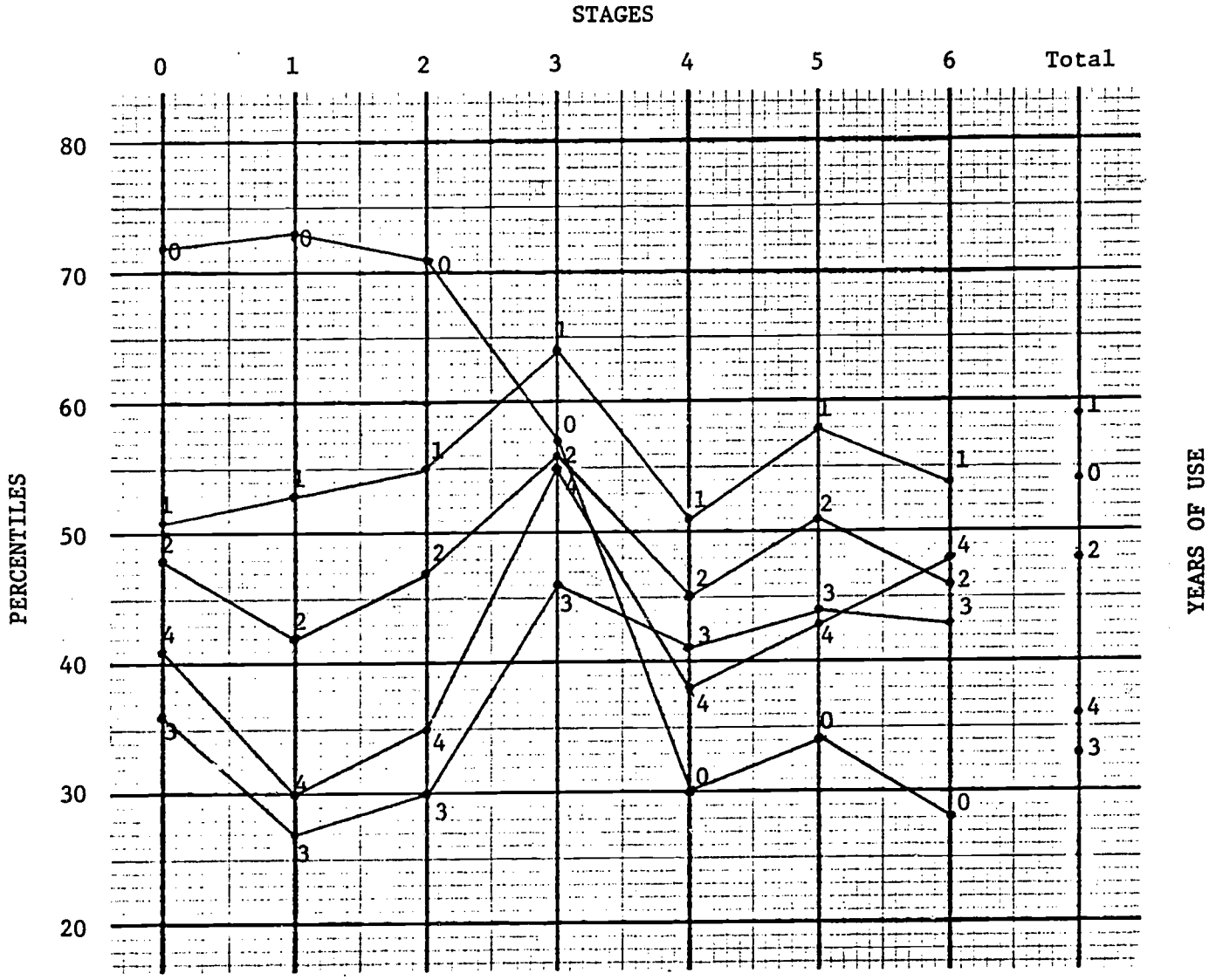
1. Do teachers have identifiable Stages of Concern about teaming?
2. Are the identified Stages of Concern about teaming related to years of experience with teaming?
3. Is there an indication of developmental tendencies in the identified Stages of Concern?

The Findings

To answer the question, "Do teachers have identifiable Stages of Concern about teaming?", principal components factor analysis of the correlation matrix with target rotation was done on the SoC Checklist data. Each factor was found to correspond clearly with one of the previously defined stages. Further, the factors from the Spring 1974 and Fall 1974 data were essentially the same. Data gathered on a sample of 422 professors adopting instructional modules were also analyzed, yielding similar results. Principal factor loadings of 27 out of 35 items were on the same factors for both sets of data. Thus, the seven Stages of Concern, as described in Exhibit 1 and measured by the SoC Checklist, appear to exist across innovations -- for teachers involved with teaming as well as for professors adopting modules.

To answer the second and third questions, the data were next prepared for comparisons of teachers' concerns with amount of experience with the innovation. In order to remove bias due to a particular innovation and to make scores on different stages readily comparable, percentile scores were computed for teaming based on the combined data from users of modules and teaming. Exhibit 2 is a graphical representation of the SoC percentile scores of teachers with different years of experience with teaming. At this point, due to the nature of the questions being asked, identification of patterns and trends in the data seems to be more valid than conducting a series of tests of statistical significance.

Exhibit 2. Distribution of Teachers' Concerns About Teaming According to Years of Experience with Teaming.



0 = no experience with teaming	N = 46
1 = first year of teaming	N = 76
2 = second year of teaming	N = 18
3 = third year of teaming	N = 60
4 = fourth or later year of teaming	N = 107

In doing this, the following trends can be noted:

Trend 1. The most outstanding pattern in the data is the distinctive profile of those teachers who have not teamed. Their Stage 0, 1, and 2 concerns are particularly intense in comparison to those of teachers who are teaming and in comparison to their own scores on Stages 4, 5, and 6.

Trend 2. Another identifiable pattern that the experienced adoption agent might predict is that, in general, it appears that the more years of experience teachers have with teaming, the less intense their concerns are about it.

Trend 3. A third and less predictive pattern is the relatively low level of Stage 4 concerns for all groups. Stage 4 concerns deal with the impact and consequences of innovation use for clients. In this case, the clients would be pupils. Since we have not found this to be true in other innovations, the pattern may be unique to teaming. Perhaps teachers do not see teaming as directly affecting children, or maybe other stages of concern are more intense during these early years of use of teaming.

Trend 4. The relatively low intensity of Stage 6 (refocusing) concerns for all groups has been further documented through our interviews with these teachers. Regardless of the reasons for beginning teaming, whether mandated or voluntary, teachers consistently report that they would not like to see teaming eliminated altogether or a return to the completely self-contained classroom. On the other hand, as is reflected in the continuing relatively high scores on Stage 3 concerns, teachers do have ongoing concerns about more efficient ways to organize and function within a teaming context, as well as the time involved.

Trend 5. The intensity of concerns increased for all stages for those

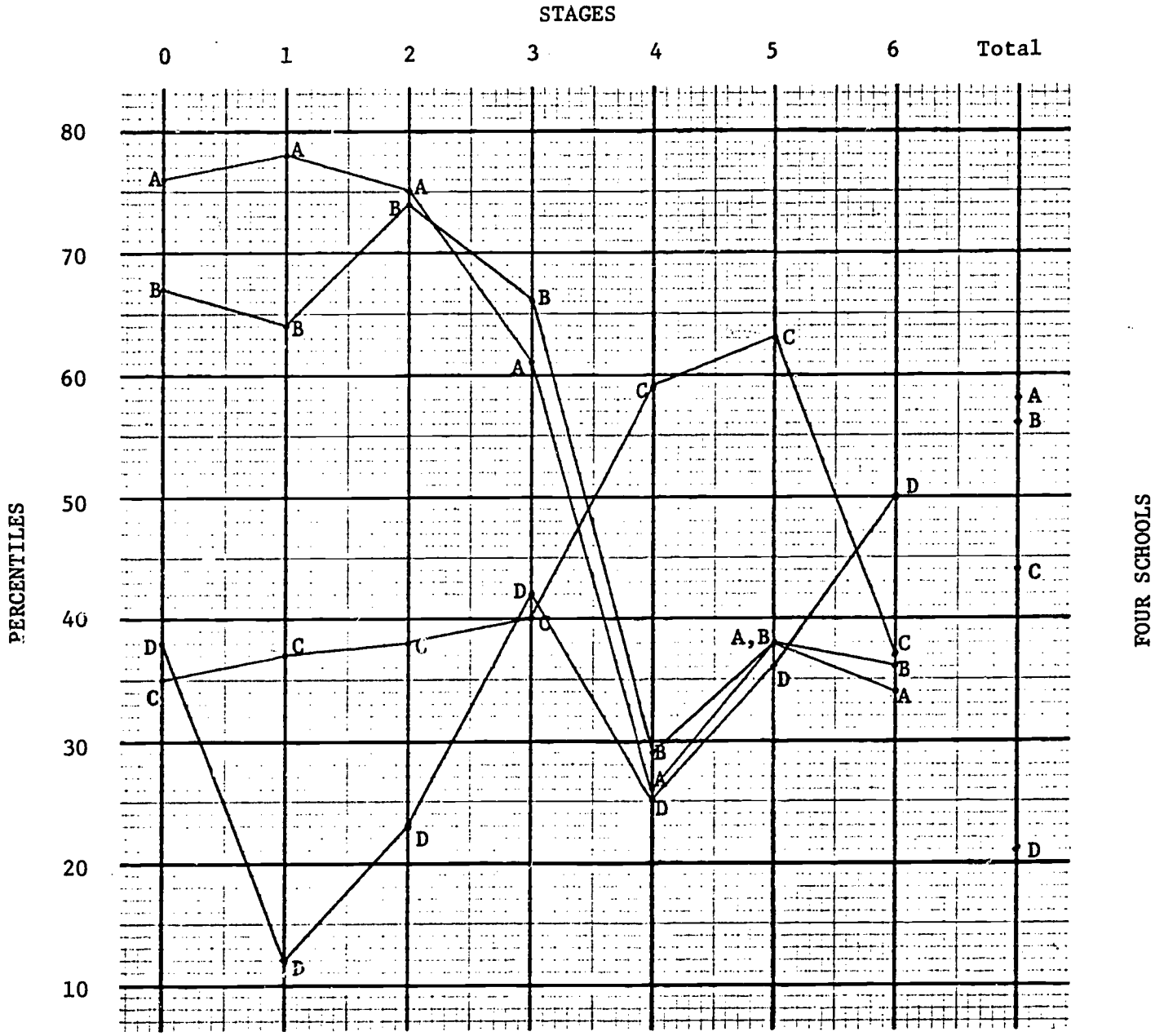
in their fourth year or beyond of teaming. As is suggested in our summary discussion, it is possible that because teaming is a sufficiently "catalytic" innovation, more time is needed to establish an equilibrium level of operation which can then serve as a stable platform from which varying use of teaming to increase impact can be launched.

Individual School SoC Profiles

The concerns profiles of the four schools shown in Exhibit 3 present additional verification of the presence of Stages of Concern and their patterning over time. Furthermore, these profiles, coupled with a description of the situation in the schools, illustrate the significance of concerns for monitoring innovation implementation.

Schools A and B are in the same school district, thus under similar administrative conditions. Neither school was engaged in teaming at the time the data were collected but both were considering it. Theory and the norm data would suggest that teachers should have high concerns for Stage 0 (unawareness) and about substantive aspects of the innovation (Stage 1), as well as high concerns about self and one's role in relation to the innovation (Stage 2). This was true for School A, but School B concerns were markedly higher for Stage 2 (self and role). Anecdotal data suggests an explanation for this difference. Teachers in School A perceived that they had the freedom to accept or reject teaming. Consequently, they were carefully, even excitedly, investigating the characteristics of teaming, as well as their likely role if they were to use it. On the other hand, teachers in School B perceived that they were being pushed by the central administration to begin teaming. As a result, they had taken a stance of protecting their current status -- their self and role -- and were giving limited attention to the real substance of teaming.

Exhibit 3. Stage of Concern Profiles for Four Schools.



School A N = 8
School B N = 11
School C N = 21
School D N = 12

School C is a completely different situation. It had been open only two months when the data were collected. The school was staffed almost entirely by teachers who were transferred from other schools in the district where they had been involved in team teaching. Thus, it was a faculty of experienced teamers but functioning in a new setting and as new teams. Their high concerns in Stage 5 (collaboration) reflects this situation as they are struggling to develop working relationships with a new set of team members. At the same time, their Stage 3 (management/change concerns) were relatively low, as might be expected of experienced teamers. These teachers felt comfortable with teaming, but they were not comfortable with their relationships with other teachers in the new teams. Notice also that their Stage 4 (consequence) concerns were relatively high, suggesting that the impact of their teaming on children was heavily on their minds.

Teachers in School D had been engaged in team teaching for at least five years and could be classified as veteran teamers. During the previous school year, a number of the teachers had become concerned over what they felt was a lack of in-depth contact with students. As a consequence, some teams had moved from a pattern where there was much movement of students among teachers to a pattern resembling, in many respects, self-contained classrooms. There were other teams questioning their use of teaming, but they had not yet made any changes in the way they teamed.

High concerns in Stages 3 and 6 and extremely low intensity concerns at Stage 1 are truly representative of teachers in that school. Those teachers who had already made a change in their teaming pattern had returned to concerns about management of the innovation since they were teaming in a considerably different way. It is interesting to note that they did not have the high concerns about working with others that were present in School C since their teams

had remained intact. The high mean in Stage 6 reflects the concerns of those teachers who were still considering major changes in the way they teamed. The low Stage 1 scores suggest that these experienced teachers felt that they already knew all about teaming.

Implications

For those interested in implementing teaming, the findings of this study have several implications. In introducing the innovation, special attention needs to be given to pre-use, self-oriented exploration and anticipation concerns. Our findings support the legitimacy of having "self" concerns when exploring use of an innovation. But not resolving them is likely to detract from or be an obstacle to implementing teaming and developing high-level use of teaming. Addressing these concerns by using targeted interventions should make for a more personalized approach to implementing the innovation and should help teachers in pursuing the task. (We plan to report more about intervention theory in future papers.)

Another implication of these findings is that implementing teaming is not accomplished quickly. It appears to take at least three years to fully implement. It is not until the fourth year and beyond that the intensity of teamers' concerns about refocusing (improving the use of teaming) begins to be relatively high on their profile. Up until that time, working out a survival level of use of teaming seems to occupy most of their thought. Perhaps, with the appropriate adoption strategy (overall implementation plan) and personalized interventions, the time could be shortened; however, in the 39 schools where we collected data, no such implementation strategies were employed.

A key point to be remembered is that adopting complex innovations such as teaming takes several years. Administrators who ignore this are deceiving themselves and endangering the innovative thrust.

Further, many kinds of training inputs about use of an innovation will not be relevant until after two or three cycles of use (i.e., interventions are often not related to the most intense concerns of the user and, therefore, not seen as "helpful"). For example, promoting the implementation of teaming because it will be good for pupils will not at all address or resolve the initial high "what does it mean for me?" and "what is it?" concerns that are the most intense concerns of people considering a change. Also, training in setting agendas and problem solving is going to be seen as most relevant when teachers are already teaming and have high Stage 3 (management) concerns.

In their planning for and managing change, adoption agents, administrators and policy makers need to face these and other data regarding teacher concerns if they are going to increase the efficiency and rewards of change while reducing the trauma.

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