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ABSTRACT

Research shows that principals with strong leadership qualities are a critical factor in effective schools. This paper describes three research based techniques that principals can use when making decisions about how to help teachers develop their skills. The Concerns Based Adoption Model (CBAM) is an empirically based conceptual framework that outlines the process individual teachers experience as they implement a new program. Important data supplied by the model includes the stages of concern (SOC). Assessment procedures used in the model are: one to one interviews, open ended statements of concern, and the SOC questionnaire. Another technique is the Levels of Use Concept (LOU) which describes how performance changes as individual teachers become skillful with a new practice. A focused interview has been developed to assess LOU that requires a trained or certified interviewer, but a more informal interview called the "one legged conference" can be used by the principal. Innovation Configurations Theory (IC) describes the differing operational forms of an innovation that result as teachers put it into practice in their classrooms. The theory includes the use of the Innovative Configuration Component Checklist which documents the parts of the innovation actually in use. (MD)

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PRINCIPALS USE RESEARCH-BASED TECHNIQUES
FOR FACILITATING SCHOOL EFFECTIVENESS

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PRINCIPALS USE RESEARCH-BASED TECHNIQUES
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Teachers in Sunnyvale District report that the math program is still not working for them...the textbook is not arranged in the same sequence as the list of objectives they're trying to use and getting that all together is a real challenge! Various principals responded to their teachers' concerns about the program. Three principals' comments to one of their teachers were overheard:

Principal A's response. Don't be so distressed. You just went to the third inservice last month. Give yourself some time. It'll work itself out.

Principal B's response. Do you have all the materials and supplies you need? What else can I do to help? I'll schedule the math consultant from the downtown office to come to see you.

Principal C's response. I've been reviewing how all the teachers are working with the math program and I'm learning that many of our faculty need more individual assistance. So, I'm doing some staff reassignments in order to provide a person here in the school to be available full time to teachers to assist them in organizing and using the program well.

Teachers' work and school effectiveness efforts are expected to result in student gains. Principals are held accountable for student gains although they typically are not linked directly to students. However, principals can influence student outcomes through the mediating variable of teachers. Thus,

¹The 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. No endorsement by the National Institute of Education should be inferred.

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a way that principals play a significant role in school efforts to be effective is through monitoring individual teacher's work and assisting teachers in mastering their change of classroom practice that will result in increased student outcomes.

We believe that most principals can do this and we approach this paper with the clear understanding that some principals implement this role more successfully than others. We will discuss tools and techniques that principals can use to enhance the probability of their success. We will use insights derived from our research of principals' interactions with teachers (Hord, Huling & Stiegelbauer, 1983), and we will focus on what we have learned about the most effective type of principal and their style of facilitating teachers' work (Hall, Rutherford, Hord, & Huling Austin, 1984). The most effective principal is one that we call the Initiator and is exemplified by Principal C in the anecdote reported above. Initiator principals' teachers in our study were more successful in changing their practice and in implementing new programs that could contribute to students' gains. Therefore, we saw the Initiator as the most effective facilitator of instructional improvement in comparison to Manager style Principal B and Responder style Principal A in the illustration (Huling, Hall, Hord, & Rutherford, 1983). The Initiator enhanced this role by using research-based assessment techniques as a basis for providing interventions to teachers. Thus, teachers were their immediate target, and students would in turn be affected. The interventions provided by the principals were clustered in the areas of supplying materials and organizational arrangements, inservice training, monitoring classroom practice, and consulting and problem-solving with teachers and reinforcing their improvement efforts (Hord, et al., 1983). In delivering interventions, the Initiator principals planned for and delegated a great deal of responsibility to special

staff who assisted them with helping teachers (Hord, Hall & Stiegelbauer, 1983).

In this paper, three research-based techniques that principals can employ are the major focus. The theory and assessment procedure for each technique are explained; how these inform principals is described. Then a principal's story that illustrates use of the technique is presented. In this way, each of the three techniques is examined in full. The paper concludes with a synthesis of the principles of change that the principals employed to increase the effectiveness of their schools.

Principals Understand Teachers Concerns

Techniques for facilitating school change have been developed from research conducted on the Concerns-Based Adoption Model (CBAM) (Hall, Wallace, Dossett, 1973). The CBAM is an empirically-based conceptual framework that provides guidance to the principal and other facilitators of school change. The model outlines the developmental process that individual teachers experience as they implement a new program or practice, an innovation for them. As components of the model were derived from research studies, assessment procedures were developed that can be used by principals and other facilitators to assist teachers in their change of practice in order to become more effective with students.

The model centers on the needs of individuals, in this case teachers, in the process of change. The model views the principal as a person who has access to a variety of resources. The principal also has the research-based CBAM tools for obtaining data about the individual teachers, and the innovation, during the change process. After such data are collected, the principal can make concerns-based interventions selected from the available resources

and target them appropriately toward the individual teachers. Thus, teachers will be assisted as they change and improve their practice, their teaching will become more effective, and schooling will be more successful for students. One kind of data supplied by the CBAM model which principals might use is Stages of Concern.

Concerns Theory

The Stages of Concern dimension centers on the "concerns" teachers have during a change in curriculum or practice (Hall, George & Rutherford, 1977). "Concerns" refers to the feelings, thoughts, and reactions individuals have about a new practice, or innovation. This dimension describes seven kinds of concerns individuals experience with different intensities throughout the change process (see Figure 1). These range from early concerns about "self," Stages 1 Informational and 2 Personal, to concerns about "task," Stage 3 Management, and finally "impact," Stages 4,5,6 - Consequence, Collaboration and Refocusing respectively. As stated, teachers have concerns at all of the seven Stages, but those at particular stages are more intense at specific times. The stages appear to be developmental, thus teachers concerns change from self to management to impact stages as they begin to adopt and implement new practices. Knowing the teachers' Stages of Concerns aids the principal in understanding what is happening to teachers in the change process. There are valid and reliable ways to ascertain teachers' Stages of Concern.

Assessment Procedures

Three procedures are useful for determining teachers' concerns. One simple way is through a "one-legged conference." In one-to-one interviews, a principal or other facilitator asks what appear to be casual questions to elicit the concerns of individual teachers.

Figure 1

STAGES OF CONCERN:
TYPICAL EXPRESSIONS OF CONCERN ABOUT THE INNOVATION

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STAGES OF CONCERN	EXPRESSIONS OF CONCERN
6 REFOCUSING	I HAVE SOME IDEAS ABOUT SOMETHING THAT WOULD WORK EVEN BETTER.
5 COLLABORATION	I AM CONCERNED ABOUT RELATING WHAT I AM DOING WITH WHAT OTHER INSTRUCTORS ARE DOING.
4 CONSEQUENCE	HOW IS MY USE AFFECTING KIDS?
3 MANAGEMENT	I SEEM TO BE SPENDING ALL MY TIME IN GETTING MATERIAL READY.
2 PERSONAL	HOW WILL USING IT AFFECT ME?
1 INFORMATIONAL	I WOULD LIKE TO KNOW MORE ABOUT IT.
0 AWARENESS	I AM NOT CONCERNED ABOUT IT (THE INNOVATION).

Hall, G. E. & Rutherford, W. L. Concerns of teachers about implementing team teaching. Educational Leadership, December, 1976, 34(3), 227-233.

Hall, G. E. & Loucks, S. F. Teacher concerns as a basis for facilitating and personalizing staff development. Teachers College Record, September, 1978, 80(1), 36-53.

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Another technique that can be used is the Open-Ended Statement of Concerns. Individuals are asked to write complete statements to answer the question, "When you think about _____, what are you concerned about? Please be frank and use complete sentences" (Newlove & Hall, 1976).

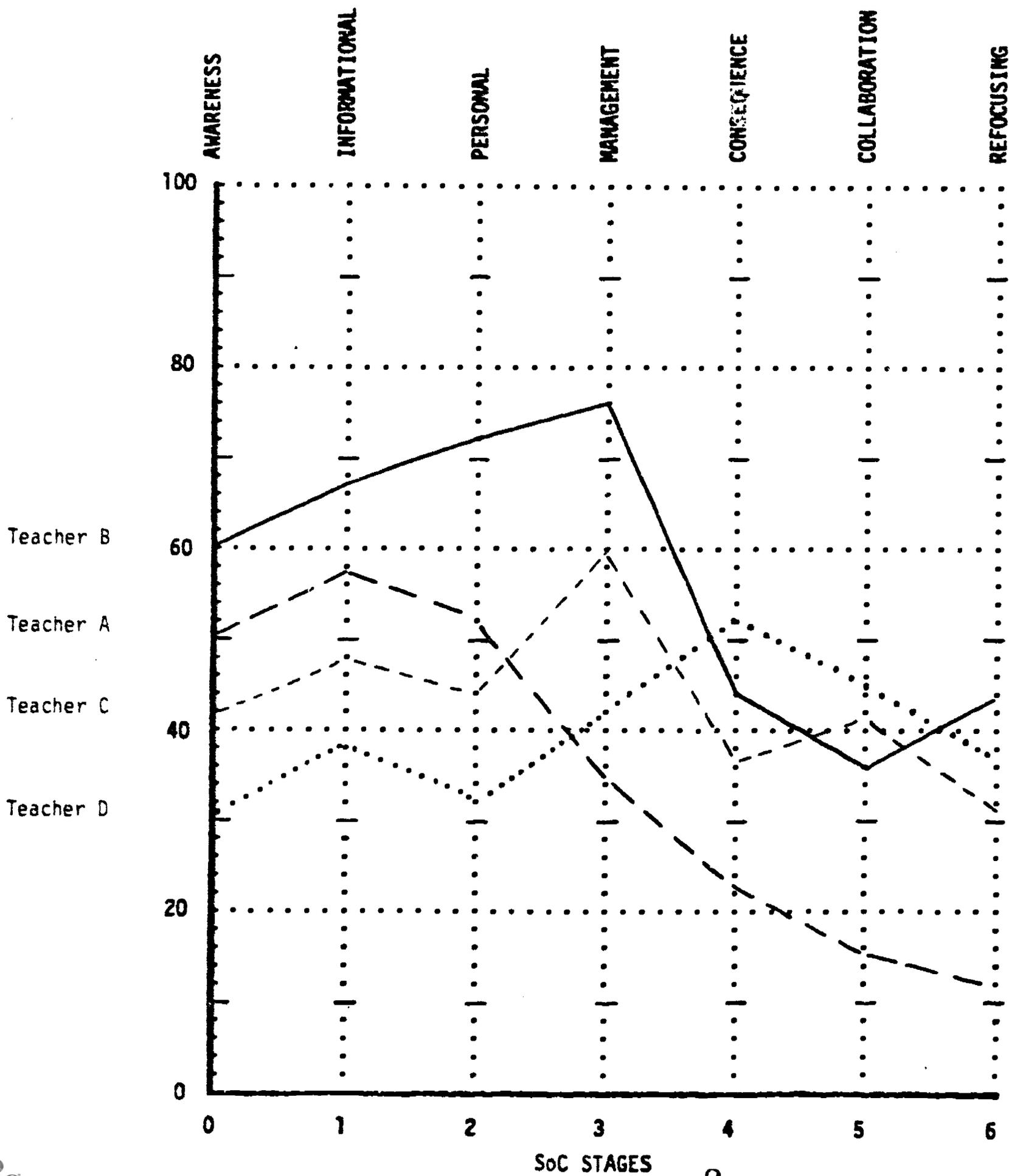
A third process for assessing concerns is the Stages of Concern Questionnaire. This 35-item paper and pencil measure is one typically used in research and program evaluation. Computer or manual data scoring yields a profile of the individual's concerns (Hall, George & Rutherford, 1977).

What the Principal Gains from SoC

From individual teacher's profiles the principal gains valuable diagnostic information about the teacher relative to a specific change. For example, in Figure 2 Teacher A is most intensely concerned about information. Personal concerns are expressed, but not so intensely as Informational. The other concerns stages are lower, indicating less concern on those stages. For Teacher A, Information about the innovation is an obvious need. Teacher B also expresses Informational concerns, but has more intense Stage 2 Personal and Stage 3 Management concerns. Like Teacher A, the impact concerns are "pushed back" or down by more immediate concerns about managing the innovation, having more information, and better understanding the personal demands of the innovation. Teacher C also has high Management concerns coupled with Informational, but does not express intense Personal concerns; thus Teacher C's needs are not likely so complex as B's. Teacher D's highest concerns are on Consequence, suggesting that the concerns of earlier Stages have been met, though the modest peak on SoC 1 is a clue to continuing interest in innovation information. Coupled with SoC 4 it could indicate informational interest in how to best use or fit the innovation to student's needs.

Figure 2

RELATIVE INTENSITY



SoC STAGES

Principal Williams Applies SoC

At Castleton Creek School, Terry Williams was a new principal to the school. After he felt the school had adjusted and was operating well under his leadership, he decided to introduce some different ways for the faculty to work together to improve the professional climate and the school as a workplace. He wanted teachers to take more leadership and a larger role in assessing their school's needs and in planning responses to the needs.

Williams measured the faculty's concerns through the use of the Stage of Concerns Questionnaire to get a "reading" on their feelings about and reactions to the new mode of collaborative planning for improving the school's effectiveness. He learned very quickly that teachers in one of the grade level teams (team 1) had concerns different from another of the grade level teams (team 2) in this elementary school. The profiles indicated that team 1 teachers' concerns were highest on Consequence whereas the team 2 teachers were expressing most intense concerns on the Management and Refocusing stages. Concerns theory would suggest that a double peak profile on Stages 3 Management and 6 Refocusing is a hint that the individuals are concerned about and possibly frustrated about managing. In addition, they see "a better way" to handle or refocus the innovation, thus making a way to relieve themselves of the management dilemma. Understanding the differences in these profiles, Williams planned different interventions for the two teams of his faculty. For team 2 he made it possible (and mandatory) for each teacher to use one planning period each week to visit another team to pick up ideas about how they worked together. His one requirement was that the visiting teacher was to leave a happy note (identifying and complimenting a collaborative practice) with the host team. The teachers reported it was the best "inservice" they'd ever had.

With team 1 teachers he asked them to claim and identify their SoC profile and to have a conference with him to share the profiles and interpretations. At that time he asked them to share their goals or dreams about Consequence for the students. The interventions with both groups of teachers was an effort to get them to think about improvement and designed to reflect the two teams different concerns about the improvement effort. The ultimate goal for Williams was to get the teachers as a group to look to each other for improvement to make their school more effective, instead of depending on the principal to do the looking and directing. He saw himself as the facilitator and he planned to sell the teachers on continuing to respond to the SoC questionnaire, "so I can help you."

Principals Describe Teachers Skills in Using New Effective Practices

A second way that teachers and other individuals can be characterized during change efforts is through the consideration of their behaviors as they center around a new practice, which is quite different from thinking of their concerns. Stages of Concerns reflect their feelings and attitudes. Behaviors and skills can be described through the concept of Levels of Use.

Levels of Use Theory

This second CBAM diagnostic dimension, called Levels of Use of the Innovation (LoU) (Hall, Loucks, Rutherford, & Newlove, 1975), describes how performance changes as the individual teacher becomes more familiar with and skillful with a new practice. Eight distinct Levels of Use have been identified (Figure 3). A teacher begins with "nonuse" of the innovation, then moves to "orientation" and "preparation" for its use. Initial use is usually "mechanical," but with experience, innovation users progress to a "routine"

Figure 3

LEVELS OF USE OF THE INNOVATION:
TYPICAL BEHAVIORS

LEVEL OF USE	BEHAVIORAL INDICES OF LEVEL
VI RENEWAL	THE USER IS SEEKING MORE EFFECTIVE ALTERNATIVES TO THE ESTABLISHED USE OF THE INNOVATION.
V INTEGRATION	THE USER IS MAKING DELIBERATE EFFORTS TO COORDINATE WITH OTHERS IN USING THE INNOVATION.
IVB REFINEMENT	THE USER IS MAKING CHANGES TO INCREASE OUTCOMES.
IVA ROUTINE	THE USER IS MAKING FEW OR NO CHANGES AND HAS AN ESTABLISHED PATTERN OF USE.
III MECHANICAL USE	THE USER IS USING THE INNOVATION IN A POORLY COORDINATED MANNER AND IS MAKING USER-ORIENTED CHANGES.
II PREPARATION	THE USER IS PREPARING TO USE THE INNOVATION.
I ORIENTATION	THE USER IS SEEKING OUT INFORMATION ABOUT THE INNOVATION.
0 NONUSE	NO ACTION IS BEING TAKEN WITH RESPECT TO THE INNOVATION.

Hall, G. E., Loucks, S. F., Rutherford, W. L., & Newlove, B. N. Levels of use of the innovation: A framework for analyzing innovation adoption. The Journal of Teacher Education, Spring, 1975, 24(1), 52-56.

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level and may reach various "refinement" levels, where changes are made based on student needs assessments.

Assessment Technique

A focused interview has been developed to assess Levels of Use. For research or evaluation purposes the interview requires a trained and certified interviewer. However, a more informal and casual procedure, another "one-legged conference," can be used by a principal with a teacher. Through what appear to be casual questions, the teacher's overall Level of Use can be elicited.

What the Principal Learns from LoU

Assessing how the new practice is actually working for teachers in their efforts to improve their effectiveness is often difficult for principals. The informal LoU interview is one tool that any facilitator with some training can use. It provides a structured way to talk to teachers about how they are using new practices with their students. It provides another basis for supplying appropriate assistance. It can help the principal to understand how things are going behind the classroom door -- to ascertain if the teacher has not started to use and implement designated new practice (Levels of Use 0 or 1 or 2) or if the teacher is experiencing problems in getting new practice smoothly into place (Level of Use 3). In either case, supportive interventions can be made. If the teacher has moved beyond and has reached a stabilized use (Level of Use IV A) then the principal can provide assistance to the teacher in assessing how it is working for the students and whether refinements in use are warranted to make it even more effective for student learning.

Watson Miller Applies LOU

In Winter Brook School, Watson Miller studied information from Levels of Use interviews with teachers. He recognized that many teachers, after one year of implementing a new math program to increase students' basic mathematics skills, were at Level of Use III Mechanical use. They had not yet arrived at stabilized use of the program (see introductory anecdote of this paper). Miller released a teacher from her classroom teaching assignment, reassigned her pupils to the other teachers at that grade level and created the role of math resource teacher. The teacher then provided staff development to the other faculty in the way the program was to work. She also provided individual assistance and participated in solving problems with the teachers. This powerful intervention by the principal was a boon to teachers in helping them to improve their program use and thus make the program work more effectively for students.

Principals Specify the Parts of New Practice

Stages of Concern and Levels of Use provide practical ways for principals to learn what is happening to the people (teachers) in the process of changing their practice. But what about the practice? What does it look like in the classroom?

Innovation Configurations Theory

The third CBAM diagnostic dimension which is useful to school leaders in monitoring implementation and in providing facilitation is Innovation Configurations (IC). This concept describes the differing operational forms of an innovation that result as teachers implement it in their particular settings, classrooms. Through this concept, the innovation's major operational compo-

nents or parts are identified and the variations of each component are described as they might be used by teachers (Hall & Loucks, 1981). These variations can be arranged on an Innovation Configuration Component Checklist.

Assessment Tool

The Innovation Configuration Component Checklist contains descriptions that summarize the innovation's components and their variations. The checklist is innovation specific and can be used to document which parts of the innovation are actually in use by each teacher. The checklist can be structured to reflect an inventory of the innovation's components and variations (see Figure 4). Of additional value is a checklist structured so as to indicate the variations that ideal, acceptable and unacceptable use of the innovation would look like (see Figure 5). Thus, if particular variations of the program are viewed as essential to the program's anticipated outcomes, this can be made evident.

What the Principal Can Do With IC

At the outset of implementing a change of teacher practice, the principal can use the IC checklist to communicate to teachers exactly what the change involves. The checklist is a tool that can help articulate what the principal's expectations are regarding how the change should look in practice. It can be used to identify those parts of a new program which should be used in a prescribed way and others with which teachers can take creative license.

After implementation is under way, the IC checklist can be used systematically by principals for monitoring classroom practice and for providing explicit feedback to teachers. It can be used for identifying exactly which parts of a new program need attention in each classroom. It thus indicates where facilitating interventions by the principal are needed.

Figure 4

Math Program Checklist

Please check one choice for each of the six categories below that is the most descriptive of your math instruction.

1. Use of instructional materials

- (1) Primarily textbook(s)
- (2) Primarily material packets provided by the program
- (3) Wide variety of materials, possibly including text(s), program packets, games, manipulatives, kits, centers, etc.

2. Grouping:

- (1) Teach whole class or two groups
- (2) Teach 3 or more small groups
- (3) Teach individuals only, no grouping

3. Objectives:

- (1) Program objectives are taught largely in sequence
- (2) Program objectives are taught largely out of sequence
- (3) Program objectives are not taught

4. Testing:

- (1) Tests are given for each objective
- (2) Tests are given for groups of objectives
- (3) No tests are given

5. Use of Test Results:

- (1) Test results determine next steps of individual students
- (2) If most of group passes test, the group goes on and those who failed are given special help
- (3) If most of group passes test, the group goes on and no special help is given those who fail

6. Record-Keeping:

- (1) Records are kept by objective for each child
- (2) Records are kept other than by objective for each child
- (3) No records are kept

Figure 5

INNOVATION CONFIGURATION COMPONENTS AND VARIATIONS OF A
CONTINUOUS-PROGRESS MATHEMATICS CURRICULUM

Teacher _____

Rater _____

<p>I. Instructional Materials</p> <p>1. program materials only</p>	<p>2. program materials plus</p>	<p>3. text only</p>	<p>4. teacher only</p>
<p>II. Grouping</p> <p>1. completely individualized</p>	<p>2. small groups</p>	<p>3. large homogeneous group</p>	<p>4. large heterogeneous group</p>
<p>III. Testing Component</p> <p>1. each student tests themselves as they complete each objective</p>	<p>2. testing done weekly with test results fed back to students</p>	<p>3. testing done once every six weeks with nothing done with test results</p>	<p>4. no regular testing except standardized achievement tests required by district</p>

Brenda Dotson Applies IC

In Plum River School Principal Brenda Dotson examined the IC information collected at the conclusion of the first year of implementing a new basic skills math curriculum. She discovered at this time that very few teachers had begun to use the kit of supplementary materials that supported the instruction of some of the program objectives. Principal Dotson and her assistant principal and a resource teacher, who comprised the school administrative team, met to study the IC data. After two meetings the team had developed a plan which included two year-long strategies (Figure 6):

Strategy A: Teachers are supported in preparing their kits for use, a response to the original condition in which the kits were delivered to teachers - in need of cutting, laminating, sorting, organizing.

Strategy B: Teachers are provided with training in use of the kits, which showed them ways in which they could use the kits more effectively in their teaching (Huling, et al., 1982).

Interventions were supplied by the principal and her team to respond to the lack of kit use indicated by the IC data. These interventions resulted in a significant increase in the use of one of the program's six components, the kit.

Guidelines of Change Employed By Principals

In making schools more effective for students, principals work with teachers and assist them in their change and improvement of practice. By basing their work with teachers on data about how teachers are experiencing change, more timely and relevant help is provided. The data are derived from principals' use of research-based techniques from the Concerns Based Adoption Model. As they work to increase school effectiveness, principals also employ a number of guidelines or concerns-based principles that help them to manage change in their schools. These guidelines are highlighted:

The first guideline involves the belief that change is a process, and not an event. Therefore, change requires time, energy, and resources to support it as it unfolds.

Change is accomplished by each individual teacher in the school. When the teachers in the school have changed and are more effective then it can be said that the school has changed and has become more effective.

Change is a highly personal experience and this is congruent with the need for attention on the individual as the unit for diagnosis and assistance. Individuals change at different rates and in different ways.

Change entails developmental growth, both in feelings about and skills in putting new practice into place; thus, individuals change in two important ways over the course of a change experience.

Interventions should be targeted for the individual teacher, rather than the innovation. The feelings (SoC diagnosis) and skills (LoU diagnosis) of the teacher should be taken into account when designing actions to support the process of change, in addition to consideration of implementing the change (IC diagnosis).

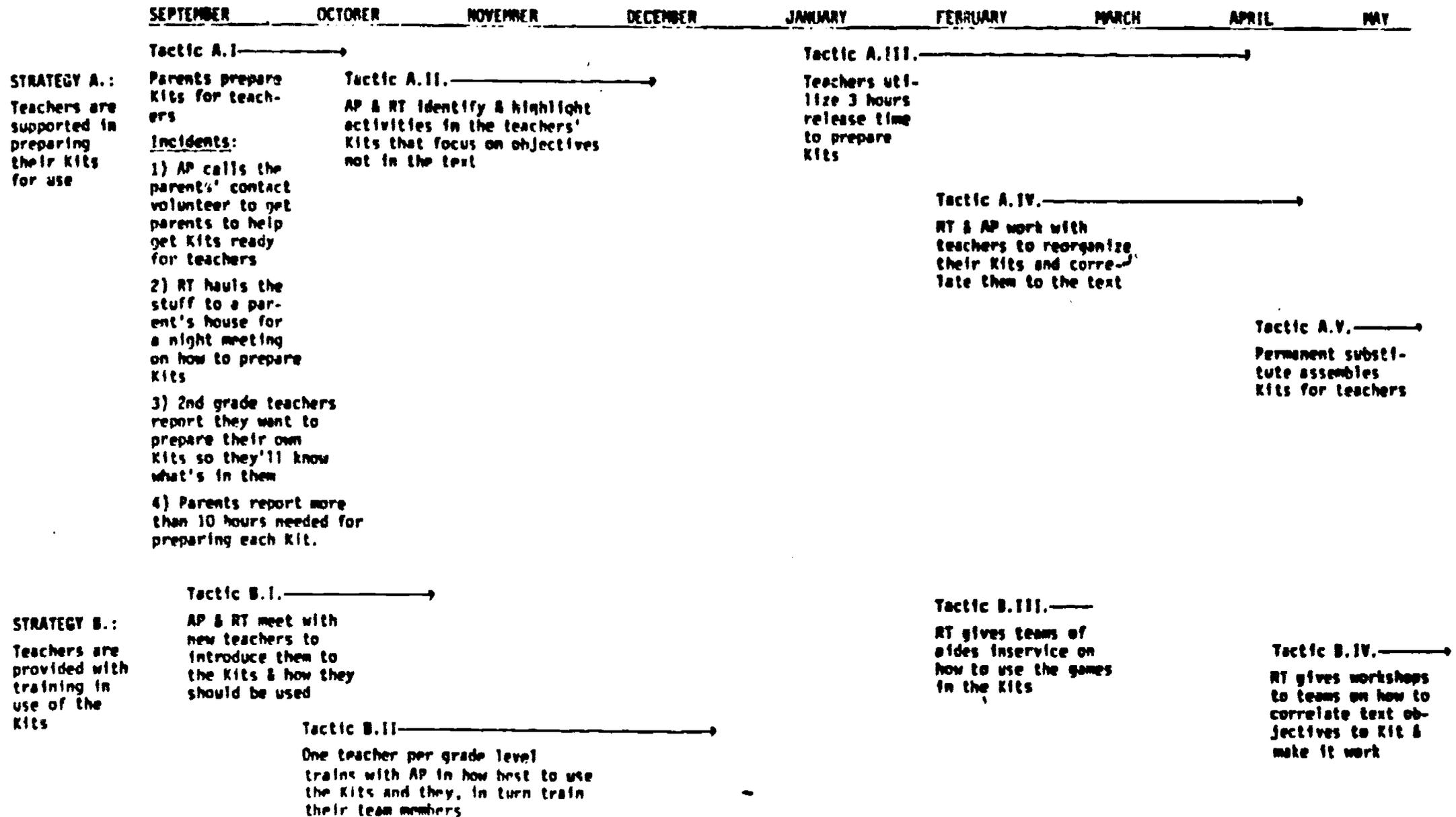
The principal and the second change facilitator need to be adaptive to the differing needs of differing teachers and to their changing needs over time. "Coaching" for individual teachers is important.

The principal needs to consider the systemic nature of the school organization when interventions are made. That is, activities targeted or made in one area of the system may well produce unanticipated effects in another.

In Conclusion

The strong principal who exerts leadership is viewed as a critical factor in schools that are effective. A role of the leader is to help teachers to deliver the most effective instructional program possible. The leadership role can be enhanced through the use of practical techniques by the principal. This paper has described three research-based techniques or tools that principals and their facilitation team can use to obtain data for decision-making about help for teachers. Principals' stories about using the tools show how they made data-based interventions to facilitate school effectiveness efforts. These principals expressed their leadership by supporting the improvement of teachers practice so that schools are more effective for children.

Figure 6
INTERVENTIONS FOR YEAR TWO



•••LEGEND•••
•••AP--Assistant Principal
•••RT--School Resource Teacher
•••

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