

Improving Staff Development Through CBAM and 4Mat™

Combining two models for looking at individual differences produces a powerful approach to teacher inservice.

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Staff development is the facilitation of growth. It requires a knowledge of our clients; a talent for scanning the outside world for means and resources; a belief that support and challenge give people the courage to create; an intuitive feel of how much space to give, and an impeccable sense of timing.

I have developed a staff development program that combines the Concerns-Based Adoption Model (CBAM) of Gene Hall and Susan Loucks and my own 4Mat System. CBAM outlines "a set of stages that people appear to move through" when they are involved in innovation. It is based on the belief that people respond to change in uniquely personal ways; therefore, the individual must be the primary target of change.¹ My 4Mat System describes a method of teaching that includes needs of all four major learning styles, while using right and left mode techniques. It does not require analysis of participants' learning styles, but instead assumes that a presenter should use techniques applicable to each of the four learning styles 25 percent of the time.²

More on CBAM

Hall, Loucks, and their colleagues at the Texas R&D Center formulated CBAM from Frances Fuller's work that examined the changing concerns of undergraduate teachers as they moved through teacher preparation.³ Hall and Loucks expanded these concerns to seven stages that describe "certain perceptions, feelings, motivations, frustrations, and satisfactions about innovations and the change process"⁴ (see Figure 1).

Implicit assumptions in the CBAM Model are:

1. Change is a process that takes time and is achieved in stages.
2. The individual must be the primary target.
3. Change is highly personal.
4. Stages of change involve both perceptions and feelings of individuals concerning the innovation as well as their skill in its use.
5. Staff developers need to diagnose their clients' location in the change process and assess the state of change as they adapt strategies along the way.

Understanding 4Mat: Learning Styles
The 4Mat System is based on learning style research, especially David Kolb's Experiential Learning Model⁵ and research on brain dominance. Figures 2 through 4 explain Kolb's process.

The resulting quadrant system formed the conceptual rationale for four different learning styles. I synthesized the work of Kolb and other learning style researchers into composite descriptions of four major learning style preferences:

Type One Learners:

- Seek meaning
- Need to be involved personally

Figure 1. Stages of Concern About the Innovation*

- Stage 6 Refocusing:** The focus is on exploration of more universal benefits from the innovation, including the possibility of major changes or replacement with a more powerful alternative. Individual has definite ideas about alternatives to the proposed or existing form of the innovation.
- Stage 5 Collaboration:** The focus is on coordination and cooperation with others regarding use of the innovation.
- Stage 4 Consequence:** Attention focuses on impact of the innovation on students in their immediate sphere of influence. The focus is on relevance of the innovation for students, evaluation of student outcomes, including performance and competencies, and changes needed to increase student outcomes.
- Stage 3 Management:** Attention is focused on the processes and tasks of using the innovation, and the best use of information and resources. Issues related to efficiency, organizing, managing, scheduling, and time demands are priority.
- Stage 2 Personal:** Individuals are uncertain about the demands of the innovation, their adequacy to meet those demands, and their roles with the innovation. This includes analysis of their roles in relation to the reward structure of the organization, decision making and consideration, or potential conflicts with existing structures or personal commitment. Financial or status implications of the program for self and colleagues may also be reflected.
- Stage 1 Information:** A general awareness of the innovation and interest in learning more about it is indicated. Individuals seem to be unworried about themselves in relation to the innovation. They are interested in substantive aspects of the innovation in a selfless manner such as general characteristics, effects, and requirements for use.
- Stage 0 Awareness:** Little concern about or involvement with the innovation is indicated.

*Original concept from G. E. Hall, R. C. Wallace, Jr., and W. A. Dossett, *A Developmental Conceptualization of the Adoption Process Within Educational Institutions*. (Austin: Research and Development Center for Teacher Education, The University of Texas, 1972).

- Learn by listening and sharing ideas
- Absorb reality
- Perceive information concretely and process it reflectively
- Are interested in people and culture; are divergent thinkers who believe in their own experience, excel in viewing concrete situations from many perspectives, and model themselves on those they respect.
- Function through social interaction
- *Strength*—Innovation and imagination; they are idea people
- *Goals*—Self-involvement in important issues, bringing unity to diversity
- *Favorite question*—Why?
- *Careers*—Counseling, personnel, humanities, organizational development
- *Primary concern*—Personal meaning.

Type Two Learners:

- Seek facts
- Need to know what the experts think
- Learn by thinking through ideas; they form reality
- Perceive information abstractly and process it reflectively
- Are less interested in people than ideas and concepts; they critique information and are data collectors; thorough, and industrious, they re-examine facts if situations perplex them
- Enjoy traditional classrooms; schools are designed for these learners
- Function by adapting to experts
- *Strength*—Creating concepts and models
- *Goals*—Self-satisfaction and intellectual recognition
- *Favorite question*—What?
- *Careers*—Basic sciences, math, research, planning departments
- *Primary concern*—Information.

Type Three Learners:

- Seek usability
- Need to know how things work
- Learn by testing theories in ways that seem sensible; they edit reality
- Perceive information abstractly and process it actively
- Use factual data to build designed concepts, need hands-on experiences, enjoy solving problems, resent being given answers, restrict judgment to concrete things, and have limited tolerance for "fuzz" ideas; they need to know how

Figure 2. Each of us perceives in our own unique way. Some of us predominately sense and feel, while others think or reason. The way we perceive is what we do first.

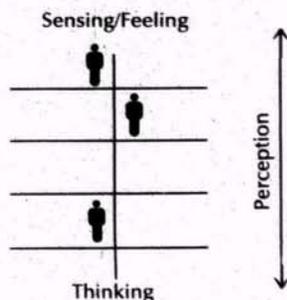
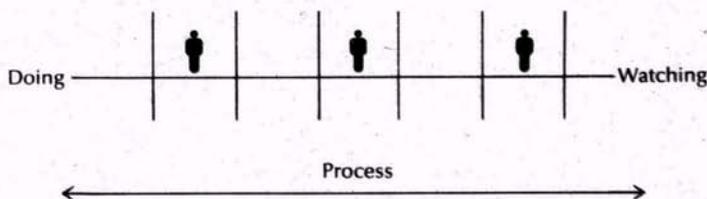


Figure 3. After we perceive, we process. Some of us watch and reflect while others jump right in and try.



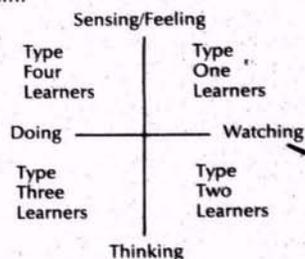
things they are asked to do will help in real life

- Function through inferences drawn from sensory experience
- *Strength*—Practical application of ideas
- *Goal*—To bring their view of the present into line with future security
- *Favorite question*—How does it work?
- *Careers*—Engineering, physical sciences, nursing, hands-on technology
- *Primary concern*—Need to try things for themselves.

Type Four Learners:

- Seek hidden possibilities
- Need to know what can be done with things
- Learn by trial and error, self-discovery; they enrich reality
- Perceive information concretely and process it actively
- Adaptable to change and relish it; like variety and excel in situations calling for flexibility
- Tend to take risks, at ease with people but sometimes seen as pushy
- Often reach accurate conclusions

Figure 4. Kolb juxtaposed the two dimensions of perceiving and processing to form a four-quadrant system.



in the absence of logical justification

- Function by acting and testing experience
- *Strength*—Action, carrying out plans
- *Goals*—To make things happen, to bring action to concepts
- *Favorite question*—If? (What can this become?)
- *Careers*—Marketing, sales, action-oriented managerial jobs, teaching
- *Primary concern*—Need to adapt learning to their own life situations to make more of what they learn.

Putting Quadrant into Sequence

The quadrant system, besides generally defining four learning styles, is especially valuable as a sequential cycle of learning. In addition to favorite questions, careers, and so on, each of the four learning style types seems to have a preferred learning method. Figure 5 shows appropriate learning methods with each learning style. An instructor can let all students shine at least 25 percent of the time by beginning with Sensing/Feeling (concrete experience) and moving clockwise around the circle to Watching (reflective observation), on to Thinking (abstract conceptualization), then Doing (active experimentation), and back up to Sensing/Feeling. Following this cycle also challenges students to assimilate other learning style methods.

Understanding 4Mat:

Applying Brain Dominance Preferences

During the 1950s Roger Sperry, who began the research on right and left brain functions, conducted a series of animal studies in which the corpus callosum, a thick cable composed of nerve fibers cross-connecting the two cerebral hemispheres, was severed.⁶ Sperry and his associates then devised a series of subtle and ingenious tests to find out what was going on in the two separated hemispheres—and two separate minds were revealed.

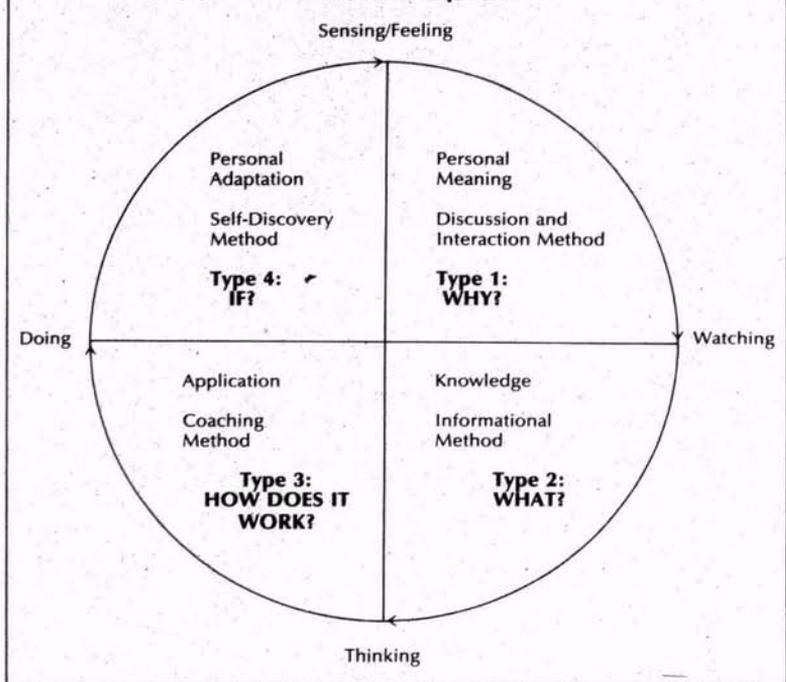
Prior to this discovery, it was known that the functions of the two hemispheres were different: speech resides in the left brain and spatial capability in the right. What was not known was that in processing information and stimuli the left brain uses lineal, sequential processing while the right brain uses a global process in which data are perceived, absorbed, and processed. Experiments with split-brain patients have shown that "the qualitative differences in the methods used to achieve comprehension are profound, and even greater than could have been predicted."⁷

Based on this and other research, I have superimposed left and right mode techniques on each of the quadrants for learning styles and concerns. The result (Figure 6) is a cyclical teaching method in which all learning styles are served while alternately using left and right teaching modes.

Overlay of CBAM on 4Mat

The overlay of CBAM on 4Mat requires an examination of CBAM's stages as

Figure 5. Four Major Learning Styles and Methods with Four Different Emphases.



they fulfill learning style needs and brain dominance preferences of teachers in innovation, as well as the cycle of change represented by these stages. In other words—is CBAM congruent with the 4Mat learning cycle? By paying attention to teachers' needs in the CBAM stages, are we attending to learning styles and brain dominance preferences? The answer is a resounding yes.

Look again at CBAM's stages of concern in Figure 1. A person begins with Awareness and moves up through the six stages. It has been my experience in staff development in school and business settings that the move from Step 2 (Personal) to Step 3 (Management) is a big step. There is a kind of reflection before people move from personal concerns to the processes and tasks of implementation. In other words, they need more time to deepen and affirm personal meaning before moving to the commitment of managing innovation.

In Figure 7 (page 24) I have redefined the CBAM stages to fit the four quadrants and labeled them: understanding, internalizing, operationalizing, and evaluating. Figure 8 (page 25) indicates questions teachers ask as they move through the stages of concern.

Using CBAM's Stages in Staff Development

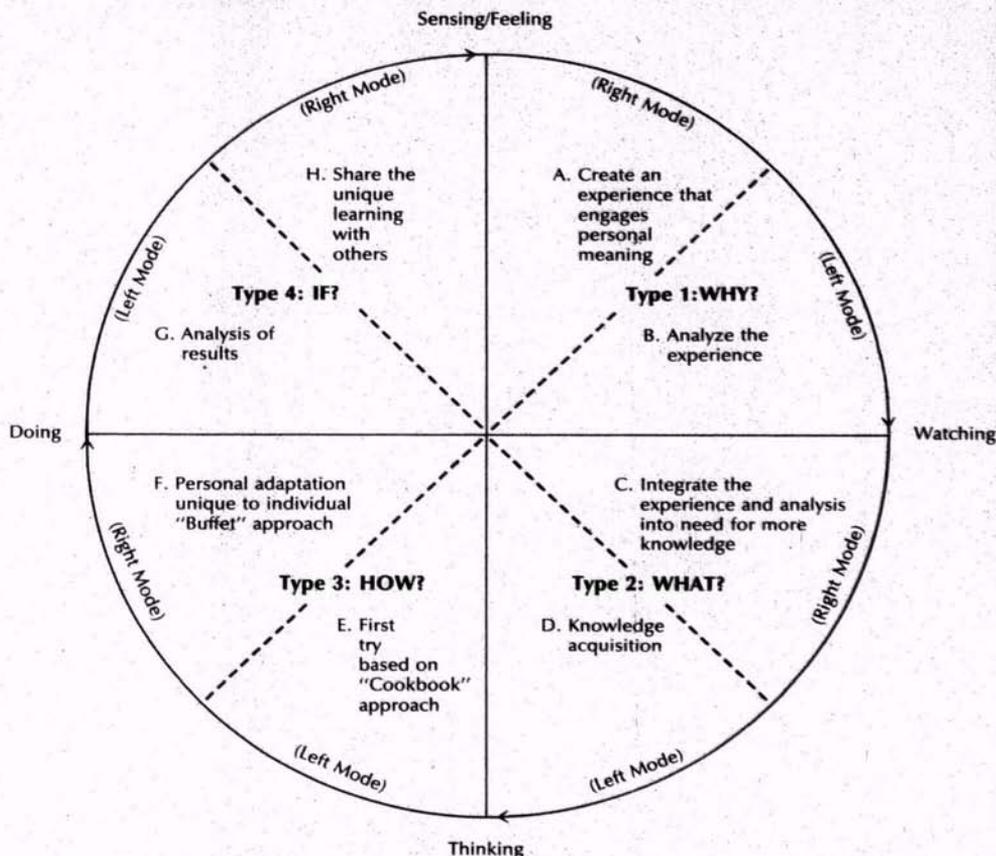
The CBAM model presents certain strategies for staff developers depending on a client's stages of concern. Figure 9 (page 25) is an overlay of CBAM and 4Mat that specifies key strategies at key times in the innovation process.

My conviction as to the usefulness of the CBAM stages of concern is based on my experience in many different staff development situations. The 4Mat workshops are designed to increase awareness of the usefulness of learning styles and brain dominance research for teaching. First, I raise Awareness (0) by administering the Kolb Learning Style Inventory and the Torrance right/left instruments.⁸ I want teachers to become aware of the diversity of learning styles and brain dominance among their own colleagues. At the Informational stage (1), I present current research. Then the initiative shifts to the participants. Large numbers of teachers, 90–95 percent, find themselves reflecting on how this research affects their personal lives—in other words, husbands, wives, children. Their evaluation comments show that they are convinced of the validity of these diversities and want to diagnose

Figure 6. Left and Right Mode Techniques Superimposed on Learning Styles/Concerns Quadrants.

Left Mode: Linear, sequential

Right Mode: Global



- A. We begin with a concrete experience that engages personal meaning.
- B. We move into an analysis of that experience. (What do you think happened?)
- C. The experience and analysis are integrated reflectively into a need for more knowledge.
- D. We turn to more detailed knowledge acquisition.
- E. We try it out.
- F. We master the skill/knowledge sufficiently to be able to adapt it (aberrate it, so to speak) to our own personal needs/situation.
- G. We analyze what happened.
- H. We turn to share with others in order to broaden our perspective as well as engaging in more complex understanding.

their families.

Even though I present classroom applications in the final hours of a workshop, I have found repeatedly that teachers remain at the Personal (2) level of concern. Why? Teachers attend the workshops to improve classroom application of this research, yet many of them apply the information only on a personal level. They need time to reflect. It's the "pause that reflects"—the big step from Personal (2) to Management (3) that we saw in Figure 1.

Once they move to Step 3, teachers broaden their analysis of the innovation

from personal concerns to managing the innovations in their professional lives. What follows is an initial attempt, a small step, based on a "cookbook" approach—they begin to try some of the ideas. When and if the initial step is successful, they begin to adapt the innovation to the particular needs of their own styles, their own students, and their own disciplines. *Only then is the innovation theirs.* Innovation must be adaptable in diverse ways if teachers are to truly own it.

Introduction of innovation, if properly done, moves teachers through all

three beginning stages: Awareness (0), Informational (1), and Personal (2). This can be accomplished by engaging the heart. A left brain intellectual approach comes into play later, when information is given to bolster awareness and after the personal level, when teachers report that "it feels right." The right mode captures the interests of teachers *through what they experience every day.* So an initial approach to innovation must engage their hearts and value their caring instincts (see I, Figure 9). When teachers move to the "pause that reflects," informal conversations

can convince them that their understandings of what they do and how they do it are appreciated (see II, Figure 9). This means that staff developers must believe they are doing something *with* teachers and not *to* them.

As some teachers move into analyses of meaning at the professional level, the same strategies should continue, shifting emphasis toward classroom implementation. Courageous "first tries" call for supportive discussions of problems and concerns, with a real boost for trying (III, Figure 9). When teachers begin adapting the ideas to their situations, real innovation is under way (3). They need to be encouraged to be true to their own styles as they move to broaden their teaching repertoires. At this stage they need to be put in touch with others who are also adapting the innovation to their particular situation (IV, Figure 9).

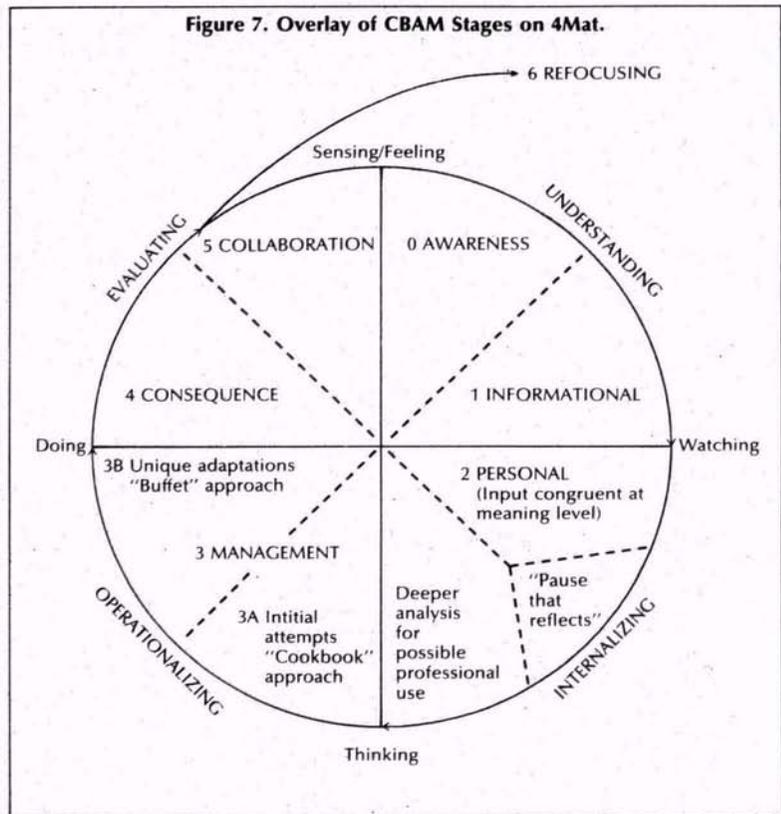
When the consequence stage (4) is reached, the left brain analysis again comes into play. Results need to be written down, and goals clarified through the structuring of larger groups (V, Figure 9). Collaboration (5) should encourage unique uses of the innovation as teachers begin to move to the refocusing stage (6). The creativity of teachers needs to be shared in-house, and the strategy of recognizing professionalism can be enhanced by gathering and printing the diverse uses of the innovation as resources for all teachers. Let them become consultants to each other (VI, Figure 9). The refocusing stage then becomes the catalyst for a deeper and broader level of awareness (0) as the cycle begins again at a higher and more complex level.

I am convinced CBAM provides important insights for understanding stages of concern in innovation. My conviction stems from the belief that the model is primarily concerned with the Self—the unique, personal ways each of us adapts to change. It begins with Self, moves to knowledge, then Task (Use), and Impact.

CBAM illustrates that without personal meaning, without Self being engaged, no change is effective or permanent. We bring ourselves with us wherever we go. Only when the question "why?" is answered can change be effective. **EL**

Gene E. Hall and Susan Loucks, "Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development," *Teachers College Record* 80, 1 (September 1978): 36-53.

Figure 7. Overlay of CBAM Stages on 4Mat.



Bernice McCarthy, *The 4Mat System: Teaching to Learning Styles With Right/Left Mode Techniques* (Oak Brook, Ill.: Excel, Inc., 1980).

Frances Fuller, "Concerns of Teachers: A Developmental Conceptualization," *American Educational Research Journal* 6, 2 (1969): 207-226.

Hall and Loucks, *ibid.*, p. 39.

David A. Kolb and others, *Organizational Psychology: A Book of Readings*, 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1974).

Roger W. Sperry, "Lateral Specialization of Cerebral Function in the Surgically Separated Hemispheres," in *The Psychophysiology of Thinking*, eds. F. J. McGuigan and R. A. Schoonover (New York: Academic Press, 1973).

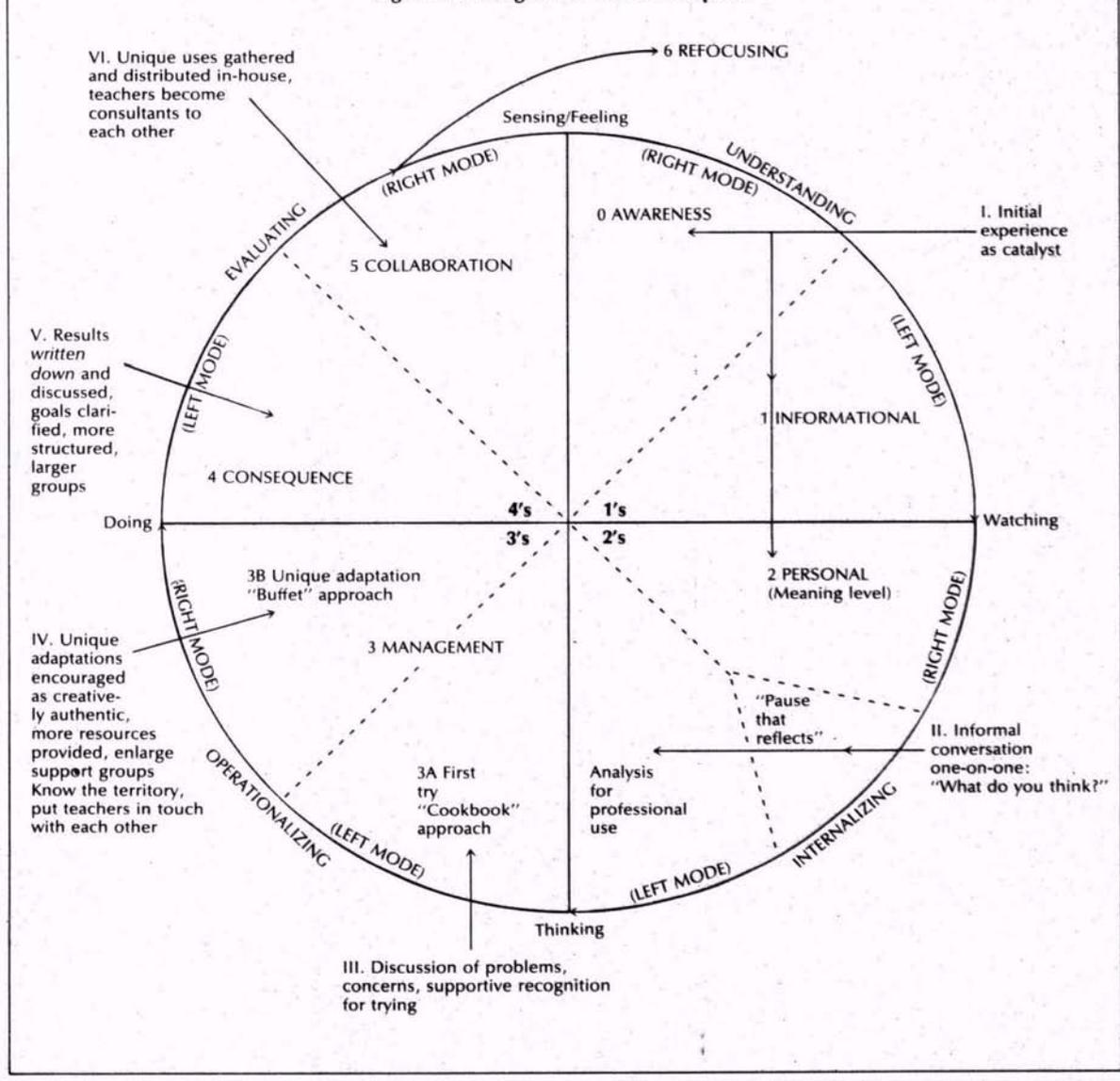
Jerre Levy, "Cerebral Asymmetry and the Psychology of Man," *The Brain and Psychology*, ed. M. Wittrock (New York: Academic Press, 1980).

David A. Kolb, *The Learning Style Inventory* (Boston, Mass.: Tests and Scoring Division, McBer and Company, 1976); and Paul Torrance, *Your Style of Learning and Thinking* (Athens, Ga.: Dept. of Educational Psychology, University of Georgia, 1975).

Figure 8. Questions Teachers Ask as They Move Through the Stages of Concern.

Type 4—IF?	6 Refocusing	Where do we go from here?
Type 3—HOW DOES THIS WORK?	5 Collaboration	What happened to you and your students?
Type 2—WHAT?	4 Consequence	What happened to me and my students?
Type 1—WHY?	3 Management: B Unique adaptation A First try	How will I adapt this to my needs? How will I begin?
	Analysis shift for possible professional use	What does this mean to me professionally?
	"Pause that reflects"	
	2 Personal	Why is this important to me personally?
	1 Informational	
	0 Awareness	

Figure 9. Strategies For Staff Developers.



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