

CURRENT CONCEPTS AND INFORMATION ON THE
DIFFERENCES BETWEEN ADULTS AND OTHER LEARNERS

by

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FORWARD

We have assembled some of the most up-to-date materials on the differences between adults and other learners:

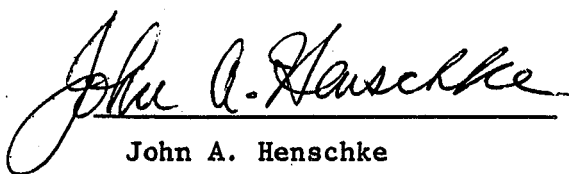
- 30 Things talks about adult learners and their motivation.
Designing curriculum for adults,
Working with adults in the classroom;
- Dear Diary is a tool for adults to record thoughts, reflections,
and feelings on their learning;
- Principles of adults Learning scale focuses adult teacher
behavior on seven different factors such as climate, needs
participation, activities, flexibility, experience, and instruction;
- Can colleges teach thinking?
Suggests seven phases of maturing for becoming adult which
influence learning; and
- Is mentoring necessary?
Indicates the need for a productive relationship between
mentor/mentee- teacher/learner for learning to take place in the
one-on-one situation.

We hope you will find these materials beneficial

March 1987



William Curtis



John A. Henschke

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The body of knowledge on the subject is just beginning to accumulate, but there are some truisms (we think)

30 things we know for sure about adult learning

by Ron and Susan Zemke

We don't know a lot about the mechanisms of adult learning. At least, not in the "What are the minimum—necessary and sufficient—conditions for effecting a permanent change in an adult's behavior?" sense of knowing.

In that, we're not alone. Dr. Malcolm Knowles came to much the same conclusion in *The Adult Learner: A Neglected Species*. Eight years ago, he equated his efforts to summarize what was then known about adult learning to a trip up the Amazon: "It is a strange world that we are going to explore together, with lush growth of flora and fauna with exotic names (including fossils of extinct species) and teeming with savage tribes in raging battle. I have just made a casing-the-joint trip up the river myself, and I can tell you that my head is reeling." Today Knowles says, "The river is much tamer. We are beginning to understand what we do that works and why it works." But as we listen, we have the distinct impression that what our point man Knowles sees as tame travel can still be white-water rapids for the rest of us.

While there are hundreds of books and articles offering tips and tricks for teaching adults, the bulk of that knowledge is derived from three relatively limited spheres. The first is "My life and times in teaching," wherein one teacher/trainer of adults shares his or her career's accumulation of secrets with others. Though intriguing and interesting, this literature focuses more on teacher survival than anything else, and while we learn much about living, we learn relatively little about learning.

The second common source is the "Why adults decide to study" re-

search. Here we learn some interesting, even fascinating, things about the conditions and incidents that motivate adults to engage in a "focused learning effort." But in most of this research, the adult seems assumed to be a learning machine who, once switched on, vacuums up knowledge and skill. It is more indicative than instructive, suggestive than substantive. A cynic would call this body of knowledge about adult learning a form of market research.

The third source is extrapolation from theory: both adult learning theory and research and that derived from work with children and nonhuman subjects. The adult learning theories in question are really holistic treatments of human nature: the Carl Rogers/Abraham Maslow sort of theory from which we can only infer, or guess at, rules of practice. "Would you rather learn from a lecture or a book?" or "On your own or with direction?" are interesting questions, but ones that beg the issue of results or learning outcomes. A trainee may prefer listening to lectures but learn best by practice and application exercises.

The nonadult theory and research is a broad lot—everything from child development studies to pigeon training. The tendency seems to be to draw guidance from the B. F. Skinner/behavior modification/programmed instruction, and the Albert Bandura/behavior modeling/social learning schools of thought. While both schools are generating research and results, they are still shorter on proven practices than pontification and speculation. No single theory, or set of theories, seems to have an arm-lock on understanding adults or helping us work effectively and efficiently with them.

Still and all, from a variety of sources there emerges a body of fairly reliable knowledge about adult learning—arbitrarily 30 points which lend themselves to three basic divisions:

- Things we know about adult learners and their motivation.
- Things we know about designing curriculum for adults.
- Things we know about working with adults in the classroom.

These aren't be-all, end-all categories. They overlap more than just a little bit. But they help us understand what we are learning from others about adult learning.

Motivation to learn

Adult learners can't be threatened, coerced or tricked into learning something new. Birch rods and gold stars have minimum impact. Adults *can* be ordered into a classroom and prodded into a seat, but they *cannot* be forced to learn. Though trainers are often faced with adults who have been sent to training, there are some insights to be garnered from the research on adults who seek out a structured learning experience on their own; something we all do at least twice a year, the research says. We begin our running tally from this base camp.

1 Adults seek out learning experiences in order to cope with specific life-change events. Marriage, divorce, a new job, a promotion, being fired, retiring, losing a loved one and moving to a new city are examples.

2 The more life-change events an adult encounters, the more likely he or she is to seek out learning opportunities. Just as stress increases as life-change events accumulate, the motivation to cope with change through engagement in a learning experience increases. Since the people who most frequently seek out learning opportunities are people who have the most overall years of education, it is reasonable to guess that for many of us learning is a coping response to significant change.

3 The learning experiences adults seek out on their own are directly related—at least in their own perception—to the life-change events that triggered the seeking. Therefore, if 80% of the change being encountered is work related, then 80% of the learning experiences sought should be work related.

4 Adults are generally willing to engage in learning experiences before, after, or even during the ac-

tual life-change event. Once convinced that the change is a certainty, adults will engage in any learning that promises to help them cope with the transition.

5 Although adults have been found to engage in learning for a variety of reasons—job advancement, pleasure, love of learning and so on—it is equally true that for most adults learning is not its own reward. Adults who are motivated to seek out a learning experience do so primarily (80-90% of the time) because they have a use for the knowledge or skill being sought. Learning is a means to an end, not an end in itself.

6 Increasing or maintaining one's sense of self-esteem and pleasure are strong secondary motivators for engaging in learning experiences. Having a new skill or extending and enriching current knowledge can be both, depending on the individual's personal perceptions.

The major contributors to what we know about adult motivation to learn have been Allen Tough, Carol Aslanian and Henry Brickell, Kjell Rubenson and Harry L. Miller. One implication of their findings for the trainer is that there seem to be "teachable moments" in the lives of adults. Their existence impacts the planning and scheduling of training. As a recent study by the management development group of one large manufacturer concluded, "Newly promoted supervisors and managers must receive training as nearly concurrent with promotions and changes in responsibilities as possible. The longer such training is delayed, the less impact it appears to have on actual job performance."

Curriculum design

One developing research-based concept that seems likely to have an impact on our view and practice of adult training and development is the concept of "fluid" versus "crystallized" intelligence. R. B. Catell's research on lifelong intellectual development suggests there are two distinct kinds of intelligence that show distinct patterns of age-related development, but which function in a complementary fashion. Fluid intellect tends to be what we once called innate intelligence; fluid intelligence has to do with the ability to store strings of numbers and facts in short-term memory, react quickly, see spatial relations and do abstract reasoning. Crystallized intelligence is the part of intellectual functioning we

have always taken to be a product of knowledge acquisition and experience. It is related to vocabulary, general information, conceptual knowledge, judgment and concrete reasoning.

Historically, many societies have equated youth with the ability to insatiably acquire information and age with the ability to wisely use information. Catell's research suggests this is true—that wisdom is, in fact, a separate intellectual function that develops as we grow older. Which leads to some curriculum development implications of this concept:

7 Adult learners tend to be less interested in, and enthralled by, survey courses. They tend to prefer single-concept, single-theory courses that focus heavily on the application of the concept to relevant problems. This tendency increases with age.

8 Adults need to be able to integrate new ideas with what they already know if they are going to keep—and use—the new information.

9 Information that conflicts sharply with what is already held to be true, and thus forces a re-evaluation of the old material, is integrated more slowly.

10 Information that has little "conceptual overlap" with what is already known is acquired slowly.

11 Fast-paced, complex or unusual learning tasks interfere with the learning of the concepts or data they are intended to teach or illustrate.

12 Adults tend to compensate for being slower in some psychomotor learning tasks by being more accurate and making fewer trial-and-error ventures.

13 Adults tend to take errors personally, and are more likely to let them affect self-esteem. Therefore, they tend to apply tried-and-true solutions and take fewer risks. There is even evidence that adults will misinterpret feedback and "mistake" errors for positive confirmation.

Dr. K. Patricia Cross, author of *Adults As Learners*, sees four global implications for designing adult curriculum in Catell's work. "First, the presentation of new information should be meaningful, and it should include aids that help the learner organize it and relate it to previously

stored information. Second, it should be presented at a pace that permits mastery. Third, presentation of one idea at a time and minimization of competing intellectual demands should aid comprehension. Finally, frequent summarization should facilitate retention and recall."

A second neat new idea that impacts curriculum design is the concept of adult developmental stages. Jean Piaget, Lawrence Kohlberg and others have seen children as passing through phases and stages for some time. It is only recently, thanks to Gail Sheehy, Roger Gould, Daniel Levinson and others, that we've come to acknowledge that there are also adult growth stages. A subset of this concept is the idea that not only do adults' needs and interests continually change, but their values also continue to grow and change. For that insight, we can thank Clare W. Graves and his pioneering work in value analysis. The implications, though still formative:

14 The curriculum designer must know whether the concepts and ideas will be in concert or in conflict with learner and organizational values. As trainers at AT&T have learned, moving from a service to a sales philosophy requires more than a change in words and titles. It requires a change in the way people think and value.

15 Programs need to be designed to accept viewpoints from people in different life stages and with different value "sets."

16 A concept needs to be "anchored" or explained from more than one value set and appeal to more than one developmental life stage.

A final set of curriculum design guides comes from the research on learning media preference. Researchers have for years been asking students if they preferred learning XYZ from a book, a movie experience or another person. Though there are limitations to the value of this sort of data, enough of it is accumulating to be of some help to the design effort.

17 Adults prefer self-directed and self-designed learning projects 7 to 1 over group-learning experiences led by a professional. Furthermore, the adult learner often selects more than one medium for the design. Reading and talking to a qualified peer are frequently cited as good resources. The desire to control

pace and start/stop time strongly affect the self-directed preference.

18 Nonhuman media such as books, programmed instruction and television have become popular in recent years. One piece of research found them very influential of the way adults plan self-directed learning projects.

19 Regardless of media, straightforward how-to is the preferred content orientation. As many as 80% of the polled adults in one study cited the need for applications and how-to information as the primary motivation for undertaking a learning project.

20 Self-direction does *not* mean isolation. In fact, studies of self-directed learning show self-directed projects involve an average of 10 other people as resources, guides, encouragers and the like. The incompetence or inadequacy of these same people is often rated as a primary frustration. But even for the self-professed, self-directed learner, lectures and short seminars get positive ratings, especially when these events give the learner face-to-face, one-to-one access to an expert.

Apparently, the adult learner is a very efficiency-minded individual. Allen Tough suggests that the typical adult learner asks "What is the cheapest, easiest, fastest way for me to learn to do *that*?" and then proceeds independently along this self-determined route. An obvious tip for the trainer is that the adult trainee has to have a hand in shaping the curriculum of the program.

in the classroom

We seem to know the least about helping the adult maximize the classroom experience. There are master performers in our trade who gladly pass along their favorite tips and tricks, but as Marshall McLuhan observed, "We don't know who discovered water but we can be pretty sure it wasn't a fish." In other words, the master performer is often a poor judge of how one becomes a master performer. There certainly are volumes of opinion and suggestion, but by and large they rest more on theory than hard data. Ironically, some of the strongest data comes from survey studies of what turns off adults in the classroom. Likewise, there is a nicely

developing body of literature on what makes for good and bad meetings that has implications for training:

21 The learning environment must be physically and psychologically comfortable. Adults report that long lectures, periods of interminable sitting and the absence of practice opportunities are high on the irritation scale.

22 Adults have something real to lose in a classroom situation. Self-esteem and ego are on the line when they are asked to risk trying a new behavior in front of peers and cohorts. Bad experiences in traditional education, feelings about authority and the preoccupation with events outside the classroom all affect in-class experience. These and other influencing factors are carried into class with the learners as surely as are their gold Cross pens and lined yellow pads.

23 Adults have expectations, and it is critical to take time up front to clarify and articulate *all* expectations before getting into content. Both trainees and the instructor/facilitator need to state their expectations. When they are at variance, the problem should be acknowledged and a resolution negotiated. In any case, the instructor can assume responsibility only for his or her own expectations, not for that of trainees.

24 Adults bring a great deal of life experience into the classroom, an invaluable asset to be acknowledged, tapped and used. Adults can learn well—and much—from dialogue with respected peers.

25 Instructors who have a tendency to hold forth rather than facilitate can hold that tendency in check—or compensate for it—by concentrating on the use of open-ended questions to draw out relevant trainee knowledge and experience.

26 New knowledge has to be integrated with previous knowledge; that means active learner participation. Since only the learners can tell us how the new fits or fails to fit with the old, we have to ask them. Just as the learner is dependent on us for confirming feedback on skill practice, we are dependent on the learner for feedback about our curriculum and in-class performance.

27 The key to the instructor role is control. The instructor must balance the presentation of new material, debate and discussion, sharing of relevant trainee experiences, and the clock. Ironically, we seem best able to establish control when we risk giving it up. When we shelve our egos and stifle the tendency to be threatened by challenge to our plans and methods, we gain the kind of facilitative control we seem to need to effect adult learning.

28 The instructor has to protect minority opinion, keep disagreements civil and unheated, make connections between various opinions and ideas, and keep reminding the group of the variety of potential solutions to the problem. Just as in a good problem-solving meeting, the instructor is less advocate than orchestrator.

29 Integration of new knowledge and skill requires transition time and focused effort. Working on applications to specific back-on-the-job problems helps with the transfer. Action plans, accountability strategies and follow-up after training all increase the likelihood of that transfer. Involving the trainees' supervisor in pre-/post-course activities helps with both in-class focus and transfer.

30 Learning and teaching theories function better as a resource than as a Rosetta stone. The four currently influential theories—humanistic, behavioral, cognitive and developmental—all offer valuable guidance when matched with an appropriate learning task. A skill-training task can draw much from the behavioral approach, for example, while personal growth-centered subjects seem to draw gainfully from humanistic concepts. The trainer of adults needs to take an eclectic rather than a single theory-based approach to developing strategies and procedures.

Study of the adult as a special species of learner is a relatively new phenomenon. We can expect the next five years to eclipse the last fifty in terms of hard data production on adult learning. For now, however, we must recognize that adults want their learning to be problem-centered, personalized and accepting of their need for self-direction and personal responsibility. When you think of it, that's quite a lot to work with right there. U

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"Dear Diary"

A PERSONAL JOURNAL
 — AN ADULT LEARNING TOOL —
 — A MEANS FOR RECORDING
 YOUR THOUGHTS, REFLECTIONS,
 AND FEELINGS ABOUT AN EVENT

A Learning Tool for Adults

By Rachel S. Christensen

The adult learner is here to stay. We know from studies exploring the extent of adult learning what a high percentage of adults are actively involved in learning projects. Observers of these learners are recommending that tools be developed to assist lifelong learners in accomplishing learning tasks more effectively.

A particular tool, which has been serving adult learners for centuries, yet about which little is known, is the diary or personal journal. Its most familiar form is as a chronological record of personal or historical events. It is also commonly used as a trip or project log. However, another form of journal recording has emerged in this introspective 20th century in which the content emphasizes one's feelings and reflections on an event, rather than stressing the factual information. It is this approach that can have relevance for lifelong learners.

The Interest in Diaries and Journals

The writing of diaries and journals has been frequently practiced by those involved in a religious life or in the creative arts. We can also turn to such pioneers of modern psychology as Freud, Jung, and Adler to learn from them the significance in recording one's dreams, fantasies, inner thoughts and feelings. In recognizing the subconscious as an influence in human de-

velopment, they opened a door for new exploration of personality.

Journal researcher, Tristine Rainer, (1978) identifies four pioneers of psychology and literature in this century who helped conceptualize the principles of modern journal writing: Carl Jung, Marion Milner, Ira Progoff, and Anais Nin. These writers and thinkers believed that the personal journal permits the writer to tap valuable inner resources by recording dreams, inner imagery, intuitive writing, and even drawings.

There have been an increasing number of seminars and workshops available to adult learners on journal writing. What is it that is being described? It is, as Rainer titles her book, *The New Diary*. In other words, it is something beyond the popular notion of diary as a chronological entry of events usually made on a daily basis. In this newer form there are no rules of composition. The content, structure, and style are up to the writer. No one will judge or grade this paper and the degree of sharing and privacy is left in the writer's hands. As Rainer (1978) states, "For some people learning to be free in their diaries is a way of learning to be free with themselves." This may explain the current interest in journal writing. The experience of journal-keeping frees people to explore and develop their potentials and abilities. These are goals which have been strongly encouraged by the human potential movement and which have foundations in the current interest in self-directed adult learning.

Finding the Inner Self

This tendency toward continued growth and self-actualization is part of the evidence uncovered by Canadian researcher, Allen Tough (1971) in studying the learning projects of adults. He went beyond the initial surveys of adult learning projects to look more closely at how adults approach these projects, what resources they use, and what problems they encounter. His interviews and the subsequent interviews of other researchers with adult learners tell us that self-teaching is the method most often used. Tough and many others have also found the qualities of self-reliance and self-awareness prevalent among active adult learners.

As we assess the needs of lifelong learners, the journal or diary should be considered as a resource which encourages and enhances self-reliance and self-awareness. It is in the solitude of blank pages that adults can reflect on their life experience, contemplate future directions, and come to trust more deeply their own answers.

Finding the inner self is not an easy task when the modern fast-paced culture provides little space for contemplation. Like the Mad Hatter in *Alice in Wonderland*, we're often in too great a hurry to listen to our inner wisdom. Encouraged by the values of a technological age, we try to produce more at a faster rate. So too in education, where some say, "How can we help adults learn more and how can they learn faster?" Yet isn't there a sacrifice made when you travel by super-highway and miss the beauty of country roads?

Thus, the journal is one means for providing a safeguard against this tendency in our culture. The outer-directed

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emphasis in our lives can be countered with an emphasis on inner direction by taking time to write and reflect in the journal. As we become better listeners to the inner movement of our selves, we become less dependent on external definition or advice from the experts, and more affirming of our unique resources and abilities.

Much of our creativity is seeded in unconscious parts of the personality. It is in moments of solitude that insights are able to float to our consciousness and be recognized. In his book *The Courage to Create*, Rollo May (1975) writes of the hesitancy people have in being quiet and alone long enough to listen to inner levels. They are wary of what might be heard. Yet, May finds a "fascinating relationship" between creativity and unconscious phenomena. It is in those moments away from rational thinking that the intuitive self can break through with creative insight. Unconscious dimensions of experience are always at work; still there is reluctance to pause and listen to the messages. If creativity can be tapped from the deeper levels within, then adult learners need to be introduced to ways of using the journal as a means of recording these connections.

Using Journal Writing

How does one begin? My own experience started in high school with a bound book entitled "My Private Life." It still sits on my bookshelf and I treasure the contents, chuckling each time I read it. Perceptions I now hold firmly were taking root at that time, as evidenced in the entries. Following is a recording made in 1959:

It seemed like going steady was a fad in the winter of '59. Everyone was attached except me. Sometimes I'd wish to be able to go steady with someone, but it would soon pass. Someday I'll find my man; he won't be perfect, but he'll be what I want. If I don't find him, who cares? I will be a rich old maid English teacher.

My interest in journal keeping was not revived until 10 years later when I began a career transition. The approach I took then was to use the pages of a spiral bound notebook as space to develop a "roadmap" for myself during

that time of ambiguity and uncertainty about my future direction. The journal served as a place for me to organize my learning activities between jobs and to evaluate what had been accomplished at particular intervals.

As I became more comfortable in writing these objective entries, self-consciousness waned and there appeared to be more description of feelings and personal reactions to people and events in my life. The realization that my journal would not be open to outside scrutiny also lowered inhibitions. Entries were not made frequently, but often enough to benefit my personal growth. Following are more recent entries from my journal:

(Portion of a letter to friend, 1971)

This is the first time I've had so much unstructured time that it is somewhat frightening; because it is *I* that must take responsibility for structuring my time and not some outside factor, i.e. school. Needless to say, it is exciting to begin to shape some creative form in the open "canvas" of time that I call mine this year.

(excerpt from 1973)

God, this has been a depressing year at times. Fortunately the waves have gone up as well as down, so my strength and sense of self returns once again with courage. But it seems my lows have been deeper than I've ever known. Yet I think in coming so directly in contact with my fears, I come out with more courage. I wish my identity and life would hurry up and take more form.

(excerpt from 1974)

Looking through this journal for a few minutes each morning is a way of reminding me of my Self—my soul, my reflective, creative part—in the midst of tasks, errands, chores. To keep in touch with Me a bit each day keeps creative energies growing.

Understanding the variety of ways to maintain journals has expanded with each new resource I discover—friends who utilize particular techniques or those who have organized a framework for teaching and encouraging others in the practice of journal work.

The most thorough and concise framework has been developed by Ira Progoff, a psychologist and founder of Dialogue House in New York City. His

perspective on the human personality is influenced by C.J. Jung with whom he studied in Europe. His approach to journal work is based on 10 years spent as Director of the Institute for Research in Depth Psychology at the Graduate School of Drew University, where he and his staff collected the life histories of a wide spectrum of persons in order to study adult development. He also drew upon his experience and experimentation with the use of journals, both for himself and in his therapeutic practice.

Having tested, expanded and refined this framework in hundreds of journal workshops, Progoff's Intensive Journal method allows people to start wherever they are and begin to bring focus and clarity to their lives. He describes it as "a method of working privately at the inner levels of our life" (Progoff, 1975). The method is referred to as the Intensive Journal in that it is not simply a passive record of events, but rather an active system of dialogue and feedback among the various sections.

Progoff is critical of the spontaneous method of journal work, the danger being that a person could keep "eloquently moving in circles" forever if the contents are not used in such a way as to bring new self-understanding and forward momentum. He also finds a journal can be limiting when it is used only to reach a pre-decided goal, in that it is "not related to the large development of life as a whole." When an individual's attitudes are fixed and inflexible, and the goals already chosen, a journal then becomes a "static tool... not an instrument of growth but of self-justification" (Progoff, 1975).

It is important to Progoff that this tool be as free as possible from imposition of others' values and that it be used by the learner without assistance from any outside authority, once the method is understood. Diarists must be able to dialogue among the journal sections with only themselves as guides.

Tristine Rainer, mentioned earlier, is less critical of spontaneous entries. She sees the diary as a place for the intuitive and rational to form creative fusion.

She has discovered among all the journals she has collected and read some techniques and modes of expres-

(continued on page 31)

Dear Diary

(continued from page 5)

sion utilized by the diarists. Many examples are included in her book (Rainer, 1978), illustrating such tools as guided imagery, dialogue, a list, the unsent letter, a map of consciousness. An entire chapter is devoted to dreamwork and what it can tell us about ourselves and our future directions. Rainer points out that re-reading past journal entries can illuminate patterns of development and give us important clues to our interests and desires.

She is especially helpful in identifying common blocks in beginning to write and suggests ways of dealing with them. The judgment we bring to our writing is an important inhibitor. She emphasizes that the diary is no place to be perfect. The less shy we can be about writing our true feelings, the more intimate we can be with ourselves. Which will remove another inhibitor—the fear that what we say on paper will be boring. Over time the diarist will reveal his or her natural writing style and will allow a natural voice to be heard in the contents.

Rainer encourages diarists to use what they already have—their own experience—and to get at this in whatever way is easiest. As more is learned about the continued developmental growth of adults, the journal becomes an excellent means for adults to observe and better understand the stages of their own adult development.

Implications for Adult Education

In reviewing literature in the adult education field, emphasis and value are given to one's life experience. Writers such as Ron Gross and Allen Tough are interested in helping adults learn how to learn better. The first step Gross recommends is to Know Thyself. He tells his readers, "Begin to pay attention to yourself as a changing, developing and growing person. Notice how you behave in different situations, how you respond to different people and problems," (Gross, 1977). With this knowledge adults become more clear on what concerns them most, particularly as a learner.

Gross considers the learning log or diary as the most important tool for

the learner, especially the learner who perceives his or her learning as lifelong and chooses to pursue learning in varied ways. The journal can be started with whatever is of most interest to the learner at the time—planning career goals, understanding personal relationships, or exploring unconscious realms of experience.

The individual's learning process becomes more apparent as experiences related to a learning project are recorded. Idea fragments swimming around in the head find connections on paper and grow into other new and better ideas. In addition, the diary can be used as an evaluative tool for the learner to review past activities and project future directions.

Although Tough doesn't write directly about a learning log, he does describe effective lifelong learners as being self-aware, self-reliant, and self-directed (Tough, 1971). He recommends that resources and assistance be designed to support these qualities in all adult learners. Tough is quite concerned that adult learners become more competent and confident in their learning. Many of them are excessively modest about their learning as well as weak in self-planning skills. He indicates that further study is needed to help people develop skills at planning and conducting their own learning projects.

The personal journal is one learning tool which can be an integral part of this process. Its application needs to be encouraged among learners as a means for stimulating thought and for planning and evaluating learning projects, as well as an enrichment for one's whole life. In addition, the journal serves to keep adults connected with a true sense of self. In a pragmatic way, the journal never becomes obsolete; it is flexible, inexpensive, and uses what the learner already possesses—his or her own life story. AEA

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Figure 1
Principles of Adult Learning Scale

Directions: The following survey contains several things that a teacher of adults might do in a classroom. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. On your answer sheet, circle 0 if you always do the event; circle number 1 if you almost always do the event; circle number 2 if you often do the event; circle number 3 if you seldom do the event; circle number 4 if you almost never do the event; and circle number 5 if you never do the event. If the item *does not apply* to you, circle number 5 for never.

	Almost				
	Always	Often	Seldom	Never	Never
	0	1	2	3	4
					5

1. I allow students to participate in developing the criteria for evaluating their performance in class.
2. I use disciplinary action when it is needed.
3. I allow older students more time to complete assignments when they need it.
4. I encourage students to adopt middle class values.
5. I help students diagnose the gaps between their goals and their present level of performance.
6. I provide knowledge rather than serve as a resource person.
7. I stick to the instructional objectives that I write at the beginning of a program.
8. I participate in the informal counseling of students.
9. I use lecturing as the best method for presenting my subject material to adult students.
10. I arrange the classroom so that it is easy for students to interact.
11. I determine the educational objectives for each of my students.
12. I plan units which differ as widely as possible from my students' socio-economic backgrounds.
13. I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions.
14. I plan learning episodes to take into account my students' prior experiences.
15. I allow students to participate in making decisions about the topics that will be covered in class.
16. I use one basic teaching method because I have found that most adults have a similar style of learning.
17. I use different techniques depending on the students being taught.
18. I encourage dialogue among my students.
19. I use written tests to assess the degree of academic growth rather than to indicate new directions for learning.
20. I utilize the many competencies that most adults already possess to achieve educational objectives.
21. I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.
22. I accept errors as a natural part of the learning process.
23. I have individual conferences to help students identify their educational needs.
24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept.

25. I help my students develop short-range as well as long-range objectives.
26. I maintain a well-disciplined classroom to reduce interferences to learning.
27. I avoid discussion of controversial subjects that involve value judgements.
28. I allow my students to take periodic breaks during class.
29. I use methods that foster quiet, productive deskwork.
30. I use tests as my chief method of evaluating students.
31. I plan activities that will encourage each student's growth from dependence on others to greater independence.
32. I gear my instructional objectives to match the individual abilities and needs of the students.
33. I avoid issues that relate to the student's concept of himself/herself.
34. I encourage my students to ask questions about the nature of their society.
35. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives.
36. I have my students identify their own problems that need to be solved.
37. I give all students in my class the same assignment on a given topic.
38. I use materials that were originally designed for students in elementary and secondary schools.
39. I organize adult learning episodes according to the problems that my students encounter in everyday life.
40. I measure a student's long term educational growth by comparing his/her total achievement in class to his/her expected performance as measured by national norms from standardized tests.
41. I encourage competition among my students.
42. I use different materials with different students.
43. I help students relate new learning to their prior experiences.
44. I teach units about problems of everyday living.

HOW TO SCORE
(SEE BELOW)

PALS - SCORE SHEET

SCORE

SCORE

- x 1
- 2
- x 3
- 4
- x 5
- 6
- 7
- x 8
- 9
- x 10
- 11
- 12
- 13
- x 14
- x 15
- 16
- x 17
- x 18
- 19
- x 20
- 21
- x 22

- x 23
- x 24
- x 25
- 26
- 27
- x 28
- 29
- 30
- x 31
- x 32
- 33
- x 34
- x 35
- x 36
- 37
- 38
- x 39
- 40
- 41
- x 42
- x 43
- x 44

NOW TRANSFER
THESE SCORES
TO THE FACTOR
SCALES ON THE
NEXT PAGE →

ITEMS WITH (X) TO THE LEFT OF THE # SHOULD BE SCORED AS FOLLOWS:

- SCORE
- 0 - 5
 - 1 - 4
 - 2 - 3
 - 3 - 2
 - 4 - 1
 - 5 - 0

OTHER ITEMS
SHOULD BE
SCORED AS
FOLLOWS:

- SCORE
- 0 - 0
 - 1 - 1
 - 2 - 2
 - 3 - 3
 - 4 - 4
 - 5 - 5

PALS - FACTOR SCORES

(9)

①	②	③	④	⑤	⑥
2	3	14	5	18	1
4	9	31	8	20	10
11	17	34	23	22	15
12	24	39	25	28	36
13	32	43	TOTAL	TOTAL	TOTAL
16	35	44			
19	37	TOTAL		⑦	
21	41			6	
29	42			7	
30	TOTAL			26	
38				27	
40				33	
TOTAL				TOTAL	

FACTORS

- ① - LEARNER-CENTERED ACTIVITIES
- ② - PERSONALIZING INSTRUCTION
- ③ - RELATING TO EXPERIENCE
- ④ - ASSESSING STUDENT NEEDS
- ⑤ - CLIMATE BUILDING
- ⑥ - PARTICIPATION IN THE LEARNING PROCESS
- ⑦ - FLEXIBILITY FOR PERSONNEL DEVELOPMENT

CHECK ARTICLE FOR INTERPRETATION
OF ABOVE FACTORS.

Assessing teaching style in adult education: *How and why*

Introduction

Recent sessions at the National Adult Education Conference, Commission on Adult Basic Education Conference, and Adult Education Research Conference indicate a growing interest among practitioners and researchers in the area of teaching style. While past emphasis has been on the characteristics of the adult education teacher (e.g., Mocker, 1974), the current focus is on the actual behavior that the teacher demonstrates in the classroom. These "distinctive qualities of behavior that are consistent through time and carry over from situation to situation" (Fischer & Fischer, 1979, p. 245) are referred to as teaching style. Style is a pervasive quality that persists even though the content that is being taught may change. A variety of terms and behavior have been identified and labeled as teaching styles (Dunn & Dunn, 1979; Fischer & Fischer, 1979). While behaviors in each style are not mutually exclusive, each style emphasizes a dominant mode of the teacher. This teaching style label is a hypothetical construct which is associated with various identifiable sets of teacher behavior and which is a useful tool "to understand and perhaps explain certain important aspects of the teaching-learning process" (Fischer & Fischer, 1979, p. 254).

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Teachers display a wide variety of behaviors in the classroom. These differences in classroom practices have been referred to by terms such as initiating and responsive behavior (Flanders, 1970), progressivism and traditionalism (Bennett, 1976; Kerlinger & Pedhazur, 1968), and andragogy and pedagogy (Knowles, 1970). Despite the existence of divergent teaching styles, a significantly large portion of the adult education literature supports the collaborative mode as the most effective and appropriate style for teaching adults. The collaborative mode refers to a learner-centered method of instruction in which authority for curriculum formation is jointly shared by the learner and the practitioner. Key contributors to the adult education literature address this concept and the elements that operationalize the collaborative mode. Strong arguments can be found in the literature to support the concepts that (a) the curriculum should be learner-centered, (b) learning activities should be related to the learner's experiences, (c) adults are self-directed, (d) the learner should be involved in entrance and exit assessments, (e) adults are problem-centered, and (f) the teacher should function as a facilitator.

The Collaborative Mode

The collaborative mode is a process-oriented approach to teaching. The emphasis is upon what the learner is doing. The teacher's primary task is to organize

and maintain an environment which facilitates student learning. In this way adult education is a cooperative venture in which the learner is a full partner (Bergevin, 1967, p. 168). It is assumed in this venture that adults are seeking increased self-direction (Knowles, 1970, p. 39) and that they have the inherent ability to control their own lives (Freire, 1970). The curriculum is built around the particular problems and life situations of the learners rather than around a predetermined set of subjects for the classification of knowledge (Lindeman, 1926/1961, p. 6). Its content is problem-centered with subjects used as examples and vehicles of learning. Adult education, thus, occurs within the democratic process (Bergevin, 1967, p. 35) as the learners take responsibility for their own learning (Kidd, 1976).

The collaborative mode depends on active student participation. The learner is involved in needs diagnosis, goals formation, and outcomes evaluation. To achieve this, the student's experiences are utilized. Learning activities are related to life experiences to help students become more aware of significant events in their lives (Lindeman, 1926/1961, p. 109). Experiences serve as a constantly growing resource for learning (Knowles, 1970, p. 39) and can stimulate adult engagement in learning (Kidd, 1976, p. 271).

Major figures argue a forceful and comprehensive case in favor of the collaborative mode. Their conclusions are based upon the findings of psychology and adult learning. Yet, questions re-

main; are adults taught differently than children, and does teaching style make any difference? Recent studies have attempted to address these questions. Beder and Darkenwald (1982) found that those who teach both adults and children or pre-adults teach them differently. Most of the variance in this study was associated with the teacher's perceptions related to learner characteristics such as intellectual curiosity, openness, and degree of self-direction (p. 153). In a check on the predictive validity of the Principles of Adult Learning Scale, Conti found that a group of 80 secondary education teachers in Texas scored 1.67 standard deviations below the average for adult educators on the instrument. This group overwhelmingly supported a teacher-centered approach to education. Both of these studies indicate a distinct difference in the teacher's behavior in the adult setting.

Teaching style can affect student achievement. The relationship of teaching style to student achievement was investigated in an adult basic education program in southern Texas (Conti, 1984b). The teaching style of 29 part-time teachers was assessed with the Principles of Adult Learning Scale, and the achievement of their 837 students was analyzed. Analysis of covariance indicated that the teacher's style had a significant influence on the amount of student academic gain. Contrary to the adult education literature base, students of the teacher-centered instructors showed the greatest gains. However, the results changed when the total hours of student attendance were controlled. In this situation, the students of the collaborative, learner-centered instructors achieved the most.

These conflicting results stimulated an analysis of the data which was broken down by the three types of classes in the program. In addition to having basic level classes, the program also offered preparatory courses for the General Educational Development (GED) test and courses in English as a Second Language (ESL). A significant interaction was found between teaching style and the nature of the course. The teacher-centered approach was the most effective in the GED class. On the other hand, the learner-centered approach helped students learn more in the basic level and the ESL class set-

tings. This study adds situational specificity to the adult education literature. Instead of broadly stating that the collaborative mode is the most effective approach for all students in an adult basic education setting, it indicates that the goals of the learner need to be considered. For the GED student whose sights are clearly set on the short-term task of passing the predefined GED examination, a teacher-centered approach is efficient. However, basic level and ESL students are concerned with the long-term process of acquiring skills related to reading, mathematics, and English proficiency. This process involves the student's self-concept, and the teachers can play a crucial role in developing a supportive environment in which the learners can take risks, experiment with their new learning, and discover things about themselves (Fellenz, 1982, p. 82). These findings switch the general argument from a combative stance of which style is best to a more practical position of when is each style most appropriate.

Assessing Teaching Style

While researchers are probing for a better understanding of the effectiveness of different teaching styles in various settings, the individual practitioner is ultimately responsible for improving the delivery of services to the adult learner. In order to relate to the teaching style research, to internalize its findings, and to make decisions for future practice and staff development, instructors must be able to assess their own teaching style. A variety of factors will influence a teacher's personal style. Educational philosophy will be a critical factor. Also, increased support of the collaborative mode is noticeable with additional academic training and with increased age (Conti, 1984a; Pearson, 1980). Experiential background may also influence style. A knowledge of one's own style can allow the teacher to better understand how each of these has contributed to his/her overall behavior in the classroom. It can also identify areas of strength and areas of future development. Elias and Merriam (1980) have suggested that the difference between those who are just practicing a profession and professionals is an awareness of the causal factors behind their basic behavior (p. 9). Therefore, the

assessment of teaching style can be an important step in the development of a professional teacher.

Practitioners can assess their teaching style with the Principles of Adult Learning Scale (PALS). This 44-item instrument is a summative rating scale using a modified Likert scale. Respondents indicate the frequency with which they practice the action described in the items. Scores may range from 0 to 220. The mean for the instrument is 146 with a standard deviation of 20. These normative scores for PALS remain consistent across various groups that practice adult education (Conti, 1983). This instrument can be completed in approximately 10 to 15 minutes and can be self-scored (see Figure 1).

PALS is based on the principles that are advanced in the adult education literature (Conti, 1978, 1979, 1982). The total score on PALS gives an indication of a practitioner's overall preference for teaching behavior in an adult education setting. Since the literature supports the collaborative teaching-learning mode in which authority for curriculum formation is shared by the learner and the practitioner, high scores on PALS have been designated to reflect a learner-centered approach to the teaching-learning transaction. A low score on PALS indicates a preference for the teacher-centered approach in which authority resides with the instructor. Scores near the mean indicate a combination of teaching behaviors which draw elements from both the learner-centered and the teacher-centered approach. Thus the score indicates the overall teaching style and the strength of teacher support for this style.

Experiential evidence from counseling with practitioners after taking the PALS indicates that scores near the mean reflect the practice of conflicting behaviors. While these teachers practice some actions that are congruent with one mode, others are antithetical. Although some seek to argue that this indicates an eclectic approach to diverse classroom situations, an analysis of the factors making up the scale often uncovers basic conflicts in the practitioner's classroom behavior. Such conflicts can send confusing messages to students, undermine the student's ability to predict teacher actions, and demonstrate the lack of a comprehensive understanding of an educational philos-

ophy as an organizing force for a personal credo to direct classroom behaviors.

Factors in PALS

The overall PALS score can be broken down into seven factors. These factors are the basic elements that make up an instructor's general teaching mode. The support of the collaborative mode in the adult education literature is reflected in the factor titles. High scores in each area represent support for the concept implied in the factor name. Low scores indicate support of the opposite concept. For example, a high score on the first factor indicates a learner-centered approach to teaching; a low score represents support of a teacher-centered approach. Factor scores are calculated by adding up the points for each item in the factor (see Figure 2).

The main factor in PALS is Learner-Centered Activities. This factor is made up of 12 of the negative items in the instrument. These items relate to evaluation by formal tests and a comparison of students to outside standards. Those who support a teacher-centered mode favor formal testing over informal evaluation techniques and rely heavily on standardized tests. They encourage students to accept middle-class values. They exercise control of the classroom by assigning quiet deskwork, by using disciplinary action when needed, and by determining the educational objectives for each student. They tend to practice one basic teaching method and support the conviction that most adults have a similar style of learning. However, those who support the collaborative mode reject these teacher-centered behaviors. Their opposition to these items implies that they practice behaviors which allow initiating action by the student and which encourage students to take responsibility for their own learning. The classroom focus is then upon the learner and learner-centered activities.

Factor 2 is Personalizing Instruction. This factor contains six positive items and three negative items. Teachers who score high on this factor do a variety of things that personalize learning to meet the unique needs of each student. Objectives are based on individual motives and abilities. Instruction is self-paced.

Figure 1
Principles of Adult Learning Scale

Directions: The following survey contains several things that a teacher of adults might do in a classroom. You may personally find some of them desirable and find others undesirable. For each item please respond to the way you most frequently practice the action described in the item. Your choices are Always, Almost Always, Often, Seldom, Almost Never, and Never. On your answer sheet, circle 0 if you always do the event; circle number 1 if you almost always do the event; circle number 2 if you often do the event; circle number 3 if you seldom do the event; circle number 4 if you almost never do the event; and circle number 5 if you never do the event. If the item *does not apply* to you, circle number 5 for never.

Always	Almost Always	Often	Seldom	Almost Never	Never
0	1	2	3	4	5

1. I allow students to participate in developing the criteria for evaluating their performance in class.
2. I use disciplinary action when it is needed.
3. I allow older students more time to complete assignments when they need it.
4. I encourage students to adopt middle class values.
5. I help students diagnose the gaps between their goals and their present level of performance.
6. I provide knowledge rather than serve as a resource person.
7. I stick to the instructional objectives that I write at the beginning of a program.
8. I participate in the informal counseling of students.
9. I use lecturing as the best method for presenting my subject material to adult students.
10. I arrange the classroom so that it is easy for students to interact.
11. I determine the educational objectives for each of my students.
12. I plan units which differ as widely as possible from my students' socio-economic backgrounds.
13. I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions.
14. I plan learning episodes to take into account my students' prior experiences.
15. I allow students to participate in making decisions about the topics that will be covered in class.
16. I use one basic teaching method because I have found that most adults have a similar style of learning.
17. I use different techniques depending on the students being taught.
18. I encourage dialogue among my students.
19. I use written tests to assess the degree of academic growth rather than to indicate new directions for learning.
20. I utilize the many competencies that most adults already possess to achieve educational objectives.
21. I use what history has proven that adults need to learn as my chief criteria for planning learning episodes.
22. I accept errors as a natural part of the learning process.
23. I have individual conferences to help students identify their educational needs.
24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept.
25. I help my students develop short-range as well as long-range objectives.
26. I maintain a well-disciplined classroom to reduce interferences to learning.
27. I avoid discussion of controversial subjects that involve value judgements.
28. I allow my students to take periodic breaks during class.
29. I use methods that foster quiet, productive deskwork.
30. I use tests as my chief method of evaluating students.
31. I plan activities that will encourage each student's growth from dependence on others to greater independence.

32. I gear my instructional objectives to match the individual abilities and needs of the students.
33. I avoid issues that relate to the student's concept of himself/herself.
34. I encourage my students to ask questions about the nature of their society.
35. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives.
36. I have my students identify their own problems that need to be solved.
37. I give all students in my class the same assignment on a given topic.
38. I use materials that were originally designed for students in elementary and secondary schools.
39. I organize adult learning episodes according to the problems that my students encounter in everyday life.
40. I measure a student's long term educational growth by comparing his/her total achievement in class to his/her expected performance as measured by national norms from standardized tests.
41. I encourage competition among my students.
42. I use different materials with different students.
43. I help students relate new learning to their prior experiences.
44. I teach units about problems of everyday living.

Various methods, materials, and assignments are utilized. Lecturing is viewed as a poor method for presenting subject material to the adult learner. Cooperation rather than competition is encouraged.

Factor 3 is Relating to Experience and consists of six positive items. Teachers who support this factor plan learning activities that take into account their student's prior experiences and encourage students to relate their new learning to experiences. To make learning relevant, learning episodes are organized according to the problems that the students encounter in everyday living. However, this focus is not just on coping with current problems or accepting the values of others. Instead, students are encouraged to ask basic questions about the nature of their society. When it is screened through experience, such consciousness-raising questioning can foster a student's growth from dependence on others to greater independence.

Factor 4 is made up of four positive items related to Assessing Student Needs. For those teachers who score high in this area, treating a student as an adult is finding out what each student wants and needs to know. This is accomplished through a heavy reliance on individual conferences and informal counseling. Existing gaps between a student's goals and the present levels of performance are diagnosed. Then students are assisted in developing short-range as well as long-range objectives.

Factor 5 is Climate Building, and it

also contains four positive items. Knowles (1970) lists setting a friendly and informal climate as the first step in his andragogical model (p. 41). Dialogue and interaction with other students are encouraged. Periodic breaks are taken. Barriers are eliminated by utilizing the numerous competencies that adults already possess as building blocks for educational objectives. Risk taking is encouraged, and errors are accepted as a natural part of the learning process. Such an environment is a microcosm of the total society. In it learners can experiment and explore elements related to their self-concept, practice problem-solving skills, and develop interpersonal skills. Failures serve as a feedback device to direct future positive learning.

The four positive items in Factor 6 relate to Participation in the Learning Process. While Factor 1 focuses on the broad location of authority within the classroom, this factor specifically addresses the amount of involvement of the student in determining the nature and evaluation of the content material. Those who score high in this area have the students identify the problems that they wish to solve and allow the students to participate in making decisions about the topics that will be covered in class. Encouraging an adult-to-adult relationship between teacher and students, they also involve the students in developing the criteria for evaluating classroom performance.

Factor 7 contains five negative items which do not foster Flexibility for Per-

sonal Development. Those who oppose the collaborative mode view themselves as providers of knowledge rather than facilitators. They determine the objectives for the students at the beginning of the program and stick to them regardless of the idiosyncrasies that may arise from divergent student needs to situations. A well-disciplined classroom is viewed as a stimulus for learning. Discussions of controversial subjects that involve value judgments or of issues that relate to a student's self-concept are avoided. Supporters of the collaborative mode reject this rigidity and lack of sensitivity to the individual. They view personal fulfillment as a central aim of education. To accomplish this, flexibility is maintained by adjusting the classroom environment and curricular content to meet the changing needs of the students, and issues that relate to values are addressed in order to stimulate understanding and future personal growth.

Conclusion

Through an analysis of these seven factors a teacher can gain a clearer understanding of his/her classroom behavior. This analysis should also reveal that the philosophical roots of the collaborative mode lie in humanism and progressivism. Humanism assumes that man is naturally good, that the potential for individual growth is unlimited, that behavior is the result of personal perceptions, and that each individual has a unique self. Human beings are proactive. They can influence and take responsibility for their actions (Elias & Merriam, 1980, pp. 115-121). By utilizing trust, adult educators can help students move in the direction of freedom and dignity. Progressivism views education as having a dual function. In addition to promoting individual growth, its aim is to maintain and/or promote the good of society (Darkenwald & Merriam, 1982, p. 50). Democracy, freedom, experience, responsibility, and participation are key words for progressives. Each of the titles of the seven factors indicates elements that operationalize these philosophies.

Actions antithetical to the collaborative mode are compatible with the behaviorist position that:

Figure 2
Scoring PALS

Positive Items

Items number 1, 3, 5, 8, 10, 14, 15, 17, 18, 20, 22, 23, 24, 25, 28, 31, 32, 34, 35, 36, 39, 42, 43, and 44 are positive items. For positive items, the following values are assigned: Always = 0, Almost Always = 4, Often = 3, Seldom = 2, Almost Never = 1, and Never = 0.

Negative Items

Items number 2, 4, 6, 7, 9, 11, 12, 13, 16, 19, 21, 26, 27, 29, 30, 33, 37, 38, 40, and 41 are negative items. For negative items, the following values are assigned: Always = 0, Almost Always = 1, Often = 2, Seldom = 3, Almost Never = 4, and Never = 5.

Missing Items

Omitted items are assigned a neutral value of 2.5.

Factor 1

Factor 1 contains items number 2, 4, 11, 12, 13, 16, 19, 21, 29, 30, 38, and 40.

Factor 2

Factor 2 contains items 3, 9, 17, 24, 32, 35, 37, 41, and 42.

Factor 3

Factor 3 contains items 14, 31, 34, 39, 43, and 44.

Factor 4

Factor 4 contains items 5, 8, 23, and 25.

Factor 5

Factor 5 contains items 18, 20, 22, and 28.

Factor 6

Factor 6 contains items 1, 10, 15, and 36.

Factor 7

Factor 7 contains items 6, 7, 26, 27, and 33.

Computing Scores

An individual's total score on the instrument is calculated by summing the value of the responses to all items. Factor scores are calculated by summing the value of the responses for each item in the factor.

Factor Score Values

Factor	Mean	Standard Deviation
1	38	8.3
2	31	6.8
3	21	4.9
4	14	3.6
5	16	3.0
6	13	3.5
7	13	3.9

humans are controlled by their environment, the conditions of which can be studied, specified and manipulated. An individual's behavior is determined by the events experienced in an objective environment. (Elias & Merriam, 1980, p. 83)

In this teacher-centered view, the instructor has a responsibility for determining and reinforcing the fundamental values necessary for the survival of the individual and the society (p. 86).

Although the students play an active role, the teacher is a "contingency manager, an environmental controller, or behavioral engineer who plans in detail the conditions necessary to bring about desired behavior" (p. 88). The teacher actions which are not congruent with the factor titles can be associated with this philosophy.

The assumptions of humanism and progressivism underpinning the collaborative mode are obviously different

from those of behaviorism which can be associated with the noncollaborative mode. The assumptions within each school are related and are supportive of each other. Collectively they form a synergistic whole which is referred to as a philosophy. When this philosophy serves as a guide, the numerous classroom behaviors of the teacher are consistent. Although these behaviors may vary somewhat due to the teacher's degree of commitment to the philosophy, to the situation, or to institutional restraints, any variance should be within a small range. When the teaching behaviors vary beyond this range, it is likely that the teacher does not have a firm commitment to a definitive teaching style. This indicates a lack of an appreciation of the correlation of the assumptions within a basic approach to teaching and thereby leads to a violation of some of these assumptions. Worse yet, it may signal either that the teacher has no understanding of the philosophical assumptions at work in the educational process or that the teacher does not recognize the inherent contradictions in his/her teaching behaviors.

Knowles (1970) has suggested that the teacher is the most important variable influencing the nature of the learning climate (p. 41). If those entrusted with this crucial position are to function as professionals, they must be aware of what they do and why they do it. Self-assessment can be a professional development technique to accomplish this. The Principles of Adult Learning Scale offers a quick and reliable means of doing such an assessment. In addition to identifying a general teaching style, it produces scores in seven factors which operationalize the general teaching style. By analyzing these factor scores, the teacher can identify specific teaching behaviors and can take steps to learn about and make decisions about modifying inconsistent behaviors (Conti, 1984a). Although all teachers of adults may not decide to support the collaborative mode which is suggested in the literature, they will be able to adopt a personal credo which contains internally compatible assumptions and which communicates consistent patterns of teacher behavior to expectant students. AAACE

(continued on page 28)



King with an interview question: maybe wisdom does come only with age

Can Colleges Teach Thinking?

Maybe not, suggests a new test measuring "reflective judgment"

Lots of information may be crammed into their heads, but U.S. college students too often fall short in the ability to think critically and reason their way to a sound conclusion. What they seem geared to, says Professor Kurt Fischer of the Harvard School of Education, is giving the "answer, as opposed to learning how to make a good argument." Some experts blame the nation's colleges for this, saying they fail in their vaunted claim to teach people to think. But two researchers who have devised a new way to measure reasoning power now believe most college students are not ready for mature critical thinking. Wisdom, the researchers suggest, really does come only with age.

"Some claim that we can teach critical thinking to people of any age if we can figure out how to do it," says Karen Strohm Kitchener, 43, assistant professor of education at the University of Denver. "What we are saying is that [such thinking] is a developmental process and that mature judgment doesn't develop until the middle or often the late 20s."

Kitchener and Patricia King, 36, assistant professor at Bowling Green State University's college of education in Ohio, began work on the theory ten years ago when both were doctoral candidates at the University of Minnesota. They have now completed a study of some 1,000 "reflective-judgment interviews" with males and females of varying backgrounds, ages 14 to 55. The subjects evaluated four problems that have no right or wrong answers but are, in Kitchener's words, "the kind of problems most

commonly faced in adulthood." Example: "Creation stories... suggest that a divine being created the earth and its people. Scientists claim, however, that people evolved from lower forms." Among the responses to this, one 18-year-old freshman brushed off anthropologists' arguments for evolution and came down on the side of the biblical dogma. But a graduate student in social science called both views "sets of ideas that have evolved from different positions... and so it's very hard to argue against one or the other and to present supporting statements." Similar analyses were offered by others, independent of religious background.

From such results, Kitchener and King postulate that reflective judgment tends to hatch in the preteen years and to progress, ideally, through seven stages. Individuals at the first two of these levels, they say, react like the freshman, accepting preordained conclusions that come from supposedly incontrovertible authority. At the next two stages, generally from 18 to 21, people grow skeptical of the notion that anything can be rationally known and justifiably believed by what feels right. At levels five and six (ages 22 to 25), represented by the



Fellow Tester King

graduate student, they see reality as a matter of interpretation, with knowledge entirely subjective. The highest level concedes personal bias but assumes that inquiry can cut through to approximations of reality—for example, accepting the preponderant physical evidence of evolution while not necessarily denying the more abstract claims of creation.

King and Kitchener's work departs from widely accepted theories like those of the celebrated Swiss psychologist Jean Piaget. He also described levels of readiness for certain kinds of reasoning, concluding that logical thought begins by age 7 and by 12 escalates to the ability to deal with abstractions like the future. "His emphasis was on logical reasoning," says King. "We are looking at a different domain of problem solving." In that domain, adds Kitchener, "logic alone is not enough for mature judgments."

Though still experimental, the reflective-judgment yardstick has attracted the interest of cognitive scholars around the country. One psychologist who edits a journal in the field privately describes Kitchener and King as "on the cutting edge" of as yet uncharted research. Some experts, like Irving Sigel, research scientist for the Educational Testing Service in Princeton, N.J., consider the interviews a promising new means for assessing "whether a student has the skills to go about understanding and solving new problems." Harvard's Fischer is particularly hopeful about the potential for measuring the broad-gauge effects of a college education. Indeed, Kitchener will be joining Fischer this year and next to study just how successful colleges may be in developing critical thinking.

—By Ezra Bowen.
Reported by Joelle Attinger/Boston and Harry Kelly/Chicago

B Is for Billion

Stanford drives for a record

What is a billion dollars these days? Merely one-half of 1% of the annual federal deficit. But such a sum would seem beyond the grandest aspirations of higher education. Not so. Stanford University is announcing this week that it will seek \$1.1 billion in a five-year fund-raising drive. Aimed at upgrading science research facilities, helping the growing number of students who need financial aid and increasing the endowment from \$1.5 billion to \$1.8 billion, the campaign is by far the most ambitious in the history of private education. Stanford's closest rival, Columbia University, is in the fifth and final year of a \$500 million drive.

With the new tax law making charitable giving less attractive, Stanford's timing may not be ideal. But President Donald Kennedy argues that federal budget cuts and rising costs leave schools like his little choice. "Everybody is running hard and not quite staying even," he says. Stanford broke the \$100 million fund-raising barrier in 1960 and was the first to crack \$300 million in 1977. "I have some antibodies to the word billion in this connection," Kennedy admits. "Maybe the next word is greedy. But what we're hoping is that the next word is audacious."

Is Mentoring Necessary?

The author suggests that the mentoring instinct satisfies itself naturally. He redirects career planners' energies to more constructive goals.

By JAMES G. CLAWSON

In the last 10 years, there has been "much ado about mentoring," as Gerard Roche put it in his popular *Harvard Business Review* article. Most of the ado focused on the importance of a mentor to one's career success. Articles with titles like: Mentor Mania—How Will I Ever Make It ALONE?; Everyone Who Makes It Has a Mentor; and Mentors Held Vital to Women underscored the growing belief that mentoring was essential to career development (being promoted) promulgated in the years following Gail Sheehy's *Passages* and Dan Levinson's *Seasons of a Man's Life*. Managers and students of management alike came to believe that one had to have a mentor in order to get ahead, and they began to try relating the notion of mentoring to their career planning efforts.

Some argue that both career planning and mentoring are fruitless exercises. Others have demonstrated that career planning improves a person's career involvement, identity resolution and adaptability. Levinson, Phillips-Jones, Missirian, Kram and others show how mentors can have a valuable, positive effect on a person's career. Let us assume here that both processes have practical value and explore the relationship between them.

At least three related groups have cause to be interested in the relationship between mentoring and career planning: individuals planning their own careers; managers responsible for the development of young talent; and career development specialists, who are usually assigned to the human resources or personnel functions. These groups face fundamental

questions as they incorporate mentoring into planning activities. First, what is mentoring? Second, is it essential to career planning? Third, how, if at all, should mentoring be incorporated in individual or organizational plans?

What is a mentor?

In Greek mythology, Mentor was the servant of Ulysses to whom the king entrusted the care and training of his son, Telemachus. Mentor's responsibilities covered a wide range of developmental aspects in Telemachus' life, not just the "professional" side. The comprehensive influence of Mentor was an integral part of what came to be known as mentoring in medieval trade guilds. Guild masters were responsible not only for the professional skills of proteges, but also for their social, religious and personal habits. Today, with a broader and more immediately available range of potential mentors, the term mentor seems to indicate primarily a sponsor, one who argues another's case to senior management.

According to Roche's study, still the definitive survey of American executives on the subject, more than 63 percent of the 1,250 executive respondents said they had one or more mentors. Respondents were asked simply, "At any stage of your career, have you had a relationship with a person who took a personal interest in your career and who guided or sponsored you?" If the answer was yes, that person was deemed to have had a mentor. Personal interest, guidance or sponsoring thus defined a mentor. This definition, however manageable in a large survey, implies only indirectly a significant portion of the mentoring process—the developmental or learning portion. Ed Schein and some of his students at MIT wrote a year earlier that mentoring really consisted of several roles, including teacher, coach,

positive role model, developer of talent, opener of doors, protector, sponsor and successful leader. Even this more complex view of mentoring is simplistic.

If we could know how influential mentors are in the lives of modern managers, our efforts at establishing mentoring processes in organizational management development systems would be more effective. I asked 76 managers in 4 executive seminars, conducted by the Sponsors of the Darden Graduate School of Business at the University of Virginia in 1983 and 1984, to rate the degree of influence the three most influential people in their lives had in 14 different aspects of life. To avoid confusion over individual definitions of mentor, the term was purposely omitted from the instructions. Participants came from a wide range of industries, functional backgrounds, states, and from civilian and military organizations. They completed the questionnaire shown in Figure 1. Collectively, they reported 214 different relationships.

I arbitrarily assigned a rating of 4 ("I wanted to be a lot like them on this dimension.") or 5 ("I wanted to be just like them on this dimension.") as the cutoff level of influence worthy of a mentor in any single aspect, and counted the number of 4s and 5s for all aspects for each relationship. With 14 dimensions on the questionnaire, a score of 14 represented a classical mentor, that is, one who had a pervasive influence on the life of the respondent.

Only 1 of the 214 mentor relationships was highly influential on all 14 aspects of life, indicating that modern managers do not find in their mentors comprehensive role models.

At what level of influence do we deem a mentor relationship to exist? How many aspects of an individual must be emulated before the title of mentor is bestowed?

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Data from this questionnaire indicate that being emulated in five life aspects is a reasonable profile of the modern mentor. Compared to the classical comprehensive mentor, our modern mentors seem little more than partial or quasi-mentors.

If modern managers generally emulate their mentors in five aspects of life, which aspects are emulated most? The lifestyle aspects in the survey, rank-ordered by participants, (see Figure 2) indicate that intellectual sharpness, job skills and managing a career were considered most important. The fourth and fifth most emulated characteristic—social skills and emotional characteristics—are a step down in degree of emulation, at about 50 percent of the sample, but are also related to success as a manager.

An interesting finding is that dimensions such as physical, recreational, financial and material score so low. One might expect subordinates to emulate the lifestyles of their superiors. Not true, apparently.

If proteges value the mental, social and organizational skills of their mentors, but see physical and lifestyle characteristics that are not attractive, might they not be confused about how one integrates work and personal life? What are the long-term effects of compartmentalized mentoring on the managerial capabilities of the proteges?

These data highlight a modern definition of mentoring that centers on the work place but excludes the development of personal characteristics which clearly influence a person's effectiveness at work.

This still doesn't explain influence and how it occurs. Comparing some mentoring activities with the five aspects of life listed above provide insight into the nature of developmental relationships.

A grid listing aspects of life on the Y axis and mentoring roles or activities on the X axis, (see Figure 3) helps individuals or career development specialists interested in evaluating the results of mentoring programs. How many mentoring activities must a person exhibit before being labeled a mentor? The discontinuous and complex nature of the adult interpersonal learning process is difficult to describe in a single term, yet it clearly affects the outcomes of the relationships, and hence the degree to which one can plan for them.

Is mentoring essential?

I think not. Rather, career planners should split their notions of mentoring and consider first, the quality of their

Figure 1—Profiles Of Personal Mentors

Select the three people, other than your parents, who have had the greatest influence on you after you graduated from high school. Put their initials in the blank lines marked A, B, and C. Then, consider the several dimensions of a person's life listed down the lefthand column. For each "mentor," using the scale defined below, mark the degree to which you emulated that person on that dimension.

0 = I did not want to be anything like them on this dimension.
1 = I listened to their advice but usually did not take it.
2 = I would try to do one or two things the way they did here.
3 = I wanted to be somewhat like them on this dimension.
4 = I wanted to be a lot like them on this dimension.
5 = I wanted to be *just like* them on this dimension.
9 = I didn't know enough about them on this dimension to know.

Mentor's initials	A: _____	B: _____	C: _____
Your age at the time (your age now: _____)	_____	_____	_____
Mentor's age at the time _____	_____	_____	_____
How long was your relationship (in months)? _____	_____	_____	_____
Physical Skills (exercise, diet) _____	_____	_____	_____
Emotional Characteristics _____	_____	_____	_____
Intellectual Sharpness _____	_____	_____	_____
Spiritual Beliefs _____	_____	_____	_____
Social Skills _____	_____	_____	_____
Marriage _____	_____	_____	_____
Commitment to Parents _____	_____	_____	_____
Parenting Skills (raising children) _____	_____	_____	_____
Financial Skills _____	_____	_____	_____
Material Possessions _____	_____	_____	_____
Managing a Career (organizational life) _____	_____	_____	_____
Job Skills (managing, doing) _____	_____	_____	_____
Recreational Patterns _____	_____	_____	_____
Community Service _____	_____	_____	_____

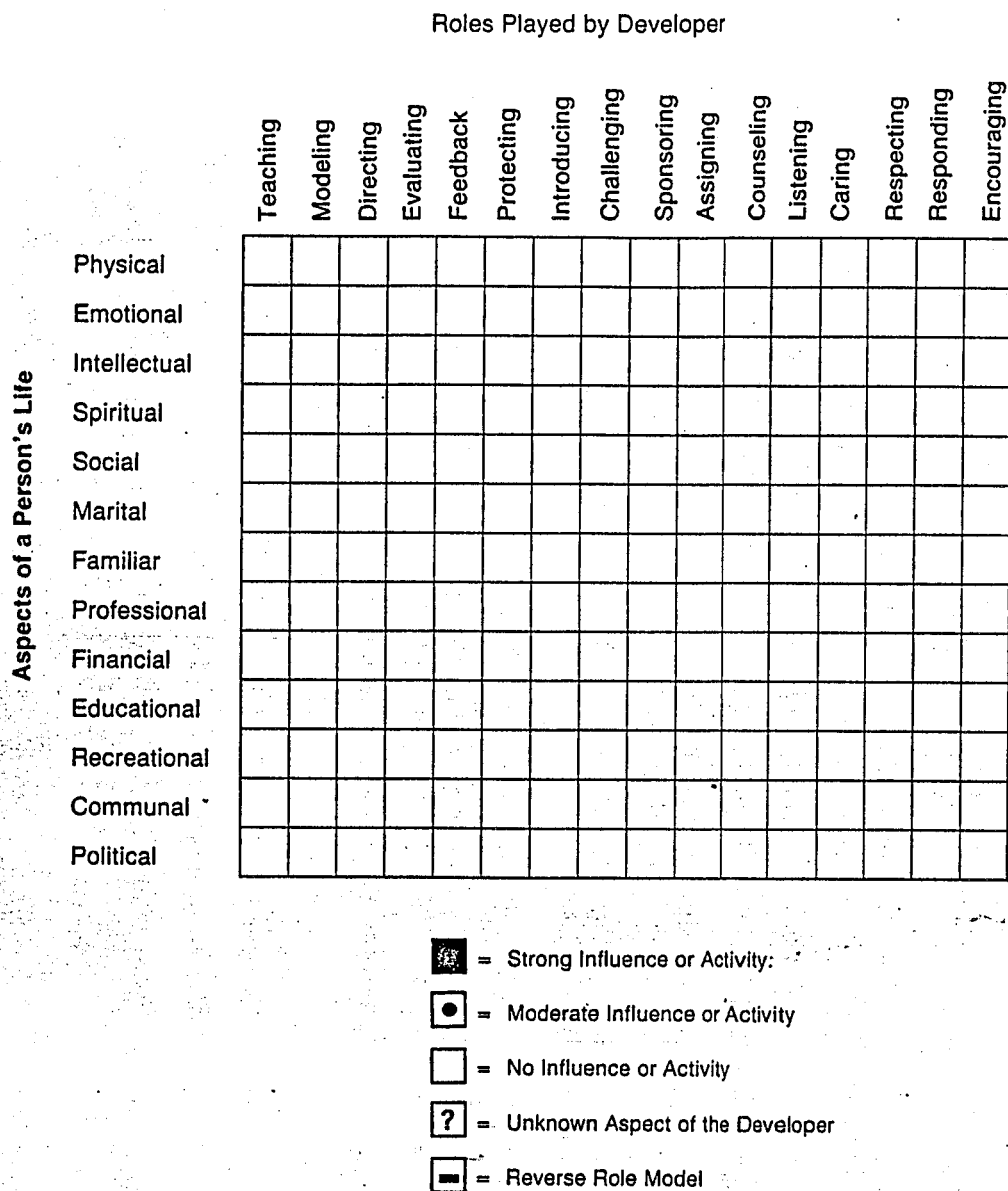
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Figure 2—Rank Ordered List Of Frequency Of Emulation* By Lifestyle Aspect

Lifestyle Aspects		Frequency Percent of 4's & 5's (N = 214)	
1.	Intellectual Sharpness	156	72.90
2.	Job Skills (managing, doing)	145	67.76
3.	Managing a Career (organizational life)	131	61.21
4.	Social Skills	108	50.47
5.	Emotional Characteristics	104	48.60
6.	Marriage	82	38.32
7.	Financial Skills	76	35.51
8.	Material Possessions	65	30.37
9.	Parenting Skills (raising children)	56	26.17
10.	Commitment to Parents	55	25.70
11.	Recreational Patterns	54	25.23
12.	Spiritual Beliefs	51	23.83
13.	Community Service	46	21.50
14.	Physical Skills (exercise, diet)	31	14.49

*Emulation again means rated a desire to be either a lot like or just like the other on each dimension.

Figure 3—Developmental Relationship Role/Dimensional Influence Analysis



developmental relationships, and second, the quality of their visibility with senior management. The popular quest for mentoring overlooks the impact of the superior-subordinate relationship. Yet, like it or not, the bulk of learning about management takes place in the superior-subordinate relationship. In *The Human Side of Enterprise*, Douglas MacGregor noted that:

"Every encounter between a superior and a subordinate involves learning of some kind for the subordinate. (It should involve learning for the superior, too, but that is another matter.) When the boss gives an order, asks for a job to be done,

reprimands, praises, conducts an appraisal interview, deals with a mistake, holds a staff meeting, works with his subordinates in solving a problem, gives a salary increase, discusses a possible promotion, or takes any other action with subordinates, he is teaching them something. The attitudes, the habits, the expectations of the subordinate will be either reinforced or modified to some degree as a result of every encounter with the boss. . . the day-by-day experience of the job is so much more powerful that it tends to overshadow what the individual may learn in other settings."

If this is true, career planners ought to

worry more about the developmental quality of existing superior-subordinate relationships in the organization than about mentoring relationships that are hard to define and harder yet to institutionalize.

From a developmental perspective, a more useful concept is that of the immediate superior as a coach. Coaches often take an active interest in a person's personal life, though not to the degree of the classical mentor. A coach's primary responsibility involves the development of task-related skills. If would-be proteges planning their advancement and personnel specialists planning the career

Individuals can learn from the intellectual, interpersonal and career management behavior of their immediate supervisors

development of others think about how to improve the learning that emerges from superior-subordinate relationships, organizations and individuals would realize more of their managerial potential.

Implications for the individual career planner

Individuals planning their own careers can stop worrying about mentoring and begin worrying about two things: learning from their immediate superiors, and later, about getting sponsorship in places where one cannot carry one's own flag. Individuals can learn from the intellectual, interpersonal and career management behavior of their immediate supervisors. The energy spent searching for a mentor or sponsor should be used to develop skills on the job by trial and error, and by reasoned emulation of peers and bosses.

Once a manager can identify and solve problems with routine confidence, he or she might consider ways of becoming more visible to senior management. These are not clearly defined sequential activities, but the emphasis should be on learning first, and then on visibility to senior management.

Meeting and being of assistance to senior people enhances visibility. Even informal actions can make a difference. Volunteering for task force assignments (often regarded with skepticism), extra-hours work on key projects, presenting reports, carrying information between departments or levels, and even driving someone to the airport provide opportunities for meeting senior people, getting acquainted with them, learning about their problems, and offering assistance in solving them. From these encounters, senior executives form impressions of competence and commitment that affect career-shaping decisions.

What can career specialists do?

Human resource specialists ought to reconsider plans to structure the mentoring process. Most people have been influenced by someone in key management

areas already. In addition, efforts to structure the mentoring process in college, private corporations and government agencies in the last 10 years have met with mixed results. Gaining a better understanding of how to foster the developmental aspects of existing superior-subordinate relationships would be a better use of professionals' time. Key influences include: the model of management portrayed by the chief executive and other senior managers; the focus and effectiveness of the performance appraisal system in rewarding management development activity; the training managers receive through coaching; and the sequence of assignments given to young managerial talent.

Trainers can encourage the informal interaction of senior and junior people at social events, lunches, meetings, presentations and other small projects. The underlying theory is that individuals can choose best those from whom they want to learn or by whom they want to be sponsored.

First supervisors have a significant long-term effect on a management trainee's managerial skills. Specialists should identify the good career coaches and make sure that incoming management trainees gain early exposure to them.

Mentoring reexamined

Individuals and organizational specialists concerned with fitting mentoring into career planning activities may be searching for a non-existent Holy Grail. Most people naturally find those from whom they learn on several dimensions related to management ability. Further, separating learning from sponsorship in management development enables individuals and specialists to manage and use superior-subordinate relationships as powerful developers of managerial talents.

My hope is that the data, suggestions and implications presented here will help individuals and career development specialists be more effective in their career planning efforts.

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