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ABSTRACT

Illustrated with examples drawn from the experience of one teacher educator, ways of providing prospective teachers at the college level with active learning experiences based on developmental principles are discussed. The discussion draws parallels between three approaches in early childhood education and these same approaches to teacher education. Specifically examined are behavioristic-learning, cognitive-developmental, and developmental-interactionist approaches. Core features of each approach are identified, differences between approaches are indicated, and the implications of each approach for educational practice and the individual development of teachers are pointed out. The behavioristic-learning theory approach is viewed as the basis of traditional approaches to teacher education and is, therefore, only briefly discussed. Emphasis is given to the cognitive-developmental and the developmental-interactionist approaches, which differ mainly in that the latter includes the dimensions of affective and social development. Much discussion of the two developmental approaches focuses on strategies for establishing learning situations that promote individual growth. Particular attention is given to workshops, which encourage increased involvement, and to teacher-made worksheets, which enable students to work independently. Subsequent to a discussion of affective dimensions of workshop experiences, concluding remarks focus on risks involved in using the developmental approaches and on grounds for preferring developmental approaches in early childhood teacher education. (RH)

PERSPECTIVES ON TEACHER EDUCATION: SOME RELATIONS BETWEEN THEORY AND PRACTICE

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As a teacher of young children turned teacher of adults, I have found it consistently useful to refer back to what I know about teaching children as I try to teach adults well. I do so because I'm a good teacher of children and I want to build on that competence--and because early childhood is really the only level of education that has taken developmental principles seriously and developed criteria and procedures for active learning. So I have asked myself repeatedly, What are the equivalents, in a college classroom, of the blocks, climbing structures, sand and water, and paints of the preschool classroom? How can I trust adult learners to grow in the way I have always trusted children to grow? How can I offer them choices in a rich environment? and, How can I empower them as self-directed learners?

As a teacher of children, I come from the tradition Franklin and Biber (1977), writing in the first volume of this series, call developmental-interaction--a tradition in which both affective and cognitive development are taken seriously. Pacific Oaks, like Bank Street, has been a source and sustainer of this tradition, and this is the approach I have sought to implement in teacher education.

Both the title and the organization of this article have been adapted from Franklin and Biber (1977). These investigators identify three theoretical approaches in early childhood education: behavioristic-learning, cognitive-developmental, and developmental-interaction. The behavioristic-learning and cognitive-developmental approaches, as they indicate, are based quite explicitly on two divergent psychological perspectives. Developmental-interaction theory "represents an integration of cognitive-developmental stage concepts and ego psychology formulations and has roots in the progressive education ideology of the John Dewey period" (Franklin &

Biber, 1977, p. 3). This approach emphasizes intuition, feeling, and imagination as well as goal-directed thinking, and demands teacher behavior that is responsive to the situation rather than standardized.

As Katz (1977) has suggested, these approaches, despite their basis in psychological theory, function as ideologies when applied to education. Behaviorists start from a different set of premises about human nature and learning than developmentalists do, and their methods and measures are accordingly different.

Teachers, who must make continual decisions about their own and their students' behavior, do so on the basis of their ideologies, hidden or expressed. They cannot be objective in the way an observer can. I believe it is useful to take a stand on our ideologies in order both to clarify our own thinking and to make it accessible to argument by others with different perspectives.

This is, therefore, a position paper, written from my own experiences as a teacher educator. By design, it is less scholarly and more personal than its prototype, though I am following Franklin and Biber's example in making my own position clear. There is no need for me to repeat their excellent theoretical review. Instead, I want to be as concrete as I can, to give illustrations from practice rather than abstractions from theory, and to draw a parallel between these approaches in early childhood education and in teacher education. I make the assumption that teachers are more likely to teach as they were taught than as they were taught to teach (E. Jones, 1975, 1981; Wasserman, 1973). Thus, a behaviorist approach in teacher education is appropriate if we wish to prepare behaviorist teachers of young children.

My impression is that the behaviorist approach dominates teacher education, even though I doubt that many of its practitioners intend to have their students transfer it whole into programs for young children. Perhaps the often-remarked gap between the ivory tower of the college and the real world of schools and day care centers can be directly attributed not so much to the unreality of the content taught as to the reality of the way in which it is taught. It seems likely that college students, like children, quickly learn what really counts; they do, and they understand. (They hear, and they forget [Nuffield Mathematics Project, 1967].)

The Behavioristic-Learning Approach

The aim of behavior modification is to achieve measurable changes in observable behavior. Reinforcers, positive and negative, are employed to produce the behaviors that someone has defined as desirable or appropriate. While this theory is not often directly credited for prevailing practice in higher education, it is certainly consistent with it. Course content and learning behaviors are defined by the experts--individual teachers and departmental committees. Reinforcers are agreed upon by the system as a whole, and strenuous efforts are made to keep them consistent (to avoid grade inflation, for example).

In most college classes, appropriate behavior is operationally defined as marking correct answers on examinations. Behaviorists do not acknowledge Piaget's distinction between logical knowledge, which must be constructed by the knower, and social knowledge, which is learned by rote, but believe any concept may be taught verbally (Engelmann, 1971; Kamii & Derman, 1971). Correct verbal learning is reinforced, both positively and negatively, by letter grades; the most appropriately behaving students receive A's, while the altogether recalcitrant get F's. The system is

straightforward, and the rules of the game are clear to teachers and students alike. Like good behaviorists, college instructors rarely try to distinguish between what a student does--his or her behavior on the exam--and what a student knows. The latter question is vague and not really relevant. (We are, after all, scientists; we do not waste our time posing unanswerable questions.)

Teacher education, striving to be a respectable discipline in colleges and universities, has generally conformed to this system. We make a point of teaching the theories underlying practice and requiring students to learn verbal abstractions as well as practical methods. Many teacher educators agree that there is an unfortunate division between academic classes and practical work, and call for more bridge building and more direct experience with children (Spodek, 1974). Several have emphasized the importance of using the same approaches with students that we expect them to use with children (Katz, 1974; Ward, 1974). However, few have come to terms with the radical restructuring of academic classes that would be necessary to make such classes consistent with students' experience with children. My purpose in this discussion is to suggest the forms that restructuring might take.

Because the behaviorist approach is familiar to all of us who have been to school, I need not describe it in more detail here.[1] The other approaches, much less familiar in college teaching, are described in greater detail.

The Cognitive-Developmental Approach

I believe that the behaviorist approach, which offers preselected closed tasks and contingent reinforcement, can be expected to produce teacher-technicians. In contrast, the cognitive-developmental approach,

which offers opportunities for cognitive action, produces problem-solving teachers focused on the content of children's learning. This latter approach is based on the theories of Jean Piaget.[2] Knowledge, acoording to Piaget, is acquired as the outcome of the interaction between the learner and the environment. Through active exploration of the physical world, children acquire direct sensory awareness of the things around them. Gradually, through discovering patterns, and creating relationships and reflecting upon them, children construct logico-mathematical theories about the world and how it works. Interaction with peers is an essential part of the process of learning about the physical as well as the social world.

Cognitive development is an orderly process; each stage serves as a necessary foundation for the next. Young children encounter the world directly through their actions, without mediation or representation through symbols. As they mature, they are able to organize their experience symbolically. Eventually, in the formal operations stage, they will be able to reason symbolically, without needing the presence of the concrete object to reinforce and check out their understanding.

It is important to recognize that Piaget's stages describe a sequence in learning, not a predictable age-stage relationship. Thus, while adolescents and adults have the capacity for formal operations, "The results [of a number of research studies] are unequivocal. A significantly and surprisingly large number of high school and college students appear to be operating at less than an optimal level" (Schwebel, 1976, p. 4). Furth (1973), interpreting Piaget's work, emphasizes that attainment of formal operations is the most variable stage in the developmental sequence:

> There is ample evidence that all healthy persons in all societies reach the stage of concrete operations. A like assertion cannot

be made with equal confidence for formal thinking . . . The closer a person is to adulthood the more likely is it that individual and particularly also sociocultural preferences and opportunities have a decisive influence on the content and manner in which a person's intelligence is used. (p. 67)

A community college teacher has described her experiences with her students as follows:

Many of [the students], I have observed, have not progressed intellectually past concrete operations in many areas--and some seem to be still preoperational! For example, I did a math workshop and had a lot of materials requiring seriation, classification, etc. Many students were very hesitant to try things out. In desperation I applied a little adult authority and led one of the students over to a table of different leaves to be classified. I was amazed to discover that this student could not shift to a different category beyond her first one. I knew that her teaching philosophy was strongly authoritarian, limiting children to closed experiences. Suddenly I understood why she could not entertain notions of educational programs that were other than authority-centered, imitative, rigid "right-answer" ones! (Hanson, 1983, p. 60)

David Hawkins (1970), teaching university students, comments:

I have long suspected that my students' difficulties with the intellectual process come not from the complexity of college work itself, but mainly from their home background and the first years of their formal education. A student who cannot seem to understand the workings of the Ptolemaic astronomy, for example, turns

out to have no evident acquaintance with the simple and "obvious" relativity of motion, or the simple geometrical relations of light and shadow. Sometimes for these students a style of laboratory work which might be called "Kindergarten Revisited" has dramatically liberated their intellectual powers. Turn on your heel with your head back until you see the ceiling--turn the other way--and don't fall over! (p. 37)

If we take Piaget seriously, in teacher education as in early childhood education, it seems evident that experiential or laboratory or workshop instruction needs to precede, or at least be concurrent with, any teaching of general principles. To understand, we must manipulate, combine and recombine--or, in the words of Kenneth Grahame's Water Rat, simply "mess about" (Hawkins, 1970). Teacher education needs "to provide students with opportunities to construct their own conceptual maps of the logic of the terrain of teaching" (Soltis, 1973, p. 7). This takes time, and it takes direct experience.

Straightforward lecture, the typical mode of college teaching, is an appropriate way (a) to present social knowledge or (b) to sum up the logical knowledge that formally operating students already possess on the basis of their personal experience. Piaget explains social knowledge as the conventions of one's culture--the names of things and the rules for behavior. Because these things are arbitrary, they can only be taught directly, by telling or showing. In contrast, logical knowledge about the ways the world works (in both physical and interpersonal terms) is constructed by the learner, who generalizes from repeated experiences (Kamii & DeVries, 1977, p. 368).

Students not yet formal-operating often take in logically constructed knowledge as social knowledge only. For example, they may be taught that positive redirection is a useful principle in dealing with children's inappropriate behavior: Instead of saying "No," help the child find an acceptable alternative. If this technique is taught directly as a rule for teacher behavior, some students will apply it with children because they have been told to. However, this is a logical principle generated by teacher experimentation with alternative ways of managing children's behavior. Students will understand the logic of the principle more fully if they have opportunities to observe, to experiment, and to discuss their experiences with one another.

Students who have learned such principles by rote (memorized them as social knowledge) may be perfectly capable of stating them in an examination. In a behaviorist framework, rote learning demonstrates competence as well as logical learning does. But rote learning is difficult to apply in practice; it doesn't generalize with any flexibility to new situations. In a culture teeming with new situations, it would seem much more to the point to provide learners of any age with the concrete experiences, and the opportunities to talk about them with peers, that Piaget describes as essential for the establishment of formal operations in any area. The cognitive-developmental approach implies such active learning.

There is no shortcut to understanding, in Piaget's view:

> Without a doubt it is necessary to reach abstraction . . . but abstraction is only a sort of trickery and deflection of the mind if it doesn't constitute the crowning stage of a series of previously uninterrupted concrete actions. The true cause of failures in formal education is therefore essentially the fact

that one begins with language . . . instead of beginning with real and material action. (Piaget, 1973, pp. 103-104)

Whether or not adults are formal-operating, they need to engage actively with the material. Capacity for formal operations means simply that action and interaction can be carried on at a symbolic level; argument about ideas replaces argument about objects. All adult students have the potential for reflecting on and generalizing from their experiences through thinking, writing, and discussion.

A helpful guide to the design of active learning experiences for adults is Contexts for Learning (Finkel & Monk, 1978). Its authors, a psychologist and a mathematician, tackle head-on the issue of providing students with direct experience about the questions of a discipline. Their methods enable students "to go through experiences similar to those that excited the teacher" in the first place (p. 1). Generously detailed examples and a lucid analysis of the process of designing such experiences are provided. To select conceptual goals for students' learning, the authors advise, "work backwards from the products of a discipline toward the intellectual experiences that lead to these products" (p. 53).

Our goal as teachers is to help students engage in mental activities that generate knowledge as they enter an unfamiliar learning environment. The student begins understanding new material in the only way possible--in terms of his or her preexisting ideas:

> [The student] applies his own conceptual framework to it. A more intellectually adequate framework can only be developed through a modification and refinement of the student's initial framework. . . . The primary means of inducing a person to alter his intellectual framework is to get him to use it in varied

challenging, and specific ways. Under the strain of active use, inadequacies in the ideas, poor and absent connections between ideas, and any overall unsuitability will become manifest. (Finkel & Monk, 1978, pp. 53-55)

Course planning in this framework has two stages based on answers to the following questions: (a) What are the concepts that will contribute to students' understanding of the subject? and, (b) What experiences will help students to develop understanding of the concepts? Stating conceptual goals for a course, in Finkel and Monk's words,

> is a task that can be performed only by the teacher responsible for that course. We and our collaborators have found that this task necessitates a rethinking of one's own discipline, a process that in itself is deeply satisfying. (p. 57)

Engaging in this process myself one day, I listed the following concepts as basic to an understanding of child development: (a) There are basic needs common to all human beings; (b) Development (physical, social, emotional, intellectual) occurs in stages and in a predictable sequence; (c) Normal development includes broad individual variations; (d) Observing children is a good way to learn about them; (e) Children learn through play; (f) Because children are dependent on adults, it is important to examine the roles, attitudes, and culture of adult caregivers; and (g) Because assumptions and biases affect any adult's understanding of children, it is important to examine one's own.

Engaging in a similar process, Elizabeth Prescott, a member of the faculty of Pacific Oaks, came up with single- or few-word concepts rather than sentences: object permanence, attachment, separation, autonomy, initiative, learning about rules and fairness, industry (accomplishment and

failure), and sense of the future (Prescott, personal communication, September 1982).

Given these or another list of concepts, the next question to ask is, How might such concepts be learned through workshop experiences or laboratory investigations? The laboratory available to the teacher of child development comes in two parts, as I see it. The first includes those experiences with people--children and adults--that students have had and are having outside the classroom and that can be discussed in the classroom. These experiences may be assigned by the teacher ("Observe a child under two in interaction with his mother . . ...") or drawn from a common human past ("Describe a memorable childhood passion. What did you care about very much as a child?" "Describe a time when you experienced a sense of failure. Did you ever achieve mastery later?").

The second set of laboratory experiences is found in the human relations in the college classroom itself. What kinds of thought-provoking experiences can the teacher structure for the students during class time, in interaction with each other, either in the room or in the community together? ("Go out of the room and come back in on a small child's level. What do you notice?" "Try first to print your name and then to cut with scissors using your left hand, if you're right-handed, or vice versa. Can you do it? How does it make you feel?" "Lead a blindfolded partner outdoors, keeping her safe while providing a variety of sensory experiences.") These are examples of relatively simple activities; others may be more complex. If instructions are given in writing on a worksheet available to students as they enter the class, students can work independently; they need not wait for the teacher's initiative to begin the action.

In this structure, the teacher takes on some new roles, becoming an asker of questions, a provider of materials, a laboratory participant, a class chairperson and secretary, and a discussion leader (Renner & Lawson, 1973). The teacher calls the students together, takes note of the data they have gathered, and encourages discussion of the data. In addition, it is the teacher's role to suggest names for what the students have discovered, thus relating the data to concepts, and to decide when and how to move on to exploration of the next concept. As Renner and Lawson observe,

> this teacher is not a teller, he is a director of learning. Traditional teaching methods embrace the notions that (a) teaching is telling, (b) memorization is learning, and (c) being able to repeat something on an examination is evidence of understanding--those points are the antithesis of inquiry. (p. 276)

The goal of this structure is student-centered intellectual activity, with the teacher out of center stage. There are many opportunities for small-group work, for interactions among students. In Piaget's (1973) words:

> No real intellectual activity could be carried on in the form of experimental actions and spontaneous investigations without free collaboration among individuals--that is to say, among the students themselves, and not only between the teacher and the student. Using the intelligence assumes not only continual mutual stimulation, but also and more importantly mutual control and exercise of the critical spirit, which alone can lead the individual to objectivity and to a need for conclusive evidence. The workings of logic are, in effect, always "cooperations" . . . The active school presupposes working in common, alternating

between individual work and work in groups, since collective living has been shown to be essential to the full development of the personality in all its facets--even the more intellectual. (pp. 107-109)

The traditional teaching model is two-person, teacher-to-student, in spite of the presence of all those other people. In contrast, the workshop approach, in Finkel and Monk's words, "breaks the iron grip of the two-person model (1978, p. 103)." Most teachers are strongly inclined to identify themselves with the subject they teach and to assume that they must be present as intermediary between students and subject matter. In so doing, they fuse their role as knower and their role as helper in the learning process.

In a workshop approach, the two roles are separated in time and place. The teacher plans the workshop on the basis of his or her knowledge, formulating ideas in a worksheet that serves to initiate students' action, typically in small groups. Because the teacher is not the center of this action, he or she is free to observe, to evaluate the effectiveness of prior planning to engage students' thinking and interaction. The teacher is free to intervene with a group or an individual, becoming a helper in a variety of ways and discovering which ways are most effective and most enjoyable.

To quote Finkel and Monk (1978) once more on the subject:

Perhaps the most liberating change of all: [the teacher] no longer has to supply the energy of the class. The students are already interacting with the worksheet when he enters to help. He may now question, probe, hint, support, provoke, facilitate, argue, emote, in ways that he may always have wanted to, but

never could, because the presentation of the subject matter always took precedence. He will also receive responses to these ways of expressing himself, quite separate from the intellectual responses to the worksheet. Thus, he can distinguish between reactions to his style as a teacher and reactions to his way of presenting material. . . . There is a true dialectic between writing worksheets and running workshops based on them. They represent two modes of sharing one's subject with students. (pp. 103-106)

The worksheet, as thus described, sounds to me a good deal like the blocks and paints and sand of the preschool classroom. It serves to get active learning started. The instructor, like the preschool teacher, watches to see what will happen, intervening as he or she chooses.

The Developmental-Interaction Approach

As Franklin and Biber (1977) have pointed out, there is a large measure of common ground between early childhood programs based on a cognitive-developmental approach and those programs that they call developmental-interaction. A cognitive-developmental approach to teacher education, as described in the previous section, may be expected to produce problem-solving teachers focused on the content of children's learning. A developmental-interaction approach, which offers opportunities for both cognitive and affective action, produces problem-solving teachers concerned with both the content and the process of children's learning. Workshop-style teaching may concentrate on the cognitive, or it may make a point of incorporating affective experience as well. Pinkel and Monk (1978, pp. 87-88) comment that some affective learning is inevitable as students help each other, enjoy one another's company, and discover how they

function in groups. The developmental-interaction teacher educator plans consciously for these and other affective goals:

> It is a premise of the developmental-interaction view here under discussion that the separation of these major developmental sequences--the cognitive-intellectual and the affective-social--has important heuristic value but that, in utilizing these formulations in connection with educational planning, it is essential to be continuously cognizant of their interdependence in the way children and people actually function. (Franklin and Biber, 1977, p. 18).

Like behaviorists, developmental-interactionists are actively concerned with motivation. Behaviorists concentrate on extrinsic sources of motivation, assuming that all behavior occurs because it is reinforced. Developmentalists concentrate on intrinsic motivation of the sort described by White (1959) and Hunt (1971); they believe that human beings are naturally curious and stimulus-seeking, and that motivation is inherent in doing. White calls this attribute competence motivation--a need to bring about an effect by acting on the environment.

Psychodynamic theorists have emphasized the ways in which anxiety may interfere with this natural curiosity. Spontaneous growth will occur only in an environment that minimizes anxiety and maximizes the delights of growth (Maslow, 1962). In a learning environment, the teacher who offers students "unconditional positive regard" (Rogers, 1951, 1969) supports them in taking the risks inherent in new learning.

Relatively few college teachers concern themselves directly with their students' affective-social development. Some may do so on an informal basis, making themselves available to students outside of class and being

sympathetic to their personal concerns. But it is rare to find interpersonal dynamics taken into account as part of the content of a course--even courses in human development and education. College teachers tend to ignore or minimize the risks involved in learning--especially learning in emotionally laden subject areas.

Dugger (1983) quotes a community college student as saying, "When I was in seventh grade, I asked a question, and the teacher told me it was a dumb question. I never asked another question in school" (p. 58). Students who learn not to ask questions give up behaving intelligently in the classroom; a whole source of energy for learning is cut off. And so my first concern, as a college teacher in this mode, is to reduce students' anxiety about learning. I try to provide a psychologically safe space--to be a teacher who demonstrates qualities of warmth, empathy, and respect, and thus can be trusted. Trust is an essential climate for learning (Meade, 1975). And I share power with students, encouraging them to take responsibility for choosing their own learning activities and evaluating their efforts, rather than asking them to play "please-the-teacher."

Teachers at Pacific Oaks have written about working in this mode with a 4-year-old: "What we are trying to do is to give him the power to do whatever he wants to do--to make an impact on his world, to be able to exert genuine choice. This is our goal for all children" (Rabiroff & Prescott, 1978, p. 133). Power is thus shared, not abdicated. As teacher I retain responsibility for defining the parameters of the course, selecting basic concepts, providing a workable learning structure--even stating process objectives in behavioral terms (E. Jones, 1983-b). But I give students real choices among a wide range of options and expect them to evaluate their own learning. For example, instead of assigning a textbook I ask

students to make their own choices from a reading list. I ask them to write their personal reactions to their reading, to questions raised in class, to the class structure and how it is working for them. I want all students to read and write, talk and listen, observe and reflect--these are my behavioral objectives. But because they are individuals, I expect students to do different things, rather than perform a single task on which I could rank their relative success. I value their differences rather than evaluate them.

Faced with such power of choice, students are often excited. They are often also uncertain of their ability to handle the situation, and the learning that comes out of this dilemma may well be the most important thing that happens for them. As one teacher education student wrote in her self-evaluation:

> Throughout my years of schooling I have always been guided. To suddenly be expected to do and discover on my own has been very difficult for me to adjust to. This semester has been one of self-exploration, and I still am not sure as to where all the scattered pieces of myself fit in. . . . I am left to depend on myself. I realize that my teaching will be a lot like this. When I am faced with a problem, I will have to look inside and discover an answer for myself. . . . I am only now beginning to put together, in a sense, my life as a teacher. (Stephanie Feeney, personal communication, August 1981)

My second concern, after reduction of anxiety, is to plan cognitive learning experiences that take feelings into account. Feelings serve as the context that determines students' ability to learn; feelings are therefore considered directly in planning for the learning process.

Franklin and Biber (1977) cite Dewey in this respect: "Learning experiences designed to further cognitive facility are weighed in terms of the simultaneous learning that is going on with respect to self-image, attitudes toward others, work patterns, or general behavioral modes". (p. 20).

My class activities are designed to promote the following goals:

1. Introduce students to the resources available (readings, places to observe, me, and one another) and help them get started in making choices among these resources for their learning.
2. Establish a communication network. When learning activities are individualized, it is crucial that everyone be accountable on a continuing basis, in writing as well as orally.
3. Cover the content through action, interaction, and reflection on experience.
4. Deal with students' feelings about the content and the people in the group (other students and the teacher).

Whenever possible, I combine two or more of these purposes in one activity. For example, I might ask students to get acquainted in a child development class by sharing an early childhood experience with each other. Paired conversation helps reduce anxiety about not knowing anyone in the group and introduces students to one another's experiences. We might then build on this basis by generating developmental themes out of the kinds of experiences the students chose to relate ("Did any of your experiences have to do with separation? Autonomy? Being competent? Does the introduction of these abstract concepts help you to put your personal, concrete experiences in broader perspective?").

Teachers who make a clear distinction between "therapy" and "education" may feel that it is inappropriate to encourage college students to express their feelings and explore their past emotional experiences. However, affectively oriented teaching differs from therapy in that the setting is educational, the student has come to learn about something, and the teacher's goal is to teach. There is a consistent reality base, beyond the individual's concern with self, underscored by the questions, What are you learning about? and, What do you want to do? Personal search undertaken in an educational rather than a therapy setting has an instrumental quality that tends to move it beyond egocentrism; that is, the individual is exploring self in order to understand others better and to become a more competent professional.

However, teachers who restructure relationships in their classrooms, thereby raising such questions, may be suspect. Writing about survival in an open-classroom situation, Beukema (1978) remarks on the response of others to such restructuring:

> One of the criticisms leveled at me, both by students and by friends and colleagues, was that I was running group therapy or sensitivity sessions. "I am not," I protested, wondering why people talking to each other should be seen as therapeutic. Later I realized that people were being human with each other in a context where humanness doesn't usually happen. Students speaking to each other about "course content" may be an acceptable classroom behavior, but students speaking about themselves is generally not. (p. 145)

Given the opportunity, people are likely to share with one another not only intellectual ideas, but also personal anxieties and dilemmas and

feelings of all sorts. Classrooms are simpler, tidier places without these things. In a traditional classroom, students can maintain a protective anonymity by listening, taking notes, and staying quiet--and, from a developmental-interaction point of view, not learning very much. Learning is an active process, involving both cognition and affect.

Essentially, I find that combining these two aspects of learning requires me to slow down in my teaching. Whenever my anxiety over covering course content takes precedence, it triggers student anxiety, which is what I want to reduce. Traditionally, anxiety is an appropriate motivator in schools. (If you don't use assignments, due dates and grades, how can you ever get students to work?) But I choose instead to trust myself, my students, and the learning process, recognizing that any content is potentially infinite; it cannot possibly be "covered." Duckworth (1972) quotes David Hawkins on curriculum development: "You don't want to cover a subject; you want to uncover it" (p. 226). This is what we try to do by identifying the critical concepts in a field; they serve as rallying points, not boundaries. It is teachers and curriculum planners who for their own convenience set arbitrary, manageable boundaries to subject areas. Students, given the opportunity, will continually make unpredicted connections relevant to their own learning. I may sometimes, as a teacher, help an individual or group focus by defining something as "off the subject," but that's an arbitrary, best-guess pedagogical decision on my part; it has nothing to do with the structure of knowledge.

Putting It into Practice: Some Hazards

As I indicated at the beginning of this discussion, a developmental-interaction approach is uncommon in teacher education in spite of its

broad-based theoretical justification. Why? Franklin and Biber (1977) have commented that

> the teacher carries a complex role in the implementation of this ideology. . . . The lack of standardization, like the requirements for awareness and responsivity, makes the teacher's role challenging but often very difficult. Perhaps more than in other programs, successful realization of educational goals depends upon the teacher's ability to take genuine initiative in translating basic precepts into a productive learning environment. The unusually complex requirements of the teacher's role constitute a challenge to teacher education not readily met within the framework of most teacher education programs. (p. 24)

The challenge, in fact, comes in two parts: (a) to teacher educators' own awareness and responsivity to their students and their ability to take genuine initiative in designing and implementing learning experiences, and (b) to their readiness to trust their students' potential for becoming teachers who can take genuine initiative. As a colleague said to me, in defense of the prepared curriculum she was giving to students to use with children: "But what do you do about the mediocre teachers?" Assuming some teachers will be mediocre, she saw it as necessary to treat them as technicians and provide them with "teacher-proof" curricula. Some teacher educators who have great faith in children's potential for growth have given up on adults, whom they feel have lost the unspoiled qualities of childhood. For my part, I believe strongly in self-fulfilling prophecies, and I find that if I trust my college students to be competent, they are more likely to behave competently and caringly than if I do not.

College teachers who choose to do so can become more aware and responsive, and they can learn to design active learning experiences. They may not, of course, get recognition from their colleagues for doing so (J. Jones, 1983); the model professor is an expert, reasonably entertaining lecturer who maintains a suitable distance from students. To trust learners is suspect, unless they are little children, and it was easier to trust little children as learners in the era in which preschool "didn't count." As the early years have been taken more seriously, "traditional" (developmental-interaction) preschools have been criticized as laissez-faire by the advocates of more "rational," often behaviorist models ("Let's shape these kids up--they don't have time to play" [Bereiter & Engelmann, 1966]).

Traditional preschool education derived from leisurely, detailed attention to what children are like. It doesn't hurry children; it respects their pace and recognizes the importance of redundancy in learning. So did Piaget--a most leisurely, detailed observer. However, in his name all sorts of hurry-them-up curricula have been devised (see Lavatelli, 1970; Weikart, Rogers, Adcock, & McClelland, 1971).[3] (Piaget himself, of course, referred to the concern for speeding up development as "the American question.") As Engelmann (1971) makes clear, Piaget's primary interest was development, not instruction, and an authentic "Piagetian" curriculum might be expected to retain this emphasis (cf. Franklin & Biber, 1977, pp. 13-15; Kamii & DeVries, 1977, pp. 366-367). Likewise, in a developmental-interaction framework the most important teacher skill is observation: Wait, watch, pay attention--intervene when you are needed (Dewey, 1943/1902, 1963/1938). The college teaching equivalent of this style has been described earlier in this discussion.

Teacher education, unlike preschool education, does "count," or wants to, especially in universities where it is competing for academic status. We must be sure to pour in all that content so our students will know everything a teacher must know. But we can't do that except by teaching as if it all were social knowledge--words to be memorized; in hardly any program is enough time allowed to learn it all by doing. Perhaps, then, it won't all be learned before a teacher begins to teach. Accepting that fact seems to me to be the preferable alternative to pouring it in. Learning to teach is like the young child's learning--the slow, unsteady attempt to gain understanding of all the parts and pieces of a whole new world. It can't be hurried, nor can it be detached from the person. I do care that teachers know, but I care much more about who they are (see Feeney, Christensen, & Moravcik, 1983). And I care that they have opportunities, as part of their professional learning, to get in touch with parts of their experience that may have been split off from their awareness and that may give them trouble later in their encounters with children and parents. Students will be unable to be good to children or to recognize their prejudices when they are on their own in the classroom if no one has been good to them (Hilliard, 1974). But it is hard, in an academic setting, to justify self-understanding as the primary content of teacher education, as Paul Goodman and others have proposed that it be (Dennison, 1969, p. 257).

It is also hard to risk, as college teachers, teaching who we are and not just what we know. But if we are asking students to be fully present in their learning, we are obligated to be there as persons in our teaching. This is risky. When we try new ways and they don't work, we are more vulnerable than if we had stuck properly to lecturing (J. Jones, 1983). The most effective way I have discovered for defusing my anxiety is to

acknowledge it rationally: "You know, I thought that discussion would work, and it bombed. Has that ever happened to you? What do you do when your plans don't work? How could we make it better next time?" By doing this I am modeling for students, making it clear to them that teaching is a learning process and that learning isn't always full steam ahead; there's a lot of slippage. We can turn our failures into learning experiences if we can detach ourselves a bit from them and analyze what happened. If my students become teachers themselves, I think they will find this piece of information useful (E. Jones, 1981).

Effective socialization into a profession demands laboratory experience. I want students to get a first-hand sense of what it's like to be a teacher, and so I ask them to engage, in my classroom, in teacher-type behaviors: planning, giving information, responding to others, evaluating. Too often students are asked to engage only in student-type behaviors, which serve primarily to screen them for minimum academic competence, not for teaching potential (Katz, 1974).

Teaching All Our Students

In American society, as Green (1968) and Herndon (1971) have pointed out, we depend on the schools and colleges to sort out people for the economic system--to decide who will be winners and who will be losers. There are few other routes to success. This is why Illich (1971) has described the educational system as the 20th century replacement for the medieval church; it monopolizes access to social status.

The students know this; that's why they're in school. They don't expect college to be any more exciting than public school was. It's just something you have to do to get ahead in the world. If you want a particular career, like teaching, you have to go to college, even if that means

you don't get to try teaching a real child for years. And besides, what else is there to do after high school? As Shor (1980) has noted, our system has a vested interest in keeping young adults out of the labor force as long as possible.

Many of the students in teacher education programs have experienced only indifferent success, or worse, in previous schooling. They are unlikely to have high opinions of themselves as learners. In addition, students who think they'd like to work with people are more likely to have intuitive and interpersonal competence than the logical/abstract competence that colleges value most highly.

Of course, teachers need theory, but working teachers build theory out of their experience; they don't just quote others' theory. They don't act as they do because Piaget said so; they do it because they say so--because they have observed and experienced and know that this is appropriate. (If they can also cite Piaget, they are in a stronger position to communicate with others and be confident in themselves.) Dugger (1983), teaching teacher aides,

> pointed out to them that each of them had a theory about children; the only difference was that they had never written theirs down and gotten famous. So [they] were going to learn about the famous theories written about in the book, and then each person could add to or change their theory as they observed children and saw how it checked out with the others. Or write theirs and become famous. (p. 53)

This approach does not, in my view, trivialize theory; it does demystify it, giving students an accurate view of its sources in experience. Like Dugger, I want the people whom I teach to gain more power over their

lives. I want to subvert students who are accustomed to be mere game-players--to enable them to find out what they really want to do, develop the skills and discipline to do it, and discover learning as exciting and themselves as competent.

What students need to learn in school is that they can learn, that learning is exciting and that it's something you can do for yourself. Prospective teachers, more than anyone else, need to learn this. Rote learning is very poor preparation for teaching. Teachers need to have developed independence and reciprocity in both the intellectual and moral spheres. Independence means that you feel confident in asking your own questions and finding your own answers. Reciprocity means that you can listen to other people and have a well-developed capacity for putting yourself in their shoes. These essential qualities are developed through active learning, not through passive learning (E. Jones, 1978).

In Piaget's words (1973), the intellectual and moral spheres constitute an "indissoluble whole." He states that

> it is not possible to create independent personalities in the ethical area if the individual is also subjected to intellectual constraint to such an extent that he must restrict himself to learning by rote without discovering the truth for himself. If he is intellectually passive, he will not know how to be free ethically. Conversely, if his ethics consist exclusively in submission to adult authority, and if the only social exchanges that make up the life of the class are those that bind each student individually to a master holding all power, he will not know how to be intellectually active. (p. 107)

Only by giving students problems to solve, not facts to memorize, as starters for their thinking, will we get quality teaching in early childhood education. Only by trusting teachers to be effective problem solvers will we go beyond mediocrity in the classroom. Only as teachers and parents raise questions about the quality of children's lives will we accomplish necessary educational and social change.

This is not a scientific statement; it is a political one, an ideology. With Katz (1977), I recognize that I adopt a point of view in education not because I know it to be fact but because I believe it to be true on the basis of my own experience, feelings, and values. Teacher educators cannot be neutral. My point in this discussion is that we choose our theoretical positions in early childhood education, and, having done so, we have an obligation to make our teacher education consistent with them.

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FOOTNOTES

[1]For further reference on behaviorism, see Ackerman (1972) and Skinner (1971).

[2]For summaries of Piaget's theories, see Kamii and DeVries (1977), Labinowicz (1980), and Pulaski (1971).

[3]Constance Kamii, discussing this issue, states that she now regards her earlier efforts to improve children's performances on Piagetian tasks as a misapplication of Piaget's theory to education (Kamii & DeVries, 1977, p. 390).