ED 189 088   SP 016 335

AUTHOR   Feiman, Sharon: Floden, Robert E.
TITLE   What's All This Talk About Teacher Development?
                Research Series No. 70.
INSTITUTION   Michigan State Univ., East Lansing. Inst. for
                Research on Teaching.
SPONS AGENCY   National Inst. of Education (DHEW), Washington,
                D.C.
PUB DATE   Feb 80
NOTE   40p.; Revised version cf a paper presented at the
                annual meeting of the American Educational Research
                Association (San Francisco, CA, 1979).

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   Adult Development: *Developmental Programs:
                *Educational Theories: *Faculty Development: Higher
                Education: Inservice Teacher Education: Psychological
                Needs: *Teacher Behavicr: Teacher Improvement

ABSTRACT
                A review of current educational literature identifies
three different approaches to defining, describing, and applying the
term "teacher development." One application of the term deals with
the commonly experienced changes most teachers undergo. Teachers
develop through the stages of survival, consolidation, renewal, and
maturity. The second application of teacher development concerns the
personal and adult development of teachers. Professional development
is viewed as an aspect of ego, moral, and cognitive development. The
third application involves the promotion and support of teacher
development through inservice and professional programs. Levels and
stages of each concept of development are discussed. (CJ)

Research Series No. 70

WHAT'S ALL THIS TALK
ABOUT TEACHER DEVELOPMENT?

Sharon Feiman and Robert E. Floden

Published By

February 1980

2

INSTITUTE FOR RESEARCH ON TEACHING

Teachers' thoughts and decisions are the focus of studies currently under way at Michigan State University's Institute for Research on Teaching (IRT). The IRT was founded in April 1976 with a $3.6 million grant from the National Institute of Education. That grant has since been renewed, extending IRT's work through September 1981. Funding is also received from other agencies and foundations. The Institute has major projects investigating teacher decision-making, including studies of reading diagnosis and remediation, classroom management strategies, instruction in the areas of language arts, reading, and mathematics, teacher education, teacher planning, effects of external pressures on teachers' decisions, socio-cultural factors, and teachers' perceptions of student affect. Researchers from many different disciplines cooperate in IRT research. In addition, public school teachers work at IRT as half-time collaborators in research, helping to design and plan studies, collect data, and analyze results. The Institute publishes research reports, conference proceedings, occasional papers, and a free quarterly newsletter for practitioners. For more information or to be placed on the IRT mailing list please write to : The IRT Editor, 252 Erickson, MSU, East Lansing, Michigan 48824.

Director: Judith E. Lanier

Associate Directors: Lawrence W. Lezotte and Andrew C. Porter

Editorial Staff:

  Lawrence W. Lezotte, coordinator of Communications/Dissemination
  Linda Shalaway, IRT editor
  Janet Flegg, assistant editor

(Lee S. Shulman, co-director with Judith E. Lanier from 1976-1978, and director in 1979, is on a one-year leave at the Center for Advanced Study in the Behavioral Sciences, Stanford, California.)

Abstract

The term "development" has recently entered the teacher education lexicon, joining the more familiar terms of "education" and "training." In a survey of the literature on teacher development, the authors identified three approaches to it. The first approach includes attempts to *construct* a developmental theory. The second approach, which involves efforts to *apply* existing developmental theories, takes two forms: (1) research using structural-cognitive theories as an interpretive framework and (2) efforts to translate developmental constructs into teacher education curricula. The third approach includes descriptions of practice and efforts to *justify* them in developmental terms. Descriptions of the concept of development within each of these approaches are presented and compared.

What's All This Talk About Teacher Development?[1]

Sharon Feiman and Robert E. Floden[2]

The term "development" has recently entered the teacher education
lexicon, joining the more familiar terms of "education" and "training." Per-
haps the popularity of developmental theories has encouraged teacher
educators to seek applications in their own work. Certainly a stable
teaching population makes staff development a high priority. Much of
the inservice literature speaks of nurturing professional growth and
development, a striking contrast to the previously prevailing rhetoric
of competency-based training. The National Institute of Education is
planning a multi-year research program on staff development, including an
initial effort to clarify the meaning of "development."

For some, at least, the shift to development is a deliberate attempt
to signal a change in thinking about professional learning and improve-
ment. Developmentalists Irving Sigel (1978), Norman Sprinthall (Note 1),
and Douglas Heath (Note 2) have recommended that teacher educators adopt
a new paradigm--developmental--and discard the limitations of a
behavioral conception. Teachers' centers are associated with a "develop-
mental" rather than a "delivery" style of inservice, and Kathleen Devaney

---

[1]This is a revised version of a paper presented at the annual meeting
of the American Educational Research Association, San Francisco, 1979.

[2]Sharon Feiman is a researcher with IRT's Teacher Role and
Development Project and an associate professor in MSU's Department of
Education. Robert E. Floden is the coordinator of that project and an
assistant professor in the same department.

(1978), director of the Teachers' Centers Exchange, notes that "the
delivery analogy is specifically rejected by educators who hold a view
of children and adult learning as mental growth spurred from within."
In the introduction to a recent book on staff development, editors
Ann Lieberman and Lynn Miller (1979) explain why they chose the title
"staff development" rather than inservice or teacher education/training.
"By development, we mean a rejection of notions of training and an
acceptance of notions of growth--often in a nonlinear and nonrational
way" (p. ix).

Despite considerable talk about teacher development, no unified
perspective guides research and practice. Teacher educators use the
term to mean different things; researchers look at teacher development
in various ways. While people are recommending that programs meet the
developmental needs of teachers and be evaluated in terms of their con-
tribution to teacher development, they each have different things in mind.
Moreover, they often seem unaware of alternative views.

The need for clarification is important because the shift to
development may be as much a reaction to previous extremes as it is a
move toward a more comprehensive view of teacher learning. Just as the
child-centered movement was partly a response to previous authoritarian
patterns of education in classrooms, the change to a developmental
perspective may be partly a response to the restriction of teacher edu-
cation to formal professional preparation and the further narrowing of it to
explicitly defined skills and competencies.

Yet, as researchers and practitioners attempt to apply aspects of
developmental theory to research and practice in teacner education, these
same theories are undergoing critical scrutiny. John Flavel, a developmental

psychologist, anticipates that "the concept of stage will not figure importantly in future scientific work on cognitive growth" (Flavel, 1977, p. 249). At the same time, efforts to formulate stages in teacher development are increasing.

This paper grew out of our search of the developmental literature in teacher education. We wanted to find out how the term was being used--a first step toward assessing the strengths and weaknesses of a developmental approach. Although a large body of educational literature is concerned in some way with changes in teachers over time, we restricted our attention to literature that explicitly introduces developmental considerations. The material is relatively recent and not extensive. It includes descriptions of practice, reports of research, and position papers from funding agencies.

From our review of the literature, we have identified three approaches to, or conceptions of, teacher development. The first involves attempts to construct a developmental theory of teachers. The basic question is: How do teachers develop or change over time? The work of Frances Fuller and her colleagues on teacher concerns provides the best example (Fuller, 1969; Fuller & Bown, 1975; Fuller, Note 4; Fuller, Peck, Bown, White, & Garrard, Note 6). The second category involves efforts to apply existing developmental theories to practice. This takes two forms: (1) research using structural-developmental theories as an interpretive framework, and (2) efforts to translate developmental constructs into teacher education curricula. The underlying question is: Can developmental constructs explain individual differences among teachers and offer guidance in designing interventions? The case studies of Carol Witherell (1978) and the development work of Sally Glassberg (Note 5) are illustrations of this. The third category contains

descriptions of practice and efforts to justify them in developmental terms. The underlying question is: How can teacher development be supported and fostered? The example of a teacher education experiment in the forties, the Bank Street Workshop, underscores the relation between developmental and progressive educational ideas and practices (Mitchell, 1950). The workshop has clear parallels in the activities and philosophy of teachers' centers and advisory programs.

In the remainder of this paper, we consider the way in which teacher development is conceived in each approach, chiefly through descriptions of representative pieces of work. It will be apparent that, though similarities across approaches exist, the approaches differ on a variety of points. When someone says they take a developmental approach to teacher education, the implications of that statement vary according to the approach ascribed to. People apparently in agreement on the desirability of a developmental approach, may find considerable disagreement as their discussion becomes more concrete. We hope that our review of these three approaches will clarify at least some of the possible interpretations of the new emphasis on teacher development.

Constructed Theories of Teacher Development

Developmental Concerns of Teachers: Frances Fuller

The best known example of an empirically constructed theory of teacher development is the work of the late Frances Fuller and her colleagues at the University of Texas in Austin. Fuller observed the mismatch between what preservice students get in their education courses and what they say they need. She set out to discover "what [student] teachers are concerned about and whether their concerns can be conceptualized in some useful way" (Fuller, 1969, p. 208). She hoped to find regu-

larities in teachers' concerns over time which could help teacher
educators choose more appropriate course content and experiences.

In her first "developmental conceptualization," Fuller (1969) charac-
terized teacher concerns in terms of a self-other dichotomy. Over a
10-year period, this conceptualization was refined and modified several times.
The most recent formulation posits three stages of concern: self-as-
teacher concerns, teaching situation concerns, and pupil concerns
(Fuller & Bown, 1975). A closer look at the early and later conceptualization
and the research which produced them will clarify the notion of teacher
development that undergirds this work.

As early as 1963, Fuller helped organize counseling seminars for
student teachers. The purpose of the seminars was to help counselors
better understand teachers. Eventually, these seminars provided the data
for her first study of teacher concerns. In that study (Fuller, 1969), small
groups of student teachers were encouraged to talk about anything they
wanted in a two-hour weekly seminar. The sessions were taped and each
statement classifi according to its main topic. The frequencies of
topics discussed and the clinical impression gained from listening to
the tapes suggested a dichotomy between concerns with self and concerns
with pupils. The former were prevalent in the first three weeks of the
student teaching semester; the latter appeared toward the end of the
term.

In a second study, student teachers were asked every two weeks during
the semester to write about what concerned them most. This time state-
ments were classified according to three topics: concern with self-
adequacy, concern with misbehavior and class control, and concern with pupil
learning. Of the 29 student teachers, 22 expressed concerns about self-
adequacy; none expressed concerns about pupil learning.

Fuller integrated these findings with existing research on "per-
ceived problems of student teachers or beginning inservice teachers."
The research studies included six surveys published between 1936 and
1965 and two unpublished surveys of beginning inservice teachers. Despite
the diversity of populations, the findings consistently pointed to a
preoccupation on the part of student teachers and beginning teachers with
self-oriented concerns.

Covertly, student teachers and beginning teachers are trying to
discover the parameters of the school situation and figure out where they
stand. Thus student teachers ask themselves: "Is this my class or the
teacher's? Can I try out my own ideas here or will someone else tell me
what to do?" Overtly, they are concerned about discipline and control,
and more generally with self-adequacy. The student teachers worry about
their "abilities to understand subject-matter, to know the answers, to
say 'I don't know' on occasion, to have the freedom to fail, to anticipate
problems, to mobilize resources and to make changes when failures reoccur"
(Fuller, 1969, p. 220). The broad overt concern also involves "the willing-
ness to listen for evaluation and to separate out the biases of evaluators"
(Fuller, 1969, p. 221).

Do experienced teachers have similar concerns? Fuller offered a
tentative answer based on concerns reported by others. Gabriel (1957)
had surveyed the problems and satisfactions of teachers. Fuller
regrouped his data to show that experienced teachers are less often
concerned with maintaining discipline or worried about criticisms of
inspectors than inexperienced teachers are. Their satisfactions come
from success with pupils and they are most often concerned about slow
progress of students. Outstanding teachers interviewed by Jackson (1968)
expressed concerns about pupils' progress. Several spontaneously recalled

10

their decreasing preoccupation with discipline and self-adequacy. Fuller
tentatively characterized the "late teaching phase" as a time when teacher
concerns focus on pupil gain and self evaluation as opposed to personal
gain and evaluation by others. "Mature" teacher concerns include the
ability to understand pupils' capacities, to specify objectives for
them, to assess their gain, to recognize one's own contribution to
pupils' difficulties and gains, and to evaluate oneself in terms of
pupil learning (Fuller, 1969, p. 221).

Both the early and the later concerns were expanded and refined
in subsequent work. Along the way, new instruments for measuring stages
of concern were also developed (e.g.,Teacher Concerns Statement,
Teacher Concerns Checklist, Teacher Concerns Questionnaire). Use of the most
recent formulation (Figure 1), based on a factor analysis of the
Teacher Concerns Checklist, resulted in the identification of three
phases of teaching concerns. The pre-teaching phase of non-teaching
concerns becomes a stage of self-oriented concerns.

I.	Early phase	0	Concerns about self (non-teaching concerns)
II.	Middle phase	1	Concerns about professional expectations and acceptance
		2	Concerns about one's own adequacy: subject matter and class control
		3	Concerns about relationships with pupils
III.	Late phase	4	Concerns about pupils' learning what is taught
		5	Concerns about pupils' learning what they need
		6	Concerns about one's own (teacher's) contributions to pupil change.

Figure 1. Model of Teacher Development (Adapted from Fuller, Note 4).

In the pre-teaching phase, education students tend to identify with pupils and are sometimes quite critical of classroom teachers. As soon as they have actual teaching experience, their idealized concerns for pupils are replaced by an intense concern with their own survival as a teacher. Fuller hypothesizes that these feelings are evoked or exacerbated by the student teacher's status.

Concerns about limitations and frustration of the desire to teach (not just survive), ensue. These feelings seem to be evoked by features of the work setting; inservice teachers have more concerns of this type than do preservice students. They are self-oriented to the extent that they focus on teaching performance, not pupil learning.

Pupil concerns are expressed by both preservice and inservice teachers, but preservice teachers cannot always act on these concerns. "Flooded by feelings of inadequacy, by situational demands and conflicts, they may have to lay aside these concerns until they have learned to cope with more urgent tasks" (Fuller & Bown, 1975, p. 39).

Nature of the Stages and the Progression

When Fuller et al. (Note 6) use the term "stage," they have in mind a cluster of concerns, a set of preoccupations which seems to unfold in a particular sequence over the course of the preservice experience. In this passage, Fuller and Bown (1975, p. 37) say what the "stages" are not:

> Whether these really are "stages" or only clusters, whether they are distinct or overlapping, and whether teachers teach differently or are differentially effective in different stages, has not been established. These stages, if such they are, have been described mainly in terms of *what the teacher is concerned* about rather than what he is actually accomplishing. However, there seems to be little doubt that the labels describe clusters of concerns and consequently provide a useful means of describing the experience of learning to teach. (Italics mine.)

What accounts for the shift or progression? How does the transition take place? There is no empirical work on this question and only some very general suggestions. In an early reference, Fuller and her colleagues (Note 6) connect the empirically derived stages of concern with Maslow's hierarchy of needs: "Early concerns can be thought of as more potent security needs and later concerns as task-related and self-actualizing needs which only appear after the prepotent security needs have been satisfied" (Fuller et al., Note 6).

There is the clear indication that pupil concerns are more desirable than self-oriented concerns and the speculation that later concerns cannot emerge until earlier concerns are resolved. Somehow teachers get to the third stage with time, experience, and a little help from teacher educators. Teacher educators should be providing materials, information, and experiences consonant with developing teachers' felt concerns as they occur rather than "teaching against the tide,"

Extensions of Fuller's Work

Katz (1972) extends Fuller's conceptualizations, drawing on her own experiences with preschool teachers. "It is useful," she writes, "to think of the growth of preschool teachers (and perhaps other teachers, also) as occurring in stages linked generally to experience gained over time " (p. 53). Concerned with the location, timing, and content of teacher education, Katz identifies four developmental stages with their associated training needs. While individual teachers may vary in the amount of time they spend in each stage, the general conceptualization covers the first five years of teaching.

Stage 1: Survival. Being responsible for a group of young children for the first time and having to encounter their parents naturally evokes teachers' anxieties. The discrepancy between ideals and classroom realities intensifies feelings of inadequacy. During this state, Katz recommends on-site support and technical assistance from persons who know the beginner and the teaching situation. Such training must be readily and constantly available. The model of the British headmaster or advisor who works closely with teachers in classrooms in a nonevaluative manner is an example of this.

Stage 2: Consolidation. During the second stage, which usually occurs toward the end of the first year, the teacher begins to consolidate what s/he has learned and to differentiate tasks and skills to be mastered. Having acquired a baseline of information about what young children are like, the teacher now begins to focus on problem children and problem situations. Again, on-site assistance is needed. Teachers at this stage need opportunities to talk with specialists, exchange ideas with more experienced teachers, and share feelings with other beginners.

Stage 3: Renewal. During the third or fourth year, the teacher gets tired of doing the same old things (Valentine cards, Easter bunnies, pumpkin cutouts) and becomes interested in new teaching materials and methods. Exposure to new ideas through participation in teachers' centers, attendance at regional workshops and conferences, membership in professional associations, professional reading, and classroom visitation are recommended. Renewal is still conceived of in technical terms--adding new ideas, techniques, and materials to one's repertoire.

14

Stage 4: Maturity. While some teachers may reach maturity in three years, others need five or more. Mature teachers have come to terms with themselves as professionals and have the perspective to reflect on more fundamental educational questions. Katz sees this as the time for teachers to work toward an advanced degree, to participate in conferences and seminars, to read widely, and to interact with educators working on varied problems.

Discussion

It is clear that Fuller's early work has had a strong influence on a number of subsequent studies. Perhaps because the stages of development arose out of studies particularly focusing on teachers, they seem to give intuitively reasonable descriptions of commonly experienced changes that most teachers undergo in the early years of their careers.

Researchers have yet to raise questions about the degree to which similar stages would be found in the development of concerns of beginning professionals in other fields. Perhaps the general pattern of stages is common to a number of beginning experiences in a variety of aspects of life, in a way returning to Maslow's (1954) hierarchy of needs

How does this approach to teacher development help us to understand the mechanisms by which teachers move from one stage to another? Fuller's work has served as the basis for a teacher education program aimed at the concerns teachers are experiencing at a given point in time. The idea seems to be that the teacher education program should be matched to the dominant concerns. However, this does not answer questions about the role of teacher education as a means for enhancing the developmental process. Addressing current concerns will probably make teachers feel more comfortable, and make them feel that their education

is highly relevant. But feelings of comfort and relevance need not be linked to attainment of the most desirable educational outcomes.

The question of desirability has yet to be seriously considered in this research tradition. Fuller's writing suggests that later developmental stages are preferable, and that a goal of teacher education should be to move teachers to these stages as quickly as possible. But what justification would be given for the superiority of these later stages? To assert that later means better is to commit the naturalistic fallacy. Certainly in Katz' (1972) work it is unclear that the third stage is better than the second. As with any theory that develops out of an attempt to describe what is, there is always a great danger of overinterpreting the resulting description. A description, even an extremely good description, may not have an accurate notion of how things might be changed, and certainly is insufficient for drawing conclusions about what should be.

Applications of Cognitive Developmental Theories

A second approach to the study of teacher development draws theories and ideas from developmental psychology. Teacher development is viewed as a form of adult development. Characteristics describing effective adult functioning are assumed to be applicable to effective teachers and teaching. Research has examined some relationships between developmental predictors and teacher beliefs and actions.

The view of learning associated with developmental theories is said to have important implications for an understanding of how teachers learn and the conditions that support professional growth. Thus developmental theories would provide both ends and means for teacher educators. Evaluations of the effects of developmentally oriented programs in moving teachers to higher stages or levels have been conducted.

We can illustrate both research aspects of this second approach to the study of teacher development from recent work at the Department of Psychoeducational Studies of the University of Minnesota. Sprinthall (Note 1) has outlined a developmental perspective on teachers as adult learners. Witherell and Erickson (1978) have conducted a structural-developmental analysis of teachers' views of teaching and human behavior in relation to their teaching behavior. Glassberg (Note 5) has evaluated a curriculum designed to promote the ego, moral, and conceptual development of student teachers.

Teachers as Adult Learners

At a recent invitational conference exploring research issues on teacher education, Sprinthall (Note 1) suggested that "developmental theory presents an interesting and sufficiently complex new paradigm for teacher education." He reviewed a set of studies connecting developmental stages with effective performance of adults in general and of adults in teaching. Since developmental stages or levels offer promise as predictors, developmental growth ought to be a basic aim of teacher education.

Applications of Cognitive-Developmental Theories to the Study of Teacher Development

Witherell and Erickson (1978) use Loevinger's theory of ego development and Kohlberg's theory of moral development as a framework for studying the relationship between teachers' conceptions of teaching and human development, and their patterns of teaching behavior.

Loevinger (1976) views the ego as the master trait subsuming four domains: (1) impulse control or character development, (2) interpersonal style, (3) conscious preoccupations, and (4) cognitive style. Ego development involves

an increase in complexity and differentiation in the conception of self in a social context. Autonomy and consciousness are the hallmarks of mature ego development.

Loevinger's theory shares the Piagetian notion of stage; ego stages are conceptualized as equilibrated structures, related to each other in an invariant hierarchical sequence. Ten stages and transition levels have been identified, with the normal range of adult ego development covering the Conformist through the Autonomous Stages (See Figure 2).

From Loevinger's theory, Witherell and Erickson draw implications for a definition of teacher effectiveness and for educational goals.

> Increased complexity in one's understanding of self and the capacity to imagine multiple alternatives, typical of the higher stages of ego development, probably increase one's behavioral options and coping strategies. In addition, because the more advanced stages of ego development are characterized by increased flexibility, differentiation of feelings, respect for individuality, tolerance for conflict and ambiguity, the cherishing of interpersonal ties, and a broader social perspective, advancement in ego development would appear to stand on its own as educationally desirable for both teachers and students. (Witherell & Erickson, 1978, p. 232)

They draw similar implications from Kohlberg's theory of moral development. In Kohlberg's view, the essential ingredient of moral development is a certain mode of reasoning or judgment which is the product of a particular cognitive structure. In his studies of children and adults, Kohlberg distinguishes six stages of moral reasoning, which can be grouped into three levels: Level I --Premoral, Level 2--Conventional Rule, Level 3--Autonomous Principled Morality. The researchers claim that a teacher's contribution to the moral development of students is in part determined by the teacher's own level of moral development.

Conformist Stage (I-3)

Persons at this stage view themselves and others as conforming to socially approved codes and norms. Explanations of behavior and situations are conceptually simple. There is little awareness of inner life or depth of feeling.

Conscientious-Conformist Stage (I-3/4)

Persons at this stage begin to allow for exceptions and contingencies in their generalizations. There is an increase in self-awareness and the capacity to imagine multiple possibilities in the situation.

Conscientious Stage (I-4)

At this stage, persons display and perceive complex thinking. Behavior is viewed in terms of patterns of traits and motives. The capacity to take the role of others, cognitively and emotionally, deepens. Self-evaluated goals and rules, differentiated feeling, and high achievement characterize this stage.

Individualistic (I-4/5)

Paradoxes and inner conflicts are beginning to be tolerated. Persons at this stage demonstrate a respect for individuality and an emerging cherishing of interpersonal ties.

Autonomous (I-5)

Autonomous persons can integrate unrelated ideas. They have a heightened respect for autonomy and emotional interdependence. Interest in development, role conceptions, and a richly differentiated inner life characterize this stage.

Integrated Stage (I-6)

A rare attainment, this stage adds the integration of a sense of identity and self-actualization to the characteristics of the autonomous stage. Characteristics include increased objectivity, transcendence of self, openness to development, and a democratic character structure.

Figure 2.   Loevinger's characteristics of stages which constitute normal adult range (Adapted from Witherell & Erickson, 1978).

> Teachers who are autonomously committed to the
> ethical development of their students and to
> principles of the social contract...are more like-
> ly to...encourage student participation and leader-
> ship than are teachers who base their commitments
> on socially acceptable cliches or on the present
> bureacratic realities and authority structures in
> schools. (Witherell & Erickson, 1978, p. 231)

Through five case studies, the relationships between differences

in ego development and teachers' beliefs and classroom behavior are

investigated. Three major hypotheses emerge from the data analysis:

1. Teachers' actions are linked to (and linked by)
    the theories and values teachers hold.

2. Patterns of teaching behavior and educational
    beliefs are associated with differences in
    developmental stage.

3. Teachers who have reached a higher developmental
    stage demonstrate both greater complexity and
    commitment to individuals in such areas as

    a. analytic self reflection,

    b. philosophy of education.

    c. constructs relating to
       children's perspective,

    d. generation and use of
       varieties of data in
       teaching, and

    e. understandings and practices
       relating to rules, authority
       and moral development in the
       classroom.

Case study research is difficult to summarize. One needs to dwell

on the data and construct a picture of an individual to evaluate the

validity of the researcher's interpretations. Some idea of how develop-

mental theories are used can be conveyed by comparing the responses

of two teachers in the study to the problem of stealing in the

classroom. These passages, which include teachers' responses and

researcher's interpretations, represent only the tiniest fraction

of the data.

Teacher 1 (Ego-development ratings: Individualistic and Autonomous)

Response to stealing
in the classroom

She (Karen) related one situation where the
class's lunch money had been stolen from her
desk. Karen announced to her students that the
money had been stolen and that since no one had
come in or left the room during the moring, it
had to have been by someone in the room.
She also pointed out that without getting the
money back, they couldn't buy their lunches She
then said to her students:
. I'm going to go into the hall and anybody
that knows anything at all about what might
have happened, come out one at a time and
talk with me. ...After serveral kids came
out, here comes the kid that took it. She
said, 'I took the money,' and she cried.
I just hugged her and thanked her for
steppin' up and saying so. She went back
in and some other kids came out. I went
back to the room and said, 'I just want
you to know that we had some really honest
people in this room. And one person did a
really hard thing, because they did take
our money and they had to say so and give
it back. I'm really proud of you for do-
ing that.'

Developmental Interpre-
tation

Through her handling of the problem, Karen
demonstrated that her primary concern was
with the protection of individual privacy
and the spirit of social cooperation with-
in her class. She wasn't shocked or angered
by the incident, but rather treated it as a
community problem that could be solved con-
structively. <u>A concern for her students'
inner lives, the capacity to deal with
conflict, a freeing from the 'oppressive
demands of conscience,' and a cherishing
of personal ties are all characteristics
of the Autonomous Stage</u> (emphasis added).

Teacher 2 (Ego-development ratings: Conscientious-Conformist)

Response to stealing   When asked what she does about stealing inci-
in the classroom   dents in her classroom, Joyce explained that
                        she usually tells the class that 'if they
                        would return whatever's missing to my desk·be-
                        fore lunch, I'll be happy.' She spoke at
                        length about one girl, however, who stole from
                        other students, and, according to Joyce, from
                        her parents as well.

> She's very bright, but lazy and sneaky.
> I told her parents that. I told her
> what happens to people who steal when
> they get older. Stealing runs in that
> family.

Joyce explained that she'd tried everything
with this student. She spoke in detail of
her exasperation on one occasion:

> I told two kids they could take any-
> thing they wanted from her desk--and
> she cried. She was upset. I was never
> so happy in my life to see someone cry..
> The only way I can touch her is when she
> cries.

Developmental   Joyce's apparent insensitivity to the underlying
Interpretation   meanings of messages in this student's behavior
                       was probably not due to malice on her part, but
                       rather to an incapacity to get past her own ex-
                       asperation and repugnance for the repeated acts
                       of stealing, to where she could enter the per-
                       spective of a troubled child.

From the analysis just presented, it is appar-
ent that Joyce demonstrates the stereotypic,
social approval orientation of the Conformist
Stage. For .the most part, she seemed unaware of
the contingencies of either her own behavior or
that of others and has not appeared to establish
self-evaluated standards or principcles for
guiding her actions and judgements.
(Witherell & Erickson,   1978, p. 235-236)

The research appears to confirm the underlying assumption that

teachers at higher stages of development are more effective than their

colleagues at lower stages. But, of course, this is the very assumption

on which the research rests. Effectiveness is defined in terms of a

more complex and differentiated framework for understanding and coping

with classroom realities. Professional development is taken as syno-
nomous with or at least parallel to personal development. (In the third
section of this paper, we refer to coding schemes for analyzing teachers'
beliefs which are suggestive   pedagogical formulations of develop-
mental constructs.)

Practical Applications of Cognitive-Developmental Theories

Practical applications of cognitive developmental theories take one
of two forms: specification of development as either the end of translation of
developmental constructs into means. Sprinthall (Note 1) lays out the
deceptively simple logic involved in moving from a conception of how
teachers develop to a belief about how they ought to develop. "If we
have good reason to believe that more mature and higher stage adults can
function more complexly, then let's induce, stimulate, exhort, cajole,
nurture and promote growth."

While researchers who study teacher development within a cognitive
or structural developmental framework seem confident that the goal is
clear, they are less certain about the means. Still they look to dev-
elopmental constructs for guidance in designing educational experiences.

In this, they follow the example of some cognitive theorists who not
only refine and validate their theory through continued research, but
also contribute to the promotion of practical applications. For example, Kohl-
berg (1969), has claimed that moral development can be facilitated by
providing persons with experiences of conflict or disequilibrium and then
exposing them to the type of reasoning common to the next higher stage of
development.

A Developmental Curriculum for Student Teachers

Glassberg (Note 5) builds on Kohlberg's "practical" suggestion in designing
a student teaching curriculum. She claims that the curriculum evolved through

the translation of cognitive-developmental constructs into educational

practices. The central elements of the curriculum include role-taking,

reflection,and support, all of which are justified from a developmental

perspective.

The student teacher role can create disequilibrium by confronting

student teachers with problems that challenge their ways of thinking.

(A parallel explanation may be appropriate for experienced teachers

undertaking a major change in their teaching.) Student teaching

certainly entails a major role-shift from that of college student

and carries increased responsibility. In addition to the inevi-

table disequilibrium and role-taking built into student teaching,

Glassberg added a second role, peer supervisor, which requires student

teachers to help analyze the teaching experience of their peers as well

as themselves.

Through a structured curriculum in peer supervision, student

teachers learn skills to carry out this new role. The same skills

(role-taking, empathic responding, interaction analysis, personal re-

flection and so on), when practiced in their classrooms, were considered

useful tools for "facilitative" teaching and a means of promoting the

student teachers' psychological development.

That development is defined in terms of those domains for which cognitive-

developmental theories exist. Professional development is viewed as an

aspect of ego, moral, and cognitive development. This is reflected in the

stated objectives of Glassberg's curriculum: (1) development of a more complex,

differentiated, and integrated understanding of self and others; (2)

growth toward principled autonomy; and (3) development of more complex

ethical reasoning.

Assessment of Developmental Growth of Student Teachers

Glassberg used three formal pre/post measures to assess developmental change in her students. Rest's Defining Issues Test gave an estimate of ethical development. Loevinger's Sentence Completion Test gave an estimate of personal development. Rotter's Internal-External Locus of Control Scale gave an estimate of the individual's perception of the relationship between behavior and the events which follow.

Seventeen of the 23 student teachers in her experimental group (peer supervision seminar) showed a positive stage change and 94% of the upward movement was one stage higher. Experimental subjects also increased in their use of principled moral reasoning and shifted from an external to a more internal locus of control. From these results Glassberg concludes: "It appeared that the role-taking opportunities students experienced as they assumed the role of 'teacher' and 'peer supervisor' in a supportive environment which encouraged reflection and integration of experiences promoted higher levels of ego development" (Glassberg, Note 5, p. 15).

Glassberg does offer a final caveat which indicates her awareness of the limitations of cognitive developmental theories in helping educators devise specific instructional strategies. In the final analysis, she credits the instructor's sensitivity in maintaining a dynamic relationship between challenge and support, "simultaneously affirming and stimulating students as they examined themselves in new and challenging roles" (Glassberg, Note 5, p. 16).

While cognitive-developmental constructs may offer an adequate framework for thinking about teacher development, they cannot help a teacher educator decide when and how to intervene. That takes a

pedagogical rather than a developmental theory. As shall be shown in the next section, articulate practitioners who work out of a developmental framework have given consideration to such a theory.

A Developmental Justification of Practice

The third approach to teacher development includes a set of ideas about professional learning and the conditions necessary to support it, and a range of strategies for working with teachers. While the practices and their rationale are not entirely new, they do represent an alternative to conventional views and formats. Advocates draw support from varied sources, including developmental psychology; however, the crux of the orientation depends on a commitment to certain beliefs and values. Developed by practitioners in the field, the approach has not been the subject of much empirical research to date. We focus on teacher centers and advisory programs as a concrete embodiment of the third view of teacher development.

Background and Underlying Premise

Since the early 1970s, a group of American educators has developed the idea of a small, informal workplace where elementary teachers can come on their own initiative to work on curricula for their classrooms. Kathleen Devaney (Note 9), director of the Teachers' Centers Exchange[3] calls them "teachers' centers" to emphasize "voluntary self-programming by teachers as they seek what they need and share what they do well."

Often the staff includes advisors who go out to help teachers in their schools. As former classroom teachers, advisors view their job

_____

[3]The Teachers' Centers Exchange is an information and referral center and a facilitator for a national network of teacher centers. It is supported by the National Institute of Education's School Capacity for Problem Solving Group and located at the Far West Laboratory for Education Research and Development in San Francisco, California.

as "stimulating, supporting and extending a teacher in her own direction of growth, not implementing a new instructional model or strategy" (Devaney, Note 7, p. 151).

Many of these grass-roots centers were inspired by curriculum projects of the 1960s that emphasized "active learning" and efforts by Americans to learn methods associated with English primary schools. While they differ in various ways—institutional setting, source of funding, program emphasis, scale of operation—they share the following premise:

> Teachers must be more than technicians, they must continue to
> be learners. Long-lasting improvements in education will come
> through inservice programs that identify individual starting
> points for learning in each teacher; build on teachers' motivation
> to take more, not less responsibility for curriculum and
> instruction decisions in the school and classroom; and
> welcome teachers to participate in the design of professional
> development programs. (Devaney, Note 7, p. 152)

This premise implies a view of the teacher as a person with the potential for professional growth and of an environment that can support continuing learning and change. These two conditions, which depart from traditional assumptions and approaches to inservice training, form the basis for "a developmental style of inservice."

Teachers' Potential for Professional Growth

The teacher is at the center of the educative process. Neither curricular packages nor organizational schemes can replace thoughtful decision making about the needs of particular children in a particular situation. If teaching becomes routine and teachers seem resistant to change, it may be less a comment on their motivation and potential and more a testimony to the way schools are organized and the absence of support for on-the-job learning. Lillian Weber (Note 8), director

of the Workshop Center for Open Education in New York, underscores this

basic faith in teachers' capacity to achieve a professional level of

practice.

> We found that the necessary decision-making activity of the
> teacher was submerged under the deluge of details connected
> with prescribed coverage, routines and control activities. But
> in our interaction with teachers...we presupposed that teachers
> could be intelligent observers and decision makers. This
> assumption that the individual teacher possesses strengths and
> possibilities is the basis of our work as advisors in support
> of teachers.(Weber, Note 8, p. 1)

Trust in teachers' initiatives for change and in their

choices about what will improve their teaching is bolstered by a view

of learning as "mental growth spurred from within" (Devaney, Note 3).

Teachers' centers-accept teachers own definitions of their learning

needs and rely on their intrinsic motivation for collegiality and

professionalism as incentives to participate.

> [Teachers' center leaders] feel confident that the homemade,
> helpful atmosphere of the teachers' center, featuring hands-
> on learning and peer teaching, can release the ingenuity and
> increase the self-confidence of those teachers whose problem-
> solving talent has not been nourished in conventional teacher
> education.   (Devaney, Note 7, p. 162)

A Developmental Style of Inservice

Devaney (Note 9) summarizes the essence of this approach with

four terms: warmth, concreteness, time, and thought. These terms offer

a succinct diagnosis of what centers believe teachers need to develop

and a short-hand description of what they seek to provide. A brief

elaboration further illustrates the blend of beliefs and values

that shape this approach.

Warmth. Teaching has been called a lonely profession. Many tea-

chers feel unsupported and ill-prepared to do the job expected of them.

Typically, teachers do not share their successes or their failures

with one another. Teachers' centers invite teachers to come in out of

the cold.   They offer a responsive, non-judgemental environment that

promotes sharing and a sense of community. "The essence of the

teachers' center's alternative style and setting," Devaney (1977, p. 25)

observes, "is in convincing the learner of his potential and responsibility

for growth. . . . The crucial element in teachers' learning is not a

diagnosis of deficiencies, but a conviction of capacity."

<u>Concreteness</u>. Education courses are not very practical and inservice

training rarely attends to the problem of local adaptation. Teachers need

ideas and materials they can actually use in their classrooms. They

also want help with their particular situation. "Concrete" refers to

the kind of hands-on, real-life curricular materials that teachers

explore and construct in teacher centers. It also implies a focus on

the specific and concrete in the teacher's work. In their study of

advisory support (classroom advising together with workshop activities

housed at a center), Bussis, Chittenden, and Amarel (1976) highlight

specificity as a distinguishing characteristic.

> Discussions take place about room arrangement, what might
> be done with a child who is unable to settle down, ways to
> extend mathematical concepts with pattern blocks, the pros
> and cons of a particular book or reading series, how to house
> a turtle. Whatever the nature of the exchange, it tends to be
> relevant to a specific teacher, a specific classroom or a
> specific group of children. Theoretical discussions may well
> ensue from encounters over specifics, but specifics are the
> concrete starting point. (p. 29)

<u>Time</u>. The curriculum reform movement of the 1960s underestimated the

time it takes to internalize new ways of working and to adapt new

curricula to a local situation. Genuine change takes time; long-

term growth comes from awareness of need which often emerges

in the process of trying something out. As problems arise, teachers

begin to see better what they need to know or be able to do. Teachers' centers structure activities to give teachers time to discover their needs and those of their students. Pat Zigarmi (1978) links this recognition of the importance of time with assumptions about the developmental nature of change.

> Leaders of teacher centers are aware that periods of high
> activity on the part of teachers alternate with periods
> of assimilation in which little apparent movement takes place.
> Because centers take this developmental stance...they have a better
> view of the amount of energy required for change and of how
> that energy can best be sustained over time.(p. 197-198)

Thought. Whereas most inservice programs reduce teaching to a techno-logy, center leaders reject the idea that teachers are technicians. Convinced of the complexity and seriousness of teaching, they believe that teachers must take more responsibility for curricular and instructional decisions and "eventually reach a state of development where they see the teaching act itself as a source of knowledge" (Devaney, Note 9, p. 21).

Increased responsibility requires increased understanding, especially about children's learning. Centers with a developmental orientation work to engage teachers in serious study of subject matter and children. Without this understanding, teachers may "open up" their classrooms to "fun activities" that are not educative.

The emphasis on thoughtfulness also implies a valuing of pro-fessional autonomy based on awareness and understanding. This is reflected in the goals of advisory programs as defined by Bussis, Chittenden, and Amarel (1976), who studied teachers' perceptions of the advising process.

Despite their different strategies and logistics, all the
advisory services shared the goal of helping teachers assume
a more thoughtful and active role in influencing the educational
environment.... Their ultimate aim was not to provide isolated
services or singular solutions to a particular problem, but to
provide a range of support that would enable teachers to
analyse situations and arrive at their own decisions. (p. 157)

Stages of Teacher Development

In this third approach, development is seen as an active,

self-regulating process, not something that can be engineered

by others. Also included is a general idea of the. environmental conditions

thought necessary to support it--warmth, concreteness, and thoughtfulness

over time. Professional growth is defined in terms of increased

responsibility for educational decision making.

Still, the literature under this approach says little about what

the process of development is actually like. Presumably a center committed

to teacher development has some ideas about (1) the kinds of teacher

beliefs or behaviors that indicate more or less developed modes of

professional functioning and (2) the kinds of activities that are most

appropriate given these developmental differences.

The notion of "stages" is part of the vocabulary of developmentally

oriented teacher centers. In summarizing what teacher centers do

well that traditional inservice programs cannot do, Pat Zigarmi (1978)

observes: "They provide teachers with individualized assistance, a

variety of resource materials and learning options, and different

kinds of assistance at various stages in the process of

development" (p. 203).

Descriptions of stages come mostly from advisors working in

classrooms with teachers. These advisors tend to characterize teacher

growth in relation to their own pattern of work and their developmental

goals.

Maja Apelman (1978), advisor at the Mountain View Center in Boulder, Colorado, sees advising as a way of helping teachers take final responsibility for the curriculum. "The teacher must become a diagnostician who observes the child, listens to the child...and then plans for the child's progress." From her work with teachers, she has identified three overlapping stages, each requiring a different kind of help. The beginning stage calls for practical help, since the teacher is concerned with classroom management and organization. (Note the similarity with Fuller's characterization of beginning teacher concerns.) At the second stage, "how-to" questions are directed toward the materials and activities that teachers have been exposed to at the Center. Because second-stage teachers are not struggling with survival, advisors must work within the existing framework of their classrooms and adapt to their personal styles. In the third stage, teachers realize they could do more to extend children's learning and need help with curriculum building. They have good classroom organization and plentiful materials. Children are interested and involved. Still, teachers are looking for greater depth and more continuity in children's work.

> When teachers have experienced learning in some depth at their
> own level, when they have solid knowledge of both child
> development and subject matter and can use it as a basis
> for their planning, they are ready to extend children's
> learning and build their own curriculum. (Apelman, 1978, p. 28)

This developmental pattern is similar to an earlier formulation by Lucy Sprague Mitchel, founder of Bank Street College where Apelman was trained and later taught. Mitchel (1950) describes stages of growth toward professional maturity in relation to a workshop conducted during the 1940's in several public schools. Here the influence of progressive educational ideas and practices on the developmental style

of teacher centers is shown.

The Board of Education had been revising the elementary curriculum in the direction of more active learning through direct experiences and Bank Street was asked to assist teachers in implementing the "new" curriculum. The workshop staff conceived of its job as on two levels: "to work with teachers on the basic relationships underlying curriculum thinking while working with them on the new teaching techniques around which their anxieties centered" (p. 142).

Two formats were considered most suited to fostering professional growth in an inservice setting: work with individual teachers in their class-rooms and group discussion. Mitchel (1950) justifies group discussion with developmental arguments familiar to teacher center advocates.

> Group discussions can bring about a sharing of the problems
> which teachers have in common in their work and break through
> a sort of wary isolation in which so many teachers work; they
> help extend a teacher's thinking about his job from his class-
> room to the whole school...This makes for the development of
> wider interests and wider responsibilities. This development
> cannot be hurried. It is not a thing that can be taught
> directly. It develops gradually at different rates and
> along different lines with different groups of teachers.
> Here a workshop must follow the leads of the teachers.
> (p. 386)

Mitchel relates teachers' initial preoccupation with how to use the "new" techniques to their attitude toward work. Basically, teachers saw themselves as responsible for carrying out official directives, but not for thinking for themselves. The first stage of professional growth was reached when teachers felt confident enough to try something new and not unduly upset if it did not work just right.

The second stage was marked by a desire to acquire more background content. At first, the staff supplied source materials which the teachers eagerly used. Gradually, they came to realize that they needed to know more to teach this way. This meant a growing appreciation for the variety

of sources that could enrich the curriculum and an acceptance of more

after-school work as part of their job.

Teachers' understanding and interest broadened along two lines--

subject matter and child development.

> We were leaving the stage of development that calls for
> the answers to the "just how do we" questions and taking
> our thinking into the realms of "why do we do what we do "
> in terms of our understandings of children's growth and,
> development.

When the two lines merged in a concept of curriculum building, the

third stage had been reached.

Mitchel adds a fourth stage when teachers see the relation between

their work and the world outside the school and feel they are engaged in

a socially important and intellectually simulating profession.

Developmental Pattern of Work

Similar developmental patterns emerge from the only extensive study

of advisory programs to date. Bussis, Chittenden, and Amarel (1976)

conducted in-depth interviews with 60 elementary-school teachers who

were trying to diversify the curriculum move away from whole-class

teaching and create more internal relationships in their class-

room. The interviews focused on teachers' beliefs about children,

curriculum, and the work environment on the assumption that the quality

and quantity of decision making depends on teachers' understanding of

children and curriculum, and the degree of institutional support. Forty-

six of the teachers were participating in some form of advisory program

and one section of the interview focused specifically on the kinds of

support they received from advisors.

Teachers' responses were coded in two ways: (1) according to the

type of activity that the teacher perceived the advisor to be engaged

in and (2) according to the degree of supportiveness experienced by the

teacher. Twelve categories of support were identified:

Advisors perceived as...

1. Service and Administrative Agent
2. Extention of Teachers (helping hand...)
3. Emotional Stabilizer and Stimulator
4. Respector of Individuality
5. Stage Director and Demonstrator
6. Diagnostician and Problem-solver
7. Provider of Alternatives
8. Explainer and Theorist
9. Modeling Agent
10. Appreciative Critic and Discussant
11. Provocative and Reflective Agent
12. Leader and Challenger

(p. 144)

These categories are placed on a continuum to show "a progression

from what is basically a consumer orientation...to a more active role

by the teacher in terms of self-investment, critical judgment, inference,

conceptual reorganization" (p. 157). The researchers use the concept of

"mediation" to characterize teachers' stances toward advisory support, how

they "use" what the advisor has to offer. For example, the three cate-

gories concerned with how teachers perceived advisors' work with children

(Extension of Teacher, State Director and Demonstrator, and Modeling

Agent) fall into different groupings along the mediation continuum. The

first is considered a form of external support and therefore not mediated

or internalized in any way. The second falls into a grouping character-

ized as minimally mediated—the teacher takes in the idea or behavior

only in the sense of being able to remember and communicate it. The

third category, modeling, is part of a grouping of maximally mediated

categories. Here the teacher's response seems to indicate that she has

"given 'shape' to the ideas and thoughts that came out of an interaction

with the advisor and...made those ideas and thoughts her own" (p. 159).

The categories of support at the far end of the continuum refer to intellectual activities associated with the long-range goal of advising: "helping teachers assume a more thoughtful and active role in influencing the environment," and enabling teachers "to analyze situations and arrive at their own decisions about problems and their solutions to them" (p. 156). Teachers whose perceptions are coded in these categories have "a higher mediation index" than teachers whose perceptions are coded in categories at the opposite end of the continuum.

Does this mean that they are functioning at a "higher" level of professional development? The researchers deny the existence of any normative standards by which to judge what is "high" or "low" mediation for teachers in general. They do, however, suggest that receptivity to advisors and mediation of support appear to be linked to understandings of curriculum and children that parallel the philosophy of open education. That philosophy is operationalized in a set of coding schemes that the researchers view as "the most important outcome of the study" (p. 48).

Advisors were most helpful to teachers who could see connections between their learning priorities for children and the "surface curriculum" of their classroom, and who were experimenting with activities and materials responsive to children's interests. Advisors were least helpful for teachers whose goals for children were mainly "grade level facts and skills" and "good school behavior" and who had not been experimenting much with their surface curriculum.

What accounts for these differences? The researchers suggest that the answer partly resides in teachers' understanding of children and child development. Is it not likely that Witherell, whose research we examined in the second part of this paper, would speculate that teachers

in the first group were more advanced in measures of psychological development? A number of the coding schemes suggest parallels between the ideology of open education and theories of (ego) development.

Conclusion

At least three distinct approaches to teacher development exist in the educational literature. One indication of their distinctness not discussed earlier is the lack of references across approaches--a paper classified as belonging to the first approach is highly unlikely to make any reference to literature in the other two approaches. The superficial similarity in vocabulary, combined with the different interpretations of that vocabulary, is bound to confuse educators and researchers trying to understand the significance of the switch from teacher education and training to teacher development.

Which approach to teacher development should a teacher educator or educational researcher adopt? What value is there in the switch to developmental rhetoric? What problems will this shift carry with it? We have only hinted at some of the strengths and weaknesses of these three approaches. We have not considered in detail questions about the adequacy of developmental models for describing differences among teachers or changes undergone by a single teacher. Nor have we addressed the difficult questions about the mechanisms for change implicit in these approaches and the consequent implications for designing programs to foster teacher development. We have not considered whether, indeed, teacher development, as conceived in these approaches, is something that should be fostered.

We plan to extend our analysis of these approaches in future work, touching on some of the points listed above. We hope that this paper

will assist others in critically approaching the growing literature on

teacher development,and that proponents of each of the three approaches

will profit from a comparison of alternatives.

Reference Notes

1. Sprinthall, N. Adults as learners: A developmental perspective. Paper presented at invitational conference on exploring issues in teacher education research, Research and Development in Teacher Education Center, University of Texas at Austin, 1979.

2. Heath, D. Toward teaching as a self-renewing calling. Paper presented at invitational conference on exploring issues in teacher education research, Research and Development Center for Teacher Education, University of Texas at Austin, 1979.

3. Devaney, K. On delivering staff development. Staff Development Newsletter, Winter 1978, Austin, Texas: Professional Development Associates.

4. Fuller, F. Personalized education for teachers: One application of the teacher concerns model. Research and Development Center for Teacher Education, No. 2314, University of Texas, Austin, Texas, 1970.

5. Glassberg, S. Student-teaching supervision: Designed, implemented and evaluated from a developmental perspective. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada, 1978.

6. Fuller, F.F., Peck, R.F., Bown, O.H., White, M. & Garrard, J. The influence of psychological feedback on empirically derived covert professional concerns of student teachers. Austin, Texas: Research and Development Center for Teacher Education, University of Texas, 1967.

7. Devaney, K. Mapping new territory. In K. Devaney (Ed.), Essays on teachers' centers. San Francisco, Ca.: Teachers' Center Exchange, Far West Laboratory for Educational Research and Development, 1977, pp. 149-179.

8. Weber, L. Letter from the director. NOTES. New York: Workshop Center for Open Education, City College, Spring 1977.

9. Devaney, K. Warmth, concreteness, time and thought in teachers' learning. In K. Devaney (Ed.), Essays on teachers' centers. San Francisco, Ca.: Teachers' Center Exchange, Far West Laboratory for Educational Research and Development, 1977, pp. 13-27.

References

Apelman, M. A permanently tentative curriculum. In R. Edelfeldt and
E. Brooks (Eds.), Breakaway to multidimensional approaches:
integrating curriculum development and inservice education.
Washington, D.C.: Association of Teacher Educators, 1978.

Bussis, A, Chittenden, E., & Amarel, M. Beyond surface curriculum:
an interview study of teachers' understandings. Boulder, Co.:
Westview Press, 1976.

Flavel, J. Cognitive development. Englewood Cliffs, N.J.: Prentice-
Hall, 1977.

Fuller, F. F. Concerns of teachers: a developmental characterization.
American Education Research Journal, 1969, 6:(2), 207-226.

Fuller, F. F., & Bown, O. Becoming a teacher, In K. Ryan (Ed.),
Teacher education., The Seventy-fourth Yearbook of the National
Society for the Study of Education, Part II., 1975.

Gabriel, J. An analysis of the emotional problems of the teacher in the
classroom. London: Angus and Robertson, Ltd., 1957.

Jackson, P. W. Life in classrooms. New York: Holt, Rinehart and
Winston, 1968.

Katz, L. Developmental stages of preschool teachers. Elementary
School Journal, 1972, 73, 50-54.

Kohlberg, L. Stage and sequence: the cognitive-development approach to
socialization. In D. Goslin (Ed.), Handbook of socialization
theory and research. Chicago: Rand McNally & Co., 1969, 347-480.

Lieberman, A. & Miller, L. Staff development: new demands, new
realities, new perspectives. New York: Teachers College
Press, 1979.

Loevinger, J. Ego development. San Francisco, Ca.: Jossey-Bass,
1976.

Maslow, A. Motivation and personality. New York: Harper & Row, 1954.

Mitchel, L. Our children, our schools. New York: Simon and
Schuster, 1950.

Sigel, I. Constructivism and teacher education. The Elementary
School Journal, May 1978, 78:(5), 333-338.

Witherell, C., & Erickson, L. Teacher education as adult development.
Theory Into Practice, June 1978, 18:(3), 229-238.

Zigarmi, P. Teacher centers: a model for teacher-initiated staff
development. Teachers College Record, September 1978, 80:(1),
172-187.