Three approaches to teacher development are: (1) attempts to construct a developmental theory; (2) efforts to apply existing developmental theories; and (3) inservice practices justified in developmental terms. Goals and strategies are connected with different uses of the term "development" in teacher education. Associated with efforts to construct theories of teacher development is a diagnostic-prescriptive approach to staff development. It is important to match the teacher's needs and to diagnose the teacher's current stages of development in order to understand how to proceed. A second model, derived from existing developmental theories, is built around creating a mismatch between the teacher's current stage of development and the desired stage of development. A third concept emphasizes certain enabling conditions that support self-directed learning. Teachers need to attain a certain level of psychological maturity in order to foster developmental growth in their students.
Approaches to Staff Development from Conceptions of Teacher Development

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(Since these papers were delivered, many of the ideas presented have been expanded in the following papers:


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Abstract

The current rhetoric of inservice education appears to favor a developmental point of view and there is growing interest among researchers in teacher development. In a previous paper, the authors identified three approaches to the use of developmental concepts in teacher education research and practice. Here we examine inservice activities recommended or implied by these three approaches, paying particular attention to the grounds (logical and/or empirical) for believing they will be effective. In assessing the underlying rationales, we draw on critiques of developmental theory and practice in other fields.
Introduction

Current interest in teacher development and staff development may reflect a new orientation to teacher learning. Just as the child centered movement in education was partly a response to previous authoritarian patterns, so this change to a developmental perspective may be partly a response to the restriction of teacher education to formal preparation and the further narrowing to explicitly defined skills and competencies.

Despite the current attraction of developmental rhetoric, no unified perspective guides research and practice. Teacher educators use the term "development" to mean various things; researchers study the process from different vantage points. More to the point, people are recommending that inservice programs meet the developmental needs of teachers and be evaluated in terms of their contribution to professional development. The fact is, they have in mind different notions of teacher/staff development and often seem unaware of the existence of alternative views.

In a review of the developmental literature in teacher education (1980), we identified three approaches to teacher development. The first involves attempts to construct a developmental theory. The basic question is: How do teachers change over time? The application work of Gene Hall based on Frances Fuller's theory of teacher concerns provides an illustration. The second category involves efforts to apply existing developmental theories. The basic question is: Can developmental constructs offer guidance in designing interventions? The Developmental Education Program at the
University of Minnesota offers some inservice examples. The third category contains descriptions of inservice practice justified in developmental terms. The basic question is: How can teacher growth be fostered? The grassroots teachers' center movement with associated advisory services offers a contemporary expression of this point of view.

This paper examines approaches to staff development associated with these different conceptions of teacher development. It is part of a larger inquiry of the goals and strategies connected with different uses of the term "development" in teacher education. More specifically, the paper addresses the following questions: (1) What staff development activities are recommended or implied by different conceptions of teacher development? (2) What are the grounds for believing these interventions will be effective? (3) How adequate are the arguments and the empirical evidence?
Interventions Derived from Constructed Theories of Teacher Development

Associated with efforts to construct theories of teacher development is a diagnostic-prescriptive approach to staff development. Whether the client is a first year teacher struggling to survive or an experienced teacher trying to master a new science curriculum, the advice is the same: match the intervention to the teacher's current needs.

One application of Fuller's work on teacher concerns is the Concerns-Based Adoption Model which focuses on the process of implementing innovations. According to the model, teachers trying to adopt an innovation will change along two important dimensions: (1) in the concerns they have about the innovation; (2) in their skill and sophistication in using it. If persons responsible for facilitating change can diagnose teachers' Stages of Concern and Levels of Use they can plan appropriate interventions to resolve diagnosed needs (Loucks & Hall, 1977).

The concerns dimension is generalized from Fuller (1969), and follows the same progression from self-oriented concerns to concerns about the teaching task to concerns about impact on students. Impact concerns are considered the most desirable; however, the developmental rationale implies that interventions should address those concerns which the teacher feels most intensely. For example, in dealing with non-users, Hall and Loucks (1978) advise playing down the consequences of an innovation for students. "The often heard administrator's statement, 'You should do this because it's good for the kids' does not address the concerns of the typical nonuser" (p. 45).

While Stages of Concern describe teachers' thoughts and feelings about an innovation, Levels of Use describe what the teacher is actually doing. The levels move from non-use, through mechanical and routine use, to refinement, integration and renewal. Again, training should match the
individual's level. Routine use is clearly valued over lower levels, but higher levels may not be strongly preferred if, in adopting an innovation, the teacher actually transforms it into something quite different from what the developer intended.

The degree of transformation is described in terms of the configuration of the innovation. The ideal configuration matches the developer's model which means that the developer must be very clear about exactly what the fully implemented innovation should look like. (This seems to put the emphasis on "adoption" not "adaptation").

Studies by Hall and others (Hall & Loucks, 1977; Zigarmi, Goldstein & Rutherford, 1978) document the difficulty of moving teachers beyond management concerns and routine use. Two or more years after an innovation has been introduced, 50% of the users still tend to remain at Level IVA where a routine pattern of use is established, and little preparation or thought is given to improving the innovation or its consequences.

The researchers hypothesize that movement toward higher stages is developmental, but the explanation of how this transition takes place is rather vague:

With continued use, management becomes routine and the user (teacher or professor) is able to direct more effort toward increased effectiveness for the clients (learners) and integrate what (s)he is doing with what others are doing. Obviously, these advanced levels of use are not attained merely by use of the innovation through several cycles. Experience is essential but not sufficient to insure that a given individual will develop high-quality use of an innovation. (Hall, Loucks, Rutherford, Newlove, 1975, p. 52)

Without a clearer understanding of what facilitates or produces movement, it would be hard to know what kind of intervention to design. The general prescription of matching intervention to level or use seems problematic in relation to higher levels.
In a parallel vein, Fuller discusses the difficulty of moving preservice students from concerns with self-as-teacher to concerns with pupils. This transition to concerns about pupils is difficult because it involves affective changes: changes in feelings, attitudes, behaviors, goals. Such changes are notoriously difficult to accomplish. At the same time, this transition is probably the most important single, professional gain the teacher ever makes. (1970, p. 19)

How does it come about? Fuller offers a number of postulates which suggest an approach to intervention that differs from the straightforward matching of intervention to concern derived from the Concerns-Based Adoption Model (CBAM).

According to her developmental formulation, "when earlier, less mature concerns have been resolved, more mature concerns will either emerge spontaneously or they can be aroused" (1970, p. 6). Concerns about pupils are more mature than concerns about self because they are characteristic of more effective and experienced teachers. To move education students from concerns about themselves toward concerns about pupils, three conditions are necessary: concerns must exist, they must be known and they must be resolved. "In summary, concerns become more mature through a process involving assessment, arousal, awareness and resolution of concerns" (1970, p. 6).

Several procedures, formal and informal, have been developed for assessing concerns. If concerns do not exist, Fuller suggests ways of arousing them. For example, she describes a strategy for arousing teaching concerns in undergraduate education students preoccupied with self concerns. Almost the first experience provided for education students in the Personalized Teacher Education (PET) Program is a brief, videotaped teaching experience. Students are plunged into the classroom for the first day of the school year and almost immediately they are required to teach a fifteen minute lesson which is videotaped. This confrontation does not allay their concerns about
themselves, but it certainly arouses concerns about the realities of teaching that they did not have before.

Whether concerns are assessed or aroused, the data still needs to be presented in a useful and focused way so that teachers can become aware of their import. One approach is to focus on discrepancies among various sources of information—self report, observation, expert opinion. In the case of information about the teacher herself, the focus should always be on remedial aspects rather than relatively unchangeable ones.

Awareness is a precondition for meaningful action. The teacher and teacher educator explore alternatives, choose appropriate activities, monitor movement toward mutually agreed-on goals.

This application of the teacher concerns model involves more than diagnosing present concerns and providing a treatment to match. Perhaps awareness and/or arousal-type activities could help move inservice teachers beyond routine levels of use and management concerns. Just because management concerns are stronger, does that mean a teacher is incapable of thinking about impact concerns? If we let teachers' present concerns limit the content of an intervention, we may be impeding the very changes we want to facilitate. It makes good sense to diagnose teachers' concerns and to take them into account in designing an intervention. As we shall see, all the approaches to staff development recommend some form of needs assessment though there are important differences. Still, if we are trying to facilitate teacher development not just adoption we may need to do more than match the treatment or intervention to the present symptoms. Even if teachers find worthwhile only those activities that seem directly relevant to their present needs, that is not a sufficient condition for their being worthwhile.

Interventions Based on Applications of Existing Developmental Theories

A different approach to staff development emerges from efforts to apply
existing developmental theories. Whereas constructed theories of teacher development are associated with a matching strategy, applications of existing theories are associated with a mismatch strategy designed to create disequilibrium. It is still important to diagnosis the teacher's current stage of development, because that tells us where to begin. The kinds of experiences which follow, however, are not so much intended to meet existing needs as to stimulate movement to a higher stage.

Norman Sprinthall and his students at the University of Minnesota have designed developmentally oriented programs for preservice and inservice teachers based on previous work with children and adolescents. Their work with teachers rests on the assumption that teachers must attain a certain level of psychological maturity to foster developmental growth in their pupils.

Teacher development is considered a form of adult development and defined by the theorists invoked: Dewey, Piaget, Kohlberg, Loevinger, Hunt. Their theories are presented as different ways of looking at the same general movement toward greater complexity and more perspective-taking. It is assumed that this movement proceeds through an invariant and irreversible sequence of stages, with each stage building on the previous one. Higher stages of development are linked to more effective teaching which is defined in terms of indirectness, flexibility, empathy, the ability to take multiple perspectives and use various teaching strategies.

In outlining a developmental approach, Sprinthall (1979) stresses the need for a balance between role-taking and reflection, challenge and personal support over time. All the training studies have some version of these elements which are justified in developmental terms.

Role-taking requires the person to perform a new and somewhat more complex interpersonal task than usual. Glassberg (1978) incorporated peer supervision
into a developmental student teaching program which offered opportunities for role-taking, empathic responding and personal reflection. Hurt (1976) trained inservice teachers in the principles of counseling psychology which included active listening, attending to non-verbal cues, doing peer counseling. Presumably, learning to be a counselor or a supervisor and actually counseling or supervising one's peers involves taking on a new and comprehensive role. Glassberg (1978) summarizes the rationale in the following way: "Role-taking opportunities and experiences which create disequilibrium are instrumental in developmental growth...The role shift from college student to classroom teacher and peer supervisor was intended to create disequilibrium and to 'stretch' students' thinking about themselves personally and professionally" (p. 6).

The second element in this developmental approach is reflection. Following Dewey, Sprinthall argues, that experience is necessary but not sufficient to promote growth. We must also learn from our experiences by careful and continuous analysis and reflection. Clinical experience at Minnesota suggests that most people must be taught how to ask questions and look at their experiences from various perspectives. Erickson and Eberhardy (1978) describe a staff development program which sought to balance experiencing and reflecting. During a five week summer workshop, teachers learned role-taking theory and then practiced using empathy in perspective-taking sessions. Various developmental theories and related curricula were also presented. Teachers then contracted to develop mini-units that would deliberately promote psychological growth in their pupils. These units were tried out during a supervised fall practicum.

Because developmental growth means giving up old and familiar ways for newer, more complex ones, it not only takes time, it can also be quite difficult. Here Sprinthall invokes the Piagetian notion "that development involves the
process of upsetting or upending one’s current stage (and state of equilibrium)” (n.p). Since significant professional growth can be painful, personal support is a necessary ingredient in an effective instructional model. Glassberg (1978) emphasizes the teacher educator’s role in simultaneously affirming and stimulating student teachers. “It is crucial to attend to the dynamics of challenge and support which were continually stressed in facilitating ego development” (p. 16).

How development occurs is directly related to how teacher educators might intervene in that process. Unfortunately, as Kuhn (1979) points out, both the theory and the empirical research on stage transition are vague. The theory of "equilibration," Piaget’s term for the process by which developmental change occurs, can be interpreted in two ways. According to the "optimal mismatch theory," occasions for developmental change occur when an individual is confronted with materials at a slightly more advanced structural level than his existing one. According to a stricter constructivist view, the individual literally constructs more advanced structures to resolve the disequilibrium created by lower-stage functioning. The source of developmental change is internal conflict rather than external stimuli.

In the Minnesota training studies, the first interpretation generally prevails. “If we know the qualities of the next stage of growth,” Erickson and Eberhardy write (1978), we can match or 'constructively mismatch' curriculum experiences to help persons organize concepts at the next higher stage” (p. 21). There is no explanation, however, of why the particular experiences in a given intervention were chosen. Presumably role-taking opportunities were supposed to promote growth toward greater complexity. But it is not clear how the instructor determined that being a peer supervisor or counselor represented an appropriate mismatch for the participating (student) teachers.

Did the Minnesota studies induce structural changes? Some statistically
positive results were obtained. The problem of external validity, however, makes their interpretation unclear. If teachers are taught Kohlberg's theory of moral development, is it surprising that they exhibit higher levels of moral reasoning on Rest's Defining Issues Test? The real question is whether they now think differently about moral dilemmas in their professional and personal lives. It seems possible that a teacher could learn the skills of empathic listening without necessarily making a fundamental psychological change.

Perhaps good teaching is being confused with effective techniques for inducing structural changes. Helping teachers reflect on their experience and providing personal support during change may be effective practices regardless of the developmental status of the learner. In fact, these elements are part of the "developmental style of inservice" associated with the third conception of teacher development we have identified.

A "Developmental Style of Inservice"

The third approach to staff development rests on a view of education as a process of growth. The growth or biological metaphor is sometimes contrasted with a technological metaphor associated with the delivery of skills to teachers through inservice training. According to Devaney (1978), one spokesman for the third approach, the delivery style of inservice is rejected by educators "who hold a view of children's and adults' learning as mental growth spurred from within" (n.p. underlining added).

Following Devaney, we call this third approach a "developmental style of inservice" because it is essentially a way of working with teachers informed by a point of view about professional learning, not a set of strategies derived from a particular theory. In fact, it is sometimes difficult to tell when "teacher development" refers to a set of guidelines for working with teachers and
when it refers to changes teachers undergo. Advocates draw support and
guidance from many practical and theoretical sources, including Dewey
and Piaget. Still, a large part of the justification seems to be—if this
is a good way for children to learn, why shouldn't it also be good for
teachers. We focus on teachers' centers and advisory programs as contemporary
expressions of this teacher-centered way of working.

The parallel between child-centered and teacher-centered learning is
deliberate. In both cases, practice is governed by the inner potential
of the learner, stimulated and supported by appropriate external conditions.
Devaney (1977), characterizes the essence of a teachers' centers alternative
style and setting as "convincing the learner of his potential and
responsibility for growth" (p. 25). Lillian Weber (1977), Director of the
Workshop Center for Open Education, underscores this basic faith in
teachers' capacity to achieve a professional level of practice:

...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 (p. 1).

Teachers' centers accept teachers own definitions of their learning needs
and rely on their intrinsic motivation for collegiality and professionalism
as incentives to participate.

Complementing this view of the learner is a conception of the teacher
(or teacher educator) as a careful observer, looking for signs of readiness
and interests, taking cues from the students. There is some ambiguity about
whether this process criterion is an end in itself or a means of helping
teachers grow into that role. Certainly responsiveness to teachers' self-
defined needs is precisely what distinguishes teacher centers from other
kinds of staff development programs, as Pat Zigarmi (1979) points out:
In order to be responsive to and supportive of teachers’ perceptions of their own needs and to allow responsibility to remain with the teacher, a teacher center can have no agenda of its own, which is in sharp contrast to many staff development programs that incorporate district, building-level, or curriculum objectives as their own (p. 202).

It also characterizes the on-site work of advisors. Formerly classroom teachers, advisors view their job as "stimulating, supporting, and extending a teacher in her own direction of growth, not implementing a new instructional model of strategy" (Devaney, 1971, p. 151). But some advisors adopt this way of working in order to get teachers to take final responsibility for the curriculum. Maja Apelman (1978), advisor at the Mountainview Center in Boulder, Colorado writes: "The teacher must become a diagnostician who observes the child, listens to the child...and then plans for the child's progress" (p. 22).

If one assumes that the teacher has the potential to develop and that the teacher educator should follow the teacher’s lead, then it becomes increasingly important to provide the right conditions where teachers are comfortable expressing their needs and pursuing activities that meet their purposes. In this context, needs assessment is a process of learning from actions initiated by the teacher, not a matter of administering a survey.

Devaney (1972), names four enabling conditions -- warmth, concreteness, time and thought—which offer a summary of what center believe teachers need in order to develop and what they try to provide. These requirements, briefly described below, are not derived from developmental theory although they are compatible with certain "developmental" ideas such as "self-directed learning" in a "stimulating environment." Rather, they reflect a view of the realities of teaching, the diversity of teacher needs and the conditions that support learning in children and adults.
Teaching has been called a "lonely profession." Many teachers feel unsupported and ill-prepared to do the job expected of them. Teachers' centers offer a responsive, non-judgmental environment that promotes sharing, a sense of community, and support for the risks of change.

"Concrete" refers to the kinds of hands-on, real-life curricular materials that teachers explore and construct in center workshops. It also implies a focus on the specific and particular in the teacher's work. Needs and interests are identified by observing teachers' concrete choices; with support from advisors, teachers practice decision-making around the specifics of their own situation.

Change takes time; long-term growth comes from awareness of needs which often emerge in the process of trying something out. Teachers' centers structure activities to give teachers time to discover their needs and those of their students.

Convinced of the complexity and seriousness of teaching, centers believe 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, 1977b, p. 21). Increased responsibility requires increased understanding, especially about how children learn. Centers with a developmental orientation work to engage teachers in serious study of subject matter and students.

In a general way, the focus on students resembles Fuller's impact concerns, but there are two important differences. For one thing, Fuller does not differentiate among impact concerns. Presumably, a teacher concerned about getting the class to master grade level facts and skills would be at the same stage of development as a teacher concerned about helping children learn to value diverse areas of knowledge. In contrast, the literature on teachers' centers implies that close observation of children and increased
understanding of how they learn should lead to more diversified learning opportunities and greater faith in children making appropriate choices about their learning.

The second difference relates more directly to intervention. If, as Fuller theorizes, later concerns cannot emerge until earlier concerns are resolved, one is tempted to set aside any pupil-related considerations until the teacher has resolved self or teaching concerns. On the other hand, an advisor working with a teacher would look for ways to focus attention on children's actions, while attending to the teacher's self-defined concerns. Weber (1972) describes how advisors in the Open Corridor Program began by helping teachers reorganize their classrooms and study its effects:

As a starting point, the advisor helps each teacher with her first projection for reorganizing her classroom, which is indeed the focus of the teachers' interest. The first changes should allow a teacher to observe her children's use of the environment and suggest even further changes (p. 3).

A common practice is for advisors to work with children in the classroom alongside the teacher. One advisor describes the intent of her "modeling" in the following way:

I am not giving a demonstration lesson. The 'how-to' aspects are played down. The focus is on how particular children learn and respond rather than how I am teaching (quoted in Thomas, 1979, p. 8).

Of course, there is no guarantee that the teacher will observe the modeling in the same spirit. There is evidence that teachers perceive the same advising behavior in different ways (Bussis, Chittenden, Amarel, 1976) and advisors acknowledge a tension between what teachers ask for and what they would like to see teachers doing (Thomas, 1979). A major dilemma in advising comes from the desire "to induce high quality classroom practice..."
and the commitment to strengthen the initiative, individuality, and autonomy" of the teacher (p. 9).

What ideas associated with this "developmental style of inservice" can help the advisor decide on the best way to support the teacher's development? As we noted, the underlying view of teacher development emphasizes the teacher's own activity in an environment rich in opportunities for self-directed learning. "The teacher learns in much the same way as a child learns," writes Kristin Field (1979) of the Brookline Teacher Center, "through active manipulation and participation in her environment" (p. 26).

This tends to misrepresent the role of the center staff who must still create the environment within which self-directed activity takes place. It also gives the impression that the advisor approaches the teacher unguided by clear preferences. The fact is, "advisors face complex, never-ending decisions about how much, how often, and specifically what kind of support to offer (Thomas, 1979, p. 8). Only when we acknowledge this inescapable responsibility can we look at it and examine its criteria.

We are also left with only the vaguest idea of what self-directed activity is and why and how it leads to fundamental changes in teachers. Are we referring to cognitive as well as physical activity? If so, what is the teacher constructing in her mind, and how does that come about? In other words, what makes a teacher see the inadequacy of old ways and reach out for new ones?

In general, the teacher center and advisory literature has more to say about what advisors do and what centers are like than about what goes on in teachers' heads as they participate in center activities or work closely with an advisor over time. That kind of data would not only be useful
in evaluating the effects of these interventions. It would also help clarify the mechanisms of change on which the "developmental style of inservice" rests.

Summary and Conclusions

We have identified three approaches to staff development based on different conceptions of teacher development. The first, associated with "constructed" theories of teacher development, uses a diagnostic-prescriptive approach to match the intervention to the teacher's current concerns. The second, derived from existing developmental theories, is built around a disequilibrium model that seeks an optimal mismatch between the teacher's current and desired stage of development. The third, based largely on practice rooted in a growth ideology, emphasizes certain enabling conditions that support self-directed learning.

Despite their differences, all these approaches emphasize certain aspects of teacher education generally underestimated in conventional programs and approaches. For one thing, they acknowledge the reality of individual differences among teachers and the necessity of more individualized inservice opportunities. For another, they focus on changes in teachers over time which call for interventions and support spread over time. One-shot workshops and staff training without follow-up ignore this time dimension. Finally, they take into account teachers' present needs and interests in developing appropriate interventions. From the standpoint of motivation, it makes sense to focus on problems or topics salient to the teacher. Both preservice and inservice programs have long been criticized for "teaching against the tide."
Without minimizing the importance of taking teachers’ needs into account, there is a danger in confusing motivation and readiness. Seeing the relevance of an inservice activity to one’s own teaching situation is often an empirically necessary condition for finding the activity worthwhile. It might still be a trivial concern or an expression of a miseducative environmental influence. Too literal a match between request and response, too zealous a commitment to follow the teacher’s lead can set a ceiling on development and create expectations and habits that make it harder to move on. Just because teachers want answers to “how-to” questions does not mean one should avoid raising “why” issues.

Efforts to design interventions around existing developmental theories and concepts raise different problems. Structural developmental theories are currently undergoing considerable critical scrutiny (Kuhn, 1978) and some of the criticisms merit serious attention by teacher educators with developmental leanings. We have concentrated here on one major problem— that the theories are vague in exactly those places where educators need clarity and direction. Neither applied nor grounded theories of teacher development provide a clear explanation of the mechanism of change in teachers. What causes teachers to see the inadequacies of their own notions and either modify or change them? How do teachers interact with their environment in such a way that fundamental change occurs? What is self-directed activity and how do we recognize when teachers are engaged in it? Does the advisor help the teacher see the applicability of ideas and strategies the teacher currently possesses or does the advisor help teachers acquire new ideas and strategies? If the latter, what are the implications for a reliance on “development from within”?
While developmental theories may not provide the answers, teacher educators working closely with teachers over time are in an ideal position to study these questions and offer some insights about teacher learning in "natural" settings. Without a clearer understanding of the nature of self-directed learning and how it leads to change, we cannot substantiate the claim that the most appropriate inservice approach is one which enables teachers to choose and direct their own activities. Without descriptions of developmental processes as they occur in inservice settings, we have no firm basis for generalizing that strategies to promote stage advancement also promote professional development. Since theorist and practitioner need greater understanding of similiar questions, collaboration seems an appropriate strategy to refine theory and inform practice.

Finally, in our enthusiasm for developmental approaches, we should not ignore the role of explanation and instruction in teacher learning. Our task is not only to enrich teachers' sense of the possible, but to transform their understanding of it. That probably means finding a balance between support and challenge, a problem articulated in both the second and third approaches. Surely this is central to the art of teaching and we would probably learn more about how to do it by paying close attention to skillful and articulate teacher educators. To paraphrase Bruner (1966), unless a theory of teacher development is linked to a theory of instruction, in this case teacher education, it cannot offer much guidance to the field.
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2. There are three procedures for assessing teacher concerns. One is a quick scoring instrument, the Teacher Concerns Instrument (Fuller & Case, A Manual for Use with the Teacher Concerns Instrument. Austin: Research and Development Center for Teacher Education, University of Texas, 1970). The second is content analysis of the Concerns Statement (Fuller & Case, A Manual for Use with the Teacher Concerns Statement, Austin: R & D Center for Teacher Education, University of Texas, 1970). The third is informal clinical assessment by the instructor of student comments stimulated by discussion of the booklet, "Creating Climates for Growth" (Fuller & Newlove, Discussion Guide for "Creating Climates for Growth." Austin: R & D Center for Teacher Education, University of Texas, 1970.