The Ecology of Field Experience: Toward an Understanding of the Role of Field Experiences in Teacher Development.

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ABSTRACT
There continues to be a great deal of debate about the role that field experiences play in teacher development and about the relative contribution of various individual and institutional factors to the socialization process. Field experiences in teacher education entail a complex set of interactions among program features, settings, and people (the ecology of field experiences); research which seeks to understand the role of these experiences in teacher development must reflect, in its conceptualization and methodology, the dynamic and multidimensional nature of the event being studied. If one accepts this ecological viewpoint, then it becomes necessary to understand the influence of various interacting factors to understand the influence of any given factor. An understanding of three specific elements of this ecology is a necessary ingredient in studies of field experiences: (1) structure and content of field experience programs; (2) the characteristics of placement sites; (3) characteristics, dispositions, and abilities of individual students and their "significant others." The conceptualization of "development" in these studies needs to be broadened to include the documentation of actual actions and interactions and the investigation of unanticipated outcomes. (JMK)
THE ECOLOGY OF FIELD EXPERIENCE:
TOWARD AN UNDERSTANDING OF THE ROLE OF
FIELD EXPERIENCES IN TEACHER DEVELOPMENT

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One of the most persistent and important issues in teacher education concerns the question of what constitutes a good experience and/or a good placement (one that results in positive professional growth and the acquisition of desired teaching behaviors) for an individual. Yet, there is at present almost no research which has attempted to identify how, why or what specific kinds of experience do actually have demonstrably positive effects. Therefore, since field experiences are coming to assume a greater portion of the teacher education preparatory curriculum, and since field experiences have the potential of producing either desirable or undesirable effects in preservice teachers, then it becomes imperative that we begin to systematically address this issue if field experiences are to contribute positively to the production of competent and qualified personnel.

(Becher & Ade, 1982, pp. 24-25)
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Field Experiences in Teacher Development

For many years researchers who have analyzed the empirical literature related to field experiences in teacher education have consistently characterized the knowledge base related to the socializing impact of these experiences as weak, ambiguous and contradictory (Davies & Anershek, 1969; Perk & Tucker, 1973; Zeichner, 1980, Griffin et al., 1983; Feiman-Nemser, 1983). Today despite the existence of numerous individual studies which have demonstrated specific effects of field experiences on the development of some individuals under particular conditions, there continues to be a great deal of debate in our field about the role that field experiences play in teacher development and about the relative contribution of various individual and institutional factors to the socialization process.

For example, several researchers have argued (often with the support of empirical data) that biography and the personal characteristics of education students are the key elements in teacher socialization and that field experiences play little part in altering the course of development that is set prior to these experiences (e.g., Lortie, 1975; Mardle & Walker, 1980; Zeichner & Grant, 1981). On the other hand, many other researchers have argued (also frequently with the support of empirical data) that field experiences by themselves or in combination with particular types of courses do indeed have a significant impact on teacher development. There is a great deal of disagreement, however, among those who view field
experiences as potent socializing mechanisms as to the particular effects of these experiences, the particular socializing agents and mechanisms that play the most influential roles in affecting teacher development (e.g., see Tabachnick & Zeichner, 1983), and over the degree to which the dispositions, abilities and personal characteristics of individual education students influence the role of field experiences in teacher development (Mardle & Walker, 1980).

Several analyses have recently been completed which provide us with very detailed and comprehensive summaries of the results of specific studies that have examined the influence of either early field experience or student teaching on various aspects of teacher development. Samson et al's (1983) "Metaanalysis" of 38 studies on the effects of early field experiences on the attitudes of education students and McInerney's (1983) analysis of studies of the relationships between all varieties of field experience and teacher development are two examples of recent attempts to synthesize this literature. Without exception, those who have attempted to summarize what research has to say about the role of field experiences in teacher development, whether they conclude that these experiences are impotent or not, have raised serious questions about the ways in which this research has been conceptualized and conducted and have offered many specific proposals aimed at a major restructuring of the dominant research paradigm in this area.

Rather than attempting to provide yet another compilation of the findings of specific studies, this paper will focus instead on bringing together in one place some of the conceptual and methodological limitations which have been identified in relation to this body of research and will
offer a set of specific proposals based on these criticisms as to how research on field experiences can begin to move closer to providing us with the kinds of empirical data which will be useful for policy decisions. The general argument is that research to date has taken either too narrow or too broad a view of field experiences, too restrictive a view of teacher development (e.g., ignoring unanticipated outcomes) and that the failure of studies to attend to the complex, dynamic and multidimensional nature of settings and people, individually and in interaction ("the ecology of field experiences") is a major reason for the current unsatisfactory state of our knowledge base related to the influence of field experience on teacher development.

The Ecology of Field Experiences

Bronfenbrenner (1976) outlines what he considers to be the basic elements of the "ecology of education" and argues that educational research which seeks to understand how people learn in educational settings must attend to two sets of relations. First, research must be concerned with understanding the relations between the characteristics of learners and the surroundings in which they live and work (person-environment interactions). Second, research must investigate the relations and interconnections that exist between the various environments themselves (environment-environment interactions). This theme about the necessity for educational research to attend to the ecological characteristics of the learning process has frequently been reiterated by those who are concerned with the processes of teacher development (e.g., Doyle, 1977; Copeland, 1980; Zimpher et al., 1980). For example, Lortie (1973:488) concludes in his examination of "the riddle
of teacher socialization" that "the socialization of teachers is undoubtedly a complex process not readily captured by a single-factor frame of reference."

He calls for studies which assess the relative contribution of several agents or mechanisms under various conditions. Additionally, the work of Spencer-Hall (1982), Karmos & Jacko (1977) and Giroux (1980) underlines the importance of going beyond the immediate professional context in looking for sources of influence to investigate the contributions of various "non-professional" agents and factors to teacher development and the influence of the larger socio-political context in which both the personal and professional lives of teachers are embedded.

Others such as Fopkewitz, et al. (1979) and Tabachnick (1981) have added to this concern about attending to a variety of simultaneous influences on teacher development at several levels the concern that research must seek to investigate the processes of teacher development as they evolve over time. For example, Tabachnick (1981) characterizes experiences in teacher education as "dynamic social events" possessing the dual characteristics of "embeddedness" and "becoming" and feels that research on teacher development must seek to understand patterns of interaction between the intentions that participants bring to an event, the physical and social environments which exist during the unfolding of an event and the ethical-psychological environments that develop as individual participants create and give meanings to the patterns of interactions that occur. Tabachnick (1981) argues that the processes of teacher development will inevitably entail unanticipated as well as anticipated "outcomes" and that in order to understand both the event and the development of participants one needs to be able to document the evolution of an event.
Finally, the works of Lacey (1977), Doyle (1977) and Zeichner & Tabachnick (1983) emphasize the importance of viewing patterns of interaction and influence between and among participants and social contexts as reciprocal in nature. The studies of Nerenz (1980) and Rosenfeld (1969), empirically document that influence during field experience does not always follow predicted directions and that those with the least formal power (i.e., the teacher education students) sometimes exert influence over those who are supposed to be influencing them and over their settings in which they work. In summary, an ecological approach to research in teacher education requires that studies: (1) seek to understand the simultaneous influence of a variety of people and factors under particular environmental conditions and at several levels; (2) document the evolution of an experience and patterns of influence over time; (3) view influence in relation to teacher development as reciprocal in nature.

This ecological perspective toward research on teacher education has recently been set forth as a necessary ingredient in studies of field experiences. Consistent with Feiman-Nemser's (1983) general charge to researchers that they pay closer attention to the content and context of field experiences, Hersh et al. (1982) have outlined the basic elements that need to be considered in research which attends to the complex ecology of field experiences. Hersh et al. (1982) in defining the ecology of field experiences as "the complex set of relationships among program features, settings and people" argue that research on field experiences needs to investigate:
(1) The structure and content of a field experience program - This entails an examination of both the goals and substance of a program as viewed by program-designers and an understanding of how a program is actually implemented (its "curriculum in use").

(2) The characteristics of placement sites - This includes an examination of the classrooms, schools and communities in which field experiences are carried out.

(3) The relationships between education students and other people - This presupposes an understanding of the characteristics, dispositions and behaviors of both the students and those with whom they interact.

The extant literature on field experiences will now be examined in relation to these three ecological characteristics. The concern will be with how well researchers have attended to each of these areas and with what specific aspects of the ecology of field experiences need to be given more systematic attention in the future. Additionally, the construct of "teacher development" will be examined and suggestions will be offered as to how our notions of "development" need to be reformulated in studies of field experiences. Although the arguments to follow are directed at the literature on field experiences in general, most of the examples of studies to be cited have been drawn from a sample of 20 specific studies. These studies represent all of the reports of individual research efforts with a focus on field experience and teacher development which have appeared in the two major refereed U.S. journals devoted primarily to teacher education: (1) Journal of Teacher Education 1976-1983; (2) Action in Teacher Education 1978-1983. It is felt that these studies are representative of recently published studies and that they provide an accurate picture of the conceptual and methodological orientations of research in this area. These 20 studies, which were carefully reviewed in an attempt to validate the arguments made in the paper, will be referred to as the "intensive sample."
The Structure and Content of Field Experience Programs

It is clear from any examination of the literature on field experiences that there is no agreed upon definition of the purposes and goals of either early field experience or student teaching and that there is a great deal of variety in the ways in which these experiences are conceptualized, organized and actually implemented even within a single institution. Zeichner (1983) has outlined four paradigmatic orientations and two dimensions along which the substance of teacher education programs vary. This description of the "received-reflexive" and "problematic-certain" continuua are only examples of the wide range of theoretical orientations toward the organization and conduct of teacher education programs which have been discussed in the literature (see also Atkins & Raths, 1974).

With regard to field experiences Gehrke (1981) has reiterated Dewey's (1904) classic distinction between the "laboratory" and "apprenticeship" points of view regarding the purpose of field experience and has outlined two contemporary rationales for the conduct of early field experiences. Also, Zeichner and Teitelbaum (1982) have described two alternative orientations to the conduct of student teaching experiences ("personalized" and "inquiry-oriented") which are consistent with both Dewey's (1904) and Gehrke's (1981) analyses.

At the level of implementation numerous writers (e.g., McNaughton & Rogus, 1978; Elliot & Mays, 1979; and Ryan, 1982) have described various alternatives that exist in practice regarding the organization of field experiences, their relation to campus-based courses, patterns for involving supervisory personnel and roles that are assumed by students (e.g., observer, tutor). Ishler & Kay's (1981) survey of current practices in early field
experiences also emphasizes the great amount of diversity that exists in early field experience programs across the U.S. However, despite the overwhelming evidence of the wide variety of purposes, organizational patterns and role configurations in field experience programs, studies which have investigated the relationships between field experiences and teacher development have not for the most part provided us with the kinds of information about programs which acknowledges this heterogeneity; nor have they provided us with information that reflects the complex interactions among the individual components within any given program.

Two different concerns have been raised in the literature regarding the treatment of field experience programs in individual studies. On the one hand Gaskell (1975) and Ryan (1982) have criticized the common practice of examining changes in the attitudes and/or behaviors of education students as a result of participation in a "treatment" which is described simply as "field experience" or "student teaching." They argue that this lumping together of all of the constituent parts of a field experience masks the effects of the particular dimensions of a program or of a particular type of program. As a result they argue, we frequently see reports of particular changes or of the lack of changes resulting from participation in a field experience, but we are very rarely given any insight into how and why education students were affected in particular ways.

A different criticism of the treatment of field experience programs in individual studies is concerned with the also common tendency to examine isolated bits of a field experience program in relation to developmental outcomes. Hersh et al. (1982) argue for example, that these attempts to explain the influence of field experiences on the basis of a few isolated
factors ignore the complex ecology of field experiences. As a result, they argue, we are also given little insight from such studies as to what particular components of programs influenced the developmental outcomes. The argument here is that we cannot understand the influence of any particular factor (e.g., cooperating teachers) without also understanding the influence of all of the other factors which are intimately linked to this factor.

When we examine the 20 studies in the "intensive sample" the information which is provided about the structure and content of the field experience programs varies according to whether the field experience is an early field experience or student teaching experience. First, despite the fact that 3 of the 16 studies of student teaching provide relatively detailed information about the purposes and organization of courses or seminars which complemented student teaching (McCaleb, 1979; Glassberg & Sprinthall, 1980; Hodges, 1982), only 3 of the 16 studies (Holt & Petersen, 1981; Corcoran, 1982; Johnson et al., 1982) provide any information about the structure of the student teaching experience itself beyond descriptions of when it took place (e.g., senior year), its length and the number of classroom placements. Silvernail & Costello (1983) differentiate between a student teaching experience and an internship, but they fail to provide any information about the differences and/or similarities in the structure, goals, or content of these two programs. None of the studies on student teaching offer any information about the content or curriculum of the student teaching program.

Thus, while all of these studies have examined various other influences on the attitudes and behaviors of student teachers (e.g., supplementary seminars, cooperating teachers, placement characteristics), the purpose, structure and content of the student teaching program itself, for the most part, remains undefined. Consequently, we are presented with a lot of specific information about the influence (or lack of influence) of cooperating teachers.
etc., but we are given little if any insight into how the particular dimensions of the programs themselves contributed to the outcomes.

When we examine the five studies in the intensive sample which were concerned with the role of early field experiences in teacher development, the picture is very different. Here four of the five studies provide us with relatively detailed descriptions of the content and organization of both field experiences and related courses even to the point of including in several cases lists of specific requirements and activities that students were expected to fulfill in the field. Consequently, when particular outcomes are reported in these studies (e.g., the field experience enhanced performance in a subsequent methods course, Denton, 1982), we have at least some idea of the nature of the field experience which is viewed as making a contribution to teacher development.

There is, however, an important issue which is not addressed by four of these five studies. Zeichner (1980:53) has argued that "the characteristics of field-based programs are not to be found in public statements of intention, but through an examination of the experiences themselves." Tabachnick & Zeichner (1983) elaborate on this theme when they argue that one cannot assume that all field experiences pose the same constraints and opportunities for all students and that the socialization of student teachers takes the same form and has the same meaning for all students even within a single program.

Fullan & Pomfret (1977) conclude with regard to curriculum and instruction generally that the process of implementation is not simply an extension of the planning process and that it is inappropriate to view the move from the drawing board to the school and classroom as unproblematic.
Similarly, Parlett & Hamilton (1976: ) have noted that:

An instructional system, when adopted, undergoes modifications that are rarely trivial. The instructional system may remain as a shared idea, abstract model, slogan or shorthand, but it assumes a different form in every situation. Its constituent elements are emphasized or de-emphasized, expanded or truncated, as teachers, administrators, technicians and students interpret and reinterpret the instructional system for their particular setting. In practice objectives are commonly re-ordered, re-defined, abandoned, or forgotten. The original "ideal" formulation ceases to be accurate, or indeed, of much relevance.

There is some evidence from studies of both student teaching and early field experiences which supports these arguments and which underlines the inappropriateness of deriving an understanding of a field-based program solely from statements of goals and from instructional plans. For example, Zeichner & Tabachnick (1982) and Goodman (1983) have shown that even when the designers of a field-based program have articulated a specific emphasis, the actual implementation of a program reflects a diversity of orientations as the diverse perspectives of specific individuals are brought to bear on the coherent instructional plan in different contexts. In ease of these studies there were differences in the degree to which various program goals and requirements were implemented in various classrooms.

Another example comes from one of the studies in the "intensive sample." In the only study of early field experiences which examined the ways in which a program was in fact implemented, Ross et al. (1980) found several discrepancies between the goals and requirements of the two programs under comparison and the actual implementation of the programs in classrooms. As a result of an analysis of students' reports of their activities during the semester (which were checked for validity by comparing them with reports from cooperating teachers), Ross et al. (1980) discovered
that 16% of the students in the Tutoring Program did not have any involvement at all in tutoring which was the main program requirement. They also discovered that as many as 25% of the students in the Teacher Apprentice Program reported involvement in only one activity other than observation. This was in conflict with the broad set of requirements for students in this program.

A final example can be found in probably the most comprehensive study of the student teaching experience to be undertaken to date. Griffin et al. (1983:335) concluded from a study of 93 student teachers from two universities that:

Awareness of policies, expectations, purposes and desirable practices was not widespread across participants in the student teaching experience. It was rare that university and school-based teacher educators agreed upon, or could even articulate, the policies and practices which were supposed to guide student teaching.

As an example Griffin et al. (1983) refer to a "pacing guide" which was supposed to influence the way in which student teachers assumed responsibility for instruction in their classrooms. They found little evidence that this guide was influential upon practice.

In summary, if one is to accept the 20 studies in the "intensive sample" as representative of contemporary studies on the relationship between field experience and teacher development we know very little from research about the nature of student teaching programs studied, something more about the instructional plans of early field experiences and almost nothing about the ways in which either early field experiences or student teaching are implemented in the field in relation to program goals. Although there are some who hold the view that the goals, curricular plans and substance of field experience programs have little influence on the
manner in which programs are implemented in the field, it is premature for researchers to bypass systematic analysis of the influence of the explicit and implicit curricula of these programs and their organizational structures on the development of teacher education students. The influences of particular kinds of field-based programs and of particular components within programs on teacher development will remain unknown until we begin to include descriptions of individual programs and program components (as planned and as implemented) within the scope of our investigations.

The Characteristics of Placement Sites

A second aspect of the ecology of field experiences to be considered is the nature of those classrooms, schools and communities in which students work. Becher & Ade (1982:25) correctly point out "by their very nature no two placement sites are alike. All vary on a number of dimensions and it is likely that they may have potentially different effects and make potentially different contributions to a student's growth." McIntyre (1983:16) argues that "to understand the field experience, one must assay the elementary and secondary school settings and programs where students are placed and examine how that environment influences the triad's interaction."

When we examine the 20 studies in the "intensive sample" we find a variety of ways in which placement sites have been described. On the one hand 13 of the 20 studies provide no information at all about the schools and classrooms beyond an occasional reference to the range of grade levels within a sample and the number of schools or school districts in which a program is carried out. On the other hand four studies do provide some, but still minimal information about the characteristics of placement sites:
(1) In Hodges' (1982) study we are told that there was no cooperating
teacher and at least two student teachers per semester in the
classroom under study and that the students were totally
responsible for the instruction in the classroom. We are also
given some information about the reading curriculum in the
class and school based on the author's observations.

(2) In Smith & Smith's (1979) study we are given information about
the socio-economic status of pupils in various schools.

(3) In McCaleb's (1979) study we are told that all of the student
teachers were placed in classrooms where the conditions for
the teaching of language were in conflict with the approach
which was emphasized in the students' courses.

(4) Holt & Petersen (1981) speculate as to how the structure of their
program influenced three school characteristics (isolation among
staff, uncertainty as to teaching effectiveness and reward systems)
and how in turn the school characteristics influenced student
teacher-cooperating teacher relations and student teacher develop-
ment. They provide very little information, however, related to
the three school characteristics.

The most comprehensive approaches to the analysis of placement site
characteristics are provided by Becher & Ade (1982), Doyle (1977), and
Corcoran (1982). As part of a three-year study of 58 student teachers who
were observed for one full period per week during their 8-16 week student
teaching experiences, Doyle (1977) maps out the ecological characteristics
of the classrooms in which students taught and provides a description of
the strategies student teachers used (both successfully and unsuccessfully)
to attempt to reduce the complexity in their classrooms. Doyle (1977) argues
that the ecological environment of a classroom together with the nature of
specific activity structures are major determinants in influencing the
actions of student teachers. Also, Becher & Ade (1982) utilizing the
"Placement Site Assessment Instrument" analyze the relationships between
three specific placement characteristics as judged by university supervisors
(modeling of good teaching behavior, feedback to the student teacher and
opportunities for student teacher innovation), the students' potential field
performance abilities and the quality of students' performance in several successive practica. Finally, Corcoran (1982) describes the instructional management system which was a part of the classroom in which an intern worked and discusses how the complexity of this system was related to the intern's problems in assuming instructional responsibilities.

Researchers have repeatedly emphasized the alleged importance of the schools (e.g., Horowitz, 1968; Sorenson & Hulpart, 1968) and classrooms (Copeland, 1980) in which students complete their field experiences in influencing student teacher attitudes and behaviors. If these 20 studies are accepted as representative of recent work in this area, then it appears that researchers have not paid much attention to the potential impact of particular types of classrooms, schools and communities on the relationship between field experiences and teacher development. The approaches exemplified by the studies of Doyle (1977), Becher & Ade (1982), and Corcoran (1982) are exceptions and merit further attention by researchers in the future. Studies which seek to understand the role of field experiences in teacher development clearly need to place more emphasis on the specific constraints and opportunities which are present in specific school settings.

The Characteristics and Dispositions of Individual Education Students and Their "Significant Others"

The third and final aspect of the ecology of field experiences to be discussed is the characteristics and dispositions of individual education students and their "significant others," and how relationships among student characteristics and "significant others' characteristics" affect teacher development during field experiences. There are several rationales which
have been presented in the literature for examining the influence of individual student characteristics, etc., on development during field experiences. First, Sprinthall & Thies-Sprinthall (1983) have presented a variety of empirical data in support of the view that the behavior of adults (including teacher education students) is affected by individual levels of cognitive development. Specifically, they conclude that there is empirical evidence now available which demonstrates that:

Persons at higher stages of development function more complexly, possess a wider repertoire of behavioral skills, perceive problems more broadly and respond more accurately and empathically to the needs of others (Sprinthall & Thies-Sprinthall, 1983:21).

If Sprinthall & Thies-Sprinthall (1983) are correct and there is abundant empirical evidence available which supports their general position, then it would seem that researchers who study field experiences would be obligated to examine how the particular developmental levels of individual students (e.g., ego development, conceptual levels) affect the influence of field experience on their development. Similarly, McDonald (1980) in the recent E.T.S. review of the literature on beginning teachers has emphasized the importance of "coping skills" that beginning teachers bring to their jobs in helping or hindering their adaptation to the workplace.

Many problems of teaching can be dealt with on the basis of skills that one uses in places and situations other than teaching. Maturity of point of view, independence, self-reliance, confidence in seeking information and help are broadly useful characteristics in life and certainly must have some effect on how teachers make the transition into teaching (McDonald, 1980:175).

McDonald's (1980) argument is analogous to the position of Sprinthall & Thies-Sprinthall (1983) and although he does not base his position on any
particular stage theories of development there seems to be a close relationship between the messages conveyed by these authors. Additionally, although McDonald's (1980) remarks are directed at the adaptations made by beginning teachers, there is every reason to believe that his analysis is applicable to teacher education students as well.

Although the actions and the development of education students doing field experiences are clearly more than simple expressions of the ideas that they have in their heads and of who they are as people, the personality characteristics, dispositions and abilities that students bring to a field experience (including their unique biographical histories) are undoubtedly important factors in influencing the quality and strength of their socialization during the field experience. There is overwhelming support for the view from a variety of theoretical perspectives that teacher education students do not simply react to the people and forces around them. On the contrary, what teacher education students bring to a field experience and who they are as people interacts with contextual constraints and opportunities to affect the course of development during the experience (Tabachnick & Zeichner, 1983; Lacey, 1977).

When we examine the studies in the "intensive sample" we find that all of the 20 studies provide some minimal information about the general characteristics of students within a research sample. For example, we are frequently given information about the gender distribution within a sample, the distribution of student majors (e.g., elementary), the range of student ages, ethnicity characteristics, etc. In most cases, however, this information is simply presented as background and does not enter into the analyses of how the field experiences affected particular developmental outcomes.
When we look at how the studies examined relationships between individual student characteristics and development during field experiences we find three general patterns. On the one hand 13 of the 20 studies do not provide any analysis of how individual students' characteristics, dispositions or abilities influenced the development. On the other hand, three of the studies give some but still very minimal attention to how individual students' characteristics, etc., influenced their development. For example, Hoy & Rees (1977) sought to determine if there were differences in development related to gender and Boschee et al. (1978) and Ross et al. (1980) explored whether a student's subject major (e.g., elementary or secondary) influenced developmental outcomes. Together, these studies reflect an unfortunate lack of attention to the important role of individuals' characteristics in the process of teacher development.

Only four studies in the intensive sample gave any systematic attention to how individual students' characteristics, dispositions or abilities were related to their development during field experiences. For example, Becher & Ade (1982) examined how students' potential field performance abilities (assessed prior to the experience) interacted with specific field placement characteristics in affecting the quality of a student's performance during successive field experiences. Another example is Walter & Stiver's (1977) analysis of how students' identity resolution/dissolution influenced their behavior and performance during a student teaching experience. Finally, Corcoran (1982) in speculating as to why a student's potential performance abilities were not actualized in her classroom, provides some insight into how individual student characteristics interact with the classroom context to affect development.
In summary, relatively few studies in the "intensive sample" have given systematic attention to how the individual characteristics, etc., of students interact with other influences to affect their development during field experiences. Furthermore, even where attention was given to the role of individual characteristics, only one of the studies provided any description of the structure of the student teaching program or field experience under study. None of the four studies described the content or curriculum of the program.

Another aspect of this ecological dimension is concerned with the influence of the characteristics, dispositions and abilities of "significant others" and the relationships between individual student characteristics and "significant other" characteristics, etc., on development during field experiences. For many years studies have been demonstrating that cooperating teachers exert a great deal of influence on teacher education students (e.g., Yee, 1969). Recently however, studies have begun to raise questions about this view and have identified the school and classroom in which both students and cooperating teachers work as a more potent source of influence (e.g., Copeland, 1980). There is almost no empirical support that the university supervisor exerts any substantial influence on development during field experiences (e.g., Bowman, 1979), but here again recent studies have emerged which document particular influences of supervisors on both students and cooperating teachers (e.g., Zimpher et al., 1980).

In the "intensive sample" only five studies gave any attention to the possible socializing role of the cooperating teacher and none investigated the role of the university supervisor. For example, Boschee et al. (1978) sought to determine if student teachers' educational philosophies were
influenced by those of their cooperating teachers and found that there was no influence. Mahlios (1982) investigated whether the cooperating teachers' field independence/dependence in relation to that of their student teachers had any influence on student teacher performance and found that it did. Finally, although both Karmos & Jacko (1977) and Funk et al. (1982) discovered that student teachers viewed their cooperating teachers as the most significant source of influence on their development, the findings of Boschee et al. (1978), Corcoran (1982) and of a study conducted by Hodges (1982) raise questions about the view which locates a major source of influence in cooperating teachers. For example, Hodges (1982) placed groups of students in a classroom over two semesters without a cooperating teacher to see if the absence of the cooperating teacher facilitated the use of methods for the teaching of reading which had been taught in a campus course. Her discovery that the students did not employ the instructional methods taught in the course support Copeland's (1980) thesis about the significance of school and classroom characteristics.

In summary, the findings from this representative group of studies reflect the literature as a whole. There are conflicting results about how and to what degree cooperating teachers influence student development, and almost no inquiry into the possible influence exerted by university supervisors. Also, despite the evidence from several sources concerning the close connection between the personal and professional lives of teachers (e.g., Johnston & Ryan, 1983) only two of the 16 studies utilized a methodological approach which permitted the discovery of "non-professional" sources of influence.
There were a variety of measures of "development" which were employed within the "intensive sample." One interest was in assessing changes in student personality characteristics, developmental levels (according to a one or more stage theory), or attitudes from the beginning to the end of an experience either in isolation or in relation to other factors (e.g., attitudes of cooperating teachers). For example, we are given a lot of information in these studies about changes or the lack of changes in students' educational philosophies, attitudes toward pupil control and language instruction and stages of cognitive development (e.g., ego development).

A second interest was in documenting the actual behaviors of teacher education students in classrooms or in interaction with cooperating teachers and supervisors. For example, Doyle (1977) describes the specific strategies used by student teachers in their attempts to reduce the complexity in their classrooms. Walter & Stivers (1971) document the degree to which student teachers employed specific teaching behaviors (e.g., accepted pupil ideas). Finally, Johnson et al. (1982) analyzed the substance and communicative structure of supervisory conferences between student teachers and supervisors.

A third interest was in assessing the quality of a student's performance in the field experience or in a campus-course related to the field experience. Here some like Henry (1983) explored students' own perceptions of their success while others relied upon grades (e.g., Denton, 1982) or on supervisors' ratings of teaching performance (Becher & Ade, 1982).
Doyle (1977) and Corcoran (1982) both examined "success" in terms of mastery of the demands posed by the ecological environments of classrooms.

Two points merit discussion related to the conceptions of "development" which were employed in these studies. First, 11 of the studies determined the specific developmental outcomes that would be assessed and limited their analysis to only those few predetermined variables. Second, only five of the 20 studies included any observations (or recordings) of students' actions in classrooms or of their interactions with supervisors. Both of these trends: (1) to ignore unanticipated outcomes; (2) to derive one's understanding of the influence of an experience without direct observation of that experience are problematic given the ecological reality of field experiences.

Gaskell (1975) correctly argues that investigations of only a particular set of predetermined "outcomes" in studies of field experiences ignore the numerous unintended outcomes and "side effects" that are inevitably associated with such experiences. Given all of the evidence regarding the inevitable discrepancies between program plans and implementation (some of which was discussed earlier) we have little reason to suspect that all of the significant developmental outcomes can be anticipated in advance. At most according to Gaskell (1975) these limited investigations of a few predefined variables can contribute to a particular theoretic viewpoint, but they will do little to further our understanding of the influence of field experiences on teacher education students.

Consequently, to assume that one can gain an understanding of the role of field experiences in teacher development without observing or in some way documenting the experience is a fallacy. There is much evidence that student
attitudes expressed on questionnaires are inaccurate reflections of the
teaching perspectives which guide their practice in classrooms (e.g.,
Shipman, 1967). There is also evidence concerning the discrepancies
between teachers' self-reports of their behaviors and their actual behaviors
in classrooms (e.g., Hook & Rosenshine, 1979). Griffin et al. (1983:332-333)
succinctly summarize the importance of direct observation in studying field
experiences:

The use of multiple data sources is crucial to obtain
as true a picture of classrooms and teachers as possible.
In particular the use of multiple qualitative data sources
in this study pointed out discrepancies in how student
teaching activities were carried forward and how they
were viewed by participants. This incongruity may not
have surfaced had only a self-report method been used
in place of collecting data about the actual event itself.

In summary, without direct observation of field experiences or some
other attempt to document the experience (e.g., through audio recordings),
it becomes difficult to understand the nature and quality of the ecological
elements of an experience and to discover developmental "outcomes" which
may in some cases be more significant than those which were anticipated
from a particular theoretical perspective. The failure of 13 of the 20
studies in the "intensive sample" to document either through observation
or self-report actions and interactions during the experiences raises
serious questions about the ecological validity and severely limits the
usefulness of their findings for policy makers.

Conclusion

It has been argued in this paper that field experiences in teacher
education entail a complex set of interactions among program features,
settings and people (the ecology of field experiences) and that research which seeks to understand the role of these experiences in teacher development must reflect in its conceptualization and methodology the dynamic and multidimensional nature of the event being studied. If one accepts this ecological viewpoint, then it becomes necessary to understand the influence of a variety of interacting factors in order to understand the influence of any given factor. An understanding of three specific elements of this ecology was proposed as a necessary ingredient in studies of field experiences: (1) the structure and content of the field experience program; (2) the characteristics of placement sites; (3) the characteristics, dispositions and abilities of individual students and their "significant others." It has also been argued that the conceptualization of "development" in these studies needs to be broadened to include the documentation of actual actions and interactions and the investigation of unanticipated outcomes.

The 20 studies in the "intensive sample" have been utilized to provide a rough barometer of the conceptual and methodological orientations of contemporary studies in this area. When one examines these studies in terms of their exploration of the three dimensions of the ecology of field experiences, it is clear that each individual study emphasized a small part of one or two of the elements but that none of the studies gave systematic attention to all three of the interacting factors. Most notable are the failure of all 16 of the studies of student teaching experience to describe the content of the programs studied and the almost total lack of attention to placement site characteristics in studies of early field experiences. Table 1 summarizes the degree to which each study has
systematically investigated the various ecological elements and the con-ceptions of "development" which were employed in each study.

It should be pointed out that studies do exist which address the interactions among all three of the ecological elements of field experiences. The recently completed study of student teaching at the Texas R & D Center for Teacher Education (Griffin et al., 1983) is probably the best contemporary example of research which reflects the ecological reality of field experiences. However, these studies (see also Iannaccone & Button, 1964; Connor & Smith, 1967; Gaskell, 1975; and Hultgren, 1982) are clearly in the minority. Most of the work that is currently being done in this area, particularly that which reaches professional journals, is not very different in its conceptualization from the studies described in this paper.

Zeichner (1980) has concluded that field experiences entail a complicated set of both positive and negative outcomes which are often subtle in nature and that research on field experiences does not provide much guidance for policy-making in teacher education. The conclusions from two recent analyses of studies on field experiences confirm this assessment and underline the need for a major reorientation of research in this area. First, Samson et al. (1983:11) conclude in their analysis of 38 studies (both published and unpublished) related to the influence of early field experiences on the attitudes of education students:

Insufficient information is available about aspects of the subjects and settings, the quality and character of the field experience, the field experience location and other important variables to recommend more specific policies than generally providing early teaching and related experiences in the first few years of college.
Griffin et al. (1983:3,4) conclude regarding the literature on student teaching (both published and unpublished):

A survey of the literature related to teacher education reveals a paucity of information regarding student teaching from a research perspective. Research-based propositions are conspicuous by their absence. The current research derived knowledge base appears to be too limited to direct decisions and practices in clinical experiences for prospective teachers.

The position which has been expressed in this paper is that the usefulness of the findings of studies or field experiences is closely related to the degree to which individual studies respect the complex ecological reality of the event being studied. Consequently, we will only begin to move closer toward an understanding of the role of field experiences in teacher development when we begin to take more of the ecological reality of these experiences into account in our research.

All of the ambiguity and contradiction which characterizes the findings from this body of research (examined as a whole) is not unrelated to the dominant tendency of investigating only isolated bits of this ecology.

At this point in our history there is little if any disagreement as to the importance of providing both early field experiences and student teaching in a teacher education program. The appropriate question at this stage of our development as a field is not whether to offer such experiences or not. This is the major interest which is implied however, in studies which do not describe the particular quality and substance of an experience. Given the undeniable evidence that field experience by itself is not necessarily beneficial in the development of a teacher (Feiman-Nemser, 1983), we must necessarily be concerned with developing
conceptual and curricular frameworks for these experiences (e.g., Kindsvatter & Wilen, 1982) and with discovering which particular kinds of field experiences and which individual components within programs contribute to their educative functions. It has been stated in this paper that the particular quality of a field experience cannot be understood solely by its procedures (e.g., length), its organizational structure or even by the curricular intentions and plans of its designers and that its influence on teacher development cannot be discerned from the examination of only isolated fragments of its ecology. It is hoped that research on field experiences will give more attention in the future to the complex and multidimensional nature of these experiences and that this ecological approach to the study of field experiences will stimulate discussion and debate over which particular curricular and contextual dimensions of programs will help us more closely realize our goals for teacher development.
NOTES

1 For example, the three "scenarios" outlined by Zeichner & Tabachnick (1981) and the two "myths" discussed by Zeichner (1980) are representative of the range of contemporary explanations regarding the socializing role of field experiences.

2 Although a study by Zimpher et al. (1980) is within the time frame of this analysis and is published in one of the two journals which were reviewed, it was not included in the "intensive sample" because its primary emphasis is on the role of the university supervisor and the supervisor's functions in a student teaching program as a whole rather than on the development of student teachers. This study does however, adopt an "ecological approach" to the study of student teaching and is an exception to many of the arguments to follow.

3 Since Becher & Ade (1982) investigated the influence of early field experiences and student teaching their study is discussed under both categories.

4 It should be noted that 6 of the 15 studies of student teaching did provide some information related to the actions of student teachers, supervisors and cooperating teachers. However, because none of these studies provided a description of the goals and content of the program these accounts of actions gathered (through observations and/or self-reports) do not inform us of the relationships between program plans and implementation.
Feiman-Nemser & Buchman (1983) suggest that students' dispositions toward inquiry (to learn and grow from experience) need to be given further attention in attempts to understand field experiences. Their suggestion is closely related to the "developmentalist" position of Sprinthall & Thies-Sprinthall (1983) and is especially interesting given the distinction between the "laboratory" and "apprenticeship" view of field experience which has permeated the literature since 1904.

The literature on teacher effectiveness (e.g., Good, 1983) also supports the view that individual learner characteristics mediate the influence of other factors.

Several studies differentiated teacher education students whether they had a particular field experience or not (e.g., Denton, 1982) or by whether they had one or another field experience (e.g., Silvernail & Costello, 1983). These distinctions were considered to be program and not individual characteristics although in a few cases, whether a student had a particular field experience or not depended upon his or her subject major.

It should also be noted that the very process of studying field experiences may in fact alter the developmental outcomes under study. There is some evidence (e.g., Tabachnick & Zeichner, 1983) that studies of field experiences are interventions which influence development and which underscores the importance of studying how the research itself affects those being studied. It could even be argued that the research study itself is another dimension of the ecology of field experiences.
Corcoran's (1982) case study of one intern comes the closest to investigating all three elements. Also, this analysis of the studies in terms of their "coverage" of the three elements, does not consider the quality and scope of the investigations within each element.
References


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* Hoy & Rees (1977) speculated as to the effects of school content on the developmental outcomes but did not directly investigate the schools in which the student teachers taught.