

DOCUMENT RESUME

ED 378 179

SP 035 698

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 TITLE Borderland Contrasts in a Microteaching Laboratory.
 PUB DATE 8 Nov 92
 NOTE 28p.; Paper presented at the Annual Convention of the American Educational Studies Association (Pittsburgh, PA, November 8, 1992).
 PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)
 EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS Case Studies; *College School Cooperation; *Educational Philosophy; Elementary Secondary Education; *Experiential Learning; Higher Education; Laboratory Training; *Microteaching; Partnerships in Education; *Preservice Teacher Education; Reflective Teaching; Teacher Education Programs; Teaching Skills; *Theory Practice Relationship
 IDENTIFIERS *Rosaldo (Renato)

ABSTRACT

This paper uses Renato Rosaldo's metaphor of a "cultural borderland" to analyze the nature of the "bridge" formed in a case study of school-college partnerships. It examines how collaborative teacher preparation programs can bridge the two worlds of theoretical, normatively based canons of practice and inductively derived maxims of reflective practice in the daily action of teaching. Data were collected in a course for prospective teachers in their junior year, as they taught and retaught three sets of microlessons and received help from instructors. The pre-lesson and post-lesson assistance sessions were led by: (1) a full professor who represented the ideal type of applied science, and (2) a teacher on leave from a public school, brought to the university as a clinical teacher, who represented the ideal type of reflective practice. For the reflective practitioners, microteaching was an activity of labor in which moments of "real teaching" were valued for their productivity in the form of students' learning. For the applied scientists, microteaching was an instance of "school learning" in the "real world" of the university in which artificial, simulated teaching enabled the practice of selected teaching skills. The participants' implicit philosophies of teaching practice had implications for collaborative partnerships. (Contains 19 references.) (JDD)

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BORDERLAND CONTRASTS IN A MICROTEACHING LABORATORY

Paper Presented at the
American Educational Studies Association
1992 Convention
Pittsburg, Pennsylvania
November 8, 1992

by

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Recent proposals from the educational vanguard call for the radical restructuring of programs for teacher preparation and professional development (Goodlad, 1990; Levine, 1992). These agendas for the redesign of teacher education often advocate the need for collaborative relationships in which experienced public school teachers and college professors work as partners to prepare prospective teachers and to facilitate the continual professional development of teachers in service. Collaborative arrangements establish links in nontraditional ways, such as the inclusion of practicing teachers as clinical faculty on both school and college campuses and the involvement of college professors in novel arrangements in actual public school settings. Regardless of the degree and type of public school-college partnerships, the theme of shared ownership through collaborative arrangements runs throughout recent agendas for reform.

A second theme flowing throughout the stream of literature about the reform of teacher education attacks the base of professional epistemology as traditionally conceptualized (Schon, 1983; 1987). Critics of the old regime argue that teacher education must "bridge two worlds"--one of theoretical knowledge, applied science, or technical rationality and a second of practical competence and the epistemology of reflective practitioners (Evertson, 1990; Schon, 1983; 1987; Zeichner, 1990). Schon (1983; 1987) articulates a new view of the epistemology of reflective practice, arguing that the practitioner's "knowing how" is a kind of knowing-in-action, or reflection-in-action, which occurs in indeterminate zones of practice fraught with uncertainty, uniqueness, and value conflicts. The implication is that teachers, as reflective practitioners, reflect on their actions and develop a kind of practice-based,

inductively derived theoretical knowledge about their teaching (Vare, 1992). In contrast, college and university researchers often represent the traditional view of applied science that principles derived from research can be applied as normative standards to guide professional practice. Schon (1987) critiques the supposition that the traditional curricula of teacher education programs will transfer to the "knowing how" type of knowledge required by the actual world of professional practice. Schon asserts that the normative, theoretical paradigms of traditional college and university curricula do not fit the problem-solving setting of the reflective practitioner.

A question for teacher educators thus becomes: how can collaborative teacher preparation programs bridge the two worlds of theoretical, normatively-based canons of practice and inductively derived maxims of reflective practice in the daily action of teaching (Evertson, 1990; Schon, 1987; Shulman, 1986; Zeichner, 1990)? This paper is written to explore the interacting dynamics of the two themes and the two worlds described above. Collaborative relationships and school-college partnerships may be vehicles currently touted as ways to bridge the two worlds of "applied science" and "reflective practice," yet the nature of the bridge itself remains relatively unexamined in the research literature. In one sense, each half of the partnership "bridge" represents one of the two worlds or ideal types: (1) teachers as the newly conceived reflective practitioners operating in the "indeterminate zone" of the public schools and (2) college professors as the traditional proponents of applied science, theoretical knowledge, and technical rationality in the "high, hard ground" of the university overlooking the messy "swamp" of professional practice (Schon, 1987). What will be the nature of

the resultant "bridge" formed when partners from these two different worlds interact?

This paper uses Renato Rosaldo's (1989) metaphor of a "cultural borderland" to analyze the nature of the "bridge" formed in a case study of school-college partnerships. In his book Culture and Truth, Rosaldo (1989) describes how the concept of "cultural borderlands" enables the recognition of cultural differences to emerge. "Zones of difference" emerge at the intersection of "the boundaries of officially recognized cultural units," at the "cultural borderlands" (Rosaldo, 1989, p. 29). Differences become recognizable because they "cross-cut" social boundaries. In the case study described in this paper, intersecting social boundaries enabled the observation of emerging contrasts between participating partners' cultural knowledge about teaching and tacitly held assumptions about the nature of tasks in a teacher preparation program. The paper describes contrasting goals and motives of the participating instructors using an analytic framework derived from activity theory, an analysis of practical activity as mind in action in a socioculturally defined context (Wertsch, 1985).

The Microteaching Laboratory as a Cultural Borderland

Data Collection and Analyses

Data were collected for this case study in a semester-long course for prospective teachers in their junior year of undergraduate study. The course took place in a microteaching laboratory on the campus of a major research

university in the southeastern United States. Prospective teachers taught and retaught three sets of microlessons, receiving help in the form of pre- and post-lesson conferences from instructors. Data collection included: (1) nonparticipant observation (using low-inference field notes) of lessons taught by prospective teachers on the university campus in the microteaching laboratory and of a few lessons taught in actual public school classrooms; (2) semi-structured interviews with all five instructors in the microteaching laboratory (four white females and one white male); (3) semi-structured interviews with four white females from the group of twenty-five prospective teachers; (4) documents and artifacts produced as an aspect of routine instruction in the microteaching laboratory (e.g., instructors' notes, video tapes of microteaching, students' lesson plans and reflective essays, course syllabi and handouts); and (5) documents produced about the course and the teacher preparation program of which it was a part.

Data analyses followed procedures recommended for the generation of grounded theory (Glaser and Strauss, 1967). Ideas and themes emerged from observations and semi-structured interviews with participants in the course. Initial research questions were revised based on the constructs emerging from preliminary data analyses and formed the basis for a new analytic framework.

Partners in the Borderland

The microteaching laboratory course was part of a model teacher preparation program funded by special legislative appropriations for collaborative public school-college partnerships in teacher preparation, a

theme which the program built upon by hiring each year a different public school teacher who was released from public school classroom duties for one year to work full-time at the university as a clinical instructor in the teacher preparation program. By including traditional university professors and experienced master teachers as clinical instructors on the same faculty, program developers inadvertently arranged the conditions for observation of partners in a "cultural borderland."

In addition to the partnership theme, state efforts to improve the quality of public school teaching and students' achievement were heavily influenced by the body of research on effective teaching. Teachers in the state were evaluated, for example, using an instrument whose behavioral indicators derived from research on effective teaching. In the microteaching laboratory course, prospective teachers were expected to learn certain "teaching skills," behaviors derived from two sources: (1) research which correlated specific teaching behaviors with students' achievement and (2) the "craft knowledge" of practicing master teachers who were members of the planning group for the teacher preparation program.

In the microteaching laboratory course, "zones of difference" became recognizable because of the happenstance by which instructors divided prospective teachers into two groups for their microteaching. The instructors divided the microteaching laboratory into two halves and the prospective teachers into two groups, a division which prospective teachers referred to throughout the course as "two sides." On each of the "two sides" of the microteaching laboratory, prospective teachers taught and retaught three microlessons to their peers and received assistance in the form of pre- and

post-lesson conferences from their respective instructors. One of the two ideal types of "applied science" and "reflective practice" dominated each of the two sides of the laboratory. "Mr. Effective Teaching," who represents the ideal type of applied science, dominated one side of the microteaching laboratory because of his stature as a full, tenured professor and a research professional. "Mrs. Effective Teacher," the clinical instructor on leave from a public school, dominated the other side of the microteaching laboratory. She represents the ideal type of reflective practice. The two ideal types, "Mr. Effective Teaching" and "Mrs. Effective Teacher," differed significantly in their respective styles, standards, goals, and motives, a difference which indicates that each partner imposed a particular "creation of context" upon the activity of microteaching (Wertsch, Minick, & Arns, 1984). Each partner's nickname came from course participants: "Marianne" called "Don" "Mr. Effective Teaching," and a prospective teacher called Marianne "Mrs. Effective Teacher.

Contrasting Approaches to Apprenticeship

This paper analyzes contrasting approaches to instruction in the microteaching laboratory using a theoretical view of activity derived from the Marxist psychology of certain Russian scholars, e.g., Vygotsky, Leontiev, and others (Wertsch, 1985). In activity theory, an activity "is a sociocultural interpretation or creation that is imposed on the context by the participant(s)" (Wertsch, 1985, p. 203). Analyses of participants' interpretations reveal: (1) the motives of an activity or the "implicit assumptions" that "determine the

selection of actions and their operational composition" (p. 212); (2) the goals of particular actions; and (3) the operations or conditions under which actions are carried out. In this case study, descriptions of instructors' styles and standards are synonymous with the operations or conditions of microteaching activity. Analyses of instructors' actions in the microteaching laboratory reveal differences in tacitly held assumptions about the nature of the microteaching task, a socioculturally guided task characterized in this case study as an "apprenticeship in thinking" (Rogoff, 1990).

The Applied Scientist: Mr. Effective Teaching

"Don Anderson", "Mr. Effective Teaching," dominated one side of the microteaching laboratory because of his stature as a full, tenured professor and a research professional. Although two female instructors worked with Don on his side of the microteaching laboratory, Don was the dominating instructional presence because he consistently interacted more verbally with prospective students during the microteaching course in a number of ways. The two female instructors, a clinical (nontenure-track) assistant professor and a graduate teaching assistant, followed Don's lead so that all three instructors on his side of the microteaching laboratory presented a unified instructional view characterized in this paper as "applied science." The styles and standards of the applied scientists' side of the microteaching laboratory comprise these operations or conditions under which prospective teachers taught microlessons (Wertsch, 1985): detached observation, normative standards, unsupported or solo teaching performances, and privately given feedback.

Detached Observation. Applied scientists observed prospective teachers' microteaching lessons with an air of detached observation and actually referred to themselves as "detached observers." They maintained what prospective teachers called "poker faces" and did not interact verbally with prospective teachers as they taught lessons. Moreover, the physical location of applied scientist instructors reflected an attitude of distance from the prospective teachers. For most of the microteaching lessons, only the graduate teaching assistant sat in the microteaching laboratory with the prospective teachers, and she did not interact verbally with the prospective teachers as they taught lessons. Early in the course (after four sessions), Don and the clinical assistant professor moved to a booth outside the microteaching laboratory and observed lessons through a one-way observation window inside the booth, which housed the operating equipment used to video-tape the microteaching lessons.

Normative Standards. When applied scientist instructors gave prospective teachers suggestions and critiques of microteaching lessons in conferences before and after microteaching lessons, they were likely to focus only on standards represented on an observation checklist of thirty-seven teaching skills. These skills were derived from the research on effective teaching and from the craft knowledge of practicing teachers who helped to design the teacher preparation program. Prospective teachers called these skills the "knowledge base research." Although the three applied scientist instructors tended to notice slightly different aspects of the "knowledge base research," prospective teachers realized that the checklist of teaching skills defined the way these instructors viewed the activity of microteaching. Also,

when applied scientist instructors did stress behaviors not listed on the observation checklist, these additional behaviors were derived from the research on effective teaching, although they were not directly represented on the checklist.

Solo Performance and Private Feedback. Applied scientists encouraged unsupported, "solo" teaching performances by requiring prospective teachers to teach lessons without cues or prompts from the instructors during microteaching. In addition, instructors encouraged only privately given feedback from instructors and peers about the microteaching lesson. Prospective teachers gave peer critiques by writing comments after each lesson, and, after the fourth day of microteaching in the laboratory, instructors no longer initiated oral feedback from either peers or instructors after prospective teachers had taught lessons. Moreover, applied scientist instructors did not usually interact with prospective teachers about their microteaching until a formally scheduled and privately held post-conference. Thus, the behavior of applied scientist instructors more closely simulated the behavior that prospective teachers were likely to encounter in actual teaching situations when they experienced formally structured evaluation cycles of pre-conference, observation, and post-conference.

The Reflective Practitioner: Mrs. Effective Teacher

"Marianne Dickson", a clinical teacher on leave from a local public school, and "Sarah Featherstone," a visiting instructor, served as instructors on the other side of the microteaching laboratory. Both Marianne and Sarah

had taught extensively in public schools, Marianne for ten years and Sarah for twenty. As "Mrs. Effective Teacher," Marianne dominated her side of the microteaching laboratory because she was the reflective practitioner who was present as prospective teachers taught microlessons. This side of the microteaching laboratory housed a video camera inside the room with the prospective teachers, and Marianne usually asked one of them to operate the camera. Sarah taught another course during the microteaching lessons and, consequently, watched prospective teachers' video-tapes of microteaching to prepare her lesson critiques. Both Sarah and Marianne were usually present at pre- and post-lesson conferences with the prospective teachers. Certain styles and standards comprised the operations or conditions of microteaching on the reflective practitioners' side of the laboratory (Wertsch, 1985): parental connection; personalized, practice-based knowledge; supported performances; and public feedback.

Parental Connection. Reflective practitioners created an ambiance of "parental connection" on their side of the microteaching laboratory. Both Marianne and Sarah voiced the view that a critical element of their philosophy of teaching depended upon establishing a "connected" relationship with their students. Belenky, Clinchy, Goldberger, and Tarule (1986) describe these crucial elements of "connected" relationships: the capacity for empathy; attachment through caring; shared experiences; a focus on understanding the other in that person's own terms; and a truth "that is personal, particular, and grounded in firsthand experience" (p. 113). Both Marianne and Sarah described how shared experiences with their students enabled the creation of "bonds" and an atmosphere of "family." Prospective teachers felt the elements

of connection and described their relationship to reflective practitioners in "parent-sibling" terms.

Personalized, Practice-Based Knowledge. When reflective, parental practitioners gave suggestions to prospective teachers in the microteaching laboratory, the instructors' critiques were personalized, content-specific, and derived from their extensive practical experience. Although reflective practitioners did address teaching behaviors listed on the observation checklist, their critiques often included more suggestions about how to teach the particular content area, such as mathematics or science. During microteaching lessons Marianne often used opportunities to share the wisdom of her practice that was pertinent to the teaching of a particular lesson. She might make a comment about "Erica's" lesson that was directed to both Erica and her fellow prospective teachers, such as: "Real students will flip out on your example of an overlapping angle when they are trying to measure it. Maybe you should put only two instead of three angles together on your worksheet." In addition, Marianne's comments to prospective teachers in the laboratory often revealed her knowledge of characteristics particular to individual prospective teachers. She might say to the group of prospective teachers, for example: "Kacy will be perfect for teaching children. Her sense of humor is perfect." Thus, reflective, parental practitioners implemented their philosophy of attached, "connected teaching" by attempting to coach prospective teachers' in their own terms, a particular kind of relationship which reflective, parental practitioners created by personalizing and particularizing a shared truth from firsthand experience (Belenky et al., 1986).

Supported Performances and Public Feedback. In contrast to the solo teaching performances and private feedback on the side of detached observation, reflective practitioners sometimes allowed slightly supported teaching performances and always encouraged public, oral feedback after prospective teachers taught microteaching lessons. As the parental practitioner who remained in the microteaching classroom, Marianne sometimes gave prospective teachers support in the form of cues and prompts while they were teaching their lessons. At times, for example, Marianne prompted certain prospective teachers to ask higher level questions before their lessons ended. She also frequently gave time cues in the form of warnings that three or five minutes were left in the lesson. Marianne also gave indirect support during the microteaching lessons by providing what prospective teachers called "side notes" about applications of the immediate situation in the laboratory to teaching in actual school classrooms.

In addition to their occasional support during microteaching lessons, prospective teachers on the reflective practitioners' side of the laboratory also received shared, oral feedback from their peers and instructors. The shared feedback came in the form of public, oral critiques after each microteaching lesson. As the parental practitioner who remained in the laboratory, Marianne encouraged prospective teachers to give "positive feedback" first; then she asked them to give "suggestions." In her shared, public critique sessions, Marianne encouraged prospective teachers to think about their experiences as "students" during lessons and to share their suggestions for improving the lessons from the students' points of view. Thus, Marianne again exemplified the reflective practitioners' philosophy of "connected teaching" by

personalizing and particularizing shared, firsthand experiences (Belenky et al., 1986).

Two Implicit Philosophies of Practice

Applied scientists, led by "Mr. Effective Teaching," and reflective practitioners, represented by "Mrs. Effective Teacher," demonstrated in the actions by which they guided prospective teachers' microteaching two different "implicit philosophies of practice" (Bourdieu, 1977), or two different "interpretations of context" in which the activity of microteaching occurred (Wertsch, 1985). Common examples of socioculturally defined contexts in which human activities occur include play, instruction (formal education), and labor or work. Wertsch (1985) emphasizes that "One of the most important characteristics of an activity is that it is not determined or even strongly circumscribed by the physical or perceptual context in which humans function" (p. 203). Rather, participants impose a socioculturally created interpretation on the context, an interpretation which is revealed in Leontiev's three levels of analysis: the operations taken to achieve a goal for which there is an implicit motive.

Partners in the cultural borderland of the microteaching laboratory created two different kinds of "apprenticeships in thinking" (Rogoff, 1990), each characterized by a different kind of teaching-learning relationship. Instructors' different styles and standards represent the operations or conditions under which prospective teachers performed the activity of microteaching. Analyses of each set of respective operations and conditions

reveal corresponding sets of implicit goals and motives. Moreover, comparative analyses of instructors' sets of operations, goals, and motives reveal that each possessed a fundamentally different "implicit philosophy of practice" (Bourdieu, 1977). In this paper Bourdieu's (1977) phrase, "philosophy of practice," is synonymous with Leontiev's concept of "motive" as the socioculturally defined context of the activity (Wertsch, 1985).

This paper presents the argument that applied scientists viewed the microteaching activity as primarily an instance of instruction or formal education whereas reflective, parental practitioners viewed microteaching as an instance of labor or work. In Leontiev's theory of activity, participants' "implicit assumptions of an activity setting determine the selection of actions and their operational composition," and "the guiding and integrating force of these assumptions is what Leontiev called the motive of an activity" (Wertsch, 1985, p. 212). Wertsch contrasts the motives of two activities, schooling and labor, by arguing that the motive of labor is productivity while that of a formal schooling activity is "learning for learning's sake" (Wertsch et al., 1984; Wertsch, 1985). Participants treat errors differently in each type of activity. In schooling activity, errors can be instructive if students benefit from analyses of their mistakes. In labor activity, however, errors are "expensive" interferences with work productivity and are therefore avoided by a division of responsibility in which more experienced persons assist novices in joint task accomplishment, often through a process of scaffolding. Schooling thus maximizes students' learning through error production, whereas labor activity maximizes efficient production through the minimization of error.

Microteaching as Autonomous School Learning

The applied scientist instructors, led by "Mr. Effective Teaching," demonstrated in their actions a view of prospective teachers' microteaching activity as autonomous school learning. The conditions under which microteaching occurred (i.e., detached observation, normative standards derived from the knowledge-base research on effective teaching, solo teaching performances, and private feedback) indicate that applied scientists held a particular goal for microteaching in the laboratory--prospective teachers should learn to demonstrate the teaching behaviors on the observation checklist, and they should do so autonomously. Autonomy implies both separateness and independence in learning. Applied scientists promoted independence in learning by requiring unsupported teaching performances beginning with the very first lessons taught in the microteaching laboratory. Moreover, applied scientists encouraged separate learning by privileging knowledge about teaching through privately given written and oral critiques. In addition, applied scientists practiced an instructional style more akin to shaping because their provision of critique and corrective feedback in the microteaching teach-reteach cycles indicated that they expected prospective teachers' microteaching lessons to resemble a series of successive approximations to an ultimate task goal. Thus, autonomous school learning on the applied scientists' side of the microteaching laboratory promoted maximal independence in learning through the use of shaping and successive approximations.

In their extensive study of apprenticeships in comparative cultural settings, Greenfield and Lave found that both trial and error and shaping (or successive approximations to the ultimate task goal) are used when the "economic stakes" are low because learners can make errors with little or no cost to the final product (Greenfield and Lave cited in Segall, Dasen, Berry, & Poortinga, 1990). The immediate implications are twofold. First, the motives that define school learning (or "learning for learning's sake") are not linked to productive or economic activity (Wertsch et al., 1984). Second, in this case study applied scientists viewed microteaching activity as an instance of school learning rather than labor or economic activity.

Microteaching as Connected Labor

In contrast, the actions of reflective, parental practitioners reveal an implicit philosophy of microteaching as connected labor. The word "labor" is chosen deliberately to imply that participants' "motives which define and structure the activity are economic and professional rather than educational" (Wertsch et al., 1984). In the quotation, Wertsch and his co-researchers dichotomize economic and educational activity because when they use the word "educational," they mean that no "products" are manufacturing during the educational activity. This paper uses participants' implicit philosophies to contrast "school learning" as an "educational" activity (after Wertsch et al.) with the teaching-learning process as an activity of labor. Wertsch et al. (1984) characterize apprenticeship in nontraditional and noneducational settings as activity in which "learning is inextricably linked to productive or

economic activity and assert that this form of "apprenticeship" does not take place in formal schooling. In this case study, however, reflective practitioners did structure the microteaching laboratory activity using techniques which resemble those of apprenticeship in traditional societies.

Reflective practitioners in the microteaching laboratory implemented an implicit philosophy of microteaching activity as connected labor. In contrast to the goal of predominantly autonomous school learning on the side of applied science, parental practitioners arranged the conditions for connected performance through the following actions: (1) reflective practitioners allowed prospective teachers to receive slightly supported performances as they were teaching lessons; (2) reflective practitioners actively encouraged public, shared feedback from both peers and instructors after prospective teachers had taught lessons; (3) reflective practitioners used shared microteaching experiences to create the context for pointing out applications of microteaching to actual public school classroom situations; and (4) reflective practitioners personalized critiques by incorporating responses to characteristics of individual prospective teachers. All of these aspects of microteaching on the side of reflective practice exemplify a philosophy of connection rather than autonomy.

Reflective practitioners also implemented an implicit philosophy of microteaching as labor rather than school learning. As noted earlier, labor activity is characterized by an emphasis upon economic productivity, relatively error-free learning, and expert-novice apprenticeship relationships in which more experienced persons gradually transfer responsibility to novices through processes of scaffolding (Greenfield, 1984; Segall et al., 1990;

Wertsch et al., 1984). Following this definition of "labor" in analyses of this case study, reflective practitioners exemplified an implicit philosophy of microteaching as labor in several ways. First, in the laboratory Marianne reduced the possibility of error in prospective teachers' microteaching by providing occasional cues and prompts while they were teaching lessons. Moreover, when prospective teachers taught lessons in actual public school classrooms during the microteaching course, regular teachers who remained in in the classes functioned as parental practitioners by also providing occasional support as prospective teachers taught.

Second, Marianne and Sarah arranged for the gradual transfer of responsibility in the laboratory by encouraging prospective teachers to orally and publicly critique their microteaching lessons. In fact, Marianne and Sarah accomplished the transfer of responsibility in a totally different manner from that of the applied scientists. Applied scientists required three cycles of privately held pre- and post-conferences after each microteaching lesson. In contrast, reflective practitioners eliminated the final pre- and post-conference cycle by requiring prospective teachers to depend on shared, public, oral critiques as their conference information for revising their third lesson. Thus, reflective practitioners fostered independence from instructors toward the end of the microteaching lesson series by forcing prospective teachers to rely upon fellow novices for lesson revision and critique.

Third, reflective practitioners demonstrated an implicit view of microteaching as productive labor in which students' learning served as the product or economic goal. Marianne's comments during microteaching lessons indicate that she viewed students' learning as the motive of

microteaching activity. She would often point out that teachers in their laboratory teaching tended to "rob their students of discovery." She might say, for example: "Don't ever give away what students can figure out for themselves," or "You never really know whether they understand. Don't tell 'em, but let 'em figure it out." Moreover, prospective teachers' comments also indicate an implicit philosophy of students' learning as the motive of microteaching activity on the side of reflective practice. "Kacy," a prospective teacher on Marianne's side of the laboratory, commented: , "On our side you don't just get through your lesson, but you have to have a sense of success at the end--that somebody learned something, or if it had been seventh graders, somebody would have learned something."

Partners in Practice: Two "Real Worlds"

What are the implications of the two implicit philosophies of practice exemplified by participants' activity in the cultural borderland of the microteaching laboratory? One implication concerns how the results of this case study relate to other comparative cultural studies of apprenticeship, such as those reported by Rogoff (1990), Rogoff and Lave (1984), and Wertsch (1985). Another implication concerns the relationship of partners in collaborative public school-college arrangements, such as those recommended by Goodlad (1990) and Levine (1992).

Implications for Research

First, the results of this case study contradict the assertions by Wertsch et al. (1984) that the motive of productivity does not define the structure of formal instructional, i.e. educational, activity. Reflective practitioners in the microteaching laboratory used processes of scaffolding and the transfer of responsibility which are usually found in traditional forms of apprenticeship rather than formal school learning (Greenfield and Lave cited in Segall et al., 1990). Use of these processes implies the goal of reducing errors on the part of both prospective teachers and their "students" (microteaching peers), a goal usually found in labor-related activity.

In this case study, differences between motives of labor and schooling were underscored by one of the reflective practitioner's recognition of "real teaching" when it occurred on her side of the microteaching laboratory. Marianne observed that "real teaching" happened in the laboratory when prospective teachers dropped the explicit scripts of their lesson plans, followed their students' lead, and improvised responses to the emergent nature of classroom interaction. In contrast, "Alyssa," a prospective teacher, described teaching on the applied scientists' side of the laboratory as an artificial situation in which "you're just on a stage pretending that you're teaching a class, and the people in the class are pretending that they care and that they're students." Both worlds of "real teaching" and "artificiality" are "real" in the sense that microteaching activity on each side actually occurred. Yet, differing conditions of occurrence belie participants' differential goals and motives for microteaching activity. For reflective practitioners,

microteaching was an activity of labor in which moments of "real teaching" were valued for their productivity in the form of students' learning. For applied scientists, microteaching was an instance of "school learning" in the "real world" of the university in which artificial, simulated teaching enabled the practice of selected teaching skills.

Implications for Collaborative Partnerships

Differences in professors' and practitioners' implicit philosophies of practice parallel Aristotle's distinction between theoria and praxis, in which theoria represents activities such as science which emphasize "knowing for its own sake," while praxis represents activities which necessitate a certain competence in order to perform the activity well (Bernstein, 1971). These classically defined differences parallel the differences that are outlined by Schon (1983; 1987) and which are also revealed in this case study in participants' implicit philosophies of practice.

Since recent proposals for the restructuring of teacher education call for collaborative activities on the part of practicing teachers and college professors (Goodlad, 1990; Levine, 1992), the implication is that participants may have fundamentally different views of the activities required of prospective teachers. Collaboration will require discussion of differences and discourse about the assumptions participants hold regarding the preparation of prospective teachers. Since philosophies of practice are revealed in action through analyses of actual participants' actions, the implication is that participants' theories about their practice may not reflect a conscious

awareness of their tacit assumptions. Research such as this case study can help by contributing analyses of participants' implicit philosophies to the forum of public discourse and, thus, providing a basis for continued discussion. In the context of the microteaching laboratory course on the university campus, Marianne commented that she knows her knowledge is "different." She said, "I have tried not to be a contrast, and what has happened is I just am. I really just view things differently." She called her view "Marianne's research" and added that she and Don "made a nice blend."

This paper has attempted to portray the contrasts between partners in a borderland. What remains for future analyses is a description of the "blend." For the two "real worlds" of applied science and reflective practice to blend, there must be dialogue and discourse beyond the borderland. The university in this case study exemplified a step toward the blend by bringing practicing teachers to the university campus as clinical teachers. Now, the partnership community needs additional narratives about the experiences of university professors in the "indeterminate zone" of the public school and about the experiences of practicing teachers on the "high, hard ground" of the university campus. For the partnership to blend, borderland contrasts must become tales of "border crossings."

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Author Notes

I wish to thank the University of North Carolina at Chapel Hill Graduate School for financial support of data analysis and interpretation in the form of an on-campus dissertation fellowship from July-December 1991. I am also grateful to Winthrop University's School of Education for a professional development award to present this paper at the annual meeting of the American Educational Studies Association in Pittsburgh, Pennsylvania on November 7, 1992.