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# What Does It Mean to Participate in Class?: Integrity and Inconsistency in Classroom Interaction

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## ABSTRACT

The original study upon which this article is based began with a seemingly simple question that had origins in the author's own experiences as a high school teacher. Why do some teachers talk too much when they are teaching, and what can a teacher education program do to address this problem? When informed, then transformed, by available research in the area, the question becomes more accurate and useful for teachers and teacher educators. How can a teacher education program enable teacher candidates to encourage greater student participation and interaction in their classrooms? This article attempts to answer these questions by reporting the results of both a comprehensive literature review and a case study of six teacher candidates in one course of a teacher certification program. The study compares what the candidates say and believe about students' participation and interaction to their own actual participation and interaction in a teacher education classroom, resulting in provocative and intriguing implications for teacher education programs.

## INTRODUCTION

### Two Problems of Classroom Interaction

The original study sought to address two problems of teacher and student interaction in the classroom. The problems had arisen out of my personal experience as a high school teacher, and were validated by a review of the literature as a doctoral candidate. The first problem was that as a new teacher I had spent too much time talking, and not enough time getting my students to participate in class. The second was that I began teaching as I had been taught for many years, perpetuating a cycle of inadequate instruction. As this article reveals, the literature showed that I was not the only teacher suffering from the first problem. The literature also showed that the second problem was particularly significant within the context of teacher education programs in which many teacher educators do not practice what they preach. Once I established this original theoretical base, I then set out to test a hypothesis: if a teacher education course and instructor "practiced what they preached," might this have an effect on teacher candidates' thinking and practice?

I proceeded to conduct a case study of a sample of six

teacher candidates in a credentialing course, comparing what the candidates said about students' participation and interaction in three different discussions to their own actual participation and interaction in the same discussions. My findings from this analysis are reported in this article, but I must also report a significant flaw in the original study: it focused only on candidates' thoughts and behaviors within the context of a teacher education course. That is, it did not look at their actual practices in their own classrooms as pre-service and in-service teachers. That would be a natural next step in the research. This article takes a hard look at the very intriguing findings of the original study, which are useful in generating a set of questions for that next step.

### The Literature on the First Problem: Why Do Teachers Talk Too Much?

The original study began as an attempt to address some of the more glaring inadequacies of my practice as a beginning high school teacher. I was on an emergency credential, with no training in a pre-service teacher education program, and trying in vain to make sense of the courses I had to concurrently take at a local teacher education college. Just a few weeks had passed when I began to realize that my classes were principally characterized by lectures and recitations with very little time spent reading or writing and almost no purposeful interaction between students. I was teaching by doing all the talking and did not know what else to do. In time, professional and personal experiences led me to vary and improve my teaching methods, but some initial questions never left me: why did I talk so much, and why did that hinder student learning? When I left the classroom and made time for reflection and reading in a doctoral program, my initial research led me to realize that I was not alone in committing the same mistakes and thinking the same thoughts.

For example, J. I. Goodlad (1984), then dean of UCLA's School of Education, published a comprehensive description of what happens in classrooms, which reported the results of one of the most exhaustive studies of schooling ever conducted in the United States. The study was based on a sample of thirty-eight schools in thirteen communities in seven sections of the country. The schools differed in location; size; racial, ethnic, and linguistic characteristics of the student population; family incomes, etc. Detailed observations were

made of over 1,000 classrooms. The findings relevant to this study were compelling:

- The data supported “the popular image of a teacher standing or sitting in front of a class imparting knowledge to a group of students.” Explaining and lecturing constituted the most frequent teaching activities.
- At all levels – elementary, junior and high school – between 40 and 50 percent of classroom time was spent on two categories of passive student activity: listening to explanations or lectures, and low-level written work (worksheets, fill-in-the-blanks, etc.)
- Classroom discussions in which students could develop thinking and verbal skills occupied only between 4 and 8 percent of the time.

Educational historian L. Cuban (1983, 1984/93) composed portraits of mainstream teaching during several periods from the turn of the century to the present. In the 1983 work, as excerpted by Pinar, et. al. (1995), Cuban drew a summary conclusion about a century of teaching in the U.S.: “A dominant core of teaching practices has endured since the turn of the century in both elementary and high school classrooms,” including whole group instruction, a predominance of teacher talk, and a question-and-answer format for carrying on dialogue.

My personal experience provided anecdotal evidence of these findings that would be recognized by most readers. If one walks the halls of an American middle or high school, passing open doors and catching glimpses of classrooms, most of the time one will see the teacher talking. The research and the anecdotal evidence led to a more general question: why do so many teachers talk so much (the question)?

### What Was Wrong With the Question?

There was difficulty with the formulation of the question, however. The question made an unsubstantiated assertion about the primary importance of the quantity of teacher talk and gave no consideration to the quality or nature of this talk. Plus, the question completely ignored student talk in the classroom.

I made the original question even more problematic when I added an extra step based on my work as a doctoral candidate in teacher education. If indeed some teachers talk too much, how could a teacher education course or program bring this concern to their attention and encourage them to change this practice? The additional question also contained unexplained assumptions about how a teacher education course or program might “bring” things to a teacher’s “attention” and “change their practice.”

Dissertation committee members, peers, coursework, and reading compelled me to reformulate the first part of the question: before I tried to answer why some teachers talk too much, I had to ask, “What kind of talk actually happens in classrooms?”

### Teacher talk, Lectures, and Recitations

One of the most complex and thorough attempts to answer this question was the result of a collaboration between Hugh Mehan and Courtney Cazden. In 1974-75, Cazden took a one year leave from the Harvard Graduate School of Education to teach for one year at an elementary school in San Diego, California. Mehan was then director of the Teacher Education program at the University of California at San Diego, and along with two graduate students, he recorded videotapes of Cazden’s classroom lessons (Mehan, 1979).

Mehan’s work, regarded as seminal in the field, (Cazden, 1986; Cazden, 1988; Gee and Green, 1998; Burbules and Bruce, 2001), consisted of analyzing transcriptions of videotapes of nine lessons, encompassing 590 sequences of interaction among teachers and students. Rather than isolate a few exemplary sequences to support some original hypothesis or assumption, Mehan’s 1979 study sought to construct “a model that accounts for the organization of each and every instance of teacher-student interaction” (p. 20).

### The IRE as the problem

Mehan and his collaborators found the primary mechanism for exchanging academic information is the elicitation, by the teacher, of information from the students. The basic pattern of this elicitation is a three-part sequence of teacher *initiation*, student *response*, and teacher *evaluation (IRE)*. A teacher initiation is followed by a student reply, followed by an evaluation of this reply by the teacher. As an example, Mehan cites the following exchange from one lesson:

- T: Um, why do you think that would be better than each child carrying his own?  
J: Cause that’s ah, that’s a job for them.  
T: Yes, it would be a good job. (p. 53)

The basic *IRE* sequence can be extended if, for example, a reply does not immediately follow the initiation. Mehan (1979) labeled certain long teacher initiations and evaluations as soliloquies, and it is these that would begin to resemble lectures. But again, these do not constitute a typical pattern, and Mehan shows how the teacher, the initiator, normally employs a number of strategies, such as prompting, or repeating and/or simplifying the elicitation, until an expected reply does appear.

### The Limits of the Recitation

C. B. Cazden (1988) reviewed her observer’s research and conducted her own analysis of the videotapes. She also found that the *IRE* pattern was actually “the most common pattern of classroom discourse at all grade levels” (1988, p. 29). She pointed out the implication of the *IRE* pattern for teacher talk: the *IRE* is proof, not just that teachers talk most

of the time, but that they talk at least two-thirds of the time, since the *Initiation* and the *Evaluation* components are spoken by the teacher. Cazden suggested a label from the language of computer technology: the *IRE* is a “default” pattern — what happens in a classroom “unless deliberate action is taken to achieve some alternative” (p. 53). This may be the most damaging aspect of the *IRE* — it is virtually the only type of instructional sequence used. Though it sometimes performs a valid instructional service, particularly in checking for student understanding of facts and concepts, its overuse precludes the use of other instructional methods.

#### Discussions and Questions as Alternatives to the IRE

The literature review then led to the instructional method of classroom discussions as a powerful and effective alternative to the *IRE* and the recitation. Cazden proposed the concept of “real discussion,” different from recitation:

It is easy to imagine talk in which ideas are explored rather than answers to teachers’ test questions provided and evaluated; in which teachers talk less than the usual two-thirds of the time and students talk correspondingly more; in which students themselves decide when to speak rather than waiting to be called on by the teacher; and in which students address each other directly. Easy to imagine, but not easy to do. Observers have a hard time finding such discussions, and teachers sometimes have a hard time creating them even when they want to (p. 54).

Others since have agreed with this general notion of classroom discussions. Newmann and his research associates at the University of Wisconsin (1996) suggested the concept of substantive conversation. Tharp and Gallimore (1990) proposed the notion of “instructional conversation,” a form which can be the “method of language instruction...the medium for teacher training...a third-grade reading lesson, or a graduate seminar” (p. 196). More recently, Burbules and Bruce (2001) locate classroom discussions within a much broader exploration of the history and practice of teaching as dialogue.

#### Questions: the final piece of the answer

A final path led to good questions as one way to ensure that such discussions happen. Cazden (1986, 1988) returned repeatedly to teacher questions as the critical component of the *IRE*-recitation and its more desirable alternative, the class discussion. She pointed out that the *initiation* component of the *IRE* is almost always a test question, one to which the teacher already knows the answer. Dillon (1983), who had also observed that teachers primarily talk in the form of asking questions, found the test question particularly damaging: a) the teacher is simply “testing” students rather than expressing

a genuine interest in what they think about an issue; b) the students are uninterested in merely being “tested”; and c) both are following the pattern in which the teacher answers his own questions. Inadequate questions lead to inadequate discussions and can inhibit or block student learning.

On the other hand, the right questions can lead to better discussions. From the perspective of sociocultural theory, Oakes and Lipton (1999) emphasized the importance of social interactions, drawing out the important aspect of questioning:

Classroom social interactions...that lead students to develop new insights, deeper understanding, and greater thinking skills are those in which a teacher or a classmate presses the student through questioning and sharing of ideas to go beyond his current thinking (p. 210).

I have explored questions and questioning methods more thoroughly elsewhere (Moguel, 2003). Here there is only room to say that some of the more promising alternatives to “test” questions are the asking of a series of questions in the Socratic manner, extending the “wait time” which teachers give students to answer questions, and having students ask questions of each other and of the reading.

#### The Literature on the Second Problem: Classroom Interaction in Teacher Education

Going from excessive teacher talk to getting students to participate more through discussions and questions was one of the two principal lines of inquiry in the literature review. The other had to do with the way in which teachers influence and prepare future teachers. In my quest to understand why I was talking and lecturing so much in the classroom, I realized I was imitating an amalgamation of many of the college professors, school teachers, graduation speakers, conference panelists, and workshop presenters to whom I had been exposed throughout my life and career. Through my initial research, I learned that the field of education accepted as conventional wisdom the notion that teachers teach as they are taught (Bailey, et. al., 1996). A novice teacher enters the field as one who has, since primary school, spent scores of hours watching and internalizing the behaviors of other teachers. It was simple to conclude that, like others, I had already been socialized into certain teaching practices even before I stepped into the formal role of a high school teacher.

#### Modeling Good Teaching in Teacher Education

Bailey, et. al. (1996) took this idea of teachers teaching as they have *been taught* and introduced the concept of teachers teaching as they have *been trained to teach*, drawing attention to a damaging cycle. If teachers teach as they are taught, part of the cycle involves pedagogies modeled by teacher educators in teacher credential, education, and training programs. For example, picture a teacher educator lecturing

teacher candidates about critical pedagogy, citing well-known critiques of “banking” and other methods of instruction in which teachers merely deposit information into students’ heads (Cooper, 2003, citing Hooks and McLaren), requiring students to memorize then regurgitate information at a later date. The teacher candidates being lectured to on something that seems so true may be learning how to lecture, not how to teach employing principles of critical pedagogy.

Again, anecdotal evidence and intuition were strong: my fellow teacher candidates and I were frustrated that our teacher educators in a credential program did not model good teaching. I thought that if the professors would only do so, I could learn more effective techniques that I could then apply to my own classroom. But, the literature said otherwise. Bailey, et. al., cited Kennedy in noting that a relatively short teacher education program has little impact on new teachers compared to the thousands of hours they have spent as students in elementary, secondary, and college classrooms. I now had another question to ask; should the pedagogy of teacher education programs be a low priority because it matters little or a high priority because it influences the way teachers teach?

#### Challenging teacher educators

Further reading found that some scholars believe teacher education pedagogy should be a high priority, with general statements on its importance scattered throughout the literature. Ginsburg and Clift, in the 1990 edition of the *Handbook of Research on Teacher Education*, borrowing the 1973 words of Peck and Tucker, argued that, historically, teacher education has largely followed a “do as I say, not as I do” formula (p. 453). The authors saw this as part of a hidden curriculum of teacher education and asserted that little has changed during the almost twenty years of research they reviewed. Barone, et. al. (1996) pointed out the irony in teacher education pedagogy, particularly within methods courses:

Admittedly, most methods professors champion an alternative pedagogy that contrasts markedly with the structured, textbook-dominated, direct instruction practiced in the schools. Yet, their actions rarely speak as loudly as their words. Typically, they transmit their visions for teaching through methods and materials no better than the vehicles used by most classroom teachers. Methods courses, despite their insistence on ideal practice, are taught in ways that mirror the real instruction in our nation’s schools. Methods students, in all probability, are conditioned to practice instructional universals that have characterized American classrooms for decades and will continue to do so for years to come (p. 1118).

Barone and his colleagues assert that methods professors “must themselves gain the practical experience and theoretical knowledge to determine methodologies and materials that seem good, just and true,” such that they can “articulate, demonstrate, and negotiate these choices in their college classrooms” (p. 1121). By doing so, methods instructors who practice the visionary pedagogies they preach shall contribute in meaningful ways to the professional development of the teachers they teach. In other words, all teacher education program courses are methods courses, as they model or fail to model the teaching practices they espouse.

Goodlad (1994) challenged teacher education programs across all their courses to be “characterized in all respects by the conditions for learning that future teachers are to establish in their own schools and classrooms.” Goodlad based his call on a comprehensive and nationally representative study of teacher education programs conducted by him and his colleagues at the University of Washington. The concept is so important, Goodlad set it forth as the tenth of nineteen postulates, or guiding principles, for the operation of teacher education programs nationwide, and asked some key questions to make the postulate clear:

What is the ongoing programmatic effort to raise consciousness among the faculty regarding the need to demonstrate excellence in teaching, quality content throughout, use of a wide range of instructional materials, attention to the nature of the physical environment, the nature of the student-teacher relationship, and so on? In other words, what is the responsible faculty group doing to ensure that what it does on a daily basis is exemplary in all respects?...What processes exist for eliminating from the teacher education program practices that should not be emulated and for taking more drastic action when these processes fail to produce results (1994, pp. 84-85)?

But, does modeling good teaching matter?

As powerful and intuitive and “right” as I believed this postulate and like statements to be, as I read further, it became unclear whether they were upheld by other research. Comprehensive compilations of almost twenty years of research on teaching and teacher education yielded vague results on questions of quality, effectiveness, and impact. In the third edition of the *Handbook of Research on Teaching*, Lanier and Little (1986) began their literature review by pointing out that neither the first nor second *Handbooks* contained a comprehensive treatment of research on teacher education. The authors found the field suffering from lack of scholarly respect and attention, “from being as academic and intellectual as it probably deserves to be...teacher education tends to be easy and nonintellectual...change is likely to be slow” (p. 556).

A few years later, drawing on more available research, Corrigan and Haberman's (1990) review of the literature in the third *Handbook* indicated "there are few practices in schools that can be directly traced to the theories and research taught in colleges of education" (p. 207). Freiberg and Waxman's (1990) review in the same *Handbook* indicated there was "a dearth of research studies indicating the impact that different approaches or types of programs components have had on changing the prospective teacher's teaching performance and attitudes" (p. 625). The only approach that consistently resulted in measurable change involved early field experiences that take place outside of a college of education. Microteaching and immediate "feedback" approaches, whether from students or university supervisors, affected change less convincingly.

Richardson's (1996) review in the fourth *Handbook* also yielded complex and sometimes contradictory results. The review reported that some programs effect change, and others do not; some programs affect certain types of students and not others; and some beliefs are more difficult to change than others. Citing the work of Zeichner, Tabachnick, and Densmore; Olson; McDiarmid; Ball; Civil; Simon & Mazza; Feiman-Nemser; Buchmann, and others; Richardson reported that some researchers, often instructors of the program or course studied, found that as a result of the teacher education program, some preservice students did not significantly change the ways they thought about teaching and learning, and others did. The best programs, Richardson found, were those that were "successful in engaging their participants in examining and changing their beliefs and practices." The goal should be:

...not to introduce a specific method or curriculum to be implemented by the teachers. Instead, the goal is to facilitate conversations that allow the participants to understand their own beliefs and practices, consider alternatives, and experiment with new beliefs and practices (p. 113).

#### Returning to the Original Problems and Questions

To where had two principal lines of inquiry led the original study? There seemed to be a couple of holes in the literature that the study could help fill. First, as we have seen, the literature review by itself asked and answered some interesting questions about classroom interaction: why do so many teachers appear to talk so much, what is really happening, and what then are better alternatives to this excess of teacher talk? But, second was the more difficult issue of getting other teachers to trace that same intellectual path. The literature did not have a clear answer to the question: can educating, preparing, and training new teachers in different and better ways make a difference in the development of their own theories and practice? I hoped that my study would be able to provide an answer.

I first made the key decision to place myself in the role of both teacher and researcher of a teacher education course. When I began to develop a pedagogy and style as a teacher educator, I had concentrated on developing methods of facilitating classroom interaction. I reduced lecture time and increased the time students did things other than listen to me (read, write, make presentation, interact with each other, etc.). I tried to model good teaching practices as I worked with new teachers. It seemed natural to me to study and reflect on my own practices first, before I studied those of others.

My research interests fell into the category of self-study in teacher education, a relatively new area in which the researchers themselves "are deeply invested in their studies, personally and profoundly" (Bullough & Pinnegar, 2001; Pinar, 1995; Zeichner, 1999). In the four editions of the *Handbook of research on teacher education*, only Carter and Doyle (1996) had mentioned, without reviewing them, the existence of a couple of "autobiographical studies of pedagogical development among teacher educators" (p. 121, 129) though the whole of their article promotes the making of autobiography and personal narrative "the cornerstone for the education of teachers." As Bullough and Pinnegar (2001) write:

Self-study as an area of research in teacher education is in its infancy. Its [endurance] as a movement is grounded in the trustworthiness and meaningfulness of the findings both for informing practice to improve teacher education and also for moving the research conversation in teacher education forward (p. 20).

#### The Course As Research Site

The course was one of many sections of the same introductory teacher education course with the goal of helping teacher candidates formulate a foundation for critical thinking about theoretical and practical issues and problems in American education. A generic syllabus listed general topics to be covered, such as the philosophy, sociology, and politics of education; political, economic, and demographic changes affecting schools; issues of class, race, and gender; equity and excellence in schools, etc. Certain requirements of the course were particularly suited to this case study. The generic syllabus required that class meetings include small and large group discussions focused on assigned readings, and that students should have the opportunity to lead small group discussions.

The required textbook on teacher education (Oakes & Lipton, 1999) critiqued traditional, behavioral methods of instruction and assessment, and promoted student-centered constructivist approaches based on sociocultural theory. I also required students to read and discuss research taken directly

from the literature review for the study, condensed into a 3-page distillation of the research. As we have seen, this literature discouraged lecture and recitation methods and recommended alternative questioning methods and discussion facilitation techniques. Among my goals for the course was to promote class discussion, questioning skills, and discussion facilitation as instructional methods.

### The Sample and the Data Sessions

From the total enrollment of thirty teacher candidates, the study drew a sample of six students to conduct a case study in which the candidates met three times to discuss issues of classroom interaction and participation. The data collection was ethnography, which incorporated elements of narrative inquiry, an approach common in linguistic anthropology and discourse analysis, which focuses on research subjects' own accounts of their lived experiences (Duranti 1977; Miles & Huberman, 1994; Merriam, 1998). The data collection avoided intensive writing, extended story-telling, and formal interaction with interviewers and researchers. Instead, the study involved recording and analyzing narrative as it occurred in small group discussions, keeping to a minimum the presence and influence of the researcher. The study focused on the talk among the candidates. While the conversations began with a question provided by the researcher, a formal interview, filled with researcher's questions and related researcher talk, would have affected the substance and direction of each conversation.

The three data collection sessions took place at approximately the beginning, middle and end points of the course. The six candidates, identified by the numbers 1 through 6, were always together for these sessions; on other days and course sessions they were grouped with their peers. For each session, two students were selected to be discussion facilitators while the others remained as participants. The videotaped discussions provided the primary data for the study, and both a qualitative content analysis and a quantitative participation analysis were conducted.

### The Questions and Analysis of Data

The researcher provided the potential teacher candidates with two questions:

1. How would you characterize your usual participation in a college class, and what are the factors that influence this participation?
2. How do you envision your students and their teacher participating in your classroom, and what are the factors you see as ensuring these forms of participation?

Based on the data provided by the students' discussions, the two principal research questions for the study were the following:

1. What did the candidates say about how teachers and students should participate in classrooms?
2. How did the candidates actually participate in the

course of the three conversations?

In the original study, both quantitative and qualitative data analysis approaches looked at every single relevant turn and sequence of talk in one hour's worth of conversation. The actual transcript of the three conversations ran to about 100 pages of talk. A quantitative analysis is described later but was not useful in answering the most important research questions. A qualitative content analysis attempted to comprehensively determine the knowledge, skills, beliefs and dispositions (Lee and Yarger, 1996) toward and about classroom participation and interaction expressed by the candidates. An exhaustive search followed the recommendation of Erickson (1998) that since evidence in the data can serve to confirm or disconfirm assertions, the search for evidence "needs to be exhaustive in order to ensure that crucial disconfirming evidence [is] not systematically ignored" (p. 1163). As Eisner (1991) writes, because qualitative research is vulnerable to the omission of "evidence contrary to one's [the researcher's] vested interests or educational values," it is necessary to consider "disconfirming evidence and contradictory interpretations" (p. 111). In a search for themes and recurring patterns of meaning (Merriam, 1960), then, the next section reports the evidence as if the researcher had rigorously recorded the principal lines of thought as they had occurred in each discussion, then carefully summarized each conversation.

## RESULTS

### What Did the Candidates Say About Classroom Participation and Interaction?

• On the subject of how they participate in college classrooms, the candidates went through a two-part change.

In the first session they emphasized the individual characteristics they brought to their classes, whether they be interest, motivation, or even fatigue and other states of mind, though they acknowledged that instructors often inhibit and sometimes encourage student participation. Peers can also be a problem, as a few vocal and aggressive students always seem to dominate discussions. On the other hand, too many passive students who do not participate enough are the other part of the problem. In the second session the emphasis on individual factors became one on how this discussion-based course and its instructor promoted their participation by exemplifying an open, respectful, safe class environment. In the third session, personal states of motivation and interest were not mentioned at all. Rather, the candidates continued to focus on how an instructor and various course activities influence participation in both positive and negative ways.

• On the subject of eliciting student participation as teachers, the candidates' thinking started from a base of "student-centered" rhetoric and was deepened and extended across the three data sessions.

All the candidates seemed to start from a base of constructivist, student-centered notions of teaching and

learning. That is, citing either their experience in this course or providing positive self-assessments of their own classrooms and teaching as examples, they believe that a respectful, open, and democratic course environment, and an instructor who respects students' viewpoints and opinions are the solution to the problems of inadequate class participation. In the second and third sessions, the candidates came to agree that a facilitator and his questions are crucial in conducting good discussions, but disagreed on some key points. First, they were undecided as to whether teachers should randomly select students to speak, or otherwise compel or force students to participate. They also never reached consensus on whether teachers or students are responsible for the important task of summarizing discussions.

The subjects deemed the pedagogy of the course, with course discussions being the typical mode of instruction, the most influential factor in the way the candidates thought about participation.

Second only to their actual field experiences as student teachers, the candidates discussed the way in which the course was taught more than any other component of the course. The candidates reached consensus at various points that the course discussions enabled them to gain a better understanding of important elements of classroom interaction and to realize the value of: a) teachers talking less and students more; b) encouraging more thinking and learning through the use of discussions and questions rather than through traditional lecture-and-recitation formats; and c) of creating climate of respect toward each other and openness toward different perspectives and ideas. On the other hand, the candidates also agreed at one point that an over-reliance on course discussions led them to conclude that teachers must vary their instructional methods.

The class read and discussed required textbook almost every week, but the study group mentioned it only once in the data sessions. The group mentioned the 3-page distillation of research a few more times, but cited only a couple of its items as influential in either the candidates' actual classroom practice, or the way they think about it: 1) avoiding test questions; 2) increasing wait time between teacher question and student answer.

#### How Did the Candidates Actually Participate and Interact?

The rhetoric of the candidates was good. They were promoting student-centered classrooms with instructors who respect students, listen to them, ask them questions, and get them to talk. They were able to "talk the talk." However, the story changed when the study turned to a quantitative and qualitative analysis of the candidates' actual participation in the sessions.

The quantitative analysis did not find any definite trends or patterns, the primary reason why this article does not include the many tables and charts that were generated by the analysis. The study employed three measures of

conversational practice: the number of turns a candidate took to speak, the average length of a candidate's turn, and the number of questions the candidate asked. Two students took more turns than the others (21 and 27 percent of all the turns in the sessions), another two took fewer (6 and 9 percent), and the last two took a number in between (16 percent). The numbers and percentages were approximately the same whether the candidate was in a facilitator or participant mode. I conducted similar detailed analyses of turn length and question number, and the results were similar and unremarkable. However the quantitative data was cut, sometimes a candidate talked more times, and sometimes the person talked fewer times. When they did talk, sometimes the person talked for a longer period of time, and sometimes for a shorter period. Sometimes more questions were asked, sometimes fewer. In essence, the quantitative analysis did not help in answering the principal research questions.

#### Comparing Beliefs with Actual Participation.

The qualitative analysis of actual participation was much more interesting. The analysis here focuses on two students and three excerpts of conversation because they each illustrate the general findings. They are not so much representative of what was said, but of how it was said.

*Student 3 as a passive participant.* On the one hand, some of Student 3's beliefs were in line with his actions. He expressed concern several times that teachers should not force students to talk. He believed that some courses can be hostile environments that shut participants down. His concern for the safety and comfort of younger students was an echo of his own feelings. He often believed the participation requirements of this course forced him to talk more than normally comfortable for him.

In the following excerpt Student 5 begins by promoting the random selection of students to compel them to talk.<sup>1</sup> Student 3 strikes a cautious note then withdraws as his more vocal peers answer the question (Moguel 2000, Data Set 2).

Student 1: [right...]  
 Student 5: they would have some kind of vocabulary...  
 Student 1: ...something that's...]  
 Student 3: That doesn't make it more stressful for people though?  
 Student 5: No, because I thought, at...at one point, it's sort of hap...I think they feel glad that now they're part of it...  
 Student 6: I think overaall...  
 Student 5: [WHEREAS IN ANOTHER PART...  
 Student 6: ...the challenge is good for them...  
 Student 5: ...THEY COULDN'T CONTRIBUTE, NOW THEY CAN]  
 Student 3: [yeah]  
 Student 6: ...helloooo?  
 Student 5: and in fact I even saw, which was very

pleasing to me, a couple of them raising their hands, which they never do and I thought so finally I hit on somethin'...an...

Student 3's participation in the above excerpts is representative of both what he said and how he said it. His own level of participation was a good reflection of his beliefs; he proved to be one of the two most passive contributors as a participant.

On the other hand, he placed a great deal of responsibility on facilitators to conduct good class discussions, but was one of the least active facilitators. He charged facilitators with the responsibility of summarizing discussions, but the overwhelming majority of his turns as a facilitator were brief, insufficient to adequately summarize, though some of his brief turns restate his peers' speech.

Finally, he invested questions with the power to encourage student participation, but asked few questions either as a participant or a facilitator. He asserted it is a facilitator's job to ask interesting questions to keep students from getting bored, but as facilitator he asked among the fewest questions of all facilitators. As facilitator he asked no good, authentic questions other than the opening one provided to all the facilitators.

*Student 5 as an active participant.* This student was well aware that he is normally an active participant and proved to be one of the two most dominant contributors. He professed strong beliefs in cooperative, constructivist teaching methods in which teachers talk less and students talk more. However, both as a facilitator and as a participant, he took frequent and long turns. In the first and second sessions he attempted through talk to "teach" his peers certain lessons. In the third session, as facilitator, he displayed the same willingness to participate and advance his own views.

He reported that as a result of this course he now sees that the instructor plays a key role in setting the tone of a discussion, and that not talking over or interrupting other people is necessary to create a safe and non-threatening atmosphere. In contrast, he demonstrated several times in all three sessions a willingness to talk over his peers, hold the floor for long lengths of time, and otherwise create an atmosphere that limited his peers' participation.

To return to the sequence already shared to illustrate Student 3's participation, we again see Student 5 promoting the practice of calling on students and Student 3 wondering whether this causes undue stress. Both Student 5 and 6 begin to formulate answers that address this concern, but Student 5 raises his voice to gain the floor and report how his class has increased student participation. While Student 5 explains how his students feel they can contribute and be a part of the class, Student 6 audibly ("helloooo?") complains she is being shut out of the conversation. Student 5 may or may not be conscious of his peers' complaint and simply continues with the laudatory description of his own classroom (Moguel 2000, Data Set 2).

Student 5: but on purpose I called on 'em 'cause they

would have something to contribute

Student 1: [right...

Student 5: they would have some kind of vocabulary...

Student 1: ...something that's...]

Student 3: That doesn't make it more stressful for people though?

Student 5: No, because I thought, at...at one point, it's sort of hap...I think they feel glad that now they're part of it...

Student 6: I think overaaaall...

Student 5: [WHEREAS IN ANOTHER PART

Student 6: ...the challenge is good for them...

Student 5: THEY COULDN'T CONTRIBUTE, NOW THEY CAN]

Student 3: [yeah]

Student 6: ...helloooo?

Student 5: and in fact I even saw, which was very pleasing to me, a couple of them raising their hands, which they never do and I thought so finally I hit on somethin'...an...

On the other hand, Student 5 brought some of his actions into line with his ideals. He believes students need to know when and how to participate. He asserted that teachers should not summarize discussions and should instead give students responsibility for doing so, which pushes students beyond mere fact recall in the process. Then, when he served as facilitator, he asked many questions and used them to push his peers' thinking.

In a final sequence, after several students have put forth their critiques of the videotaped teacher and classroom, Student 5 steers them back to the original session question (Moguel 2000, Data Set 3).

Student 2: The other thing I noticed, I mean, there was way too much input coming in to those kids.

Student 5: Wait a second though, would you say for you then, um, that it would help you, as a student, to be focused before you...

Student 6: Well that's the key...

Student 1: [Well, in your role

Student 5: ...Wait up, that's what I'm wondering

Student 2: [Because what, what...

...what I was gonna say...

Student 5: ...if you personalize that, and you...

Student 2: ...Yeah, yeah, well that's what I was gonna say]

Student 5: ...does it help you?'

As facilitator, Student 5 uses a sequence of questions and other statements to steer the conversation and deepen and focus his peer's answers.

Summary findings on comparing beliefs to actual participation

- Much of what the candidates said was not consistent

with their actions and practices as discussion facilitators and participants.

For example, Student 3 placed a heavy responsibility on discussion facilitators for asking questions and summarizing discussions, but did neither when he served as facilitator. Student 5 believed that respectful and safe environments make successful discussions possible, but he, himself sometimes contributed to a discussion atmosphere not perceived as safe by his peers.

On the other hand, the candidates also displayed consistency between what they said and believed and how they actually conducted themselves as participants and facilitators.

Student 3 worried about random selection and other aspects of discussions creating undue pressure on quiet students, and he proved to be such a quiet student that became even more passive in each session. Student 5 believed good facilitators ask questions and push students beyond fact/recall with sequences of questions, and as facilitator asked interesting sequences of probing questions.

## DISCUSSION

To repeat an earlier admission, this study did not attempt to determine the actual teaching practices of the candidates in their own classrooms. I see now that such data would have begun to provide, as Eisner has written (1991), the multiple types of data necessary to provide the “confluence of evidence that breeds credibility” (p. 110-111), what he terms “structural corroboration” (p. 110-111) of evidence, finding, and interpretations in qualitative research. My attempt to replicate a slice of the real world ended with just that, a slice. The group of six was small, the students were presumed to be knowledgeable adults, and the facilitators were not charged with “teaching” a lesson. Still, I think the study was useful in raising some questions for further research in both classroom interaction and teacher education.

### Teacher Talk, Discussions, and Questions

The findings of the study, primarily the results of the literature review, begin to address a fundamental problem of classroom interaction. Teachers try everyday to get students to participate in good classroom discussions. Yet, these efforts fall flat, and teachers revert back to doing most of the talking. Teachers ask tons of questions to get things going, and the same few students try to answer all the questions while most others do not. Occasionally something fires up the students for a few seconds or minutes; the hands go up, the students get excited, everyone wants to make a comment, and then...back to reality. Teachers prove unable to sustain intense discussions, students slump back into their chairs, and the classroom returns to long stretches of flat, boring discussion in which the teacher still does all the talking.

The literature review reveals that one fundamental problem is a common and overused pattern of classroom interaction:

the *IRE*/recitation, in which a teacher *initiates* with a test question, one to which the teacher already knows the answer (*I*), followed by a short, unelaborated student *response* (*R*), followed by a teacher *evaluation* (*E*) of the student response. The students seldom give longer, elaborated answers, and the teacher does most of the talking. Though it seems that the pattern is useful and necessary in checking for understanding, it is overused and turns into checks for memorization rather than for true, deep understanding. Improved questioning methods and better, *more authentic* questions that facilitate true participation provide a more desirable alternative which will ensure good class discussions.

This study can report that the candidates referred to some of the research to which the course exposed them as they discussed classroom participation and interaction. They seemed particularly taken with the idea of replacing “test” questions with authentic questions, instead, and extending the time allotted to students to answer questions. They referred many times to the importance of a safe, comfortable, non-threatening atmosphere to student participation. But, the candidates also went beyond the research to which they were exposed and raised some issues on which they never quite reached consensus.

For example, some of the candidates believe that students should be not be pressured to talk, while others want to challenge them to do so as much as possible. They also debated whether the teacher or the students should summarize a discussion of some length. How the candidates actually put these ideas into play in their own classrooms would be the subject of another study, but the present study enabled the candidates to ask each other which set of beliefs better exemplify good principles of classroom interaction and participation? As one candidate framed the issue in exasperation, trying to figure out whether it is best to pressure students or allow them the opportunity to talk or not talk as they wish, “...I can’t help but think ‘SO, WHAT’S RIGHT?’” There are some good questions here for further research in classroom interaction, the answers to which many teachers are eager to know.

### Modeling Good Teaching

One of the intriguing findings of the study is that what people say is often different from what they do, though there is also some consistency between the two. I believe the literature review and the study show that this is phenomenon common among both teachers and teacher educators. But, what does this finding contribute to the field? I had hoped the study would show that it is important that courses and instructors model good teaching practices, but this study took me beyond that point.

On the one hand, the candidates cited the experience of the course and its instructor as valuable in gaining a better understanding of some elements of classroom interaction: realizing the value of teachers talking less and students more, of encouraging more thinking and learning through the use

of discussions and questions than through traditional lecture-and-recitation formats, and of creating a climate of respect toward each other and openness toward different perspectives and ideas. The candidates cited the pedagogy of the course and its reliance on class discussions as influencing their thinking and practice. They discussed the course pedagogy more than any other single component of the course, including the required textbook and the 3-page distillation of research, and second only to their student teaching field experience. Interestingly, the students reported that an over-reliance on course discussions lead them to conclude that teachers must vary instruction, and actually discouraged their participation in the class at times, though the quantitative component of the study found no support for the latter.

Taking the time to discuss pedagogy became more important than simply modeling it. In this and subsequent courses I have found that while some candidates immediately grasp the instructor's attempt to model good teaching, other students completely miss the lesson unless it is explicitly stated. Cooper (2003), in making a similar attempt to model good teaching practice, found one student awake enough to push the instructor. She writes:

"As one preservice student put it: 'It isn't enough to model something, I want to know why it is being modeled 'in the first place'" (p. 91).

The implication of this finding is the continuous need for rigorous self-assessment in a teacher education program, and both reconfirms and adds to earlier work. In the third edition of the *Handbook of Research on Teacher Education*, among Freiberg and Waxman's (1990) conclusions had been that real change in teaching necessitated "the ability to be introspective and to be able to generate one's own sources of information" (p. 627). Another conclusion had been that change in teacher education, "in the final analysis," had to be

"instituted from within," and that teacher educators had to appropriate more responsibility and authority over their profession.

This study adds the idea of reflection about the pedagogy of a teacher education course as a worthwhile exercise. It asserts that the teacher educator has to take the lead in this effort. The pedagogy of a course is something the students may experience more than any other single method, technique, reading, lesson, or exercise. It is a shared experience to which all students can relate, and it provides a common ground for discussions.

### The Importance of Self-Study

This article began, as did the larger intellectual journey of which it is a part, with an autobiography, and it is appropriate to end on an autobiographical note. While the following is self-reported and thus immediately suspect, in some ways it is all I am truly certain about in the end. The research I have read has been one of the greatest revelations of my career principally because it was about my own practice. Others' ideas about lectures, the *IRE*, discussions, and questions have all illuminated my own thinking and practices regarding classroom interaction. My students' comments about the course confirmed what I thought were some of the strengths of the course and pointed out some weaknesses that had to be addressed. I found the candidates' wariness of too many class discussions compelling; in my zeal to substitute teacher talk and lectures with classroom discussions, I had taken my courses to the other extreme. As a result of the study I became much more aware of the need to vary my instructional methods. Perhaps the next step for my own research would be to compare what I have said and believe with my own actual practices, and I would hope that other teacher educators would agree that more of us should do the same.

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#### (Footnotes)

<sup>1</sup> The following transcript notations are used in the excerpts, notations conventional in conversation analysis, sociolinguistics and related fields, including brackets [ ] indicating the overlapping talk of two or more persons, and capitals indicating loud speech (Heritage, 1984, 1997; Duranti, 1997).