



## The Role of Preservice Teacher Education

Mary M. Kennedy

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Ideas about teacher education are strongly influenced by a received wisdom about learning to teach. Most citizens in the United States who have thought much about teaching subscribe to the received wisdom, and most teachers subscribe to it as well. The most vocal and visible group not subscribing to the received wisdom is teacher educators. Here is why.

According to received wisdom, teaching is fundamentally a self-evident practice. What to teach should be obvious if you know your subject, and what to do at any given moment should be obvious from the situation. Therefore learning to teach consists of two main parts: you learn the subject you intend to teach through college-level liberal arts courses, and you refine your technique and personal style through experience in your own classroom. Most versions of the received wisdom end here. Some versions add a small role for teacher education, acknowledging that there might be some benefit from studying child psychology or perhaps research on teaching. But the role of teacher education is still considered to be relatively modest.

Even reform movements, which usually acknowledge that there might be more to teacher learning than meets the eye, often subscribe to the received wisdom and concentrate more attention on continuing professional development than on preservice teacher education. Consistent with received wisdom, reformers tend to believe that a great deal of teacher learning occurs in the context of practice, that teachers can continue to refine their techniques throughout their careers, and that this is where reform efforts should be concentrated.

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There is much to be said for received wisdom. Many teachers will attest that it describes their experience of learning to teach, and many studies of teacher education programs indicate that teacher education is indeed a weak intervention. Comparisons of teachers who have received different amounts or kinds of teacher education often indicate only slight differences between groups, thus suggesting that teachers are learning the things that matter most from either their liberal arts courses or their own experiences teaching.

There is, though, an invisible element in learning to teach that the received wisdom does not mention. The sociologist Dan Lortie pointed out over twenty years ago that teachers go through a lengthy apprenticeship of observation in that they spend their entire childhoods observing teachers teach. Lortie suggested that the endurance of traditional teaching practice derives in part from the fact that teachers are highly likely to teach in the way they themselves were taught.<sup>7</sup> Their experiences in primary and secondary schools give them ideas about what school subject matter is like, how students are supposed to act in school, and how teachers are supposed to act in school. Thus, when they begin to teach, they adopt the practices of their former teachers. If their elementary teachers represented the school subject of writing as a set of grammar rules, for instance, rather than as a way to organize thoughts and communicate ideas, they will tend to teach writing this way themselves.

The apprenticeship of observation is an important omission from the received wisdom model of teacher learning, yet it is likely that the model itself would not work if the apprenticeship were not there. This apprenticeship gives teachers a frame of reference that allows them to interpret their experiences and gives them some ideas of how to respond to them. That is, one reason teachers are able to learn to teach almost exclusively through their own teaching experiences is that they know what is supposed to happen. Their frame of reference enables them to judge their daily successes against a standard of expectations. Consequently the received wisdom model of teacher learning seems to work because teachers have already learned so much about what the practice of teaching consists of. Absent an a priori frame of reference, it is not clear that the received wisdom model could account for teacher learning.

We could revise the received wisdom model of teacher learning, of course, so that it provided a more complete picture of teacher learning. We could say that teacher learning consists of three parts. First, teachers learn what the task of teaching is through their apprenticeship of observation, then they learn their subject matter through their liberal arts courses in college, and then they develop their own technique and style through their own teaching experiences. And, of course, they can still learn some incidental things about learning theory, child development, or classroom management through their preservice

The received wisdom model of teacher learning, then, is a reasonably accurate rendition of how most teachers learn to teach, if we add the proviso that teachers engage in an apprenticeship of observation that provides them with a frame of reference for deciding what is appropriate and inappropriate classroom behavior. But the received wisdom model is less useful when teachers are expected to learn a version of practice that they have not already examined for thirteen years, for it does not include a place for teachers to learn alternatives to traditional teaching.

In fact, if teachers must draw on their apprenticeship of observation in order to learn to teach, then most reform proposals are doomed. Reformers will not improve teachers' practices by changing the caliber of people who enter the profession, for teachers of all kinds bring the same apprenticeship to their work. Nor can they improve teaching practice by changing the number of course credits teachers are required to take in one subject or another, or by changing the rewards and sanctions that govern teachers. Reformers can change teaching practices only by changing the way teachers interpret particular situations and decide how to respond to them.

That teachers already have a clear frame of reference for interpreting and evaluating classroom situations introduces problems for education reformers. Reformers by definition want to change the frame of reference. They want teachers to teach differently. They want teachers to see differently. For reformers, the received wisdom model of teacher learning will not work for two reasons. First, it does not include a time and place for teachers to learn a different conception of the task of teaching, and second, it does not acknowledge that teachers already have a frame of reference that might actually hinder the learning of a different conception of teaching.

In fact, the kind of teaching that reformers envision requires teachers to shift their thinking so that they have different ideas about what they should be trying to accomplish, interpret classroom situations differently, and generate different ideas about how they might respond to these situations. Such a shift in thinking might be analogous to Kuhn's (1970) famous description of paradigm shifts in scientific communities, although teachers' ideas are not nearly as elaborated as those of scientists. Still, teachers function within frames of reference, and they use these frameworks to formulate their plans, interpret their experiences, and respond to classroom events. So when reformers ask for an entirely different type of teaching, they are asking teachers to shift to an entirely different frame of reference. This is no simple task.

Reform might be easier if reformers could describe—indeed, prescribe—the practices they wanted, but they cannot. The kind of teaching that reformers want requires teachers to encourage students to develop their own ideas, and then to respond intelligently to those ideas. This kind of teaching requires a lot of spontaneous judgments. It is often difficult to know how to interpret a par-

ticular student's remark or to discern the sources of confusion that are frustrating a student. Evidence of student learning is obscure at best, and it is hard for teachers to judge their own success. Sometimes a carefully wrought lesson misfires, and sometimes a lesson hastily thrown together is wildly successful.

This ambiguity makes teachers' frames of reference especially important, for teachers draw on these frames of reference to interpret the situations they face, make sense of what happens in their classrooms, and make decisions about what to do next. These frames in turn are likely to derive from their own childhood experiences in classrooms.

An important role for preservice teacher education (PTE) is to change these initial frames of reference. Preservice teacher education is ideally situated to foster such a shift in thinking. It is located squarely between teachers' past experiences as students in classrooms and their future experiences as teachers in classrooms. From their experiences, teachers develop the ideas that will guide their future practices. If these ideas are not altered during preservice teacher education, teachers' own continuing experiences will reinforce them, cementing them even more strongly into their understandings of teaching, and reducing the likelihood that these ideas might ever change.

Whether preservice teacher education can do this is not known. To address this question, I turn to findings from a study of the influences of teacher education, the Teacher Education and Learning to Teach (TELT) study. This study was designed to examine teachers' interpretations of and responses to a set of prespecified situations. In the TELT study, instead of testing teachers for their knowledge about ideas such as "authentic tasks" or "engagement in learning," we presented them with hypothetical classroom situations and asked them what they thought about these situations and how they thought they would respond to them.

## TEACHER EDUCATION AND LEARNING TO TEACH STUDY

The TELT study was designed to see what teachers learned from teacher education programs—not what they could recite about important educational ideas, but how they interpreted particular situations and proposed to respond to them. Researchers followed teachers from the time they entered their programs through their completion of those programs. Over one hundred teachers were followed as they participated in nine programs. Teachers were asked at several times during this process how they would respond to a set of specific classroom situations. The situations were such that teachers' interpretations and responses could, and did, differ from one situation to another. Moreover, the ideas and ideals they claimed to care about could be, and often were, incompatible with the ideas that occurred to them in the face of these specific situations.

The TELT study concentrated most of its examples of teaching within the context of two specific subjects, mathematics and writing. In this chapter I focus on teachers' thinking about writing situations. The teaching of writing is a good example of the problem of frames of reference because there are many laudable ideas within the reform rhetoric for writing, and they differ substantially from traditional practices in teaching writing. The reform argument in writing runs something like this:

1. In the past, the subject of writing has consisted of a set of prescriptions: rules for when to capitalize, how to punctuate, which verb tenses to use in different sentence constructions. These have been taught to students with little regard for why they matter. The assumption in the past has been that once students are adults and have some reason to write, all of the rules will be there, waiting to be applied.
2. What we have failed to do in writing is help students learn to generate ideas and translate those into texts: to formulate their thinking, wrestle with ideas and with the meaning of words, go through the difficult processes of thinking, drafting, revising, rethinking, envisioning audience response, and so forth that are part of writing when it is done in the real world for authentic purposes.
3. Moreover, we suspect that all of this attention to prescriptions in writing may divert students' attention to their original purposes and inhibit their ability to engage in serious thought about their purposes and how to achieve them.
4. Therefore, the teaching of writing should change so that (1) students engage in authentic writing tasks for real audiences; (2) teachers serve as coaches, mentors, or facilitators rather than as judges and arbiters of what should be done and how and when; (3) prescriptions are taught in the context of these projects, when students are ready to publish their papers, rather than earlier in the process, when students are still formulating their ideas and trying to express them.

None of the reformers claim that prescriptions should not be taught. Rather, they suggest that the orientation toward prescriptions should change so that prescriptions have a purpose within an authentic writing context. However, teachers may not be able to see prescriptions through this frame of reference if they have acquired a different frame of reference from their apprenticeship of observation. They may not be clear about exactly how much attention should be given to prescriptions, relative to the concepts and processes of writing. Yet when they are alone in their classrooms, trying to teach in this new way, they must interpret each situation by themselves and must decide by themselves

whether it calls for attention to prescriptions or to some other aspect of writing. Writing, then, is similar to many of the other subjects that have been involved in reform rhetoric in that it requires teachers to make a great many ad hoc decisions, and consequently is very dependent on the frame of reference that teachers use to make those decisions.

Writing is also representative of other subjects in the sense that many of its ideas appear in the rhetoric of other subjects: the idea of student engagement is there, as is the idea of authentic tasks, the idea of teachers' working as facilitators rather than as purveyors of absolute truths, and the idea of students' constructing their own understanding of important ideas in writing through their experiences working with these ideas. But all of these ideas are only vaguely defined, and teachers are necessarily left to their own devices to envision what they might do in any particular teaching situation. Consider, for instance, the concept of ownership. *Ownership* sometimes means that the student chooses the topic or format or genre for texts, sometimes that the student, rather than the teacher, makes the major decisions about the progression of the piece, and sometimes that the project is an authentic project rather than an assignment. Not only are there many meanings to this idea, but any of these definitions of ownership can conflict with the idea of ensuring that students learn to comply with prescriptions, because eventually, the teacher must inform the student of relevant language conventions. At some point, the teacher must impose some rules on the student's text and insist that it conform with these conventions. Without a clear and detailed understanding of ideas such as ownership, teachers may have difficulty envisioning a practice that gives students ownership of their own products while at the same time ensuring that they learn language conventions.

### Initial Frames of Reference

To see how teachers' frames of reference influence their teaching decisions, consider one particular classroom situation that we asked teachers to interpret and respond to: a story written by a student named Jesse. Jesse's story appears in Figure 3.1. Like the texts of most other novice writers, Jesse's story contains many errors in punctuation and grammar. But it also contains evidence, to a teacher who is disposed to look for it, that Jesse is thinking about his writing and is developing strategies for achieving his own purposes. We received this story from a second-grade teacher who told us of the original "Jesse's" intentions. In this story, Jesse wanted to include quoted material. He had never used quoted material before, and had received no formal instruction in how to indicate quoted material. But he had noticed that when his teacher read stories to the class, the teacher always paused prior to reading a quotation. Jesse therefore decided to insert pauses before his quoted material, and chose to insert periods to indicate those pauses.

Figure 3.1. Jesse's Story.

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One day my friend mary asked me. Do you want to have a picnic? When we got there we started playing. At the picnic pepol said. Where's your puppy? He is at home? We went home happy. My mother said, I'm glad you had a picnic.

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In the TELT study, we asked teachers attending each of our sample programs to examine Jesse's story and talk about how they would respond to Jesse if he were a student in their own classrooms. As I examined teachers' interpretations of and proposed responses to Jesse's story, I found that I could group teachers' comments into three main categories of ideas.

Comments reflecting the traditional prescriptive frame of reference.

Teachers whose interpretations and responses fell into this category wanted to help students learn the rules of grammar, punctuation, and so forth. When examining Jesse's story, for instance, they were likely to discuss its errors, and when proposing a response, they were likely to enumerate all of the errors.

Comments drawing on a conceptual frame of reference. Teachers using this frame tended to think that concepts were important in writing—concepts such as chronology and flashback, for instance. When examining Jesse's story, these teachers were likely to say that Jesse understood the main parts of a story—beginning, middle, and end—or that Jesse understood chronology.

Comments reflecting an interest in students' strategies and purposes.

When examining Jesse's story, for instance, teachers using this frame of reference were likely to comment on the meaning of Jesse's story—to say that they were confused about the significance of the puppy, for instance.

Teachers were free to comment in any way they wanted, and their comments reflected their own frames of reference about teaching and learning. A teacher whose ideas derived mainly from traditional teaching practices, for instance, would be likely to notice that Jesse's story had numerous incomplete sentences, while a teacher who was interested in conceptual understanding might notice that there was a pattern to these sentence fragments—that they always appeared prior to quoted material. Such an observation could lead to the deduction that Jesse had invented a method for indicating quoted material.

Table 3.1 shows the percentage of teachers entering each program category in the TELT study who commented on each of these features of Jesse's story at the time they were entering their teacher education programs. Two important points can be made about the pattern of responses shown in the table. First, across most program groups, a larger fraction of teachers noticed Jesse's errors in prescription than noticed any other feature of Jesse's story. This pattern is very similar to the patterns we found when examining teachers' interpretations

Table 3.1. Categories Teachers Noticed in Jesse's Story, Before Participation, in Teacher Education.

What Was Noticed in the Story	Traditional Management Orientation		Reform Orientation		Total Number of Interviewees Noticing This Aspect
	University Based	Field Based	University Based	Integrated	
	Urban U (n= 13)	State AR (n=8)	Elite C and Normal U (n = 11)	Collaborative U and Independent U (n = 21)	
<i>Jessie's compliance with prescriptions</i>					
Mechanics, other rules	77 percent	50 percent	45 percent	19 percent	30
<i>Jesse's understanding of concepts</i>					
Concepts, ideas	31	25	18	29	14
<i>Jesse's strategies or purpose</i>					
Content of the story	31	50	64	52	27
Apparent purpose	23	13	9	24	10

Note: Each figure indicates the percentage of people who raised a particular concern, but the total exceeds 100 percent because teachers could raise as many issues as they wanted.

Italicized figures indicate that a group's response rate in this row differs by at least 20 percentage points from the average response rate for the row.

U = University; C = College; AR = Alternate Route Program

and responses to other teaching situations as well. That is, across all the situations we presented and across all interview occasions, the most frequent comments reflected a concern about how well students complied with prescriptions. In this case, when examining Jesse's story, teachers noticed the many grammatical and punctuation errors Jesse made, and when asked how they would respond to Jesse, they proposed to correct these various grammar and punctuation errors. This should not be surprising, in that ensuring compliance with prescriptions has been the main idea guiding the teaching of writing in the past.

The second important point that needs to be made about Table 3.1, however, has to do with the group in the right-most column. The programs represented in these columns subscribed to many of the reformers' ideals. They represented the school subject of writing as a purposive activity that required a unique pedagogy. Moreover, neither of them is a preservice teacher education program; both work with practicing teachers who can profit from their own experiences teaching as they participate in the programs. One is an in-service program, the other an induction program. The idea of working with practicing teachers rather than preservice teachers is consistent with the received wisdom model of teacher learning, which asserts that the most important phase of teacher learning is that which occurs in the context of practical experience. These programs capitalize on this important phase of learning by working with teachers while they are maintaining full-time teaching practices.

One important corollary to the fact that these programs are working with practicing teachers is that the teachers themselves already had their bachelor's degree and their teaching certificate. They did not need these programs in order to teach. This fact turns out to be important when we look at their interpretations of Jesse's story. Notice that teachers entering these programs interpreted Jesse's story remarkably differently from teachers entering all the other programs. Far fewer of them noticed Jesse's compliance with prescriptions, for instance. Thus, even before they participated in these programs, they were already guided by different frames of reference than other teachers were guided by. These teachers, then, were probably not like most practicing teachers. Instead, they represent a subgroup of the population—a group that happens to be interested in the same ideas reformers are interested in. So these reform-oriented programs have somehow managed to recruit teachers who were already sympathetic with the reform agenda and already interpreted classroom situations differently than other teachers did.

With the important exception of these teachers, though, most teachers, across a wide range of programs, interpreted Jesse's story as revealing how well the student was complying with language prescriptions. Only a small fraction of teachers saw evidence of concepts that Jesse understood or did not understand, and in fact, none looked closely enough to notice that there was a systematic pattern in Jesse's sentence fragments so that they could infer that Jesse had an

idea in mind when he created these fragments. These teachers were using the frames of reference that they had developed during their thirteen-year apprenticeship of observation to interpret Jesse's story.

Interestingly, these frames of reference are closely tied to concrete situations. That is, teachers often espoused different ideas when they talked about teaching in general, and yet they turned to their traditional frames of references when they face particular situations. This tendency was especially apparent in a set of interview questions that had to do with teaching students to organize their writing. In one question, we asked teachers what they thought students needed to know in order to organize their writing. Teachers' responses to this question revealed their espoused ideas about teaching organization. In another question, we asked teachers to examine and comment on a student paper that was disorganized (the student's text is shown in Figure 3.2). Responses to this question revealed the frame of reference that teachers used to interpret this particular

Figure 3.2. The Dolphin Essay

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Dophins are really not fish. Other fish have gill to breath in air and blow out again. Dophins are like other big, big water animals they eat other small water animal. The ocen is the only place that Dophins can live.

The reason that the Dophins can only live in the ocen is because the Dophins have to live in salt water. Dophins are somewhat related to sharks and whales. There are only one kind of Dophins. There are very few places that have Dophins. Matter of fact there are only two places that have dophins.

The two places that have Dophins are the coast of maine and Alaska are the only two places that have Dophins. The Dophins can weigh up to three tons. In 1963 a man was killed by a Dophins.

The Dophins name was Julie. The way they tell is the markings on the Dophins tale.

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situation. In a third question, we asked them how they would actually respond to this student author if he or she were in their classroom.

By examining the relationship between teachers' responses to these various questions, we can see the extent to which teachers used the same or similar frames of reference when considering these different questions. The relationship between responses to the first two questions is shown in Table 3.2. The rows in the table represent the kinds of knowledge or understanding that teachers espoused when considering what students needed in order to organize their writing. The distribution of responses across the rows suggests that teachers mentioned these different ideas in roughly equal proportions. That is, there was no apparent domination of prescriptions or concepts or strategies in teachers' thinking about what organization entailed.

The columns in Table 3.2 represent the aspects of this particular student's text that teachers noticed as they examined it. What they attended to reflects the frame of reference they used to interpret this particular situation. The distribution of ideas across the columns shows that even though teachers were almost evenly concerned about each kind of knowledge when they discussed organization more generally, they were more likely, when interpreting this particular student paper, to focus on how well the student complied with prescriptions.

If teachers interpreted this situation using the same ideas they espoused about organization, we would see large numbers in each of the diagonal cells.

Table 3.2. Relationship Between Espoused Ideas and What Teachers Noticed in Examining the Dolphin Report (Number of Teachers Mentioning Each Combination of Ideas).

Ideals Espoused in Response to Question About What Students Should Know	Ideals Enacted in Response to a Student Paper			
	Author's Compliance with Prescriptions	Author's Understanding of Concepts	Author's Purpose, Content of Paper	Author's Effort
Know facts and prescriptions	23	15	18	3
Understand concepts	15	13	24	2
Have a purpose, ideas	18	15	21	3
Have general capability	8	5	8	3

Note: Teachers may volunteer more than one idea as important to learning to organize a text, and they may also notice more than one thing when examining the dolphin report.

That is, a teacher who thought students should know all the relevant facts and prescriptions would respond to the paper by enumerating all the prescriptions that needed to be fixed. One who thought students should understand important concepts would respond to the paper by introducing important concepts the student appeared to understand or not to understand. Table 3.2 suggests that there is very little relationship between the ideas teachers mentioned as generally important in learning to organize a text and the ideas they saw as relevant when they examined this particular disorganized text. For instance, among teachers who claimed that knowledge of prescriptions was important to organization, twenty-three commented on the author's compliance with prescriptions, fifteen interpreted the paper in terms of some important concepts that the student appeared to understand or not to understand, and another eighteen interpreted the paper in terms of the student's apparent purpose. Regardless of which ideas they thought were generally important to learn in order to organize one's writing, they drew on all of the different ideas to interpret this particular situation. Table 3.2 shows that every possible combination of espoused and enacted ideas occurred.

Table 3.2 shows only the relationship between espoused ideas about learning organization and ideas used to interpret this student's paper. Yet to be considered are teachers' proposed responses to this student. Just as teachers may draw on different ideas when they discuss a topic in general and interpret a particular situation, they may also draw on different ideas when they devise a response to a situation. Table 3.3 displays the relationship between teachers' interpretations of the dolphin report and their proposed responses to its author.

Table 3.3. Relationship Between What Was Noticed  
in the Dolphin Report and Proposed Responses to Its Author.

What Was Noticed in the Report	Number Mentioning This Idea	Teacher's Proposed Response			
		Correct Errors	Impart Knowledge	Facilitate Purpose	Encourage Only
<i>Author's compliance with prescriptions</i>	52	50 percent	38 percent	4 percent	6 percent
<i>Author's understanding of concepts</i>	14	29 percent	36 percent	77 percent	
<i>Author's strategies or purposes</i>					
Content	45	36 percent	49 percent	9 percent	
Purpose	19	32 percent	47 percent	16 percent	

Table 3.3 shows that there was very little relationship between the ideas that guided teachers' interpretations of this dolphin report and the ideas that guided their response to the student. Almost every combination of ideas appeared, so that teachers who noticed prescriptions when they first examined the paper proposed sometimes to correct those errors, sometimes to impart knowledge, sometimes to facilitate the student's purpose, and sometimes simply to encourage the student without providing any instructional guidance at all. Similar distributions appear on the other rows.

But Table 3.3 also shows us that regardless of which ideas teachers attended to when they examined the dolphin report, they were still highly likely to propose to correct the errors in the text or impart some knowledge to the student. Just as more teachers appeared in the first column of Table 3.2, so more teachers appear here in the first column of Table 3.3.

We have, then, a situation in which teachers tend to be more and more influenced by prescriptive ideas as they move closer and closer to the action of teaching. When teachers discuss organization in general, they give roughly equal attention to each of these three ideas about writing. When they interpret the dolphin report, they focus more on prescriptions than they had in their general discussion, and when they propose responses to the author, they focus even more on prescriptions than they had when they first examined the text. As teachers move closer and closer to the action of teaching, their frame of reference turns more toward the traditional view of writing as requiring compliance with prescriptions.

Frames of reference are important guides for teachers. They enable teachers to interpret the situations that arise in their classrooms and provide them ideas for how to respond to those situations. The evidence from the TELT study also suggests that although teachers may espouse ideas about teaching that deviate from the narrow prescriptive tradition, they are less likely to act on those espoused ideals. The tremendous advantage of asking teachers to respond to particular classroom situations, from a research point of view, is that these situations enable us to get past the ideals that teachers claim to subscribe to and into those they are likely to enact.

To see how teachers move from their espoused ideals to their interpretations of particular situations, consider Ginger, a teacher candidate who was sympathetic with reform rhetoric in part because her experiences as a student had reinforced it. Ginger had written for her school newspaper when she was young, and through that experience she discovered the satisfaction of writing for her own purposes rather than to please the teacher. As a teacher candidate, she wanted her students to like school and to like writing, and she thought that one way to accomplish that goal was to give them meaningful projects rather than assignments that served no purpose other than fulfilling the teacher's require-

ments. Yet when we presented Ginger with Jesse's story, Ginger felt compelled to enumerate all of its errors:

What I'd try to do is sit down with him and say, "So let's look at this and, you know, let's try and correct some of the little things you have wrong, like the punctuation, the spelling, and the capitalization and things like that." And also some of his sentence structure would-using question marks when it's really a statement and should have a period.

After having said all of this, Ginger does discuss the meaning she sees in the student's text:

I think once you did that you could look at the story and say, "Well, you kind of jumped here, you know? See, you're talking about this and all of a sudden we went to this. Can you kind of explain? Tell me what happened in between," type of thing.

This last segment of her response is closer to what reformers generally mean when they suggest that teachers be facilitators rather than dispensers of prescriptions. But although Ginger proposes this response, she puts the prescriptions first, and only after those are corrected does she mention that the story is a bit hard to follow. If this had been a real student, presumably Ginger would have made the student correct all of the spelling and punctuation errors, only then to be told that the story needed more revision. Ginger's interpretation of this situation apparently was that the errors were so numerous that they needed attention.

These discrepancies appeared in response to other questions as well. One particularly frequent discrepancy appeared when teachers talked about their ideal of caring for students. Leslie is a good example of a teacher who cares about caring. When she entered her teacher education program in an open enrollment university, she had already married and raised her children. She wanted to teach because she felt she had been successful as a parent. However, Leslie's own childhood experiences in education had not all been positive, and these experiences were the source of her conception of teaching. Her parents were not well educated and had essentially told Leslie as a child that they could not help her with her schoolwork. Leslie also had had some bad experiences in school, once being chastised so severely by a teacher that she stayed home for a week in embarrassment. She wanted to be different from that teacher. She wanted to be caring, wanted her students to like her, to like school, and to like learning.

This ideal of caring was a strong theme in Leslie's discussion of teaching; it was a value that had sustained her throughout her preparations for teaching.

She said, “I want to build children’s confidence. I don’t want to crush them. And I hope I can be sensitive to different children and their needs.” What we do not know from these conversations is how Leslie would translate that ideal into particular classroom situations. To be sensitive to different children and their needs would require Leslie to be able to perceive those needs in particular situations and be able to generate responses that appropriately reflect her ideal of caring.

One of the particular situations we asked Leslie to respond to was this:

**Imagine that you are teaching in your third-grade classroom,  
and one of your students says, “This is boring. Why do  
we have to learn this?” How would you respond?**

Like most of the other situations we presented, this one is brief but contains much within it. The first sentence announces the student’s boredom. It is a plea for sympathy, for sensitivity, for some sort of response that will alleviate the boredom. The second sentence asks for a justification for the task. It could be interpreted as asking for an explanation of the value of the content being learned, but it could also be interpreted as challenging the teacher’s authority to make curriculum decisions. Given Leslie’s espoused ideal of caring, we might expect her to interpret the situation as presenting a plea for relief, and we might expect her to devise a response that would either alleviate the boredom or at least offer a sympathetic ear to the student. For instance, she might propose to try to learn more about why the student felt bored, or to ask how other students felt about the lesson. Or she could propose to utter some sympathetic words to the student, encouraging the student to stick with the work a little longer.

But Leslie did not interpret this situation as calling for sympathy. Instead she interpreted the student’s comment as a challenge to her authority and said:

I think I would really be tough, because he’s bored and he doesn’t want to work on organizing. Ah, I’d ask him, “Well, how would you do it if you were the teacher and you knew your students needed to organize their papers? Because you’re going to need to write papers throughout school and even after school. And, ah, we want to hear your ideas but we can’t understand them if they’re not organized.”

Leslie was not alone in her interpretation of this situation or in her proposed response. Many teachers who espoused an ideal of caring interpreted this situation as calling for something other than caring. An interesting comparison to Leslie is Dena, who entered teaching from a very different direction. Dena had not originally intended to teach. When she finished college, she went to work as a stockbroker. But in her free time, she volunteered to help various charities,

and through these activities she decided she preferred helping people more than managing money. She eventually found her way into an alternative route program. When we asked Dena what her goal would be for her students, she talked at length about her own experiences in school:

I desperately reach down in myself and remember how I was when I was in sixth, seventh, and eighth grade and even high school. I felt so lost sometimes and I felt that I had no direction. What am I going to do with myself, where am I going to go? I remember these thoughts so vividly all the time. I felt so dumb sometimes. Maybe they're going through the same things I went through.

Dena took a job in a Catholic school and translated her concern into lessons on the golden rule. She wanted her students to think about themselves and their lives, and to think about how they would apply ideas such as "doing good to others." Yet when we asked Dena about the bored student, she responded,

No matter what they say to me, they're not going to embarrass me because I usually have something to say back to them or the kids have something to say back to them. Because if they start looking like they're making a monkey out of themselves, not me, the kids will say, "Why don't you shut up?" or something, to the kid, not to me.

Responses to Jesse and to the author of the dolphin report indicate that teachers' thinking is dominated by a concern for how well students are complying with prescriptions; they show us too that teachers' ideas become more and more dominated by prescriptions as they move closer and closer to the action of teaching. Responses to the bored student suggest that this tendency to espouse ideas different from those one enacts is not limited to subject matter issues.

There are several plausible hypotheses for why these patterns appear in our interviews. One hypothesis is that these teachers subscribed to multiple, and sometimes conflicting, ideals. That is, Ginger may indeed want writing to be meaningful, but she also wants to ensure that students learn to comply with prescriptions. And Leslie and Dena may indeed want to be caring and compassionate teachers, but they may also want to ensure that their students treat them respectfully. Another hypothesis is that their ideals were not strong enough to overcome the frames of reference they had developed during childhood, so when they faced particular situations, their childhood frames of reference dominated their interpretations and their proposed responses in spite of their intentions to think and do otherwise. Yet a third hypothesis is that these teachers thought they were enacting their ideals. Since terms like *caring* and *ownership* can mean different behaviors to different people, perhaps Ginger, Leslie, and Dena were in fact enacting their ideals, but they meant something different with these terms than reformers are seeking.

There is probably some truth in all three of these hypotheses. Most teachers necessarily hold multiple and conflicting ideals. All of us do. We want teachers who are strict and do not tolerate inappropriate behavior, yet we also want teachers who are sympathetic and sensitive to students' needs. We want teachers who give students autonomy and encourage independent learning, and yet we want teachers who will ensure that students learn particular academic content. This is why teachers' interpretations of each situation are so important, for it is in their interpretation that they decide which ideals should be pursued in this circumstance. It is also likely that these teachers had not had as much experience with their ideals as they had had with the traditional approach to teaching. In fact, their ideals were often framed as alternatives to the specific experiences teachers had had themselves. Leslie and Dena held caring as an ideal precisely because they felt their own teachers had not been sufficiently caring. And Ginger held ownership as an ideal because she had not experienced ownership in her classes. Therefore, none of these teachers had many specific examples to fill out the details of their espoused ideals. Finally, given their extensive experience with the traditional approach to teaching, it is likely that these teachers may have meant different things with the terms *ownership* and *caring* than others might infer. The meanings they ascribe to these terms may be embedded within a traditional frame of reference. That is, perhaps Ginger took prescriptions for granted to such an extent that it seemed appropriate to ask Jesse to correct all his errors before she responded to the content of his story. Perhaps too Leslie and Dena assumed their own authority to such an extent that when they said they wanted to be caring, they did not mean *empathetic* but instead meant that they wanted to be at least benevolent in their exercise of authority.

If all of these hypotheses have merit, then the ideas that Ginger, Leslie, and Dena enact at any given moment cannot be predicted from knowledge of their espoused ideals. Without a clear sense of how teachers' ideals translate into classroom behaviors, with multiple ideals influencing their interpretation of classroom situations, and with the vagaries of the language of classroom ideals, these teachers' interpretations of classroom situations, and their responses to them, will depend heavily on a frame of reference we may never see and they may never be aware of.

This is the problem of enactment. There are at least three parts to this problem. First, the language we use to talk about our ideas can be used in the context of many different frames of reference. Thus, one teacher who claims to want students to have a sense of ownership over their writing may say this from a frame of reference that attends mainly to how well students comply with prescriptions. Another teacher may say the same sentence, but her sentence may emanate from a frame of reference that attends mainly to creating a classroom atmosphere in which students work separately and independently on projects

of their own choosing. The second part of the problem is that even within a particular frame of reference, most ideas, especially those that stand behind our ideals, are associated with a wide range of specific behaviors. This second part of the problem is not unique to teaching, but is fundamental to virtually all discussions of human behavior. If I were to tell you that a mutual acquaintance seemed angry, you might envision any number of behaviors I might have seen. If you were to describe yourself as generous, I might envision any number of behaviors you might engage in. We could both be wrong in our behavioral translation of one another's descriptions. So, too, with teaching, in which terms like *ownership* and *caring* can have numerous legitimate behavioral translations. And this leads to the third problem of enactment. Novice teachers and their university faculty are highly likely to draw on different frames of reference when they talk about teaching. Novice teachers often approach the formal study of teaching with a frame of reference they developed during their childhood, while their university faculty are likely to approach the formal study of teaching from the perspective of reformers. When teacher educators discuss attitudes such as curiosity or teaching approaches such as cooperative grouping, novices may envision a wide range of behaviors that might be meant by these terms. Moreover, it is likely that all the sentences spoken by faculty will be interpreted in the light of novices' initial frames of reference, rather than in the light of a reform frame of reference.

There is also a strong likelihood that even if novices are persuaded by their faculty's ideas and are persuaded to adopt a different frame of reference to thinking about teaching, they will not know what actually to do to enact these new ideas. To pursue any particular teaching idea or ideal, teachers need to be able to recognize particular situations as calling for that particular idea. Teachers may acquire numerous important ideas about teaching when they are studying in college, and they may even have some visions of what to do to enact these ideas yet be unable to recognize situations that call for these ideas.

The problem facing preservice teacher education is not merely one of giving teachers a new frame of reference, but in addition of giving them the behavioral enactments that accompany these ideas. Psychologists refer to this kind of knowledge as *situated knowledge*, meaning knowledge that is understood through specific situations rather than, or in addition to, knowledge that is understood abstractly. It is through specific situations that we learn most of the concepts we use every day. Situated learning enables us to recognize everything from a beanbag to a bar stool as a "chair." Formal definitions of chairs do not prepare us for these varied examples.

In ordinary conversations, when I tell you someone was angry, I can depend on our shared cultural experience and shared situated understanding of this term to help you understand what I mean. Even if you envision different behaviors than I actually witnessed, you are likely to envision behaviors that I

would also count as examples of angry behavior. Situated knowledge of these terms is central to our ability to communicate using language. Our shared experiences in a common culture and a common language enable us to narrow the range of possible behavioral meanings such a term might have.

But the terms we use to describe teaching practices, especially reformed practices, do not have the benefit of shared behavioral meanings. We cannot draw on our shared experiences to understand the meaning of a kind of teaching that none of us has experienced. Teachers, teacher educators, and policymakers use a common language to describe their ideas about teaching, but each interprets these terms in the light of his or her own frame of reference.

One might reasonably ask whether teacher education programs that adopt a reform orientation toward teaching can actually influence teachers' interpretations and proposed responses to particular teaching situations. One can imagine several possibilities. Teacher educators may use reform rhetoric, and novices may interpret that rhetoric in terms of their extant frames of reference, so that no fundamental changes in thought occur. Or students might be persuaded to change their frame of reference and yet be unable to enact these new ideas because they do not have enough behavioral understanding of the terms to enact them. Or, finally, students might learn both a new frame of reference and a set of enactments for these new ideas. The question is, Can reform-oriented pre-service teacher education programs influence enactments?

## INFLUENCES OF PRESERVICE TEACHER EDUCATION PROGRAMS

One problem in posing the question as I have is that not all programs of teacher education subscribe to the reform agenda. In fact, the programs participating in the TELT study can be roughly classified according to whether they were traditional or reform oriented. Reform-oriented programs tried to persuade teachers to attend less to how well students complied with prescriptions and more to how well students formulated and expressed their ideas. They wanted students to learn concepts such as voice, main idea, and chronology that are important when translating ideas into text, they wanted them to be familiar with the iterative processes that are involved in translating ideas in texts, and they wanted students to write things that were important and meaningful to them. In contrast, the traditional teacher education programs concentrated on classroom management issues such as how to organize classroom activities, keep students busy, and discipline students who were disruptive. They tended not to address the content that would be taught. I was interested in comparing teachers who attended these different types of teacher education programs to see whether the programs influenced teachers in different ways. To illustrate these possibilities,

I describe two examples of teacher education classes that were observed as part of the TELT study.

As an example of a traditional teacher education class, consider a class we observed in an alternative route program. In this class novice teachers were learning to examine lessons they had already taught by reteaching them in front of their peers. After each novice teacher taught her lesson, Professor Dickenson led discussions in which the novice teachers analyzed the focal lessons. Dickenson's focus, however, was not on the substance of the lesson but on how it was packaged—on how the focal teacher had organized and presented the lesson. On the day we observed, a focal teacher gave a writing lesson intended for third-grade pupils. She wrote the three parts of a paragraph on the board as “(1) beginning sentence, (2) middle sentences, and (3) ending sentence.” She then asked her mock pupils what each set of sentences should do. Other novice teachers, playing the role of pupils, volunteered that the beginning sentence should tell us the main idea, that the middle sentences should tell us more about the main idea, and that the ending sentence should restate the main idea. Then the focal teacher said she wanted students to write their own paragraphs. These paragraphs would be about the wind. In preparation for their writing, she wrote on the board, “(1) kinds of wind, (2) sounds made by the wind, (3) other words for wind.” After some brainstorming about what one might say about each of these topics, she had the students write their paragraphs.

With the mock lesson finished, Dickenson led the novices through an assessment of this lesson. She guided the students' analysis of the lesson with a handout that listed the features of a good lesson. Here is a partial transcript of that list:

- Anticipatory set: Were the students told what they were to learn and how it related to prior lessons?
- Were students given a chance to practice what they were taught?
- Did the teacher close by having students identify what the session's learning was!
- Did the teacher assign homework based on the day's learning?

In the group analysis that followed, novice teachers tried to translate the ideas on this handout into the specific activities this focal teacher had done. With respect to anticipatory set, for instance, they noted that the focal teacher had opened the lesson by saying, “Today we are going to use what we know about paragraph writing.” They commented on the fact that the focal teacher had used the board, the teacher had given students an opportunity to practice what they had learned at the close of the lesson, and so forth. Only a very brief exchange had to do with the content of the lesson, and this consisted of an

argument between two teachers over whether this was a science lesson or a writing lesson. Dickenson quickly ended the dispute by saying it was both.

Had she been so inclined, Dickenson could have directed novices' attention to at least three substantive points about this lesson. First, the focal teacher never said what paragraphs are for, why anyone would want to learn about them, or how they can be used to communicate with others. Second, she provided definitions for the three parts of the paragraph that were virtually indistinguishable. All three parts were used to tell the main idea. Third, when the focal teacher had pupils write their own paragraphs, she defied her own definition by developing a paragraph outline that had three ideas (kinds of wind, sounds of wind, other words for wind) rather than one. Thus, although Dickenson did encourage novices to examine specific instances of practice and to assess these instances against some broad criteria, her criteria did not address the content of what was taught, but instead addressed only how it was organized and presented.

A university class taught by Professor Smith illustrates the converse of this lesson in two ways. First, Professor Smith focused exclusively on substantive ideas rather than ideas about how to package or present lessons. Professor Smith strongly promoted reform ideas about teaching writing and eschewed what he called the "formalist ideal"—the notion that you could teach students proper structures and forms. He listed many reasons why he rejected the formalist ideal, cited research on how professional writers write, and referred the students to some interviews with writers. The second way in which Smith's class differed from Dickenson's was that Smith provided no enacted meanings for the ideas he presented. He gave no examples of what any of these ideas might look like in real classrooms. He did eventually ask his students, most of whom were already teaching, how these new ideas might influence their own teaching of writing, and he encouraged them to discuss their teaching experiences. But even during this discussion, Smith offered nothing to help his students connect their experiences to the ideas he had presented. For instance, one student described her frustration in getting students to write an opinion essay. She said it was as if the students had no opinions about anything, even when she put a quotation on the board for them to respond to. Professor Smith could have helped this student translate his ideals into enactments by asking several questions about what the assignment was, how she had gone about preparing students for it, what students actually said or did that made her think they could not do the work, and so on. But he did not. Or he could have offered some hypotheses for why the lesson failed to motivate students. He could have pointed out, for instance, that this teacher had assigned both the content and the format of the writing project rather than encouraging students to write their own pieces. As other teachers offered speculations about the lesson, Smith neither affirmed nor questioned anyone's speculations. His only remark was a mock

surprise that teenagers would not have any opinions. Although many students agreed that this was a frustrating event, and some offered their own frustrating experiences, Smith asked no questions, encouraged no analysis of the lesson, offered no suggestions about what else could have been done, and offered no critique of the student's lesson. His lack of ability, or of willingness, to translate his ideas about teaching writing into action meant that his students had to figure out for themselves what these ideas really meant. Rhetoric about such things as engaging students in intellectual activities and making school subject matter more meaningful and more authentic says little about how teachers decide what to do at any particular moment.

The distinctions I make between these two broad program orientations are based in part on program rhetoric and in part on interviews with and observations of faculty. Ideally we would want to distinguish programs by the extent to which they provide students with situated ideas rather than, or in addition to, abstractions, but this is a difficult classification to make. Programs could promote situated meanings through case discussions, video clips, school-based observation assignments, or even vivid descriptions couched in lectures. Moreover, even knowing that any of these types of situated descriptions had been provided to students would not automatically assure us that students were acquiring situated understandings of important ideas. It could mean only that teachers are witnessing examples of teaching, something they have already done throughout their lives. What is more important is whether the situations teachers see or hear about are interpreted in terms of important reform ideas. If they are not, teachers will surely interpret these situations with the frames of reference they already have.

A popular proxy for situated knowledge is the location of the program: programs located in schools rather than universities are often presumed to provide more situated knowledge. The problem with location, however, is that we cannot know the extent to which programs attach important ideas about teaching and learning to the many behaviors that novices observe. Some programs in schools might give teachers a great deal of situated understanding, all of which is consistent with the frame of reference they already had. Others might give teachers a new frame of reference for interpreting the classroom situations they see. The great confidence that reformers and others place on classroom experiences reflects their attachment to the received wisdom model of teacher learning, and fails to acknowledge the importance of frames of reference in learning to teach. Still, because location is presumed to be so important, I did distinguish between TELT study programs that were located primarily in colleges and universities and those that were located primarily in schools so that I could compare their relative influences on teachers and teaching. Thus, I was able to distinguish programs that were oriented toward traditional teaching or toward reform teaching and programs that were located primarily in universities or primarily in schools.

Since teachers participating in the TELT study were asked to respond to the same situations before and after they participated in their programs, it is possible to see the extent to which their interpretations of these situations, and their proposed responses to them, changed during this period of time. It is also possible to compare the changes (or lack of changes) that occurred among teachers attending reform-oriented programs with those of teachers attending traditional programs, and to compare changes among teachers whose programs were provided mainly in schools with those of teachers whose programs were provided mainly in university settings.

Finally, it is possible to distinguish two different kinds of program influences. Most people, when asked how programs might influence teaching, would say they expect to see learning. That is, they would expect to see changes in teachers' interpretations of or responses to these particular situations. An equally important influence could be called an enrollment influence—that is, teacher education programs can recruit teachers into the profession who are already inclined to use one frame of reference rather than another. I found both kinds of influences when examining these programs. Enrollment influences were apparent when teachers entering a particular program already interpreted situations and responded to these situations differently than other teachers did, even before they had learned anything from the programs themselves. I showed an enrollment influence in Table 3.1 when examining teachers' interpretations of Jesse's story. It was clear that teachers entering two of the programs already differed from other teachers, even before they began the programs. Learning influences, on the other hand, were apparent when teachers drew on different ideas at the end of their programs than they had drawn on at the outset.

Just as it would be a mistake to assume that all programs are oriented toward reform, so too it would be a mistake to assume that all enrollment influences or all learning influences were in the direction of the reform. There were some teachers participating in the TELT study who already embraced reform ideas from the start, and then changed toward traditional thinking. One such example is Chad. Chad was a black man who believed writing was essential to black people and was committed to making writing meaningful for his students. His ideals for teaching writing were consistent with much of the reform rhetoric in that he wanted students to take ownership of their own writing and to learn to use it for their own purposes. At one point in the interview, he said,

If we can read, if we can write, we have a greater understanding of ourselves and we have greater definition of who we are and what we present to the world. They are powerful skills. They put us in control of our lives. I want students to see how writing can become a powerful tool to them so that they do not have to be resigned to whatever the limits were of the previous generation in their families, you see, but that they can go light years beyond if they can write.

We asked Chad, both before and after his teacher education program, to respond to the dolphin report. The first time Chad read the paper, he overlooked the technical problems and focused on the content, saying,

I would ask the student some searching questions that he would be able to answer and then suggest that, with his own answers, he further develop a conclusion.

Chad's proposed response was consistent with his espoused ideas about teaching writing and consistent with reform rhetoric about teaching writing. Chad had wanted writing to be meaningful for his students, wanted them to write for authentic purposes and to learn to use writing to formulate and express their own ideas. His method of encouraging such expression was to ask the student searching questions—questions that would stimulate the student to refine his thinking and his text.

Despite Chad's apparent interest in reform ideas, he had much to learn. For instance, Chad did not say what a searching question might be for this student or what he would do if the student could not answer his searching question. If Chad had entered a reform-oriented program, he might have received some help in clarifying his situated understanding of these ideas. Because Chad's program had a traditional orientation, though, it did not provide that assistance.

Chad's program was an alternative route, suited for someone who was changing professions in midcareer. It was largely a school-based program and oriented toward traditional ideas about teaching. Chad's mentors provided no help in figuring out what a searching question might be and in fact encouraged him to be more prescriptive. By the time Chad had completed his alternative route program, he had adopted a more prescriptive response to this student. When asked to respond to this author at the completion of his program, Chad said:

I would tell her that unless she is going to introduce lots of new information, we don't need a new paragraph [at one location in the text]. A couple of sentences don't make a new paragraph.

Chad began his program hoping to make writing more meaningful for his students and envisioned himself asking searching questions to help students improve their writing. But Chad's program pursued a different set of ideas and encouraged him to attend more to prescriptions. By the time he completed the program, Chad's proposed response to this student was more prescriptive, and this change is an example of a program influence on Chad's learning.

In Tables 3.4 and 3.5, I summarize the number of times I found evidence of each kind of influence. Table 3.4 lists the number of enrollment influences each program group had when teachers responded to each particular teaching situation I analyzed, and Table 3.5 lists the number of learning influences each

Table 3.4. Summary of Program Enrollment Influences on Ideas Elicited Across All Interview Questions.

	Traditional Management Orientation		Reform Orientation	
	University Based (Urban U)	Field Based (State AR and District AR)	University Based (Elite C., Normal State U, Research State)	Integrated (Independent U, Collaborative U)
<i>Immediate concerns</i>				
What was seen in Jesse's story	2			1
Proposed responses to Jesse		1		1
Criteria for grading Jesse's story		1		1
What was seen in the dolphin report	2			2
Proposed responses to the dolphin author	1			1
Proposed response to the question about verb choice				1
<i>Ideals</i>				
Aspects of subject matter relevant to learning organization				
<i>Situation-relevant subject matter knowledge</i>				
Number of principles shared about <i>none</i> with is or are			-1 <sup>a</sup>	
Total	5	2	1,-1	7

Note: Number of times when entrants in one program group mentioned an idea noticeably more often than other program entrants.

<sup>a</sup>These teachers offered more misinformative principles than any other group of program entrants. Although no program rhetoric addressed the question of informative versus misinformative content, I am assuming they would take misinformation as a negative.

Table 3.5. Evidence of Program Influences on Teacher Learning Across All Interview Questions.

	Traditional Management Orientation		Reform Orientation	
	University Based (Urban U)	Field Based (State AR and District AR)	University Based (Elite C., Normal State U, Research State)	Integrated (Independent U, Collaborative U)
<i>Immediate concerns</i>				
What was seen in Jesse's story		2	1	
Proposed responses to Jesse	2 <sup>a</sup>		1	1
Criteria for grading Jesse's story	N.A.		2	2
What was seen in the dolphin report			1	
Proposed responses to the dolphin author		1		
Proposed response to the question about verb choice	N.A.			
<i>Ideals</i>				
Aspects of subject matter relevant to learning organization				
<i>Situation-relevant subject matter knowledge</i>				
Number of principles shared	N.A.	-1 <sup>b</sup>	1,-1 <sup>b</sup>	-1 <sup>b</sup>
<i>Total</i>	2	3,-1	6,-1	3,-1

Note: Number of noticeable changes in teachers' ideas from the beginning to the end of the program within each program group.

<sup>a</sup>One of these changes was a decrease in the proportion of teachers who proposed to give encouragement only, with no substantive comments on the story. I do not have information on program views toward encouragement without specific feedback, but am assuming they would all prefer teachers to provide some sort of substantive comment. Consequently I considered this a positive, rather than a negative, change.

<sup>b</sup>These teachers noticeably decreased the number of principles they provided to the student with the verb choice question. I do not have data indicating whether programs would prefer for teachers to say more or less on an issue like this but am assuming that since the student asked for information, and since the reductions resulted in fewer than one principle offered per person, all programs would view this change negatively.

program group appeared to have on the same set of teaching situations. The four columns in each table represent the four major program groups. There is just one program in the first column, representing a university-based program with a traditional orientation. The two programs in the second column are field-based programs, emphasizing similar content but presumably more able to provide enacted meanings for their ideas. Professor Dickenson's class, described above, was observed in this program group. The third column includes three reform-oriented programs housed in universities, and the two programs in the fourth column are reform-oriented, field-based programs.

Across all programs, beginning teachers demonstrated a strong tendency to draw on prescriptive ideas when they interpreted and responded to the situations we presented. Therefore, in this analysis, I was especially interested in seeing whether, and to what extent, reform-oriented programs helped teachers learn to draw on other ideas—either to teach their students important concepts about writing or to help students learn the processes of generating texts.<sup>2</sup> Either of these ideas would be closer to what reformers seem to want.

Tables 3.4 and 3.5 show the number of occasions when programs influenced teachers' responses to each of several particular situations. I defined an "influence" as any occasion when one group of teachers' responses to a given situation differed by at least 20 percent from the responses of the other groups. Recall from Table 3.1, for instance, that over half of the teachers entering most programs offered prescriptive interpretations of Jesse's story, while only 19 percent of teachers entering the two reform-oriented, field-based programs offered prescriptive interpretations of this particular situation. The difference constitutes evidence of an enrollment influence, and so I placed a 1 in that column. In a couple of places in each table, I used a negative number to indicate an instance in which a group of teachers differed from others but in the opposite direction from the program's orientation.

Five statements can be made from these tables. First, both tables have far more positive than negative numbers, suggesting that programs did in fact influence the ideas that teachers drew on to interpret and respond to these particular situations. With respect to enrollment influences, programs with traditional classroom management orientations enrolled teachers who were more likely to enact prescriptive ideas, whereas reform-oriented programs enrolled teachers who were more likely to draw on reform ideas. With respect to learning influences, traditional programs tended to reinforce teachers' prescriptive ideas, while reform-oriented programs tended to decrease references to those responses and increase references to ideas about concepts and processes. In other words, the differences I found were virtually always in the direction of program orientations. That these patterns of enrollment and learning are consistent with program orientations suggests that teacher education programs do indeed make a difference. The patterns were not random.

The second point about these patterns, however, is that program influences are slight. No program produced radical changes in the ideas teachers drew on, even though many produced some changes. Thus, although teacher education programs can and do make a difference in the ideas teachers used to interpret particular situations and to respond to them, none was able to alter radically their teachers' interpretations of or responses to these situations.

Third, there were more enrollment influences than there were learning influences. Across all situations and all program types, there were fifteen enrollment influences and fourteen influences on learning. The difference itself is slight, but the important point here is that influences through the process of enrollment were noticeable and just as likely to occur as learning influences were.

Fourth, with respect to program location, Table 3.5 shows that university-based programs demonstrated more influence on teacher learning than field-based programs did. This finding underscores the fact that locating a program in the field does not necessarily ensure that teachers will learn to translate important ideas into particular situations. One reason this difference occurred, of course, is that the field-based reform programs were enrolling teachers whose frames of reference were already oriented toward reform ideas, so there was less room for change. Still, I tallied more influences on learning in the third column of Table 3.5 than in any other column. This finding is particularly important in terms of the received wisdom of teacher learning, which gives a relatively minor role to university-based teacher education programs and a more potent role to liberal arts courses and learning from experience.

Finally, these influences, whether influences on enrollment or on learning, were associated with differences in program orientations, not differences in program structures. The university-based program group included four-year and five-year programs, with relatively more and less field experience, and with different specific courses listed in their curricula, but these differences were unrelated to the substantive orientations of the programs. Even the difference between field-based and university-based programs was not as great as the difference between programs with different orientations. In fact, just as some university-based programs had a traditional orientation and some had a reform orientation, so some field-based programs were traditional and some were oriented toward reform. This point is important to policymakers, for it suggests that the kinds of program features that they often try to influence—curriculum, duration, number of credit hours, or amount of field experience—are relatively less important than is the actual content that teacher educators teach within their individual classrooms.

The TELT study shows us that it is possible, though difficult, to help teachers develop new frames of reference so that they interpret classroom situations differently and envision different responses to particular situations. Before participating in these programs, many teachers espoused ideas that were consistent

with reform rhetoric, but when faced with the situations we presented, they were unable to enact those ideas and turned instead to more traditional—usually prescriptive—responses. Those who attended programs with a reform orientation often learned alternative frames of reference for interpreting and responding to these situations.

## IMPLICATIONS FOR POLICY

Findings from the TELT study throw some doubt on the received wisdom model of teacher learning. They show, for instance, that the content of teacher education programs is more important than their structure. Policymakers often regulate program structures to conform to the received wisdom model of teacher learning, a model that gives relatively little weight to the formal study of teaching and considerable weight to liberal arts courses and practical experience. By regulating program structure, policymakers hope to ensure that teachers receive an appropriate exposure to these various components of the curriculum. The TELT study included programs with a variety of structures: four-year and five-year programs, graduate and undergraduate programs, programs with extensive or less extensive field experiences. These program structures were less important than program content in influencing teacher enrollment or teacher learning. In fact, Professor Smith's program is often cited as an ideal approach to teacher education, in that it is a fifth-year program and consequently ensures that students receive a complete liberal arts program before beginning their formal study of teaching. Moreover, the students in his course were teaching concurrently with their university courses, a structural feature that should have enabled students to see connections between the ideas their professors espoused and their teaching experiences. But merely seeing such connections does not enable teachers to become better teachers. Smith's students were able to see that their students were not engaged in writing, and they expressed their frustrations at their inability to engage students in writing. But Smith was either unable or unwilling to help his students translate his ideas into interpretations of, and responses to, the classroom situations they described to him. Consequently, even though the students agreed on the ideals they wanted to enact and sympathized with one another's frustrations when trying to enact these ideas, they made no progress toward a better understanding of what they could actually do in their classrooms to enact these ideas. As long as professors like Smith are unable or unwilling to make that translation, the structural arrangement of this program offers no particular advantage to students.

The TELT study also raises doubts about the wisdom of alternative routes into teaching. Alternative route programs are also premised on received wisdom. In fact, they are based on a relatively strong version of it that gives almost

no role to university-based teacher education. These programs try to recruit teachers who have not formally studied teaching but have received a bachelor's degree and have received high test scores on academic achievement tests. They then place these teachers in schools with mentor teachers to help them learn the practical aspects of teaching. Yet the two alternative route programs participating in the TELT study yielded few enrollment influences relative to other field-based programs and yielded few influences on learning relative to university-based programs.

Third, the TELT findings raise some doubts about the likelihood of in-service programs as a broad-based approach to reform. Since the two reform-oriented, field-based programs participating in the TELT study demonstrated more influence on enrollment than on learning, it is possible that such programs may never reach those teachers whose frames of reference depart most dramatically from reformers' ideas. To the extent that programs such as these enroll volunteers, their influence is likely to be limited to those who are already disposed toward reform ideas.

Finally, the TELT study indicates that university-based programs may have more influence on learning than the received wisdom model has assumed. Among the programs participating in the TELT study, university-based preservice programs had more influence on teacher learning than school-based programs did. Moreover, they had more influence over teachers' interpretations of particular situations than they had over teachers' espoused ideals. These findings fly directly in the face of the received wisdom model of teacher learning, which expects most practical learning to occur in school settings and assumes that the formal study of teaching has less influence because it is abstract and theoretical. In fact, policymakers who subscribe to the received wisdom model of teacher learning sometimes try to restrict teacher education curricula to a small number of courses and sometimes try to restrict the content of these courses to generic topics such as classroom management, thinking that all subject matter-related courses should be taught by the disciplines. These policies may, ironically, hinder teacher learning rather than enabling it.

## Notes

1. While Lortie was the first to make this observation (Lortie, 1975), many others have since elaborated on this idea. See, for instance, Nemser (1983). See Haberman (1985).
2. Since teachers could propose virtually anything they wanted, including multiple responses, it was possible for teachers to increase their attention to other substantive ideas without necessarily reducing their attention to prescriptions. Or, conversely, they could reduce their attention to prescription without necessarily increasing their attention to other ideas. I therefore tallied references to each

of program impact. A given situation could therefore produce multiple changes in teachers' responses to one situation: increases or reductions in enactments of combination of ideas.

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