

3 | Establishing Professional Schools for Teachers

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Drawing on the teaching hospital analogy, many education reformers dream of a place where teachers can study and learn about teaching as they are **teaching**. The envisioned “professional development school” (or, as used elsewhere in this book, “professional practice school”) would be a functioning elementary or secondary school with a teacher education program more rigorous than the current student teaching programs are, yet more practice-oriented than the current university programs for teaching often are.

Though the concept of a professional development school is intriguing, the details of its operation have not yet been worked out. A great deal more dialogue and debate are needed to transform the dream into a workable blueprint. Much of that dialogue will address two important points: the nature of professional expertise that is to be developed in these schools, and the processes by which professional expertise is developed. This chapter contributes to the dialogue by examining both of these issues—the nature of professional expertise and the process by which it is developed—and presents an argument for a particular professional development strategy.

The chapter is divided into four principal sections, the first of which examines the nature of professional expertise. The second section focuses on the ways in which the development of such expertise can be fostered, particularly with respect to the most prevalent in-school method of preparing teachers—student teaching. The third section draws upon the first two to derive a set of goals for professional development programs, and the fourth section applies the criteria implicit in these goals to a few examples of learning opportunities that could be offered to novice teachers.

THE NATURE OF PROFESSIONAL EXPERTISE

Professional development schools would have an easy time of it if their goal were to provide professional **knowledge**. It is easy to tell someone

that water boils at 212 degrees, and not too difficult to get them to remember that. With these tasks accomplished, we can say that our learner has acquired some knowledge. We can also provide more elaborate knowledge by pointing out that boiling water kills resident bacteria, and we can ensure that our learner remembers this as well. The difficulty comes when we want to ensure that our learner will actually boil water when it is necessary to do so. To perform this act, our learner must (1) translate the knowledge from a sentence form into an action form, (2) adopt a goal of eliminating bacteria, and (3) recognize situations where this action will contribute to this goal. When these things happen, we say our learner has developed expertise. When knowledge is connected to situations-when it ceases to be a repository and becomes dynamic and operational-it has been transformed into expertise.

In an earlier review of professional education literature, I identified four forms of expertise and found that knowledge contributes to each in a unique way (Kennedy, 1987). One form of expertise consists of the application of technical skills. Doctors use technical skills when they sew up wounds, architects when they draw blueprints, and teachers when they suppress student disruptions. Another form of expertise consists of applying concepts, theories, and principles. Principles are usually in the form "if x, then y," or "*to* accomplish x, do y." The task of the practitioner is to identify the appropriate principle for each particular situation and then apply it.

The third form of expertise consists of the ability to critically analyze a situation and to generate multiple interpretations of it. Lawyers do this when they identify the potential legal precedents that could apply to a case, teachers when they generate hypotheses for why a child is reluctant to participate, and movie critics when they consider various analogies that could be used to characterize a particular film. Rather than finding the appropriate principle to apply to each case, critical analysts are aware of multiple and sometimes competing principles and concepts that could be applied to the same situations. Their task is to examine *both* the principles *and* the situation, and to select the most appropriate match. Critical analysis is a form of expertise especially relevant to professions whose "actions" are primarily intellectual rather than physical-historians, literary critics, or lawyers, for instance.

Finally, expertise can consist of deliberate action. Like critical analysis, deliberate action entails multiple interpretations of a situation. But it goes beyond analysis and yields an action. As a form of expertise, deliberate action recognizes that there may be multiple goals in any given situation, and that multiple, conflicting principles may apply to the same case. While the critical analyst chooses among alternative ways of inter-

preting a case, the deliberate actor chooses among alternative **goals** that may be sought in a given situation. These goals provide alternative frames of reference from which actions can be chosen.

Deliberate actions entail guesses as to what the likely outcomes of actions will be, and choices about actions and outcomes that are based on those guesses. It is the actor's experiences with this or similar cases that enable him or her to make these guesses about outcomes, and it is these guesses that make it possible to choose a goal from among many that could be focused on. For instance, the lawyer who recognizes several potential precedents in a case uses her experience with this particular judge to choose the precedent-and, concurrently, a goal for the case-that is most likely to succeed with this judge. The teacher with the reluctant child chooses his action on the basis of his prior experience with this child, and the architect revises her design on the basis of prior encounters with similar landscapes.

These four forms of expertise are distinguishable by the way in which knowledge is linked to action. When expertise consists of technical skills, the knowledge *is* the action. When expertise consists of applying concepts, theories, or principles, knowledge exists independent of action and provides the decision rules for choosing an action. In either of these two cases, the knowledge is codified and identifiable, and can be imparted to the practitioner. This is not true of the latter two forms of expertise. In these, actions are not guided by stable decision rules. Instead, the frames of reference one might rely on may contradict one another. To select one, the practitioner critically examines *both* the knowledge *and* the situation in order to produce a good match. In the case of deliberate action, the frame of reference may be a goal rather than a theory, but the choice of goal entails critical examination of a range of potential actions and their consequences and a range of potential goals. And just as a critical analyst may change frames of reference if he or she cannot adequately interpret the situation, a deliberate actor may change the original goal if it cannot be accomplished.

The first two forms of expertise imply that there is an explicit body of content that should be imparted to the novice. I will use the term **content** to refer to the technical skills, concepts, theories, or principles that are contained in codified bodies of professional knowledge. These two forms of expertise depend on content that can be defined in advance, organized into a curriculum, given to novices, and later applied by them. For these forms of expertise, professional preparation would consist of giving novices the content and then showing them when and how to apply it.

The role of content in the latter two forms of expertise is less clear.

Content is not automatically applied to situations; instead, critical analysts and deliberate actors seek optimal matches between concepts and principles, on one side, and the situations they encounter, on the other. Both analysts and deliberators must have access to content, but they also must know how to examine the content, how to examine the situation, and how to examine the match between the two.

And because the criteria for goodness-of-fit between frames of reference or goals, on one hand, and the situations encountered, on the other, are themselves a matter of judgment, these forms of expertise require more than knowledge. They require an ability to engage in such analyses, a desire to engage in such analyses, and a disposition to continually seek better solutions. These two forms of expertise cannot be developed simply by giving professionals relevant knowledge. Instead, novices must be **transformed** into people who are inclined to critically examine their own practice and to search for ways to improve it.

Of all the forms of expertise, the most difficult in which to identify content is deliberate action. Deliberation is based not only on whatever codified skills, principles, or concepts have been formally transmitted, but also on one's own experiences in this and analogous situations. Each learner deduces morals from each story he or she encounters, and draws on these morals in future deliberations. These experiences not only contribute to interpretations of future experiences but also to interpretations of **previously learned** codified knowledge (Kennedy, 1983). Everything—thoughts about appropriate goals, interpretations of codified knowledge, and estimates of the probable consequences of various actions—evolves over time with new experiences and new thoughts about these experiences. This developmental process makes the content and character of expertise-as-deliberate-action very difficult to define, for deliberators each continually reconstruct their own knowledge bases as they encounter new experiences and re-examine goals. Thus, what counts as “knowledge” varies from individual to individual even within a profession. And what counts as an appropriate goal in any given situation may also vary depending on which member of the profession encounters the situation.

FOSTERING DIFFERENT KINDS OF EXPERTISE

Professional development can include an infinite number of activities, some better than others, some more suited to certain forms of expertise than others. In what follows, I briefly review research on ways of fostering different forms of expertise.

First, with respect to technical skills, there exists a relatively large

body of research (Joyce & Showers, 1980) that indicates that these skills are not acquired casually. Four things must occur.

1. The skills need to be explicitly defined and their purposes explained to the novice
2. The skills need to be demonstrated to the novice
3. The novice needs an opportunity to practice the skills and to receive feedback
4. These first three events must occur in controlled environments designed specifically to teach these skills, rather than in the unpredictable world of real practice

Only after novices have mastered the skills in a sheltered environment, Joyce and Showers argue, should they practice the skills in real classrooms.

While there is less research on teaching novices to apply concepts and principles, a widely accepted conventional wisdom does exist regarding the development of this form of expertise. It is generally assumed that novices first need to learn the concepts, theories, and principles, and only later learn to apply them. That is, it would not be useful for students to practice their profession or to observe practitioners before they have learned the relevant codified knowledge. Most university-based professional schools, whether they prepare businesspeople, doctors, social workers, or engineers, reflect this view: They offer a year or two of courses in the scientific bases of the profession, sometimes accompanied by laboratory courses that enable students to apply the concepts or principles, and at the end of the program they provide an internship during which students presumably learn to apply the content to practice.

We also have a model available for fostering critical analysis. This is the form of expertise that is most heavily emphasized in law schools, where students engage for three years in almost nothing but critical analysis. They read and analyze appellate court decisions and debate them in class. Their professors raise questions and objections, and encourage students to question one another. The goal of law schools is to make students “think like lawyers”-to be critical analysts. Their method of instruction is such that content-legal concepts, principles, and precedents-is embedded in the analytical tasks, so that students absorb it in the process of learning the process. Because the process of critical analysis determines which frames of reference are most relevant and why, the analytical task is difficult to separate from the content. By the time budding lawyers have analyzed cases for three years, they have been transformed into critical analysts. They think like lawyers. And, though they have ac-

quired a body of knowledge, they have not acquired that knowledge independent of the analytical process. They have acquired it through the analytical process.

Much less is known about how to foster deliberate action. Presumably, one would want to give novices an experience similar to that received by lawyers; they should receive extended, intense practice analyzing their own actions and the effects of those actions, with a mentor constantly challenging their reasoning. The training that Schön (1983) describes for architects satisfies this requirement: The novice architect designs and redesigns the same building, trying it many different ways, and applying a variety of criteria to his or her efforts, all with the aid of a critical mentor. Schön (1987) argues that, to be effective, the mentor's questions and challenges must come at the very moment the novice is deliberating, and that moment usually occurs when the actor is in the situation. But the architect's actions occur on the drawing board, not in a classroom with other actors. A teacher's actions are nearly all interactions. It is not possible to re-teach the same math lesson to the same students several times, examining the merits of each successive trial with one's mentor. Actions and situations are necessarily nonrepeatable. Nor can a teacher engage in intense analytical dialogue while in the flow of action. And if the conversation occurs later on, much of the detail of the event may already be lost to memory; consequently, some interpretations may be lost as well. Analysis requires the action to be temporarily frozen.

Many authors have criticized existing teacher preparation programs on the ground that these programs fail to foster expertise in the form of deliberate action. Probably the earliest critic was John Dewey (1904/1965), who distinguished the control of the "intellectual methods" of teaching from the mastery of skills, and introduced the notion of laboratory schools into teacher education. Dewey used the term **laboratory** because he intended these schools to be places of experimentation, where novice teachers would be encouraged to try different actions and to evaluate the consequences of those actions. Several contemporary authors have emphasized the same tension that Dewey was concerned about. Arnstine (1975), for instance, complains about apprenticeship as a means of learning to teach on the grounds that apprenticeship results only in copying the behaviors that are observed, whereas the goal of preparation should be to cultivate relevant understandings and dispositions. Similarly, Eggleston (1985) notes a tension between novices' short-term need for immediate coping skills and their long-term need to incorporate critical reflection into their practice.

There is ample evidence that, during the first few weeks of teaching, usually during student teaching, novices do change their views substan-

tially. But the evidence does not suggest that they become better deliberators. Instead, it suggests that they become less theoretical, less ideal, more practical, and more control-oriented (Haberman, 1982). Research on the nature of student teaching experiences has suggested several hypotheses for why this is so. Tabachnik, Popkowitz, and Zeichner (1979-80), for instance, found that student teachers' activities were limited to mechanical teaching of short-term skills: testing, grading, management, or recitation. Furthermore, student teachers had little control over their activities. If opportunities and responsibilities are curtailed in these ways, novices have little opportunity to deliberate over, or to try, alternative courses of action.

On the other hand, Hodges (1982) found that novice reading teachers regressed when they had entire responsibility for their own teaching—that is, when there was no cooperating teacher in the classroom to curtail the novice's responsibility. In interviews, the novices attributed their behavior to the press for classroom survival, to limited time, and to their inability to recall, when they needed it, the formal content they had learned in their university methods courses. Thus, as a learning opportunity, student teaching may fail if the novice has so little responsibility that there is no opportunity for experimentation and for deliberation about these experiments, and it may fail if the novice has so much responsibility that he or she is overwhelmed to the point where deliberation is not possible.

With regard to the guidance novices receive, McIntyre and Killian (1986) found that cooperating teachers give very little feedback to student teachers, and McNergney and Francis (1986) found that supervisors tended to be nonanalytical in their interactions with student teachers, concentrating instead on being supportive. Tom (1972) found that supervisor interactions with novices were quite predictable—praise something, then offer constructive criticism, then end on a positive note—but that there was no substantive continuity from one supervisory visit to the next. Furthermore, visits were infrequent, and supervisors had no sense for whether the behaviors they observed were representative of the novices' general strategies. Zeichner and Liston (1987) found that even in a program that strongly emphasized reflective teaching, not all supervisors engaged in the kind of interactions that one would expect to foster such expertise. Only 19% of seminar discourse indicated critical reflection, and many supervisors were more oriented toward technical skills or toward personal growth—that is, finding a style that “works for you”—than toward stimulating critical analysis or deliberate action. Finally, Arthur Powell (personal communication, March 1987) found that the curricula of seminars accompanying private school internships usually

lacked any thematic focus and instead offered novices an eclectic mix of “stuff.” One session might be on the use of computers, another on assertive discipline, another on cultural literacy.

THE TASK OF PROFESSIONAL DEVELOPMENT SCHOOLS

In the first section of this chapter, I identified four forms of expertise—technical skills, conceptual/theoretical skills, critical analysis, and deliberate action—each of which entails a unique way of transforming knowledge from sentences into action. It should be apparent that these forms of expertise are not independent of one another: Most professions require all of them, and most practitioners possess all of them to varying degrees. Nevertheless, it is useful to separate them when thinking about professional development, for these forms of expertise imply different strategies of professional preparation. In thinking about the unique features of professional development schools relative to universities or other contexts for teacher preparation, I draw two conclusions.

1. The form of expertise **most appropriate** for professional development schools to foster is deliberate action. Deliberate actions are based in experience, and expertise in deliberate action is most likely to be developed by experience in deliberating; that is, experience in establishing real goals in real situations, working toward those goals, and learning from these experiences which goals can and can't be met in which kinds of circumstances. The most salient feature of the professional development school, relative to the university, is that it provides the real experiences needed to begin deliberating about practice.

2. The form of expertise **most necessary** for professional development schools to attend to is also deliberate action. For even if professional development schools did not try to foster deliberate action, novices would still think about their experiences and would still draw conclusions that would influence their future actions—yet their conclusions might be flawed. When failing to meet a goal, they might assume the goal was not appropriate, when in fact their method of approaching it was the problem. Real experiences happen fast, and novices may not be able to grasp all the relevant aspects of their experiences without assistance. Without guidance, novices may draw many erroneous conclusions about their practice, and these conclusions may influence their practice for years to come. Not only are professional development schools particularly suited to fostering deliberate action, therefore; they have an obligation to do so, since novices will begin to develop models of practice, either well or poorly, when they begin to practice.

Yet deliberate action is also the most difficult form of expertise to foster, for two reasons. First, the process of deliberation is normally a private one, and it is often based on experiences that are not witnessed by other teachers. Further, practitioners may ruminate about their experiences at odd hours of the day, when other practitioners are not available to review or influence these conclusions. Second, the nature of practice is such that practitioners may draw conclusions that are hard to articulate, and may base these conclusions on experiences that are hard to describe. It is not clear how a supervisor or mentor can hope to improve a novice's deliberations, without being able to monitor or influence those conclusions.

This in turn suggests some criteria by which learning opportunities for teachers could be assessed. In evaluating the potential of a professional development program, we might look for evidence that they meet the following conditions, which may be necessary to foster deliberate action in teaching.

1. Novices must have **responsibilities that require deliberation**: responsibilities for establishing their own goals and for selecting their own actions. The act of deliberation involves defining the situation and selecting both goals and actions to suit it. Yet Tabachnik, Popkowitz, and Zeichner (1979-80) found that student teachers' tasks were limited to relatively well-defined activities assigned by the cooperating teacher. In these circumstances, student teachers have no opportunity to engage in the central task of deliberation. The task of professional development programs must be to ensure that novices have this responsibility.

2. Novices must have the **opportunity to deliberate**. They need both the time and the knowledge to judge their goals, their actions, and the consequences of their actions in light of recognized concepts, theories, and principles of teaching and learning. This second criterion complements the first. While it is important for novices to take responsibility for situations, the evidence from Hodges's (1982) study suggests that, when given full responsibility for classrooms, novices were overwhelmed by their responsibilities and were unable to recall the codified knowledge they had learned in their methods courses. If novices are to learn to deliberate over their own goals and actions, they must have both the time to deliberate and the content—that is, the theories, concepts, and principles—needed to interpret situations, establish goals, and evaluate the consequences of past and proposed actions.

3. Supervisors or mentors must be able to **monitor novices' deliberations**—to monitor their interpretations of their experiences and their conclusions about their goals, their actions, and the consequences of

those actions. Novices routinely interpret and draw conclusions about their experiences, but we do not know what those conclusions are, for the current system of supervision does not enable supervisors to learn what their student teachers are concluding about their experiences. Consequently, almost any conclusions, erroneous or fruitful, will remain with the novice when he or she leaves student teaching to take a full-time position. Even if these conclusions cannot be readily influenced, professional development schools have an obligation to monitor the views that novices are forming and to prevent teachers with erroneous or indefensible views from continuing in the profession.

4. Supervisors or mentors must be able to **influence novices' deliberations** by offering contrary evidence and rival hypotheses, and by criticizing novices' hypotheses in light of recognized concepts, theories, and principles of teaching and learning. The evidence reviewed above suggests that much of the guidance provided to novices is nonanalytical and tends to provide support rather than critique. If this is true then supervisors are probably not influencing either the conclusions or the deliberative process used to reach those conclusions. Yet if conclusions about past actions and their consequences are contributing to future decisions, supervisors must somehow ensure that novices are aware of alternative interpretations of their early experiences, that they understand how their actions would be judged according to a variety of recognized standards, and that they are aware of outcomes foregone by their choice of goals and actions.

But how supervisors are to influence deliberations is not at all clear, for, by definition, deliberate action renders professional concepts and principles relative to specific situations. When expertise is defined as the application of recognized concepts or principles, it is easy to define standards for professional practice and easy for observers to judge the appropriateness of a novice's actions. But when decisions depend on how one interprets the situation, the observer loses authority for judging the appropriateness of any particular action. If professional development schools are to foster deliberate action, they must do so in a way that promotes professional standards while at the same time acknowledging that situations can be viewed in multiple ways, and that it may be legitimate to alter goals to fit situations. This leads to the fifth criterion.

5. Supervisors or mentors must **infuse content** into novices' deliberations about experiences and actions. Content—that is, professional skills, concepts, theories, and principles—provides the standards for judging others' practice, the framework for establishing one's own goals, and the criteria for evaluating the consequences of one's own past and proposed actions. Content enables self-regulation as well as the grounds

for critical self-assessment. Consequently, professional development schools have an obligation to infuse skills, concepts, principles, and theory into novices' deliberations about their actions and the consequences of their actions. Just as lawyers learn, through the process of critical analysis, how to find and judge content that may be relevant to a case, teachers must learn through their own deliberations to define and judge content that may be relevant to their goals and actions.

This last point may seem contrary to the thrust of deliberate action: I argued earlier that content was important when expertise consisted of the application of skills, concepts, and principles, but that critical analysis and deliberation required an inclination toward analysis and the ability to reject content when it was not appropriate to a situation. But content provides the stuff of deliberation: the frames of reference for interpreting situations, the value judgments for selecting goals, and the principles for choosing among competing actions. Even a decision to reject a particular principle or concept requires awareness of the principle and how it could be applied to a situation. It is competition among various contents that makes deliberation rigorous. Finally, content provides the language for describing and interpreting experiences. If each teacher were left to deliberate in private, conversations among teachers would resemble a Tower of Babel.

EXAMPLES OF PROFESSIONAL DEVELOPMENT SCHOOL ACTIVITIES

The preceding sections of this chapter have put forward an argument both for the kind of expertise professional development schools should try to foster and for how that kind of expertise is most likely to be fostered. But the principles are still at a rather abstract level. To illustrate how they might be used in designing a professional development program, I now apply these criteria to a few specific learning opportunities that have been or could be used to help teachers learn to teach. I try to evaluate such learning opportunity for its potential in fostering deliberate action, based on the five criteria listed in the previous section.

Learning How Children Learn by Tutoring One Child

Tutoring involves many aspects of teaching—developing goals, designing lessons, implementing lessons, diagnosing the student's understanding of the material, revising plans, and revising goals. Consequently, tutoring meets our first criterion listed above: It enables novices to develop their

own strategies. And since tutoring itself would require only an hour or less each day, the novice would have time to deliberate-our second criterion. To satisfy the third and fourth criteria, we need a mechanism that enables the supervisor to monitor and influence the novice's conclusions. This could occur if the supervisor met regularly with the novice to discuss the novice's "case," criticized the novice's activities in light of the concepts and principles of child development, and occasionally observed the novice tutoring the child in order to provide rival hypotheses and contradictory evidence from those observations. Since the purpose of the tutoring is to help novices learn more about how children learn, and to recognize signs of learning and signs of confusion, the project satisfies our fifth criterion. Part of the supervisor's job is to infuse knowledge of cognitive development into these circumstances.

Because such a project might be construed as a variant of ordinary guided practice, it might be instructive to review the ways in which it differs from ordinary guided practice. First, it establishes the novice's responsibility in a very different way. Student teachers can be hampered by too little responsibility when their cooperating teachers hold the real authority in the classroom, and by too much responsibility when they are left in complete charge of the classroom. Tutoring avoids both of these pitfalls. The tutoring novice has full responsibility for the tutoring project, a feature that is important to deliberate action. But the responsibility is limited to one student, one subject, and one hour or half-hour a day, so that the student teacher has ample time to digest and deliberate over his or her actions. Second, in ordinary guided practice the student teacher's supervisor interacts with the student teacher only occasionally, when he or she observes a teaching episode, whereas the tutoring novice's supervisor is involved in ongoing conversation with the novice about the tutoring project. Consequently, the tutoring novice's supervisor knows the development of the novice's reasoning over time and can respond to that rather than to random events he or she happens to observe. Finally, the student teacher's supervisor has no substantive agenda, so that the supervisor's response to the student's teaching episode is unpredictable and most likely unrelated to the student teacher's intentions and interests in the episode. In contrast, the tutoring novice's supervisor has a clear agenda. It is to enhance the novice's ability to evaluate goals and actions in light of a particular set of concepts and principles.

It should also be clear that the tutor's supervisor is not an ordinary teacher. This is a person who is thoroughly grounded in the content-the theory, concepts, and principles-but who also is well grounded in experience and aware of the contradictions experiences may offer to theory. Finally, this is an individual who is experienced in fostering deliberate action in adult learners.

Learning Subject Matter Through a Mathematics Study Group

The second learning activity is a mathematics study group. All group members are engaged in teaching mathematics, though they may be teaching it to very different kinds of students. The group could meet weekly and discuss issues that have arisen about mathematics in their teaching. A member may describe a problem she encountered explaining a particular concept to her students, and her realization that she really really didn't understand the content herself. The group may then examine that mathematical concept in depth and discuss alternative ways of thinking about it and of helping students understand it. Another member may raise questions about a section of a math textbook and its applicability to particular mathematical concepts. As members deliberate, the study group leader interjects lessons about mathematics when it is apparent that novices do not understand the content, and inserts mathematical criteria into discussions about evaluating textbooks, explaining concepts, or sequencing lessons.

The study group in mathematics could be construed to be a variant of ordinary internship seminars, but it is not an open-ended conversation. Instead, it focuses on a particular content area and encourages deliberation within that area. It also satisfies our five criteria. Because members of the study group are practicing, they have an opportunity to establish their own goals and strategies and to evaluate their actions and the consequences of those actions. Second, the weekly conversations enable the group leader to monitor and challenge their conclusions. The content focus of the study group enables the leader to critique the members' goals and actions in light of these concepts and principles.

Learning About School-Community Relations Through a Case Study

Professional development schools could also rely on case histories of real or hypothetical situations, for they cannot assume that "good" examples will naturally present themselves each year. Imagine, for instance, a problem that would foster deliberation about the relationship between school, parents, and society. The problem is multifaceted. It involves a recently rezoned secondary school whose student body has changed from a uniformly white, lower-income population to a population that is heterogeneous racially and in family income. Many parents are dissatisfied with their children's new school, and several have threatened to remove their children if the district does not return them to their original schools. Among the new students are many who belong to a particularly strict religion, and teachers have noticed that other students have been cruel

and aloof toward these students. During this unrest, a group of middle- and upper-income parents has protested the school's social studies curriculum, arguing that it is not relevant to their youngsters' backgrounds. The textbook they want adopted was recently rejected by the school district's curriculum committee on the basis of research evidence regarding its accuracy. The principal of this school is a strong instructional leader who is respected by the teachers, but she is unable to garner confidence from parents. The problem posed to novice teachers, who all teach social studies, is to develop a package of strategies that will resolve these problems. The novices form a committee and meet regularly to develop their plan. A supervisor meets with them, monitors their thinking, and challenges their ideas with contrary evidence and rival hypotheses.

Though the problem is hypothetical, it does require novices to choose among competing goals and competing actions-to deliberate. Further, because a supervisor attends the committee meetings, he is able to monitor the conclusions novices draw and to challenge those conclusions. Finally, the supervisor can insert findings from research on parent-school relations and political science concepts related to governance in education and can stimulate novices to use these concepts and principles to estimate the likely outcome of their plans and to judge the appropriateness of their goals and strategies.

Learning How One's Own Practices Influence Students Through Video Deliberations

This learning opportunity represents an attempt to improve the ordinary internship seminar so that it is more likely to enhance deliberate action. The procedure works as follows. First, novices are videotaped as they teach once a week. They view these videotapes of themselves and identify one event they are proud of and one event they are dissatisfied with. They establish goals for improving particular aspects of their teaching. One novice may want to decrease her use of leading questions, while another aims to improve the number and variety of examples and analogies he uses. When novices meet weekly for their seminar, they must be prepared to show one another their good and bad practices, to explain their assessment of these actions, and to define and justify their goals. Other novices as well as the seminar leader may question a presenting novice's reasoning, pointing out evidence in the tape that the presenting novice overlooked or suggesting alternative hypotheses to account for the events. The novice's goals provide substantive continuity from week to week, and the tapes enable participants to see things in the events that they otherwise might not be able to see.

These video deliberations also satisfy our five criteria. The novices deliberate about their own actions and their own goals; the seminar leader is able to monitor and challenge their conclusions about these events. Further, she is able to bring into the conversation concepts, theories, and research findings about teaching techniques, thereby encouraging novices to use this content in their assessment of their own experiences and their own goals.

Learning Group Management by Organizing a Class Activity with No Instruction Involved

My last example requires the novice to organize an activity that does not involve instruction. The activity could be a game at recess, a hike, a trip to the zoo, or a cake sale. The reason I de-emphasize instruction in this example is that this project is intended to foster deliberation about classroom management; consequently the project is designed to minimize attention to other issues.

This example does not satisfy my criteria as well as the other examples have. Because novices design their own projects, it engages them in deliberation. But a supervisor may not be able to monitor or to challenge their conclusions. If the novice's project is a one-time event, rather than an ongoing event, the supervisor may be unable to respond to the novice's conclusions while the novice is still deliberating. The supervisor can discuss the novices' plans with them beforehand and help them examine their ideas, and he can discuss their assessment of the events afterward. But once the event is finished, his critique may have no consequence because there is no future action or goal to be reconsidered in light of his challenges. Consequently this project does not satisfy all the criteria. There may be strategies that can make it work better, such as requiring novices to write a paper describing how they would do this event again if they had the opportunity to repeat it, or establishing a system where the novice actually had repeated opportunities to do comparable activities in different classrooms.

CONCLUSIONS

Professional development schools must help novices deliberate better—help them formulate more hypotheses to account for the situations they encounter, help them apply more varied standards to their actions, and help them engage in a more critical analysis of the goals they establish for themselves. To do this, professional development schools must see that

each novice has an opportunity to engage in deliberate action-to take actions that are deliberate and to deliberate about those actions both before and after they have been taken. They must also find ways to monitor novices' thoughts and respond to them. When they respond, they must find ways to infuse content into novices' deliberations, for it is content-the professional concepts, theories, and principles-that provides the criteria for judging actions and their consequences. The two central tasks of the professional development school-improving novices' deliberate action and imparting usable content- are actually the same task, for deliberations are improved by infusing content into them, and usable content is imparted by infusing it into deliberations.

This chapter offers a frame of reference for planning professional development schools and for evaluating various learning opportunities that could be provided for teachers. The examples presented here are intended to be illustrative of the kinds of opportunities professional development schools might offer to novice teachers. They are by no means inclusive of all possibilities. But careful consideration of these illustrations raises a number of issues about the potential of professional development schools.

One is that the creation of appropriate learning opportunities may introduce serious and complicated staffing problems. Though I sought examples that fostered deliberate action within the context of practice, most of the learning opportunities described here occur outside regular classrooms. Furthermore, the novices are not engaged in full-time teaching activities. That means that professional development schools may find that the goals of fostering expertise conflict with the goal of educating pupils. If novices are given full responsibility for only limited portions of children's education, then experienced teachers must be available to take responsibility for the remainder of the children's education. Furthermore, still others must be available to work with novices in their deliberations. Finally, most of these examples require long-term intense interaction with a supervisor or mentor. Thus, one important implication of the argument presented here is that these programs would be far more costly and far more difficult to develop than conventional teaching internships are. They require at least the following:

Staffing patterns that provide

- Limited and focused responsibilities for novices so that they can deliberate at length about the responsibilities they do have
- Full-time teachers in every classroom so that novices are never overwhelmed by full responsibility for a class

Full-time novice supervisors or mentors who have both content expertise and expertise in helping adults learn

A rather large complement of supervisors or mentors, each with his or her own area of content expertise

A ratio of novices to supervisors or mentors that enables supervisors to spend ample time with each novice

An organization that provides

- A mechanism for coordinating novice activities with regular classroom routines in a way that does not interrupt the regular teacher's rhythm yet enables novices to do such things as tutor a child, organize a hike, or regularly teach the math lesson
- A mechanism for coordinating novice activities to ensure that each novice receives an adequate portfolio of learning opportunities, and a method for rotating novices through them all

Program policies that provide

- A method of monitoring novices, a set of criteria for satisfactory progress, a method of flagging those who do not respond well, and a procedure for handling these cases
- Criteria for selecting supervisors or mentors that recognizes their content knowledge and their ability to teach adults, rather than their years of experience teaching or their formal degree (An important issue to be determined is whether or not these mentors must themselves be practicing teachers, or whether they can be, for instance, university professors.)

Another issue implied in this analysis is that if schools are to take seriously the task of preparing novices to teach, they will need to give as much attention to the education of teachers as they now give to the education of pupils. The conversion of an ordinary school into a professional development school will entail a considerable amount of thought about the curriculum that will be offered to novice teachers and to the kinds of learning opportunities that will be offered. If new staff and new novices are placed in schools without attention to the specific activities that will occur, the result may not lead to the kind of learning that would be most beneficial to novices.

Yet a third implication of this analysis is that such learning opportunities are indeed possible. They will not appear without serious attention to staffing, organization, and policy, and they will not appear without attention to the curriculum and learning opportunities that should be offered to novices, but they can be developed. And if they are developed,

they will foster a form of expertise that has long been desired in teachers, but that has been elusive to teacher educators and other educational reformers.

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