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ABSTRACT

The relationship between teacher empowerment and the knowledge bases in teacher education is discussed. Assuming that students are not standardized and teaching is not routine, teachers must be capable of making judgments using learning theory and pedagogy, child development and cognition, curriculum and assessment. Teachers must know their subject areas as well as the principles of teaching and must be practiced in the making of sound teaching decisons. The suggestion is made that the "knowledge base" needs to be reconceptualized, moving away from a sense that it is something to learn about, or simply content to be delivered or covered. There is also a need to focus on certain life-long learning skills that will make it likely that teachers will continue to learn after they leave college. It is important as well that teacher education students have the best possible role models. Reflections are offered on ways in which preservice and beginning teachers can develop the ability to think and act creatively and critically as well as learn the fundamental pedagogical skills. Twenty-one references are included. (JD)

TEACHER EMPOWERMENT: EXPANDING THE NOTION OF "KNOWLEDGE BASE"

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Teacher Empowerment: Exanding the Notion

of "Knowledge Bases"

The two issues I want to address--the knowledge bases in teacher education and the empowerment of teachers--may at first seem distant, at best tangentially, related issues. The first is at the heart of discussions of reform of teacher education programs; the other is usually directed at needed changes in the organization of the school system. My thesis, however, is that the two are essentially related and that, in fact, teacher education must expand the notion of knowledge bases to include explicit development of the ability to act as "situational decision-makers" (Bolster, 1983). If we do not address the development of our students' ability to act as decision makers, we risk failure in the schools where these teacher will work.

Let me begin with Linda Darling-Hammond's (1988) description of two "radically different notions of how students learn, how effective teaching is conducted, and how, as a result, education can be improved" (p. 4). The first, an "assembly line" or teacher as technician view, sees students as "raw materials to be 'processed' by schools according to specifications defined by schedules, programs, courses, curriculums, and exit tests" P. 4) The role of the teacher is circumscribed by policies, guidelines, and mandates from the top. School improvement, in this view, is brought about when the words of rules and guidelines get clearer and tighter and teachers are supervised and inspected more strictly to make sure they implement policy and procedure

exactly. Darling-Hammond points out the danger in this view--seeing students as "standardized" and effective teacher practice as merely a matter of following the regulations. It follows that teachers need little knowledge or capacity for judgment, because they are not making decisions. They are simply required to carry through predetermined actions. Darling-Hammond says of this approach that "It is better that they not be 'empowered,' as correct implementation depends on a certain degree of uniformity controlled from above" (p. 4).

For those who think Darling-Hammond's characterization is extreme need only examine the school policies that have looked for "teacher-proof" curriculum, that have eliminated time and other resources for teacher inservice, and that have moved in the direction of more and more control as the approach of choice in addressing the problems of the schools.

The other view described by Darling-Hammond, "starts from the assumption that students are not standardized and teaching is not routine" (p. 5). In this view, the aspects of the student that must be considered include varied stages of development, diverse learning styles, and different learning goals. Teachers, then, must be capable of making judgments, using "learning theory and pedagogy, child development and cognition, curriculum and assessment" (p. 5). School improvement, in this view, supports the full development of teachers, who must know their subject areas as well as the principles of teaching and who must also be practiced in the making of "sound teaching decisions." Because decisions come out of their interaction with complex variables in the teaching environment, procedures cannot be determined in a

central office and sent to varied settings to be carried out. In this view, school improvement requires that teachers continually increase their knowledge bases as well as reflect on their decisions in a thoughtful and ongoing way. Darling-Hammond says of this view that it "provides the rationale for the transformation of teaching into a true profession" (p. 5).

Darling-Hammond's descriptions of the two views of teaching, learning, and school improvement are parallel to my own description of two competing epistemologies related to the knowledge bases in teacher education (Diez, 1987, 1988). The first, rooted in the dominant paradigm of the social and behavioral sciences, promotes a positivist, experimental approach to seeking generalized "truth." It generally has promoted research separated from practice and excluded the input and judgment of teachers (Rauth, 1988). It assumes that the knowledge base will be a body of "facts" or "findings" that are objective and generally applicable, that are "tested" in a certain sort of empirical study, and that are offered to classroom teachers by those who are not, themselves, classroom teachers.

Anyone who has completed the beginning course in research design knows the limitations of such generalized truths. As Shulman (1987) points out, most researchers realize that their findings, especially when applied by policy makers, are simplified and incomplete--perhaps even inappropriate to specific situations. Yet the stance of a latent positivist epistemology is the presumption that what is learned in a carefully controlled study can generalize to future events, whether in the same setting or not--and that variations across classrooms are simply "error

variance." No wonder there has been support for top down control as a school improvement method!

The positivist view produces an image of the knowledge base as a "file cabinet" of discrete bits of information--again parallel to the ways that school districts produce manuals and guidelines and store them in official files.

The second epistemological position focuses not on the "generalized truth" as knowledge, but rather upon the ongoing interaction between the knower and the known. Rooted in anthropology and symbolic interactionism (see Erickson, 1986, for an excellent discussion of its development), this view holds that our knowledge base for teaching is continually being created and interpreted, especially by practitioners--and that it is modified by particular situations, specific disciplines, and individual styles. In support of this position, Bragaw and Hartoonian (1988) make a useful distinction between information and knowledge: "It is the structuring and use of information that becomes knowledge" (p. 11). And Dewey's (1916) call for knowledge to be linked to experience is important in understanding how the teacher's knowledge and experience need to be constantly integrated in her operation. He says:

> To learn from experience is to make a backward and a forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying, an experiment with the world to find out what it is like; the undergoing becomes instruction--discovery of the connections of things (p. 140).

The problem with the interactionist view, of course, is that it is less "tidy" and cannot simply be "presented" to preservice teachers as something you can learn "about" and that's enough. The "facts" in this position are often less fixed, and generally less important than the judgments made in specific situations. The necessary background for the teacher is more mastery of a set of conceptual frameworks that are used and modified to interpret experience and balanced against each other in order to make the decisions required in the complex situation of the classroom.

In two recent articles about teacher preparation programs, comparisons have been made that shed some light on this new interactionist paradigm. Proefriedt (1988) reflects on the way a good writer and a good teacher both are given advice in the form of guidelines or checklists (or research findings), but don't treat them as rigid directions to be followed. Rather, they are "active and reflective in searching out appropriate ideas, trying them out, elaborating on and altering them in appropriate ways" (p. 286). Featherstone (1988) uses Mark Twain's description of his mastering the craft of piloting, from Life on the Mississippi, as a metaphor for the development of the teacher. "He became a master pilot in the company of other pilots, 'the equal of kings,' by confronting the fact that the river always keeps changing" (p. 3). These are metaphors of decision-making, both drawing upon situations where a recipe won't do, where the decision maker must use information and experience to make new knowledge.

To produce teachers as "good writers" and "master pilots," what we need in teacher education is a conceptualization of the complex inter-relationships of the knowledge bases at work in the

preparation of an effective teacher. This conceptualization must take into account the subject area knowledge and understanding, the practical awareness of developmental frameworks and pedagogical approaches, as well as a sense of questioning and reflection that can be drawn from a grounding in the liberal arts. That's hard to do in a set of discrete chapters or courses; the metaphorical image of file cabinet needs to be replaced with an image of a web with inter-related strands that mutually support and connect with each other.

So, if the epistemological framework I've laid out is to impact teacher education programs in order to promote empowerment of teachers, what must change? To begin to address this question, Ashcroft's (1987) discussion of the etymology of "empowerment" is helpful. The root, of course, is "power," which is consistently seen as "to have the ability to do or act" (p. 142). Then, "empowering" and "empowerment" are best seen in Dewey's (1916) statement: "The purpose of education is to insure the continuance of education by organizing the powers that insure growth" (p. 51).

Education is about the developing of the ability to act. If we are to develop the <u>ability to act</u> as professionals, which implies "organizing the powers that insure growth," then I suggest three approaches and welcome your additions and suggestions. First, we need to reconceptualize the "knowledge base"--moving away from a sense that it is something to learn "about" or content to be delivered or covered (note the passivity of all these expressions!). We need to move to a sense of "knowledge base" as an interactive process of knowing and doing that grounds (or bases) the preservice teacher both <u>in the frameworks</u> of content areas and of pedagogy

that she will call upon to make sense of her experience and in the experiences in real classrooms that will allow her to test the meaning of the frameworks.

Second, we need to focus on certain life-long learning skills that will make it likely that our graduates will keep learning after they leave us. They need to be able to confront and reflect on their experience and have well developed strategies for accessing information and accessing decision-making processes in the schools.

Finally, we need to involve preservice education students with the best role models we can find--first of all ourselves and then practicing elementary and secondary teachers who demonstrate that it can be done.

Reconceptualizing the Knowledge Base

What will it take to reconceptualize the knowledge base as an integration of knowing and doing? First of all, it requires tackling the assumption that "to know" is "to be able to do." In discussions of what is needed in the development of effective teacher education programs, it is common to see descriptions of what students need to learn about. The use of the word "about" is at the heart of the differences in epistemology about knowledge base questions. How many students who have had coursework that has told them "about" classroom management would be able to say that it prepared them for the challenges of actually managing a classroom? Is learning about the process of a multidisciplinary team review the same as experiecing the process? The problem with the "about" may be that it allows us to separate "learning that" (information) from "learning how and when" (information modified by structure and

use). Students preparing to be teachers need both the knowing and the doing, the theory and the practice, for their "knowledge" to provide an effective "base" for effective teaching.

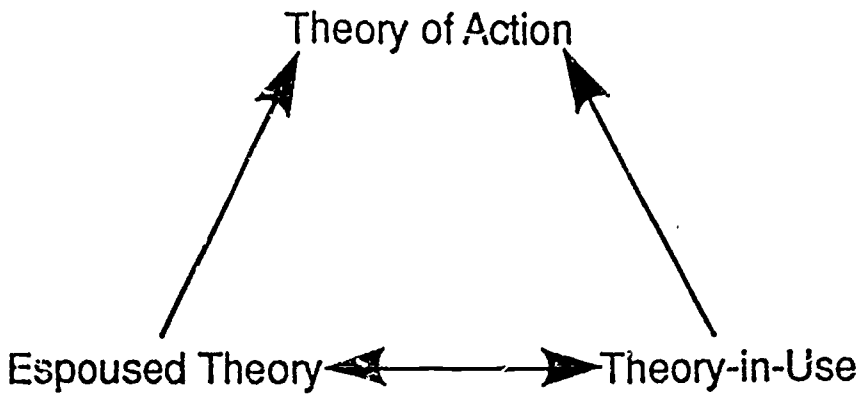
Second, providing a reconceptualization of the knowledge base as an integration of knowing and doint requires study of the ways in which knowing and doing connect to the daily decisions and actions of effective teachers. Sources for this approach are in the literature (see Lampert, 1985; Putnam & Duffy, 1985), but they are also available in the experiences of the teacher education faculty and the cooperating teachers involved in our programs. An example is the articulation of a "Model for the Development of Teaching Abilities" produced by the Alverno College Faculty (Diez & Lake, 1987; Diez, 1989).

Third, such a reconceptualization required a method of organizing the learning of teacher education students in an "ongoing interactive process in which both knowledge and experience are repeatedly transformed" (Hutchings & Wutzdorff, 1988, p. 7). One framework is that provided by early work of Argyris and Schon (1974). The model (see Figure 1) shows an interaction between an "espoused theory" and a "theory in use." Whether or not they realize it, students come into situations with prior knowledge, a set of assumptions about the situation from experience with others more or less like it, and methods or approaches they believe to be suitable. Of course, this "espoused theory" is also influenced by their reading in educational psychology, pedagogy, and other areas. For the education student, it might be a particular theory regarding discipline, e.g., reinforcement of positive behavior, that she

intends to try out with a class of students in a field placement.

When in the situation, faced with the class (concrete individuals rather than the abstract "fifth graders") and behavior that she didn't expect, the teacher education student may act very differently. What she actually does, or what she sees she might have done differently as she reflects on the outcome, Argyris and Schon (1974), call her "theory-in-use." Reflection on her "theory-in-use" leads to modifications in the original espoused theory, so that the next experience is guided by the new learning. The two-directional arrow in Figure 1 indicates that the interaction between the two is "ongoing and dialectical" (Hutchings and Wutzdorff, p. 8).

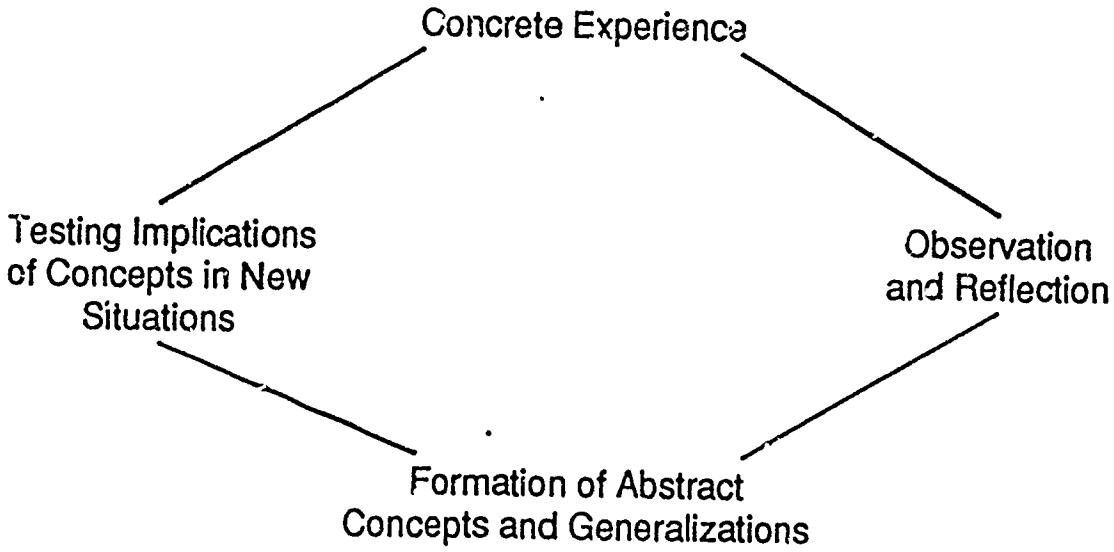
Figure 1. Argyris and Schön's Model



A similar model is that of Kolb (1984), whose learning styles research suggests that there is a cycle for complete processing of experience and information (see Figure 2). In Kolb's model, the education student might have begun with the concrete experience in the class, without much reflection on how her beliefs, assumptions, experience and study had affected her plan. However, taking the

concrete experience of the lesson with the class of fifth graders, she can reflect both on the situation and on what she did. That reflection leads her to formulate a "theory" or generalization about fifth graders, about discipline, and about her own style. The next time she goes to her field placement, she can test out her theory, which leads to a new concrete experience, and the cycle of learning continues.

Figure 2. Kolb's Model



At Alverno, faculty have used these two models, adapting them somewhat, but using such models as explicit teaching tools to assist students to make conscious and explicit their decision making processes ("espoused theories") and to analyze the effectiveness of their actions ("theories-in-use"). They have also designed varied activites required for concrete experience, reflective observation, abstract conceptualization, and active experimentation. In Education, we have designed reflective logs for the four semesters of pre-student teaching field work that lead students to examine aspects of our five teaching abilities in both theoretical and practical aspects, bring the knowing and doing together in their reflection.

Alverno faculty use "knowledge base" in two senses in talking about our teacher education program. The "knowledge base" we have articulated in teacher education is an integrated set of abilities of the teacher, describing the actions of the teacher and their roots in research, practice and reflection. The "knowledge base" that our students take with them to their professional practice is their grounding in an ongoing reflective processes that moves them from knowing (taking theoretical frameworks they have explored in class and in reading) to doing (trying out their ideas in simulations or in real classrooms), back to a knowing modified and deepened through their reflection on their experience.

Life-long Learning Skills: Problem Solving and Social Interaction

One of the more disturbing talks I've had with fellow teacher educators centers around what we can expect of the beginning teacher. In an exercise designed for the AACTE Knowledge Base Workshop, participants are asked to read a brief paragraph about four candidates for a teaching position. All are beginners, but it's clear from the descritions that they vary in what kind of "ability to act" they have developed. The part of the discussion that disturbs me is the strong position held by some that beginning teachers can "only be technicians." While I'm willing to admit that teachers grow and develop in their first few years of teaching, I think that if they began as "only technicians," the schools will have a hard time working magic to change them.

We have to work the magic and do it before they begin teaching. Actually, it's not so much magic as a set of life-long learning skills that will allow them to learn from new situations, to take on problems as challenges rather than obstacles, and to

have the social skills to both find out information and influence decisions.

A strictly content focused notion of the knowledge base does not address these skills. Rather, it is designed to give right answers and correct interpretations--all laid out before the class in the lecture or readings provided. To develop, instead, "the ability to act" in the face of the new or unexpected problem (i.e., Twain's "ever-changing river") requires that the teacher educator design experiences in class or in the field where the answers are not evident and may even be ambiguous. Sternberg's (1985) work in critical thinking suggests that the development of problem solving skill requires practice with "messy, unstructured situations" (p. 196).

In addressing problem solving, we need to be concerned with the development of an attitude or disposition as much as a skill. My own experience in working with a major restructuring of an urban school has introduced me to many teachers who cannot see beyond the constraints they currently face. Asked to create a curriculum to meet the needs of urban students and to begin with what they would like to see the students know and be able to do as well as with what would be optimal teaching conditions for integrating content areas, three out of four groups began with designing a time schedule. Their years of experience with the control of the time schedule led them to tinker with it rather than addressing the more radical changes they were being asked to make. They did not see that potential "solutions" would be severely limited by specifying the time schedule first.

How do we teach for problem solving--both skill and attitude?

Above all, we have to make it an explicit goal of our teacher preparation programs. We need to design experiences and allow students to make mistakes as they try out their knowledge. We need to assist them to reflect on what they did and why, revealing their espoused theories and theories in use. We need to look at what happened, giving students explicit feedback on their processes in approaching the problem as well as on their solution. Simulations of the kind facing teachers in the schools today--for example, the redesign of curriculum to build thinking skills--may be one place to start. But students engaged in active field work will come across many opportunties to address problems--with ways to reach a reluctant learner, classroom management strategies, options for recouping a lesson that failed. If they actively address these problems in a way that give us (and them) access to their thinking, then we as teacher educators can direct their reflection and make of every problem a new opportunity for growth.

An ability very closely tied to problem solving in practice is social interaction. Teachers need to be able to interact effectively not only with their students, but with the students' parents, the other teachers, the administrators, and (increasingly) other pr ressionals and community leaders concerned with the needs of their students. One set of interaction skills might be labeled "interpersonal," referring to the teacher's ability to gather information from the verbal and nonverbal indicators in one-on-one settings.

A second, very important, set of skills concerns the ability to work effectively in group settings. Again, my experience has been that many teachers are not at ease in professional group

work. The same teacher who can lead a class skillfully in a discussion falls apart when working with peers on a professional task.

If teachers are going to be able to make changes happen in the schools, they need to know how to work together to achieve their goals. They need to develop the ability to speak their ideas clearly, to listen to others and to synthesize their own points with those of another. They need to learn how to use strategies to move groups forward and to deal with the conflicts that will arise when groups are made up of persons who care about the outcome.

While it's true that some persons develop interactional "moxie" naturally, social interaction can be taught and learned (Diez, 1986). Again, it's a matter of making explicit what we want to have students be able to do with what they know, giving them opportunities to practice, and using clear criteria to give them feedback. Videotaping is an invaluable resource in the development of these skills, since it's difficult to have the sense of how we look to others from our interior perspective.

Role Models: Teachers to Inspire and Demonstrate

Developing the ability to act as professionals is facilitated when preservice teachers can see a professional in action. Our hope ought to be that the teaching of the college faculty--both in liberal arts and in teacher education--models this ability. If not, then much of what we try to develop will be undercut by the power of the counter example.

But it's not enough to model effective teaching at the college level. We are preparing students for the elementary and secondary schools and they need to be able to see professionals in

action at those levels. We need to be careful in our selection of schools and teachers as fieldwork sites, so that we are not providing messages of discouragement or complacency. Any work toward developing problem solving and social interaction skills can be undermined by their absence in cooperating teachers. We need to identify the teachers whose ongoing openness to learning and who care for the individuals in their classes will inspire the teacher-to-be.

I am encouraged by the numbers of excellent cooperating teachers I have met in the past several years. There are good teachers in the schools, but it may take extra time and effort to find them and (equally important) to work with them as colleagues in the development of preservice teachers.

One strategy I would recommend particularly is to have faculty members become involved in a one-on-one way with local schools that are developing school-based management councils or that are working through curriculum revision. In these settings, it's possible to see the blossoming of teachers given renewed hope in their profession and the personal relationships built in working together often provides the stimulus to say yes to working with your students.

This last point brings me around full circle. The link between teacher education reform and the restructuring of the schools, between the knowledge base and teacher empowerment, is forged the choices of teacher educators. We must see as essentially related the conditions of the schools and the preparation of teachers. If we do, and if we build upon our relationships with the schools, we will develop ever stronger programs that will develop our students as empowered teachers.

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