

Teacher Education Is Not Enough!

By Donald R. Cruickshank and Kim K. Metcalf

Overview

In a major midwestern city, members of the Board of Education and the community were astonished to learn some elementary teachers used “isolation boxes,” or cubicles constructed of cardboard-like material, to segregate disruptive pupils. The local paper was aglow with polemics regarding the ethics and need for this sort of punishment. Censure was so widespread, the building principal had to be replaced.

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In a smaller, nearby city, the Board of Education brought dismissal proceedings against a tenured teacher who allegedly was observed to use faulty instructional practices that antagonized both pupils and parents.

Meanwhile, a school board in another part of the state dismissed a veteran teacher, in part because of alleged instructional incompetence (specifically, failure to employ effective practices including reinforcement, wait-time and appropriate questions), and additionally because the respondent did not maintain good relationship with pupils and parents.

Six hundred miles away, a teacher of 17 years

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was dismissed for failure to “use effective teaching practices” and “manipulative, concrete learning aids” in an elementary classroom.

In *Newsweek* magazine’s special education edition (October, 1990), editor Richard Smith notes, “We know much more than we think we do about how to teach children...but knowing and doing aren’t the same” (p. 3). The magazine is replete with articles, statistics, and opinions of scholars and laypersons bemoaning the problems plaguing our nation’s public schools. Notably, general inability to enact what is known about effective or desirable instruction is a recurring theme.

These events, although merely representative and certainly not peculiar to recent years, are indicative of a chronic shortcoming in teacher preparation: the failure to **train** teachers, to empower them with abilities and dispositions necessary for conducting effective practice.

Training and Education

Since the hypothesis put forth suggests lack of training results in faulty teaching, a brief discussion of the term training is warranted. Training implies development of a variety of abilities and dispositions across the spectrum of human activity. The spectrum includes habits of thought (how to think), dispositions (what to think), actions (what to do), skills (how to do), and taste (what is good). It is important to note that training can result in change in higher-order cognitive abilities, as in problem-solving (what to do), and reflection (how to think). Presumably, training also can help teachers acquire cogent affective abilities and dispositions, as in values clarification (what to think, what is good), and psychomotor skills, as in computer utilization (how to do). Commonly, and unfortunately, the term most often is associated only with the acquisition of lower-order physical skills.

The difference between education and training is blurred (Glaser, 1962; Gliessman, 1984; Hills, 1982), and dictionaries regularly commingle the terms (e.g., Webster’s *New World Dictionary of the American Language*, 1980). And, when a discrimination is made, many perceive training somehow to be **less** than education. However, Billings (1981) and Robertson (1987) provide a distinction useful here. The former notes that education permits us to be informed, to know about something, whereas training permits us to do something. Robertson agrees, stating, “The focus of training is on **knowing how** rather than **knowing that**” (p. 16). Be that as it may, Billings notes, “In one learning system we can find elements of both” (p. 273).

A number of schools of thought exist about the conduct of training. They are discussed elsewhere (Cruickshank & Metcalf, 1990). Most use a variation on the theme known as the systems approach. Joyce and Showers (1988) suggest training regimens include: an explication and explanation of the ability or disposition to be learned; modeling or demonstrating the ability or disposition; practicing it in

simulated settings; providing information on goodness of performance; and providing learners assistance in utilizing the ability or disposition in natural classrooms. Metcalf (1989, 1992) has developed and successfully field-tested a similar training regimen based upon research on training. Thus, in such a conception, training goes beyond education. Both education and training provide knowledge acquisition. Then, training focuses on application of acquired knowledge.

What Might be Goals of Teacher Training?

If training is more than education, in what might we wish preservice and inservice teachers to be trained? The abilities and dispositions necessary for effective teaching practice have been identified through surveys (Charters & Waples, 1929; Dodl, Elfner, Becker, Halstead, Jung, Nelson, Purinton, & Wegele 1972; Organizational Analysis and Practice, Inc., 1985), by scholars (Broudy, 1972, 1978; Chaukin & Williams, 1984; Cruickshank, Applegate, Holton, Mager, Myers, Novak, & Tracey, 1980; Dunkin, 1987; Flanders, 1963; Gage, 1972; Jackson, 1965; Medley, 1984; and Zahoric, 1986); and as a result of research on effective teaching practices and programs (Cruickshank, 1990).

Comparison of these sources makes clear there is consensus that teachers need abilities or know-how related to the following:

1. **Assessing and evaluating pupil behavior.** How to analyze pupil information, assess pupil needs, construct tests, record and report progress;
2. **Planning instruction.** How to analyze the requirements of subject matter, establish educational objectives, select and obtain materials, plan lessons and units of work, individualize and personalize, develop instructional materials, arrange classrooms, organize field trips;
3. **Conducting instruction.** How to communicate expectations, engage and maintain interest and attention, use a variety of instructional alternatives, employ technical skills of teaching, employ behaviors associated with pupil learning and satisfaction, assign and monitor work, utilize effective K-12 education programs;
4. **Analyzing and reflecting on teaching.** How to monitor and reflect on one's teaching;
5. **Developing human relations skills.** How to establish positive relations with pupils, colleagues and superordinates; establish mutual support with parents; enhance positive social interactions in the classroom; collaborate (e.g., serve on committees);
6. **Developing positive pupil self concept.** How to counsel pupils and obtain help for them when necessary;

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7. **Problem solving.** How to solve classroom problems;
8. **Managing and controlling the classroom.** How to maintain a business-like, cooperative work setting, use classroom control and behavior management, manage resources including time;
9. **Performing administrative skills.** How to keep attendance, handle other routines, respond to administrative requests; and
10. **Serving as teacher educator.** How to facilitate the learning of preservice teachers during field experiences.

Training in Teacher Education

Given the above array as a reasonable approximation of abilities needed by K-12 teachers, to what extent does teacher training follow? Very little, say observers of the field, including Allen and Ryan (1969), Berliner (1985), Cruickshank (1986, 1987), Gage (1972, 1985), Howsam, Corrigan, Denmark, and Nash (1976), Joyce and Showers (1988), Medley (1984), and Smith *et al.* (1969, 1980).

With few exceptions, neither preservice nor inservice teachers receive more than awareness of the need to have these abilities, and admonitions to use them. For example, they are told what direct instruction **is** and perhaps a few forms of it are described, such as Madeline Hunter's Mastery Teaching Program, The Missouri Mathematics Program, or Distar. Hardly ever does training or gaining know-how in any of them follow. We might as well be saying, "There are some promising instructional practices you should learn to use. Here they are. We hope you learn to use them somehow, someday." Unfortunately, too often, the scenario is of untrained preservice and inservice teachers being urged to use reinforcement, use wait-time, involve pupils, be with-it, establish good relationships with parents, and so on *ad infinitum*. As Smith *et al.* (1969) noted, "Almost all teachers are prepared in programs that provide little or no training" (p. 69).]

Even the segment of teacher education intended to be most pragmatic and practical, school-based experiences including student teaching, is suspect. These experiences provide practice, but of what? In addition to being given knowledge of some significant teaching activity, teaching technique, educational practice, teacher behavior, or competency prior to or during field experiences, are novices directly trained in them by any conception of the term? Not so, say many, including Smith *et al.* (1969, 1981), who would eliminate student teaching and substitute systematic training in training complexes. We must ask ourselves whether, for the most part, field experiences are more akin, by way of analogy, to swimming preparation, wherein learners are given general conceptual knowledge about the complexity of swimming and then substantial knowledge and practice with each of its elements; or to swimming preparation, wherein, following a description of the general conceptual knowledge (for example they are told to "be clear"), learners are thrown

into the pool with the charge, “Now let’s see if you can do it?” **Exhortation** to “do it!” seems to take precedence over real **training** in “here’s how to do it.”

Why Are Teachers Not Trained?

Why is this so? What are the conditions that inhibit or prohibit teachers from acquiring specifiable and notable cognitive, affective, and psychomotor abilities and dispositions during preservice and inservice teacher preparation? To begin with, there is an extraordinary negative mid-set within the ranks of teacher education toward training. That disposition includes that you train animals but educate humans, and that any form of indoctrination with regard to how to think, what to think, or how to do is inimical with education (see O’Neill, 1988). This view does not seem to reflect a belief that teacher preparation should **not** develop teachers’ abilities to think, act, or behave in desirable ways. Many critics at the same time unwittingly reinforce in their students and clients mental behaviors including dispositions more to their liking. Rather, the critics’ view appears founded on the notion that training is **less** than education, the inaccuracy of which was noted earlier. Thus, teacher preparation is conducted with the intention of developing teachers’ professional dispositions and activities, but does so implicitly. As a result, it mostly fails to affect desired outcomes.

Secondly, and partly as a consequence of the above, there is only a small cadre of education faculty interested in teacher training and its membership is not coalesced. Among the cadre we count Don Medley, John Zahoric, Walter Borg, Willis Copeland, Dave Gliessman, and of course prominently the late B.O. Smith. Medley and Zahoric have both made a case that a goal of teacher preparation must be to help teachers become more skillful and thoughtful about their work and that teachers fail not because they are ignorant about their work, but because they don’t know how to apply what they know: they lack **know-how**. Gliessman (1984, 1986) repeatedly argues that teachers cannot be expected to infer the skills implied in the body of knowledge about education. To illustrate, not only do they need to know that teacher clarity is important, but they also need to acquire the ability to perform clearly. Borg makes an analogy with medicine and asks whether we would have confidence in a surgeon who had learned her skills by listening to lectures. Together, these advocates of training contend it is not uncommon that preservice teachers are admonished with regard to what to do, but seldom are they shown or guided in how to do it. According to advocates of training, teacher preparation favors education or providing **knowledge about** rather than **know-how**. Thus, we constantly charge preservice and inservice teachers to do this or that, but due to dearth of training, they are unlikely to know precisely how and fall short of the mark, as did the teachers cited in our opening paragraphs. Education, yes. Training, no.

A third explanation for lack of training is that teacher preparation either is too inefficient or brief to encompass it. Let’s merely tell them what to do and then put them in the field where they can operationalize the knowledge they have received.

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Thus, field experience is the supposed repository for training, which we know does not meet its conditions.

However, perhaps the major inhibitors to training are our lack of familiarity with it and cost. Not having been trained ourselves, how can we train others? Not having sufficient wherewithal, colleges of education must prepare teachers at a cost that is less than that of educating K-12 pupils. In short, the situation in teacher preparation is to maximize the education function, i.e., provide low-cost knowledge-about, and minimize the higher cost training function, i.e., neglect the attainment of requisite abilities or dispositions, or, at best, hope they occur "in the field."

Effectiveness of Training Within Teacher Preparation

Recently we were asked to report on training within teacher preparation (Cruickshank & Metcalf, 1990). We identified systematic efforts to train teachers. By systematic, we meant the efforts were carefully formulated and, to some extent, based on knowledge about training. Moreover, we reviewed only efforts where some research design (pre-experimental, true or quasi experimental, correlational, or *ex post facto*) was employed in order to judge the impact of training. As a consequence of our search, we believe that over the past several decades there have been only isolated, systematic, documented efforts to train teachers.

What are Examples of Training Within Teacher Preparation?

Sporadically, training has been used to modify attitudes (dispositions), knowledge, or skill. Among other things, training has been implemented to make teachers able to change pupil behavior (behavior modification), use discovery teaching (inquiry training), analyze classroom discourse (interaction analysis), utilize teaching behaviors with a basis in psychological literature (microteaching), understand significant educational concepts and phenomena (protocol materials), raise their cognitive level of thought about teaching (reflective teaching), problem solve (simulation), and utilize teaching abilities related to pupil achievement (teacher effectiveness). The above training efforts mostly are independent and fragmented efforts to address some of the training needs earlier cited in national surveys, by scholars, or as a consequence of research on teaching. Many of these efforts are well known, and space does not permit extended descriptions. However, brief overviews of several notable training efforts follow. Readers are encouraged to consult suggested references for more detailed discussions.

Behavior Modification. Teachers have been trained in using behavior modification to change the behavior of deviant pupils and to increase certain pupil actions related to school learning such as attending behaviors. In either instance, teachers are given knowledge of psychological principles related to operant conditioning

and skill-in their application. Reviews of research on such training (Allen & Forman, 1984; Patterson, 1971) suggest that behavior modification training often produces desirable results in that teachers can learn and will use behavior modification principles. Most disconcerting, however, is that use seems to diminish after the training period is over.

Inquiry Training. Inquiry training was particularly widespread during the 1950s and 1960s with the introduction of K-12 curriculum changes in the form of “new” math, science, and social studies. All were concerned with enhancing pupils’ higher level thinking abilities. “Analysis” and “discovery” were keywords, and programs to enhance pupil inquiry skills flourished. Consequently, teachers were to be taught to use inquiry as an instructional strategy. Few studies of the effects of such training are available, and there appears to be much variation in the types of training provided (Cotten, Evans, & Tseng, 1978; George & Nelson, 1971; Hurst, 1974; Lombard, Konicek, & Schultz, 1985; Porterfield, 1974; and Zevin, 1973). These studies report success in getting teachers to use more inquiry-oriented strategies, that less experienced teachers are more affected by training, and that modeling the target skills facilitates their acquisition and use by subjects. However, as noted by Zevin (1973), although inquiry is highly touted, little has been done systematically to train teachers in its use.

Interaction Analysis. Interaction analysis emphasized preparing teachers to use systems of classroom observation and analysis in order to help them use more desirable patterns of interaction. Most notable among these systems is Flanders Interaction Analysis System (Amidon & Flanders, 1963). Implicit in such programs was that teachers so trained would improve their classroom interactions. Not only would they know how to record and analyze classroom interchanges, but they would also see the errors of their ways. Thus, for example, teachers trained in interaction analysis would see that they needed to become more pupil-centered or indirect, and reduce teacher talk. Results of several studies provide support for this expectation (See Amidon & Hough, 1967).

Microteaching. Microteaching is among the best known training efforts in the preparation of teachers. Developed at Stanford in the 1960s, microteaching includes brief teaching encounters in which teachers conduct five to twenty-minute lessons in their subject field to a small group of pupils who are often peers. The purpose of microteaching lessons is to practice specific technical skills of teaching until an acceptable level of performance is reached. MacLeod (1987) reviews the extensive body of research on microteaching and cautiously reports favorable outcomes. Microteaching was and is popular and has been the subject of extensive research. The collective findings on the effectiveness of microteaching make clear that it is difficult to modify the behavioral repertoire of teachers to include the

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microteaching skills. MacLeod (1987) concludes, "Despite the enormity of research endeavor, there are few definite conclusions which can be drawn about the...effectiveness of microteaching." (p. 538).

Protocols. The concept of training teachers via protocols was first suggested by Smith *et al.* (1969). As originally described, a protocol would consist of two parts: an audiovisual or written recording of a naturally occurring classroom event or phenomenon (e.g., cheating) and aggregated research and theory which would help teachers understand the event or phenomenon. Funding by the U.S. Office of Education resulted in the development and testing of several protocols, though most emphasized development of teacher behavior (questioning, for example) rather than conceptual understanding. Cruickshank and Haefele (1987) review research of protocols and note that many studies indicate positive results in affecting concept acquisition, skill teaching, or both. However, the reviewers note considerable shortcomings among many of the studies.

Reflective Teaching. Reflective teaching has become a generic term referring to a range of efforts intended to prepare teachers to be more thoughtful. The concept and descriptions of several programs are discussed in Clift, Houston, and Pugach (in press). Because the notion of reflective teaching is new, or at least newly revisited, reports of training endeavors are scant. Available studies have most often investigated the effects of the Reflective Teaching regimen developed at Ohio State University and have reported positive effects. These studies suggest that preservice teachers can be helped to become more reflective about their profession and professional practice (Beeler, Kayser, Matzner, & Saltmarsh, 1985; Cruickshank, Kennedy, Williams, Holton, and Fay, 1981; McKee, 1986; and Troyer, 1988).

Simulation. Simulation is an instructional alternative whereby elements of real situations are presented to learners to provide them with awareness and an opportunity to learn and practice responses. Simulation has been used for a variety of purposes with a frequent goal of such training being to develop teacher problem-solving skills. Simulations can be thought about as being media versus computer-based, providing for group versus individual instruction, using operant conditioning versus open-ended, and being simplistic versus complex. Research indicates that simulation training devices need not have a high degree of verisimilitude, or one-to-one correspondence to reality, that subjects can learn to respond appropriately to problems presented in simulation, and that users find the devices believable (Cruickshank, 1990). Many of the emphases of simulation programs have been on extensive and complex development of the simulations, seemingly leaving less time for studying their effectiveness as training devices.

Teacher effectiveness. More generally, several investigators have developed

training intended to help teachers learn to use classroom behaviors and practices derived from research of effective teaching. Although the process or form of training differs across these efforts, the results of the process have been favorable. Gage and Needels (1989) review 13 such attempts and report that teachers can learn to use more desirable instructional behaviors and that, when they do, positive student outcomes, like learning and satisfaction, are increased.

For the most part, and to their credit, the trainer-investigators seem to have utilized care in their projects and have produced generally positive results: Teachers can be trained, training is perceived by trainees as mostly pleasurable, trained teachers use or can be encouraged to use their newly-acquired abilities, and benefits accrue to the trainee and/or the trainee's pupils.

Improving Teacher Training

Given that desirable teacher abilities and dispositions have been carefully annotated, that preservice and inservice teachers constantly are required and admonished to use them, and that successful training regimens have been developed for some, what might be done to enhance training within teacher preparation?

Most importantly, the abilities and dispositions necessary for desirable teaching practice and which are to be developed within a teacher preparation program must be defined. It is not the purpose here to argue for or against any particular set of goals or outcomes for teacher training. And, the goals of one institution need not be the same as those of another. However, within a teacher preparation program, those attitudes, dispositions, or behaviors which the program seeks to develop must be clearly delineated—what is it that we believe is critical to successful teaching and that our students will be able to do upon completion of the program. This process closely resembles the self study dimensions of the National Council for the Accreditation of Teacher Education (NCATE) accreditation process: The objectives and goals of the program are delineated, and curricula and instruction are designed to emphasize and promote them. The goals and objectives serve directly to guide experiences and activities provided students of the program.

In order to help students reach program goals, teacher educators must become more adept at conducting systematic training activities. Understanding of effective training, and the relation of teacher training to teacher education, must be included in teacher educators' preparation. Further, we must develop skill in providing teacher education students with guided practice and appropriate feedback to develop desired dispositions or abilities. Thus, the education of teacher educators must come to include some systematic training in the conduct of teacher training activities, such as simulations, microteaching, and Reflective Teaching.

Teacher preparation must emphasize the application of knowledge about teaching and learning. The often noted criticism of teacher education's failure to relate theory to practice or to provide "practical" information about teaching stems,

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in large part, from a lack of experiences in which preservice and inservice teachers are guided in appropriately **using** their knowledge in controlled teaching situations.

Relatedly, teacher preparation must seek to decrease the amount of time spent in didactic instruction geared to providing knowledge-of, and increase use of clinical and laboratory experiences for providing know-how. Such forms of instruction allow learners to gain proficiency in using desirable behaviors or ways of thinking through controlled practice and feedback provided by an instructor. To argue that teacher preparation lacks sufficient time to incorporate adequate laboratory and clinical experiences fails to consider the success of training attempts reviewed earlier. In many of these efforts, desirable results were obtained by integrating systematic training, including guided practice with directive feedback, into existing educational methods courses. An apparent lack of time for training activities may be attributable to programmatic redundancy and failure to clearly delineate the desired outcomes of the teacher preparation program.

Lastly, and again related to the delineation of desired program goals, student teaching and other extended field experiences must come to represent an intensive, field-based arena for teachers to refine their ability to act, perform, or think in ways consonant with program goals. Programs currently exist which use student teaching as a capstone training experience directed at honing teachers' practice, although they are the exception, not the rule. In these exceptional programs, goals are clearly delineated, cooperating teachers are helped to become familiar with these goals and ways in which they can help student teachers become proficient in them, and university supervisors reinforce these goals through consultation and evaluation (see Boyan & Copeland, 1975; Hill, 1977; Kilgore, 1979; McIntyre & Killian, 1987; Stahl, 1979; and others).

Removing Obstacles to Effective Teacher Training

The above suggestions can be implemented with resources presently available. However, the extent of their implementation may be enhanced by removing or reducing at least five obstacles to effective training within teacher preparation.

First and foremost, many teacher educators must cleanse themselves of the negative connotation held for training. Training is a necessary part of a teacher preparation: true teacher preparation is the product of education and training. Recent support for this equation is found in guidelines for a proposed system of national teacher certification that include overarching standards regarding what nationally certified teachers need to know **and** be able to do (*AACTE Briefs*, 1989).

Secondly, we must accept that in the overwhelming majority of on- and off-campus clinical and laboratory experiences, what we do cannot fairly be regarded as training. Practice teaching is better thought of as trying-out theoretical knowledge about teaching by way of trial and error. Students in-field experience may be trying to put course-acquired knowledge-of into practice, but students most

certainly are not being trained therein in precise abilities or dispositions nor are they necessarily practicing the precious few that might have been acquired on campus.

Thirdly, some greater attention and recognition must be given to persons with a predilection for helping preservice and inservice teachers actually acquire the abilities and dispositions cited earlier. Education units fortunate enough to harbor such persons should maximize their potential to contribute.

Fourth, private resources must be identified to enable the development of a large set of materials related to the types of training that have already been called-for as a result of the earlier noted national surveys of the activities of teachers and the work of scholars and researchers. Perhaps educational publishers would make such a commitment to publish training materials if we could convince them that we have reached consensus on the abilities and dispositions K-12 teachers must have for successful practice. Relatedly, universities in the business of teacher preparation must begin to realize it costs much more money to prepare teachers than they seem willing to commit.

Finally, and perhaps most importantly, we must rally stakeholders with strong interests in teacher preparation to this cause. State education departments, the National Association of State Directors of Teacher Education and Certification, professional practices boards, NCATE, the Association of Teacher Educators, the American Association of Colleges for Teacher Education, the National Education Association, the American Federation of Teachers, learned societies, and others must take whatever action they can to ensure teacher training is a reality. There must be active, powerful advocates.

We cannot ensure that all will benefit equally from teacher training, but there is every reason to believe the vast majority would. Imagine teachers being as carefully and precisely trained as surgeons, engineers, musicians, artists, and actors. What will we think of next?

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