Instruction in specific teaching skills should supplement teacher education curriculums. A teacher should gradually acquire basic skills through structured classroom observation and prestudent-teaching activities (tutoring, microteaching) prior to immersion in the complex milieu of the classroom. His performance of such skills would become one of the criteria for his advancement in preservice education and later for his position on a differentiated staff (which would require, in turn, inservice education for skill sharpening and specialization). (LP)
A PLAN FOR A NEW TYPE OF PROFESSIONAL TRAINING FOR A NEW TYPE OF TEACHING STAFF

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Few people are satisfied with the professional training given to teachers. Complaints come not only from elder statesmen and admirals but also from teacher educators and their students. Criticism from within the educational community is perhaps more telling since it comes from the people who have to live with the results. The dissatisfaction seems to center on the relevance of present professional training to the daily work of teachers.

This paper outlines an alternative approach to the present efforts in teacher education. The plan is radical and as yet untried. However, as will be seen, it has a precedent in another field of professional training. The proposed plan for reform in teacher education can be traced back to the work of two men: the curriculum insights of Franklin Bobbitt (2) of the University of Chicago which were articulated fifty years ago, and the staffing patterns advocated by Dwight W. Allen (1) of Stanford University in 1966. Finally, the plan proceeds from two assumptions: first, that presently teacher education is not adequately preparing the majority of teachers; and second, that the present use of teacher strengths is inefficient for the schools and stultifying for individual teachers.

Much of teacher training is ineffective because it is based on a rather doubtful model. When one examines the professional training of teachers, two categories of experience appear:
exposure experiences and total immersion experiences. By exposure experiences I refer to courses in professional education, classroom observation, and other experiences to which potential teachers are exposed and from which they are expected in some mystical fashion to learn how to teach.

By total immersion experiences I refer to our current student-teaching and internship practices. Typically, although not always, these immersion experiences follow exposure experiences. Armed with several education courses and having watched others teach, the student or intern is immersed in a classroom with the expectation that he will come out a teacher. This practice is reminiscent of survival training for paratroopers in which a trainee is dropped in hostile territory and, after struggling to stay alive for a number of days, is expected to emerge intact. Besides appearing rather inappropriate for the development of cognitive and effective skills, this immersion experience does not seem fair to the school children who come to learn.

There are also questions about the relationship between the exposure and immersion experiences. Are the objectives of the education courses to be demonstrated by the beginning teacher in his initial teaching? Are the education courses and observation programs designed to bring about specific changes in the prospective teachers, i.e., effective teaching skills and pedagogically sound attitudes? While many teacher educators would answer in the affirmative, few have bothered to offer hard, supporting data.

The present model operating in teacher training has, however, one major attribute: it is economical. Courses and initial teaching experiences do not draw heavily on our resources. But if the quality of public education is related to the economic future of the nation, as many scholars suggest, the economy in teacher education seems shortsighted. From the viewpoint of the potential teachers who are willing to take on the grave responsibility of educating the young and who come to learn how to fulfill this responsibility, this economy is even more dubious.
A PROPOSED MODEL

In 1918 Franklin Bobbitt (2) called for a scientific approach to curriculum building. Like many good ideas, his plan was disarmingly simple but complex and difficult to carry out. In essence, he said that those who construct curriculum should go out into the world and discover the specific activities which constitute human life. The curriculum, then, becomes the abilities, skills, attitudes, appreciations, and forms of knowledge that men need in order to live well. Extending Bobbitt's plan for general curriculum to curriculum building in teacher education, it follows that the teacher educator should go into the schools and other places where learning occurs and discover the specific activities that constitute good teaching. The trainee's curriculum, then, would center on those activities.

"Good teaching" is a troublesome phrase. It is too big, too all-inclusive, and too slippery to deal with intelligently. Trying to come to any conclusions about teaching using this monistic approach is like wrestling a greased boa constrictor in a darkened room. In both, the object of pursuit is illusory and the ends difficult to determine.

Nathan Gage (3) of Stanford University offers valuable insight into this problem. In discussing ways of analyzing the concept of teaching, he makes the following point: "Teaching can be analyzed according to types of teaching activities. Teachers engage in explaining activities, mental hygiene activities, guidance activities, demonstrating activities, order-maintaining activities, housekeeping activities, record-keeping activities, assignment-making activities, curriculum planning activities, test and evaluation activities, and many other kinds of activities. If everything a teacher does qua teacher is teaching, then teaching consists of many kinds of activities." Looking at teaching from the activities or skills point of view, the problem of educating teachers becomes more manageable. The problem now is to specify the activities in which a teacher should be skilled and to develop training protocols that foster those skills. The result is a performance curriculum in teacher education.
The performance approach to professional education is not without precedent. The military has been using a performance curriculum quite successfully for years. Typically, the military prepares men for new roles by training them to perform the skills appropriate to the roles. For example, each year the military takes thousands of non-pilots and transforms them into skilled professional pilots. The performance curriculum for pilot training resulted from the examination of the pilot's role—what he must do, how he must be able to perform. Once the curriculum builders had clear goals in mind, they set out to design and test a curriculum that would bring non-pilots up to the performance level of pilots. The resulting curriculum is directed by a set of very clear objectives, provides knowledge and develops skills to reach those objectives, and systematically measures its effectiveness by checking on how well its trainees are fulfilling the objectives.

The pilot trainee starts at the bottom of the curriculum and advances through a series of phases. Advancement is dictated primarily by his performance of specific skills. While much of the instruction follows the typical classroom learning approach, there is a tight relationship between the content of the individual lessons and the tasks the pilot will be called upon to perform.

However, a pilot does not learn to fly in a classroom. Although he learns much from films and lectures, the bulk of his training is in simulators and through in-flight exercises. Simulated experiences provide a bridge to actual in-flight training. The trainee learns new skills in a safe situation in which a complex act is simplified and can be systematically mastered. One of flight training’s most famous simulators is the Link trainer. The Link is essentially a cockpit on the ground. The trainee climbs in the hooded cockpit and various problems are radioed to him in sequences of ever increasing difficulty. He in turn attempts to handle them and receives feedback on his performance. As he masters each problem he gains valuable skills which are tested in the next stage—in-flight training.
There are three phases of in-flight training: familiarization flights, supervised flights, and solo flights. In the first phase—familiarization flights—the trainee acts as an observer. An experienced pilot-instructor demonstrates the various maneuvers and performs specified in-flight tasks. In the second phase—supervised flights—the positions are reversed: the trainee performs the maneuvers and in-flight tasks with the instructor acting as an observer. In the third phase—solo flights—the trainee flies alone but is supervised either from the ground or by an instructor in a trailing aircraft. In each one of these in-flight phases there are specified objectives and the purpose is highly focused. Progress through each phase is governed by the trainee's performance. It is only after successfully completing all aspects of this training program, after demonstrating that he can perform the skills that make up the goals of the program, that the trainee graduates and receives his wings.

But receiving his wings does not mark the end of a pilot's training. It is the end of the beginning. Continuous training becomes the modus vivendi of the professional pilot. Although a pilot goes through what would really be considered further training in the regular flying duties he performs, he still spends a good deal of time in formal, advanced training. He is continually going through refresher courses to sharpen and practice his skills and is constantly introduced to new techniques and equipment. Also, as the professional pilot advances in rank, he is sent to schools to train him for specialized duties. In effect, a military pilot's training ends only with retirement.

Using this brief discussion of the components of military pilot training as a model, what follows is its suggested application to the professional training of teachers. First, however, a caveat or two is in order. The training program outlined below does not apply to the entire education of a teacher. It will not develop a liberally educated person. Nor will it foster the specialized knowledge of the discipline needed for many types of teaching. It will not provide the teacher trainee with the proper attitudes about teaching and about children. It cannot develop in him a
passion to reach out and touch fellow mortals with truth. These tasks must be left to others: the potential teacher's parents, his entire history of schooling, himself. The aim of the program outlined here is a limited one. It tries to train learning strategists and skilled communicators. It tries to develop professionals capable of passing on to students the knowledge they need and of exciting them about learning. While the suggested training program will not develop the knowledge of the disciplines and attitudes necessary for teaching, it will show the teacher how to channel these and bring about effective learning in students.

APPLICATION OF THE MODEL TO TEACHER EDUCATION

In discussing the application of the pilot-training model to teacher education, various phases of training will be paralleled for purposes of clarification and demonstration. It should not be inferred that teacher education has exactly the same number of phases or that they are of equal importance.

Teacher candidates should be chosen for training according to specific criteria. Instead of having the number of academic courses taken as the criterion, the yardstick should be the ability of the candidate to demonstrate familiarity with certain core concepts, bodies of knowledge, and particularly the unique structure of each discipline. Early in training the teaching candidate should be introduced to specific bodies of knowledge about teaching and learning, concepts and information on which his professional performance should be based. Although the traditional methods of classroom and lecture hall instruction may be the most economical means here, educators should be pioneering in efficient and ingenious methods of presenting this core information. Since the overriding principle of this model is progress through demonstration and performance, much should be taught through self-pacing programmed instruction. Methods such as Mars's (4) training in six different types of audiovisual aids could be employed. In Mars's training, the student follows a programmed sequence while operating the various pieces of audiovisual equipment. For example, while operating the tape recorder, the student hears taped instruction on the various operations of the tape
recorder and also is told how to use the next piece of audiovisual equipment in the programmed series.

There is a tendency in professional education, as in other areas, for the number of required courses to proliferate. Unfortunately this proliferation is not always in direct relationship to the growth of knowledge. In the professional education of teachers it is imperative that criteria of relevance be applied ruthlessly to the curriculum before being established firmly as part of the curriculum. Each educational experience included should have demonstrable transfer value to the teacher's role in the classroom.

Instead of exposing beginning teachers to a series of education courses and then immersing them in the complex milieu of a class of twenty-five or thirty students, they should be trained gradually to acquire basic teaching skills through a series of simulated or constructed experiences. This aspect of training can be divided into three phases similar to those of pilot training.

The first phase is classroom observation. Typically, however, observation has been unstructured. The beginning teacher is sent into classrooms with the hope that he will learn by example. If the trainee is not sensitive to the complexity of teaching and has received little direction, it is doubtful that this type of observation is particularly fruitful. Observation experiences, like all training experiences, should have specific objectives and some means of measuring whether or not the objectives have been met. One way in which to make these observations more fruitful is to direct the observer's attention to certain phenomena, like the teacher's use of information-structuring statements, or the classroom routines the teacher employs. Also, since it is difficult to predict what will go on in the class to be observed, a greater "quality control" could be attained in observation programs through the use of selected video tapes --tapes chosen to demonstrate specific aspects of teaching-learning situations. The important point, however, is that observation experiences should be purposeful events, not catch-as-catch-can happenings.
The second phase of this training involves more active participation of the trainee. Here the trainee applies some of the principles learned through previous training but in a setting less complex than a normal classroom. The tutoring of one student is a good beginning. Again, the objectives of the tutoring should be specified. The second stage should involve the trainee in microteaching experiences—the instructing of a few students for a short period of time. There are three advantages to microteaching. One, this constructed teaching experience provides a maximum feedback from the supervisor and from students, and when possible, from immediate playbacks of video-tape recordings. Two, the trainee not only receives practice teaching in a specific subject, but he also practices a specific teaching skill or technique. Three, the short microteaching experience can be repeated with different students until desirable levels of performance are reached.

The active-participation phase of training should also include group or team teaching by several trainees. Here, five or six trainees plan a series of lessons and take turns instructing a group of students. After each teaching session the group critiques the performance and plans for the next lesson.

These various types of constructed and limited teaching situations should be part of an overall plan to develop teaching skill in the most important areas that constitute good teaching. Again, each should be designed to accomplish specific tasks and implement various objectives of the training program.

When the teacher has practiced and demonstrated his ability to teach in simulated situations, he is ready to take on the instructional responsibilities of a regular class. This phase corresponds roughly to our present practices of student teaching and internship, except that the teacher trainee has had an opportunity gradually to build up a repertory of skills and a background of experience. The main purpose here, however, is to put the trainee on his own so that he can integrate his previous learning of isolated skills and techniques into a coherent whole. During this period, the trainee must demonstrate his mastery of the various teaching activities to his supervisors. It is this performance of professional tasks that constitutes his right of passage, and at this point the teacher is ready for certification.
Certification should not be the end of training but the end of the beginning. Just as a pilot continues his professional training throughout his active career, so should a teacher. Although we give lip service to this idea of in-service training, it is rarely reflected in any substantial way in a school's daily schedule for teachers or a district's educational budget.

We are deceiving ourselves if we think that a teacher, even one who has gone through the thorough type of training outlined here, can do a professional job for very long without some additional help, some special training. Today particularly, amid the knowledge explosion and in a technological revolution which is just beginning to have an impact on the schools, it is imperative that we junk the idea that the profession can give its seal of approval to a trainee and then leave him alone. Training—intensive and continuous—should be a part of a teacher's professional life.

THE DIFFERENTIATED STAFF

The problems of teacher education, like education generally, would be greatly simplified if we were dealing with a complete homogeneous population. This is not the case, however.

There is an immense range in the abilities and potentialities of those who choose to be teachers. They come to teaching with widely different intellectual and experiential backgrounds. They have a wide spectrum of interests and career goals. They have differing capacities for leadership. They differ widely in their mastery of the various skills and activities that constitute teaching. We could also say that they differ in their capacity to grow professionally. In spite of this great diversity, however, teachers are treated essentially as interchangeable parts. Except for differences within grade levels and subject areas, all teachers have pretty much the same job description. They are given the same duties and responsibilities.

Our present staffing patterns require that each teacher become a jack-of-all-trades and do not encourage the development of mastery of specialized professional competencies. They permit the situation where the great teacher and the incompetent teacher daily teach in contiguous classrooms the same number of students but with widely different effects. Further, present staffing patterns have fostered a
promotion system that leads out of the classroom. The ambitious teacher who wishes to advance is not given greater responsibilities to instruct more students but "moves up" to an administrative position that takes him further from students.

The differentiated staff, as proposed by Allen (1), allows the gifted teacher to exert a much greater influence on the students and his colleagues than does the present system. It also allows the more limited teacher to make contributions more in line with his strengths. The differentiated staff concept meets the issue of individual differences among teachers head on and attempts to maximize the capacities and abilities of the staff while minimizing their areas of weakness. To facilitate this end, teaching staffs are grouped according to different duties, specialties, and different levels of responsibility. In effect, there are different categories of teachers.

Basic to the idea of the differentiated staff is the principle that positioning on a staff is dictated by performance and demonstrated competence. Years in the classroom, courses taken, degrees obtained are not in themselves suitable criteria for deciding who will have what level of educational responsibility. In the proposed system, talent is the basis for differentiation, and talent is the basis for reward.

TRAINING IN A DIFFERENTIATED STAFF

The dual purposes of the differentiated staff are to maximize educational opportunities for children and to provide viable career patterns for teachers. Since teachers' movement within a differentiated staff is dictated by their performance and professional competence, special allowance should be made for staff training. Once the various levels of teacher skill and competence are delineated, it becomes the function of a training program to help teachers reach their potential within this framework. Given this aim, in-service education takes on much more importance in and relevance to a teacher's professional role.

In a differentiated staff, one of the major responsibilities of teachers at the higher levels is professional in-service education. While not all higher-level teachers would have equal responsibility in this, those with special skills and leadership qualities would direct and provide for staff training.
Although a much greater commitment to in-service education is needed throughout the educational enterprise, it becomes particularly important within a differentiated staff. Without effective and continuous training, a carefully differentiated staff could become, within a few years, a static oligarchy. If movement within a staff is based on performance and competence, provisions for training and demonstration of competence become crucial. Therefore, while much of the in-service education program will be aimed at providing "refresher courses" and instruction in new content and methodological dimensions of the curriculum, a major focus will be on providing training for higher levels of responsibility.

The in-service program for a differentiated staff should be an extension of a preservice education program. It should help sharpen the professional skills of teachers. It should help identify and utilize the special talents and abilities of teachers. In this connection, it should be flexible, readily supplying special resources to those desiring special training. The in-service program should be the instrument for systematic change in education. Finally, an in-service program should provide the advance training for those gifted teachers who wish to take on higher levels of professional responsibility without giving up their place in the classroom.

REFERENCES

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