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AUTHOR Auerbach, Leo
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ABSTRACT

Competency Based Teacher Education (CBTE) may be gathering a bandwagon momentum and arousing high expectations, but it needs a realistic examination. Some of the advantages of the CBTE movement are that it specifies student and teacher outcomes, helps individualize instruction, brings about cooperation between the public schools and the colleges in working out plans for improving education, and focuses attention on some of the major areas in education that need improvement. Some of the problems with CBTE are that there is an inadequate research base for identifying the factors which produce effective teaching, and any attempt to relate teacher skills to student achievement does not offer an empirical basis for the prescription of teacher training objectives. To the extent that CBTE omits consideration of variables like school, community, and home factors related to student achievement, the movement cannot support its claim of being scientific. Industry can teach some lessons about competency that are useful to the CBTE movement, but it also must be remembered that education is not a production process. Finally, it must be remembered that working to improve teacher education must not divert educators from working for overall reform. (RB)

Leo Auerbach
Jersey City State College
Jersey City, New Jersey 07305

AN EVALUATION OF COMPETENCY-BASED TEACHER EDUCATION BY A FORMER INDUSTRIAL WORKER/ FOREMAN/ PRODUCTION SUPERVISOR

John and Danny were both offset pressmen, running the same size presses and responsible for the same type of job. Bright-eyed, apple-cheeked, slightly younger John, with his friendly grin, always bustled in with short, sharp steps, like a middleweight prize fighter, aimed at a straight-line mission. Sleepy-looking, sallow, grim-mouthed Danny lumbered in, bearlike, confused and annoyed about where he was. No question as to which of the two men their employers (and mine) regarded as more competent; just looking at them would tell anyone who was better. However, as production supervisor, I kept detailed daily records of the quantity and quality of their work and of "down time," when presses were being repaired. Surprise: three-month production records for both pressmen were almost identical. So much for superficial impressions. An analysis of the reasons for the similar performance could have been made, but my job was to make production meet goals and standards. The employers were not happy about their error in estimating the two men's relative competency. One lesson for us, then, is that management is not an infallible model for judgments regarding competency. However, industrial experience can be very illuminating with regard to evaluating many aspects of Competency-Based Teacher Education.

For one thing, industry responds to new processes, materials, and pro-

ducts competitively. And with the tremendous investment in CBTE (and PBTE) in money, legislation mandating it, commissions working on it, and other forms of energy and publicity, a powerful competition with existing teacher-education programs is well on its way. Business people react in various ways to the appearance of the latest techniques. One common reaction is to investigate, to determine the costs of the new and to compare them with the relative merits of the total operation -- items such as speed, efficiency, economy, quality of performance, quality of product, consistency, and cost of replacing the old. CBTE may be building up a bandwagon pressure, perhaps a juggernaut effect, and arousing high expectations, but it needs a realistic examination.

No one denies that education is in constant need of reform and renewal. Like any social institution it is subject to stagnation, shortcomings, and failure to meet changing needs. At various times, different components have been expected to produce the improvements -- curriculum changes, changes in scheduling, developing electives or other alternatives, structural and organizational changes. Some changes are well supported, some are poorly implemented, and attempts at reform go on. Now teacher education is in the spotlight. The reasoning is simple: if any progress is to be made, the teachers on the "front lines of production" must do the job, and if they are to do it better, they must be trained or prepared differently. Teacher education can benefit from criticism and self-criticism, with ongoing evaluation and reassessment built in to forestall or overcome stagnation or retrogression.

What can we accept from the CBTE movement? First, the plans to specify outcomes for students and teachers, in knowledge, skills, attitudes, and values. In English education, we have been dissatisfied with statements about outcomes which are too general and vague. It would be useful to specify behaviors, but with this proviso: that these behaviors shall be decided upon or scientifically established as both necessary and sufficient to produce the desired outcomes.

Secondly, we agree with plans to individualize instruction. Teacher candidates must be prepared as individuals if they in turn are to individualize education for their students. Weaknesses are inherent in mass education, especially as individual treatment is dispalced by grouping -- by age, ability, achievement, occupational or educational goals. Educational needs and learning style are individual. We in teacher education already attempt to set an example of attention to our students' uniqueness. (One model of business management deals with workers as almost interchangeable parts. It sets production quotas in advance and then places the burden on the workers to meet the requirements, regard-

less of problems or special features of the job. My employers hired such a consultant to induct me into the secrets of this approach. It was unacceptable.)

Thirdly, we can agree with all efforts to center teacher education in the field, keeping it realistic and involved. All reports of cooperation between public schools and colleges, of the participation of classroom teachers, administrators, college professors, and students in working out plans, programs, and procedures, have indicated positive advances, like the experiences reported at our preconference seminar/workshop on CBTE. The "field" should also include meaningful involvement of the communities.

And finally, we can agree with the CBTE movement that we prefer competency to incompetency. To the extent that CBTE has focused attention on some major needs, it has had some beneficial effects.

What is it that we cannot accept in CBTE? First, any claims that it has an adequate research base for identifying the factors which produce effective teaching. For details in support of this point, consult the research memorandum, Competency Based Teacher Education, by Phyllis W. Hamilton, prepared at the Stanford Research Institute for the U.S. Office of Education, Office of Planning, Budget and Evaluation (July 1973). After a careful and persuasive presentation, she summarizes, "The lack of knowledge on teacher effectiveness is well documented." (p. 20) More recently, Robert W. Heath and Mark A. Nielson, drawing on their own investigations as well as those of Rosenshine and Furst, have analyzed the major research studies. In their article, "The Research Basis for Performance-Based Teacher Education," (Review of Educational Research, Fall 1974, Volume 44, No. 4, pp. 463-484), they state that an analysis of the research "fails to establish an empirical basis for performance-based teacher education." (p. 463) There is, then, no scientific research base for this major component.

Secondly, we cannot accept any claim that CBTE can identify any operationally-defined teacher skills which are related to student achievement. This is a crucial question. Public interest in teacher education arose and grew in connection with student achievement (or lack of it) in reading, writing, spelling, speaking. We have all heard these complaints: "What's wrong with the teachers? What are they doing? What aren't they doing? Why aren't our kids getting as good an education as we had? Why don't the kids in our school do as well as kids in other schools?" We share the parents' demand for quality education, demands implicit in these comments. But at this point, CBTE people seem to ignore the con-

clusions of Heath and Nielson:

> First, the research literature on the relation between teacher behavior and student achievement does not offer an empirical basis for the prescription of teacher training objectives.
>
> Second, this literature fails to provide such a basis, not because of minor flaws in the statistical analysis, but because of sterile operational definitions of both teaching and achievement, and because of fundamentally weak research designs.
>
> Last, given the well-documented, strong association between student achievement and variables such as socioeconomic status and ethnic status, the effects of techniques of teaching on achievement (as these variables are defined in the P-B T E research) are likely to be inherently trivial. (p. 481)

To the extent to which CBTE omits consideration of variables like school, community, and home factors related to student achievement, the movement cannot support its claim to being or even becoming scientific. A homogenized view of either students or teachers is totally unsatisfactory. Yet some CBTE leaders believe that such shortcomings can be overcome by the assiduous collection of data, and that from the processing of information, some valuable generalizations will emerge. How can CBTE develop a satisfactory measurement and evaluation system for teacher performance? Merely collecting data, no matter how minute and detailed the items, the so-called teacher skills, is not a scientific procedure. One simple example from the history of science about the inadequacy of observation without a theory to provide explanatory power is the story of meteorology. Certainly this field must lead all others in the number of recorded observations, but its development as a science has not been the result of the accumulation of data. As for our present technical capacity for processing enormous quantities of data according to theoretical models which are invalid, we are all too painfully aware of the failures of the field of economics. With all the sophisticated, high-speed interpretation of complex, specific, minutely detailed economic data, we have not been spared inflation, recession, unemployment, or just plain trouble and hardship. Without adequate theory or explanation, there is no adequate policy. Similarly, CBTE cannot provide a successful formula, in theory or policy, since it cannot define what behavior is being measured and why it is important to measure it.

Industrial experience can teach us some simple lessons about competency. For one thing, it is not difficult to identify incompetency. A worker is judged incompetent if he breaks machines or other equipment, if he neglects to care for the equipment, if he spoils jobs, if he allows unsatisfactory work to go by (know-

ing as he does that the customer can reject the product), or if he takes unnecessary time to produce the job. It should be possible to identify incompetence in teachers. It is found in those who mistreat students physically or psychologically, who shortchange the kids by the poor quality of their performance, setting an unsatisfactory example and accepting a poor quality of student performance, and who fail to respond to positive help, suggestions, recommendations, and criticisms. In addition, of course, teacher education must include formation of democratic attitudes in a way that is not equally relevant in a production process.

Industry can observe, measyre, and assess productivity as quantity of output by a given labor force in a given time, efficiency as economy in material, power, and time, quality as the salability of the product, and the flow of production as an uninterrupted activity. Variables such as materials, equipment, and working conditions are controlled and remain employer responsibility, thus leaving worker responsibility clearly but narrowly defined. Standards are based first of all on the simplest, most routine job. As soon as custom work, "quality work," is involved, the basis for judging the worker's performance changes. Modern management deals with problems of improving performance in various ways. Technological improvements are most readily introduced in replacing the monotonous, repetitive, most mechanical aspects of production. But there are also ongoing efforts to automate the judgmental aspects in order to make quality control less dependent on individual skill and experience. Without going into details, one can say that remarkable advances have been and are being made. Yet, in many industries and operations, there is still room for craftsmanship, especially in assessing quality.

What lessons are there for teacher education? Education is not a production process. Our students are not a replaceable product, which can be set aside as waste (as happens in printing), while the job is rerun. The mechanical parts which can be improved with technology should be made more efficient, less time-consuming, less energy-consuming. If improvement comes with new equipment, materials, and working conditions, these should be introduced. But they are not the heart of teacher education. The judgmental aspects we expect teacher candidates to acquire can be improved with observation, demonstration, discussion, cooperation, and experience. Breaking down performance into tiny, repeatable bits leaves out the over-all nature of the teaching/learning process. Training may sometimes proceed by concentrating on parts or segments, usually skills and/

or information, most readily measurable, even quantifiable. But total performance entails human involvement and interaction, including realms of attitude, feeling, and value which are developed differently and must be assessed differently. Even industry evaluates different jobs with different criteria. Performance is not merely the sum of the different parts, and all these features are minimized or ignored under CBTE. My industrial experience taught me to distinguish four kinds of performer: the botcher, the mechanic, the craftsman, and the artist. These are qualitative categories. Clearly the first performer is inadequate. The other designations proved helpful. But whatever the labels, education must always include the perspective of teaching as an art. Frequently the concept of competence is not extended that far.

In industry, we found that technological problems needed technological solutions while human problems needed human solutions. What CBTE has that is good, like its emphasis on clarity and flexibility, is not all that new. Socrates, for one, stressed clarity. Modestly, CBTE might take a place alongside other approaches to teacher education. However, when CBTE's checklist approach emphasizes the skills and knowledge components, it reduces teaching to its most mechanical, repetitive level. When CBTE enumerates competencies and sub-competencies in profusion, as in some recent elaborate lists, it makes measurement and evaluation virtually unmanageable. Industry would scoff at such impractical devices. If CBTE then changes to an over-all "gestalt" appraoch to evaluation (as some practitioners have found necessary), it allows the judge, the observer, with his/her standards, experience, and preferences to become decisive. So much for its vaunted objectivity. In real terms, this makes the interpretation by the viewer as important as the performance.

If CBTE claims a scientific character which it does not and cannot possess, it can be damaging. It can also be misleading if it ignores the different qualities which are needed in different educational situations. There is no single set of teacher behaviors appropriate for all age levels, all levels of student ability. all types of student background, and all circumstances comprising the educational environment.

All of us believe that teacher education is important, but we know that it is not the entire educational picture. Therefore, working to improve teacher education must not divert us from working for over-all reform. Quality education depends on improved teaching techniques, and muchm much more. It involves concern

with social priorities, with seeing education in the light of necessary social changes, in employment, housing, and health care, an end to discrimination and racism, and the development of multi-cultural understanding. Everyone knows the material conditions for establishing the best possible learning environment -- books, equipment, schools, etc., and the personal requirements to go with them -- the attitudes and values as well as the knowledge and skills. The role of educational leaders, our version of management, is vital to carrying out full professional responsibilities. We must go beyond CBTE in the methods of sharing responsibility for constant reform and innovation. Rather than a single, standardized approach, we must provide alternatives in education. There is room for the Johns and Dannys. We must encourage diversity so that real individuality is achieved by teachers abd students. We must promote genuine cooperation, free and open exchange of ideas and experience, among teachers, among schools and colleges, between educational institutions and communities, as the most democratic and fruitful way to serve the profession and the children.

(Based on a talk at the Conference on English Education, Colorado Springs, Colorado, March 21, 1975)