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PERFORMANCE BASED TEACHER EDUCATION FOR VOCATIONAL AGRICULTURE TEACHER

Roland Peterson
Teacher Education
University of Minnesota

BACKGROUND:

A high school principal recently stated that:

"If teacher educators do not improve the quality of teachers they are sending to us, we've a good notion to stop hiring graduates of colleges of education and initiate a program to prepare teachers. Frankly, beginning teachers in my opinion, just do not know how to teach."

It is also obvious that occasionally state department of education personnel infer that they would like to prepare teachers. Community and citizen groups in consulting with colleges of education frequently state that they know the type of preparation teachers should receive. As a result the number of alternative schools, employing or using teachers with a wide range of qualifications have emerged. Teacher organizations are offering, and in some instances seemingly dictating, that they could easily map out the education required for teachers. These developments should cause some rather serious thinking among teacher educators. However, teacher educators have been thinking and doing some interesting work in new designs for teacher education. Elam, in a paper on the state of the art in teacher education, suggested that performance-based teacher education is by no means a full fledged movement in the early 1970's. He stated, however, that a reform movement of tremendous potential is emerging. Hopefully, as Elam further suggested, the movement will continue to generate on the basis of an enlightened leadership, resources and the research to expand on a dangerously thin knowledge base.¹ Along with the new developments in teacher education has emerged performance-based teacher certification. A review of the literature, particularly a report of Schmieler, revealed that state legislatures and certifying agencies seem to be passing enabling legislation or just plain demanding by law that teachers become certified on the basis of performance criteria.²

One of the primary problems facing teacher education seems to be in just what is meant by performance-based teacher education. It is obvious from a brief perusal of the literature that probably a dozen different titles are in usage across the country. Perhaps the A.A.C.T.E.'s Committee on Performance-Based Teacher Education has identified the elements which distinguish performance or competency-based teacher education from other programs. The elements are as follows:

1. Competencies (knowledge, skills, behaviors) to be demonstrated by the student are
 - derived from explicit conceptions of teacher roles,
 - stated so as to make possible assessment of a student's behavior in relation to specific competencies, and
 - made public in advance;
2. Criteria to be employed in assessing competencies are
 - based upon, and in harmony with, specified competencies,
 - explicit in stating expected levels of mastery under specified conditions, and
 - made public in advance;
3. Assessment of the student's competency
 - used his performance as the primary source of evidence,
 - takes into account evidence of the student's knowledge relevant to planning for, analyzing, interpreting, or evaluating situations or behavior, and
 - strives for objectivity;
4. The student's rate of progress through the program is determined by demonstrated competency rather than by time or course completion;
5. The instructional program is intended to facilitate the development and evaluation of the student's achievement of competencies specified.

Elam further noted that only professional teacher education programs that include all of these elements fall within the A.A.C.T.E. Committee's definition of performance-based teacher education. From a review of the literature it would appear that the terms performance-based teacher education (P.B.T.E.) and competency-

based teacher education (C.B.T.E.) have the same overall definition.³

One additional aspect of performance-based teacher education was referred to by Elam as implied characteristics of the program, these characteristics are:

1. Instruction is individualized and personalized.
2. The learning experience of the individual is guided by feedback.
3. The program as a whole is systemic, as the essential elements require.
4. The emphasis is on exit, not on entrance, requirements.
5. Instruction is modularized.
6. The student is held accountable for performance, completing the preparation program when, and only when, he demonstrates the competencies that have been identified as requisite for a particular professional role.⁴

In reviewing implications for teacher education, Houston stated that "... teachers tend to model their teaching on selected teaching practices they have experienced."⁵

The age of objectives, management systems and accountability for use of financial resources and accountability for the quality of product are key factors in our day that have become means for encouraging the development of performance-based teacher education.

AGRICULTURAL EDUCATION

Now that everyone is talking about performance-based teacher education, how are we doing in agricultural education? Some will say "Well, it's just another fad and after all we've been doing it for years!" Others may say "Let's do something now, it sounds tremendous." Obviously we can all do "our thing" and apparently some of us have been enticed by the performance-based "bug." The crucial question seems to be "What are the competencies needed by Vocational Agriculture teachers?" Possibly we need to examine a more basic

question and attempt to identify "good vocational agriculture teaching." Do we really know precisely what constitutes good teaching in vocational agriculture? In thinking about developing a basic set of competencies, it may be well to examine what is currently being developed. Does anyone have a carefully prepared list of competencies? The 385 competencies developed by Cottrell⁶ have some commonalities for Agricultural Education but do we have unique competencies in our subject matter area? Certainly lists developed in Minnesota, Nebraska, Arizona and Texas by Agricultural Educators offer a beginning, but, are we really interested in an acceptable list of competencies? In examining this question, Broudy criticized the movement by stating:

"... If there is no widespread agreement as to the task-sets to be used as targets for the training of the teacher, what assurance is there that school systems can employ teachers trained on different task-sets? How are certifying agencies to judge highly diversified task-sets? To which set of tasks shall textbooks and other instructional materials be calibrated? The practicability of the analytical approach depends heavily on general agreement as to what constitutes a relevant unit. In production assembly lines such agreement is the rule. How common is it in the analysis of teaching?"⁷

Will teacher educators each do their own thing or will they reach out for common competencies? Certainly a number of states have been and hopefully are continuing to work together but at best the effort still lies in the area of identifying educational pedagogy. More work is needed to identify the competencies required in the animal, plant and soil science areas, agricultural mechanics, farm and agribusiness management. We need teachers in Minnesota (since January 1, 1973 Minnesota schools have made requests for 102 Vo-Ag teachers). We need well prepared teachers of vocational agriculture. With the heavy demand for teachers we can, and in some instances are, resorting to temporarily certifying teachers. It seems evident that a system that demands an explicit statement of objectives and explicit criteria for attaining those objectives, holds considerable promise for meeting the demand for qualified teachers of agriculture.

It is reasonable to assume that presently only piecemeal performance-based efforts are underway in agricultural education. Agricultural educators seem to be willing to meet the rigors of performance-based teacher education in some aspects of the preparation program but are reluctant to go all out. Hopefully state mandated certification requirements will not force the issue.

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University of Minnesota, St. Paul, Minn. 55101

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THE STAFF

ROLAND L. PETERSON GEORGE COPA
FORREST BEAR GORDON SWANSON
EDGAR PERSONS CURTIS NOREBERG
GARY W. LESKE MILO J. PETERSON

R. PAUL MARVIN, *Editor*

Obviously, any hasty approach to meet a mandate could result in considerable loss of quality. Has any agricultural teacher education program attempted to provide a total performance-based experience for prospective vocational agriculture teachers? Apparently we seem to be content to "try it" in one, two, or three courses but that seems to be the extent of our effort. How many regional research conferences are attempting to focus on this question? How many regional research efforts are being directed at identifying good vocational agriculture teaching? If performance-based teacher education does not merit region wide recognition and attention then it seems reasonable to assume that as teacher certification requirements become more explicit the movement of teachers across state lines will grind to a complete halt. If the previous statement sounds like a threat, it is intended to have that connotation. The performance-based competency-based teacher education program is alive and well and is mushrooming into a full scale movement. Where will agriculture teacher education find itself within the movement? There may be an attraction to focus on a system of management by objectives but it seems that prior to enlisting a management system or at least in the preliminary stages of employing a management system, teacher educators must be able to identify the components necessary for good vocational agriculture teaching.

EVALUATION

One critical aspect of performance-based teacher education is evaluation. Once a student performs a teaching task does it mean that he can repeat that task forever? Some educators feel that all the ills of education can be easily resolved if teacher education just latches on to the system. However, it may be possible for a student to perform a basic task satisfactorily once and not perform the same task satisfactorily ten weeks later. It may be the student never really learned in the first place, however, one may argue the student performed each point satisfactorily. The question may then be, how long will teacher education be held accountable for its product? This may be from one hour to three years. Teacher education is apparently a life long process.

In evaluating competency in teaching, Turner has identified six criterion levels. He stated that criterion one, evaluation, may occur by observation of the teacher's behavior in the classroom and the pupils' behavior over time such as two or three years. Criterion two involves observation of pupil behavior in the classroom in a relatively short time (one-two weeks). Cri-

terion three addresses itself to the effects of training on the teacher's behavior under actual classroom conditions. Criterion four is concerned with the effects of teacher training on improvement in pedagogic skills under micro-teaching conditions. Criterion five is concerned with examining one skill (such as questioning) under micro-teaching situations. Criterion six is concerned with evaluation of teach knowledges and comprehension of principles and concepts. Turner, therefore, suggests that evaluation of teaching should occur from teacher learnings and abilities to facilitating pupil learning.⁸

Questions now rise as to who will do this evaluation and what type of instruments will be used? Where will agricultural education fit into the process of evaluation? For those agricultural educators who are moving toward a competency-based program, what evaluative schemes are being utilized? Mere feedback and observation at this point in time is extremely useful and encouraging. However, this type of evaluation will not likely stand the test of time and does not add meaningful feedback dimensions.

WHERE DO WE GO FROM HERE?

Last spring the Minnesota State Department of Education held a two day conference on Performance and/or Competency-based Teacher Education.⁹ At this conference some relevant guide questions were raised: "How do you acquire a list of competencies?" "What must institutions do?" "What must students do?"

How might agricultural educators acquire a list of competencies and what must institutions do? Probably the first step would be to take a long hard look at what we are doing. Ask the question, "what is currently being taught in our courses?" Utilize teacher and community resources to fully examine the list. Keep the list open-ended because it's doubtful anyone will arrive at a perfect list of competencies. (Hopefully at some point agricultural teacher educators will more scientifically and precisely develop a list of required competencies for both beginning teachers and master teachers.) This list of competencies should be continually questioned. After acquiring the list, behavioral or performance objectives must be generated so that each competency can be taught. When the objectives are set, the competencies must be packaged to allow for individualized learning and insure that every student experiences the same competency scheme or set of teaching tasks. The individualized packages will then allow each student a unique personalized experience. After this individualized and

personalized dimension, a field experience must be provided for all students.

Secondly, in answer to the question, what must students be prepared to do in a performance-based teacher education program, the following points must be considered. Students must ask why they want to teach. They may have to decide what type of agriculture teacher they would like to become. They will have options for being in rural or metropolitan areas, general vocational agriculture, horticulture, natural resources or adult farm business management types of teaching positions. Students will then need to complete a pretest to determine level and need. The program the student follows should provide an opportunity for recycling in the event the subject matter task is not clear or he fails to perform satisfactorily. Once the student has had an opportunity to perform the competency in a field experience, and over an extended period of time, he should be ready for certification.

AGRICULTURE TEACHER EDUCATION IN MINNESOTA

The agriculture teacher preparation program in Minnesota is undergoing some change. Though performance-based teacher education is not fully a reality at this point, it is alive and is faring quite well and has made some initial inroads into the experiences of students. The 27 new Minnesota graduates now on the job for the first time are products of the system. Currently, the performance-based teacher education program in Minnesota is limited to the methods of teaching area, with 29 competency areas and 72 objectives providing the framework for the experience. Reassessment of courses being offered in the areas of adult education, course planning, program planning, occupational experience programs, youth leadership activities, and the philosophy of agricultural education is currently a major undertaking in the Department of Agricultural Education.

SUMMARY

Performance-based teacher education is causing some real turnabouts in some teacher education programs. To some it appears as a fresh breeze and to others it can be somewhat threatening. Elam seemed to summarize the promise of performance-based teacher education by stating that due to the fact that it relies on: (1) focusing on explicit and advance planned objectives, (2) allowing students to share responsibility for learning, (3) giving attention to the individual abilities, needs and interests, (4) tying learning

closely to the learning resources, (5) teaching students in a way they are expected to teach, and (6) integrating the psychology of learning with practice, it has to be a system with merit.¹⁰

In agricultural education, where are we going? Will we join the movement or will we hold back and give the system merely passing thought or support? If we join, are we willing to research the competencies and face the tests of evaluation? The program has potential for being a superior scheme for preparing teachers of agriculture as effective managers of learning.

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AGRICULTURAL EDUCATION OCCUPIES "NEW" FACILITIES

On July 20 and 23 the Agricultural Education Department moved into offices in the new Classroom Office Building. The new quarters are very serviceable and a new excitement prevails in the Department. If you happen to be in our vicinity we would encourage you to visit us. We'd love to show you around.