

Appendix (Continued)

D. O. T. No.	Job Title
581040	Tractor Mechanic
591001	Foreman (Slaughter and Meat Packing)
608011	Corn Weigher, Elevator Man
608084	Pellet Mill Operator
609212	Hog Weigher and Grader
609292	Ham Boner
609315	Hide Inspector
609332	Stuffer, Sausages
609402	Lard Refiner
80911	Laborer (Slaughter and Meat Packing)
83041	Laborer (Lumber and Lumber Products)

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BASIC ELEMENTS OF EVALUATION OF VOCATIONAL EDUCATION
IN AGRICULTURE AT THE SECONDARY LEVEL*

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Research on evaluation, both applied and theoretical, has provided limited help to those who must assist with the evaluation of programs of vocational education in agriculture. From experience and the work that has been done, however, it has been possible to formulate a series of principles of evaluation to serve as guides as a most difficult task is undertaken. These principles provide the basis for the answers to the multitude of questions that must be answered about evaluation. The principles represent that which is basic to the evaluation process and each

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contributes a separate something to an understanding of what must be done to conduct an adequate evaluation of local programs of vocational education in agriculture. Most of the principles were developed during my own research on evaluation while others were formulated from the literature. Theoretically, these thirty-one principles should provide all the direction needed.

The Setting

Before discussing the principles, it is important that an understanding be developed as to what the principles apply. Principles are developed for specific areas of knowledge. It must be understood that the principles of evaluation to be discussed today relate to only one aspect of the total effort in vocational education in agriculture, the public school program at the junior and senior high school level.

The evaluation task ahead encompasses all aspects of vocational education from congressional study and legislation, public purposes of education, policy and program development at all levels, and program conduct to the final product of those programs. Evaluation is and must be integrated with every single part of this total structure. Nothing less than that will ever be satisfactory. The task at this time, as stated before, is to take a searching look at the evaluation aspects of the local program of vocational education in agriculture.

The Principles

Some of the principles to be presented relate to more than one part of the program as just presented; other principles are not as broad in scope. Furthermore, other principles would need to be formulated for other parts of the total program in agricultural education.

To help provide some perspective regarding evaluation, selected writings from H. M. Hamlin and H. M. Byram which relate to the principles are included. Hamlin prepared what is perhaps the most significant writing to date on evaluation of vocational education entitled Citizen Evaluation of Public Occupational Education.¹ Some of the quotes from other writers are taken from Hamlin's work. Byram's research on evaluation of vocation education, reported in Evaluating Vocational Education in the Public Schools² contains much of value.

While many other efforts are being made in the area of evaluation, these two offer the best hope for the kind of evaluation needed. Passages were also quoted from an address by James E. Allen, U.S. Commissioner of Education, on the topic "Competence for All as the Goal for Secondary Education"³ and from other selected writings.

Principle #1. Responsibility for evaluation rests with the school administration (including boards of education), the faculty, the students, and the public.

This principle stems from the broader concept that persons affected by decisions should share in making them.

Byram stated that "An assumption underlying the present study was that evaluation should be done by those responsible for the program and those affected by it, utilizing assistance of others where appropriate."²

Hamlin presented a mixed picture of responsibility for evaluation as shown in the following quotes:

"Although the forms by which the evaluation function is exercised have changed, citizens have always retained it."¹

"Governing boards are still responsible for evaluating the schools and colleges committed to them."¹

Dr. Arthur H. Rice, former editor of Nations Schools, has written recently that "the bigger responsibility of the school board today is to evaluate the program that has been brought to it by its professional staff or the program that it, as a board, has helped to plan, and then to evaluate the activities of the staff in achieving that program."⁴

The differences in opinion regarding responsibility for evaluation appears to stem from the particular program segment being considered rather than from a question of whom should be involved in evaluation in its entirety. Most writers do not deny that all those affected by a program should have some share in its evaluation.

Principle #2. Evaluation of teaching is the responsibility of the professional administrative staff.

Teachers rightly become concerned when the student and the lay citizen are given responsibility for evaluation of teaching. This is best left to the professional. Two quotations emphasize this point:

Hamlin states that "Citizen evaluations compel decisions regarding the respective roles of citizens and educators. The most commonly accepted division gives lay citizens the responsibility for enacting policy and seeing it is executed and professional educators the responsibility for advising about and executing policy. Under this arrangement, the program and the procedures of a school or college are the responsibility of its professional staff. They must, of course, be in line with official policy."¹

Hamilton and Reutte wrote that "the law does not contemplate that the members of a board of education shall supervise the professional work of teachers, principals, and superintendents. They are not teachers, and ordinarily, not qualified as such. Generally, they do not possess qualifications to pass upon methods of instruction and discipline. The law clearly contemplated that professionally trained teachers, principals, and superintendents shall have exclusive control of these matters."⁵

It seems clear that the non-professional should be involved in the evaluation of teaching only to the extent that the professional requests that he share in it under professional direction.

Principle #3. Evaluation is a continuing process.

No special supporting statements were found relating to this principle. It does seem to be so obvious as to make defense of it unnecessary. Both people and programs change, thus making regular evaluations necessary.

Principle #4. Local school educational policies and procedures should provide for the initiation and conduct of evaluations of vocational education.

Although school policy statements often include statements making evaluation officially in order, procedures for implementation of the policy are rarely found. Without some definite procedures, the policies on evaluation may be easily ignored.

Byram provided mild support for this principle when he wrote that "Many also are convinced that provisions for evaluation need to be built into future plans for vocational education in the public schools."²

Principle #5. Financial resources for conducting evaluations should be provided by the board of education.

Neither a busy staff nor the working citizen is apt to find time for the data collecting and tabulation so necessary in evaluation. Direct financial support from the board of education is a must for employing others to do this work under professional guidance.

Hamlin implied this board of education responsibility when he wrote that "One function of citizens is to provide the staff with the time and means to make these evaluations."¹

Principle #6. The most meaningful evaluation, in terms of resultant program changes, is evaluation by committees representing the lay citizens of the community in which the school is located.

The people closest to the schools are usually most desirous of change and are in the best position to assure that needed changes are made. When control of schools rests with distant authorities, change is more difficult to accomplish.

Several statements by Hamlin support this principal.

"In the United States, control of public education is vested in the citizenry. In exercising their control citizens must and do evaluate it. If there is conflict between lay citizens and professional educators, the evaluations of the lay citizens or their representatives prevail."¹

"Citizen evaluation, if well conducted, is perhaps the best means by which the thinking of key citizens can be modified and the expectations of citizens generally can be changed."¹

"There is a special advantage in using a separate organization for evaluating occupational education."¹

John W. Gardner, Secretary of Health, Education, and Welfare, said: "One thing we are going to have to do is restore a sense of

community and participation at the local level, which is the only level that will have immediate meaning for large numbers of Americans."⁶

Principle #7. The evaluation process should include reporting to the board of education and to the community on the findings, conclusions, and recommendations.

The results of too many evaluations are not implemented. Publicizing the findings is essential. In addition, as Hamlin wrote, "Citizen evaluations are ineffective unless the machinery is provided for getting the recommendations from them considered and adopted by the official boards and the professional staffs."¹

Principle #8. Local school evaluation efforts should be coordinated with evaluations of vocational education on an area or state basis.

Duplication of effort can be eliminated if evaluations on the local, area, and state levels are coordinated. However, failure to conduct evaluations at the area and state levels should not serve as an excuse for non-evaluation at the local level.

Principle #9. A complete evaluative effort should include evaluation of all public and private education programs of vocational education.

Several quotes from Hamlin help to clarify this principle.

"Thinking about evaluation is broadened and made more realistic when it is recognized that occupational education includes much more than the federally aided program of vocational and technical education."¹

"Perspective in evaluation is gained when one looks at the entire range of public educational institutions from the nursery school through the university, including those for adult education, and decides what each unit should contribute."¹

"Occupational education in the public schools and colleges cannot be evaluated accurately unless there is consideration of the much larger programs conducted privately and the programs of public agencies other than the schools and colleges."¹

"The outcomes of evaluation will not be as great when occupational education is evaluated separately as they would be if it were included in an evaluation of all public education."¹

Principle #10. The results of an incomplete evaluation, improperly used, may destroy the program they were intended to improve.

Agricultural educators should know better than anyone else how the failure to consider all pertinent factors in evaluation can destroy a program. As Hamlin wrote, "There must not be occasions for blaming professional employees for circumstances beyond their control."¹

Principle #11. Program evaluation by local advisory groups should result in the compilation and presentation of data which serve as the basis for value judgments.

Hamlin said, "One effect of citizen evaluations is to create a demand for data a staff can collect and may properly release for use in these evaluations."¹

Too many evaluations consist of reports of the opinions of inspection teams unsupported by data. Such evaluations contribute little to program improvement. People like "to see for themselves."

Principle #12. In depth evaluations for each vocational subject are needed.

Hamlin wrote, "An evaluating committee should, as a very minimum, view all occupational education within a school system."¹ In my opinion, evaluation may begin with the study of one student or former student. Certainly, evaluation should be conducted on identifiable educational units. This seems too obvious to require further elaboration.

Principle #13. Local communities will want and need assistance from consultants representing the subject area of the program being evaluated.

The responsibilities of the profession in evaluation are many, with one of the most important being that of serving in a consulting capacity to the citizen evaluator.

As Byram wrote, ". . . the need for consultant help in this matter should be apparent."² Byram defined the role of the consultant as follows: "Consultants should give ideas, raise questions, supply technical information, and advise, but should not render judgments regarding the effectiveness of programs unless asked to do so."²

Hamlin's concern for the use of consultants is demonstrated in the following statement: "If citizen evaluation is not to be discredited completely, responsibilities for evaluation must be delegated to carefully selected citizens who will give time to it and use the knowledge and wisdom of professional educators."¹

The use of the profession in a consultant capacity makes possible evaluation by representative citizen groups. Since there is little evidence that there exists sufficient education statesmanship to assure excellence in a "carefully selected" committee, a "random" selection procedure or "citizen selection committee" should be used to determine membership.

In a society seemingly bent on torturing itself with statistics, it is essential that educators demonstrate forcefully the value of subjective data.

Hamlin stated the case well in the following quotes:

"The subjective aspect of evaluation dominates the objective aspect."¹

"Everything that can be even crudely measured should be measured, but measurement is a part of the evaluation process, not the whole of it."¹

"Currently there is much emphasis in Washington upon the cost-benefit approach to evaluation. This approach has a special appeal to businessmen and industrialists accustomed to estimating possible profits before making their investments. It is, however, a concept not easily applied to public education and its application in occupational education, the phase of education to which it is apparently most applicable, could be disastrous."¹

Support for the use of subjective data can be found in the writings of other educators. Stake wrote that "Evaluators will seek out and record the opinions of persons of special qualifications. These opinions, though subjective, can be very useful and can be gathered objectively, independent of the solicitor's opinions."⁷

It can be seen in government what can happen when intuitive judgment is discarded and complete reliance for decision making is placed on numbers. People should never become the slaves of computers.

Principle # 15. Evaluation procedures and instruments should be so designed that their use is within the limits of what local evaluating groups might reasonably be expected to do.

If educators are truly concerned about communicating with the public, it would seem wise to devise evaluations the public can understand. There is no aspect of evaluation which must be so sophisticated that it is incomprehensible to the general public.

Principle #16. The follow-up of the former student one year following his leaving school provides a sound basis for evaluation.

This is, perhaps, one of the most controversial of the principles presented. Hamlin says "It cannot be judged solely in terms of first job placements; the findings twenty years later may be markedly different."¹

Twenty years later the findings should indeed be different! It is also true that those twenty years filled with new experiences have left their mark on an individual. To deny the impact of those later twenty years would be to deny the power of education and the ability of man to change. With all of the current influences on individual development, it would be well to stay with showing how well agricultural education has contributed to preparing youth for the next step in life.

Principle #17. Evaluations should be in terms of local community objectives for the program being evaluated.

Nothing contributes more to misunderstanding in education than the insistence by some on evaluating programs in terms of the objectives to which they ascribe rather than in terms of the objectives for which the program was conducted.

Commissioner James E. Allen made the following statement in a recent talk: "As Alfred North Whitehead said: 'The first requisite for educational reform is the school as a unit, with its approved curriculum based on its own needs.'³

Hamlin said that "Basic to the whole evaluation process is some measure of agreement by lay citizens, boards, and staffs regarding the values to which occupational education is to contribute."¹ Hamlin further said "There is real danger of conflict as the school districts, the states, and the national government apply differing criteria in the evaluation of occupational education."¹

In the final analysis, programs should always be evaluated on the basis of the degree to which they accomplished that which the programs were intended to accomplish. If the objectives were not sound, then the objectives should be changed; but program success cannot be denied because one disagrees with the objectives of the program.

Principle #18. Evaluation of programs should be based on minimum standards for various parts of the program established by the local school staff, assisted by citizen advisory groups.

Just as it true regarding the use of local objectives in evaluation, so, too, must local program standards be the basis for evaluation. To do otherwise would be, in effect, using local data to evaluate a program to which the data do not apply. What should be compared on a national basis are program objectives, not program accomplishments, if true educational reform is to be brought about.

Principle #19. Evaluations should relate program to the quality of the product of the program.

The sporadic efforts over theyears to evaluate program elements have fallen far short of what is needed. For the first time in history, legislation has directed vocational educators to show the relationship of product to program. Agricultural educators need have no fear of the outcome of such an evaluation.

Principle #20. Evaluation of vocational education must include an assessment of the policies under which the program is conducted.

Hamlin wrote that "There must be a search for the causes of the situations discovered, particularly for defects in public policy for occupational education for which citizens are responsible."¹

Policies are interpretations of public purposes. As such, policies are major determinants of program development and must be considered in any evaluation worthy of the name.

Principle #21. Program evaluation must include a consideration of the characteristics of the individuals who are the students in the program.

A program cannot help an individual develop beyond his potential, nor can it help the individual who refuses to be helped. Even though measures of human characteristics are crude, they must be used if fair and meaningful evaluations are to be obtained.

Principle #22. An important element of the evaluation of vocational education is the assessment of public attitudes towards an understanding of vocational education.

According to Hamlin, "An evaluation of public occupational education should give attention to the concepts of it held by the citizenry and to the means for providing the public with the information about modern occupational education that it sorely needs."1

Better measures than now exist must be devised to assess public attitudes toward vocational education in agriculture.

Principle #23. Evaluation of educational programs must provide for recognition of the many influences on individual development of both a formal and an informal education nature.

According to Byram, "The inference was substantiated that the total curricular program of the school should be considered when appraising the effectiveness of the school in preparation of youth for the world of work."2

Hamlin wrote that "Occupational education should be viewed as a continuum including the basic education essential for occupational competence, introduction to the world of work, vocational counseling, vocational education, technical education, and education for the professions."1

Allen stated that "It is the renewed awareness of the universality of the basic human and social need for competence that is generating not only increased emphasis today on career education but a whole new concept of its character and its place in the total educational enterprise."3

To fail to recognize the contributions of other education and influences to individual development would risk exposing the evaluation of vocational education in agriculture to public and professional ridicule.

Principle #24. Program evaluation should include the non-graduate, as well as the graduate, of that program.

According to Commissioner Allen, "This new concept rests on the belief that no one, whether he leaves school after 12 years, or

even earlier, or after twenty years, should leave without the basic education and skill necessary to qualify him for a place in the world of work. "3

Hopefully, agricultural educators will eventually develop an acceptance in society of the concept that an individual should stay on the formal education train only as long as it is of benefit to him; each person will get off the train at the station which is most appropriate for him. Evidence of the efficacy of this concept will be needed.

Principle #25. The major criterion for judging vocational program effectiveness is the adjustment of the individual, who is a product of that program, to the world of work and to continuing education.

As stated before, major emphasis in evaluation must be placed on how well youth are prepared for the next step in life. The following quote from a talk by Commissioner Allen supports this principle:

"The secondary school was once the end of the line in education for most Americans. Now, for more and more of our youth, it is only a milestone along the way. Whether they leave it to go on to other schools or to go directly into the world of work, we want our young people to take from their secondary schools real skills and a sense of direction--a sense of direction rooted in competence, the ability to function productively and satisfyingly. "3

Principle #26. Program effectiveness may be evaluated, in part, by the extent of use of learnings by former students for occupational purposes and for non-occupational purposes.

There is no better evidence of the relevancy and value of a program than data showing that the abilities developed are actually put to use. As stated by Commissioner Allen, "What we should seek to provide for those who need aid is not merely money, but the competence and the opportunity to earn money and support themselves. "3

Principle #27. Effectiveness of program conduct may be judged, in part, by the success of the adjustment of the individual product of the program to family and to society.

No support for this principle is needed beyond the words of Commissioner Allen who said, "A sense of oneself as a contributor to the vital processes of society is one of the best safeguards against

a feeling to a l i e n t a t i o n . I t i s t h e b a s i s o f t h e s e l f e s t e e m , t h e p r i d e t h a t e n g e n d e r s r e s p o n s i b i l i t y a n d m a k e s g o o d c i t i z e n s a s w e l l a s h a p p y p e o p l e . " 3

Principle #28. Effectiveness of program conduct may be judged, in part, by the extent to which program participants are accepting of it.

It must always be kept in mind that people choose programs, programs do not choose people.

Principle #29. Program evaluation should include an assessment of the use of available resources.

Programs sometimes remain stagnant because individuals refuse to use resources available to them. This should be recognized as a "personnel" failure rather than as a failure of the program.

Principle #30. Program effectiveness may be judged in part by the extent to which it is an economically feasible program in terms of results obtained.

Commissioner Allen spoke comforting words when he said that "Educating young people for employment costs in the long run far less than educating them for college programs most of them will never enter and then trying to reclaim them with remedial programs." 3 There is an implication in the foregoing statement that preparation for college and for the world of work are not compatible. With this agricultural educators must disagree; education should be aimed at helping the individual prepare for life and this includes both work and education. Only short-sighted educational policies prevent accomplishing this for most youth.

However, agricultural educators must recognize that the resources of this country are not without limits. To secure a high national priority will require evidence that a program is, indeed, a sound investment financially for the nation.

Principle #31. Program effectiveness may be judged in part by the extent to which the potential clientele of a program are actually participating in the program.

Agricultural educators have long claimed all agricultural workers as their clientele. Evaluations should validate this claim.

Conclusion

It is tempting to cast aside the principles enunciated to deal with the details of evaluation, a task with which it is much easier to deal. However, some basis in theory is needed, a theoretical construct, as a starting point for evaluation. Some of the principles should, perhaps, be labeled as assumptions or hypotheses to be tested. Some of the principles may not stand the test of time and use. Other principles may be formulated as agricultural educators learn from experience with evaluation and, of course, there is always room for differences of opinion.

However, the major test in evaluation will not be in a challenge of the principles stated or yet to be stated. Rather, the major test in evaluation will be with regard to a willingness to expose programs to this kind of searching analysis and with regard to a willingness to commit the time and resources needed to conduct a sound evaluation. Vocational educators have for too long been holding institutes to develop sophisticated models for evaluation. Agricultural educators know how to evaluate. Let's get on with the job.

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