

DOCUMENT RESUME

ED 079 430

TM 003 035

AUTHOR Norton, Daniel P.; Watley, Duivan J.
TITLE The Efficiency and Efficacy of Evaluation Practices of the Illinois Division of Vocational and Technical Education. Summary Report.

INSTITUTION Educational Testing Service, Evanston, Ill.
SPONS AGENCY Illinois State Advisory Council on Vocational Education, Springfield.

PUB DATE 21 Dec 72
NOTE 17p.

EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS *Evaluation Methods; Evaluation Techniques; Followup Studies; Performance Tests; *Program Evaluation; *Research Methodology; School Districts; *State Programs; *Systems Development; Technical Education; Technical Reports; Vocational Education

IDENTIFIERS Illinois

ABSTRACT

The Illinois Three Phase System should be temporarily retained as an administrative tool to be used in relationships between the Division of Vocational and Technical Education and local education agencies. But it is clear that such a system, with its scope directed toward local school districts, with its lack of outcome assessment, and with its lack of state priorities should not be judged a fully satisfactory vehicle for statewide evaluation. The greatest need for improvement and modification of the System is for improved, fully comprehensive follow-up procedures. Similarly, there is a great need for progress in the area of performance assessment for students who complete programs. A supplemental developmental program is needed, which should lead to progressive modification of the present System with the goal of ultimately replacing it.
(Author/CK)

ED 079430

TM 003 035

ED 079430

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

SUMMARY REPORT

THE EFFICIENCY AND EFFICACY OF EVALUATION
PRACTICES OF THE ILLINOIS DIVISION OF
VOCATIONAL AND TECHNICAL EDUCATION

Daniel P. Norton
Donivan J. Watley

Prepared for

STATE OF ILLINOIS
ADVISORY COUNCIL ON VOCATIONAL EDUCATION



EDUCATIONAL TESTING SERVICE
Evanston, Illinois

ED 079430

SUMMARY REPORT

THE EFFICIENCY AND EFFICACY OF EVALUATION
PRACTICES OF THE ILLINOIS DIVISION OF
VOCATIONAL AND TECHNICAL EDUCATION

Daniel P. Norton
Donivan J. Watley

Prepared for
STATE OF ILLINOIS
ADVISORY COUNCIL ON VOCATIONAL EDUCATION

EDUCATIONAL TESTING SERVICE

Evanston, Illinois

December 21, 1972

OVERVIEW OF STUDY OUTCOMES

The primary concern of this study was to determine the efficiency and efficacy of evaluation practices of the Illinois Division of Vocational and Technical Education (DVTE).^{*} Its primary focus has been on the performance of the *Three Phase System for Statewide Evaluation of Occupational Programs* administered by the Program Approval and Evaluation Unit of the Division.

Study of the System was conducted by use of several methodologies: (1) study of the many documents prepared by the DVTE, (2) interviews of Division personnel, (3) sampling of agencies for study, (4) collection of data from record systems of the Division, (5) submission of questionnaires to planners and team members, and (6) independent study of trends in statewide evaluation.

The Three Phase System has been operated from an underlying assumption that if certain conditions judged to be important for an effective program are present, the output from the program will be satisfactory. The presence of qualified teachers, up-to-date equipment, a good curriculum, et cetera would, it has been assumed, produce graduates who have marketable entry level skills and who will make desirable employees, while schools lacking in these attributes will produce less competent and less desirable employees. Actually, without extensive follow-up of students there is no way of knowing whether there is any important relationship between the process variables and the real life criterion of on-the-job effectiveness. Therefore, it is important to know what happens to students (preferably all of them) after they leave school as dropouts or with diplomas. Follow-up should provide information for at least three and preferably five years from course completion.

This report and the full report that preceded it have been prepared with the intention of avoiding excessively negative criticism based upon theoretical considerations for which there are now no expedient means of implementation. For example, proven competency-based assessment devices for statewide evaluation of student performance do not now exist. Nor has any state

^{*}This document summarizes findings and recommendations from a much larger report prepared by Educational Testing Service titled, *A Study of the Efficiency and Efficacy of Evaluation Practices of the Illinois Division of Vocational and Technical Education - Final Report*. The names of persons who worked on the study and recognition for the commendable cooperation granted by staff members of the DVTE are noted in the full report.

or local education agency (LEA) successfully developed and installed a fully comprehensive system! Therefore, while it is necessary to keep firmly in mind that the Three Phase System is critically deficient when compared against ideal standards and to avoid encouraging its users or those who learn about it to conclude it can be retained or adopted without need for constant revision and adjustment, the system must not be excessively criticized and condemned.

This investigation revealed strong support for continued use of the Three Phase System. Both educators and non-educators judged the System to be valuable and worth the effort that it requires. An important aspect of the System is that it is designed to produce and deliver large quantities of information that are useful and necessary for its own modification; it can for this reason be rated highly self-reactant and capable of modification. It has produced changes in local plans from one year to the next, and possesses a functional feedback loop that involves the Program Approval and Evaluation Unit, other units of the DVTE, and local education agencies. Therefore, a major strength of the System is that information is periodically obtained that can help evolution toward a more effective form of evaluation.

But the System produces discrepant information. In the composite ratings that are prepared from site visitations, agency personnel receive consistently high ratings at the same time that Resources Utilized, which must be linked to personnel performance, is negatively related to the financial needs of agencies; this suggests that personnel deficiencies may go unrecognized by visitation teams. A consistent negative relationship between financial needs and ratings suggests that, if composite ratings reflect "local potential achievement," proportionately higher support should perhaps be given to poorer agencies than is now being allocated. Of course, since no information exists to establish that local potential is realistically considered when ratings are made, this conclusion cannot be strongly made. Indeed, because of lack of information about how these adjustments are made by visitation teams, composite ratings have little established validity.

Planning activities of agencies have numerous deficiencies. Some deficiencies may arise in part because documents prepared by the Division to guide planners lack the kinds of specificity and elaboration that would make planning

easier. However, other types of planning assistance are also needed. Half or more of the respondents to a questionnaire distributed in this study agreed or strongly agreed that their planning activities would have been more successful had they been given additional external help to:

1. Conduct student follow-up studies.
2. Conduct needs surveys in their communities.
3. Conduct employer need surveys.
4. Prepare behavioral objectives.
5. Conduct effective evaluations.
6. Identify job entry skills of students.
7. Set priorities for program development.

The Division currently provides some assistance in each of these areas and cannot be faulted for not being fully helpful in all, but it is obvious that a very great amount of assistance is needed by local agencies if they are to become more effective in their own evaluation efforts. In particular, they will need assistance in performance assessment if comprehensive state-wide evaluation is to be highly effective. Local agencies may need much more assistance in these areas than has commonly been thought.

The Three Phase System, as developed and implemented in Illinois, does not emphasize assessment of the output of programs. Instead, under the tacit assumption that if conditions are present outcomes will result, the System concerns itself with the contents of plans submitted by agencies and what can be learned from site visitations keyed to traditional process concerns. These types of information cannot, however popular the System may be at this time, firmly establish the value of programs to their graduates.

Development of a fully comprehensive evaluation system has not been achieved in Illinois. Cooperation between the different agencies is still needed and coordination is required. This coordination should, it must be noted, extend beyond the boundaries of individual states and incorporate concern for what states can do together. Therefore, just as the Illinois System has already benefited from information developed elsewhere and is currently inviting future multi-state efforts, the existing major need for comprehensive system development can best be met by formally cooperative development with other groups.

INFORMATION NEEDS OF THE DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION

The DVTE is organized under the Board of Vocational Education and Rehabilitation through which it is related to the Governor's Advisory Council. It has a director and two assistant directors having responsibility for the performance of eight operational units. An Administrative Planning Council made up of the eight Unit Coordinators relates to the Office of the Director. The Superintendent of Public Instruction is designated by statute to be the Executive Officer for work of the Division.

To understand the relationship between Division needs for information and how the Three Phase System works, it is necessary to consider the goals which were set for the Evaluation System:

1. To promote and assist with the development of quality occupational education programs at the local level.
2. To provide the Division of Vocational and Technical Education with data upon which better statewide planning of occupational education programs can be based.
3. To help assure accountability of Federal and State funds allocated to local occupational education programs.

These goals suggest how evaluation activities within the Division and in the field are intended to fit together to produce a coordinated planning and evaluation sequence. The functional parts of the Three Phase System are described by the Division as follows:

- Phase I: Utilization of self-evaluation data in program planning by the local district culminating in the development of a One and Five-year Plan.
- Phase II: Program approval by staff of the Illinois Division of Vocational and Technical Education.
- Phase III: External evaluation by a visiting team to develop a profile of the local program with conclusions and recommendations to the local district.

During Phase I, people in local educational agencies receive descriptions of the System and guidelines for the submission of planning documents. During Phase II, LEA plans are reviewed for approval. The local plan, after approval by the district and its local governing board,

is transmitted through the regional Superintendent of Educational Service or the Illinois Junior College Board to the Program Approval and Evaluation Unit of the Division. This Unit, with assistance from other persons, evaluates the Local Plan and recommends that it be given one of three approval levels: Fully Approved (A), Conditionally Approved (CA), and Not Approved (NA).

Site visitation is the critical core of the Three Phase System. After the selection criteria that are used at a given time have been applied, an agency to be visited is notified. This notification sets in motion a series of activities that end in the mailing of an evaluation report to the agency that was visited.

Phases I and II are annual processes while Phase III occurs every two to five years or as warranted. The outcome for Phase I is a document which serves as a contractual agreement between the Division and the Local Education Agency. In Phase II, the outcome is approval status given to each occupational course as well as overall approval of the local plan by the state director. The outcome for Phase III is an evaluation report with a projected profile of the local district's total occupational education program. Additional operational details for implementing the Three Phase System consist of pre-visitation preparation including composition of the visitation team, preparation of the evaluation report, and format for a local plan.

The Illinois Division of Vocational and Technical Education is, by its control and function, an agency that most often responds to goals and objectives set elsewhere rather than establishing its own goals. The Division must, if it is to receive Federal funds for disbursement, respond to Federal laws with its specified plans and review the plans submitted by local educational agencies. The Division must also respond to State of Illinois requirements for the funds its legislature provides, to the advice of formally organized advisory councils, and to innumerable other concerns for guidelines from educational agencies, groups, and individuals.

The Division also responds to a large number of internally initiated objectives appearing in various documents including: *A Systems Approach for Management of Vocational Education*¹ and the *Fiscal Year State Plans for the*

¹Revised September 1, 1971 (Working Draft for discussion purposes only).

*Administration of Vocational and Technical Education in Illinois.*² These objectives, when taken in combination with those that arise outside the Division, produce a pool of many hundreds of objectives which can be considered as one tries to learn what the Division is attempting to accomplish.

The Division produces many thousands of copies of other forms and reports among which are requests for proposals to do funded work; procedural guidelines for the submission of requests for funds and for reimbursement of programs; and program and project descriptions. Some reports are of general information value; others are for use by very limited audiences.

For the sake of clarity, a way of combining objectives was adopted by Educational Testing Service staff members that called for summary information needs statements to be prepared from statements of goals, objectives, and so forth, present in the very numerous documents. Furthermore, information needs statements were sought that would describe vocational education outcomes external to the Division (that is, within and about local education agencies) and those which might be needed to describe internal Division functioning.

Educational Testing Service staff members, after reviewing the materials available to them, prepared a summary set of 13 objectively stated information needs requirements against which the performance of the Three Phase System could be compared. (See Column 1 in Table 1 which follows.) Table 1 briefly summarizes relationships that exist between Three Phase System operations and the external and internal information requirements of the DVTE. In the two right hand columns of Table 1, brief statements about the extent to which answers are provided can be read and, for each, a statement of new procedural requirements that may be needed to improve the System have been made.

Study of the contents of Table 1 will reveal that the Three Phase System is designed to meet almost all information needs of the DVTE. Also, the System provides a large amount of information for the Division. Recommendations on the following pages suggest how the System, which is a model of its type, might be further improved.

²Prepared annually by the State of Illinois, Board of Vocational Education and Rehabilitation, Vocational and Technical Education Division.

TABLE 1

RELATIONSHIPS BETWEEN THREE PHASE SYSTEM OPERATIONS AND EXTERNAL AND INTERNAL INFORMATION REQUIREMENTS OF DVTE.

<u>Information Needs</u>	<u>Is the System Designed to Answer?</u>	<u>To What Extent Is an Answer Provided?</u>	<u>What New Procedures Are Needed in the System?</u>
<u>EXTERNAL</u>			
1. What measurable competencies do students possess when they complete programs?	No	No information is acquired.	A development program should be initiated to acquire capability for competency-based evaluation.
2. Are the numbers of agencies, programs, and support experiences available to students increasing?	Yes	Taped records of numbers of agencies and programs are prepared.	Attention should be directed toward improving the assessment of program provisions for job placement and followup support services.
3. Are the numbers and qualifications of available teachers increasing?	Yes	No information is collected about numbers of teachers but qualifications are considered in the visitation phase. Lack of variability and generally high ratings for personnel suggest a rating system for teachers may lack effectiveness.	The qualifications to be sought of teachers should be studied with special concern given to the importance of relevant job experience.
4. Are educational agencies acquiring adequate information by which to plan improved instructional offerings?	Yes	Information about needs is not provided by the System although introduction of a followup service can help. Priority assignments are of questionable value to planners.	The System must be augmented if needs are to be identified and offerings thus improved.
5. Are guidance personnel and services being improved?	Yes	The System has documented that deficiencies exist in this area; it can report improvements.	The System is providing good information about this deficiency.
6. Are program enrollments increasing and student retention being improved?	Yes	Program enrollments are reported by the System but retention data is not collected.	The System provides satisfactory information except that individual students' development is not monitored. A special subsystem would be required to get unduplicated student counts and program retention information.
7. Are students being assisted with placement in employment and followed up when they leave immediate control of their educational setting?	Yes	The System documents that placement services are often not provided; immediate followup is not provided for.	New procedures are needed to monitor job placement.

TABLE 1 (continued)
 RELATIONSHIPS BETWEEN THREE PHASE SYSTEM OPERATIONS AND EXTERNAL
 AND INTERNAL INFORMATION REQUIREMENTS OF DVTE.

<i>Information Needs</i>	<i>Is the System Designed to Answer?</i>	<i>To What Extent Is an Answer Provided?</i>	<i>What New Procedures Are Needed in the System?</i>
<u>INTERNAL</u>			
1. What priorities should be set for program development and the provision of services?	Yes	Needs for services are identified, as for example, assistance in conducting followups or acquiring behavioral objectives but the System includes no specific provisions for the assignment of priorities.	Formal procedures for the entry of System information into Division decision-making are needed.
2. Are funds being correctly spent?	Yes	The System includes cooperative provisions for establishing fiscal accountability. The System is not current in its operations.	Fiscal audit operations should be pressed until they cover the last completed fiscal year's reimbursements.
3. Is the evaluation System reactant; that is, does it possess features for self-correction?	Yes	The System is unusually reactant; this is its greatest strength.	No important changes in the reactance of the System are needed.
4. Are agencies receiving consultation and support as required?	Yes	Formal provisions exist whereby consultation and other assistance is provided. The consultation that is given seems to be effective although some agencies desire greater services.	The System seems adequate but this aspect of Division operations requires constant review as personnel and priorities change.
5. Are business, industry and labor being effectively involved in program development?	Yes	The System delivers information about the effectiveness of community involvement.	Collection of evidence of community involvement must continue to be a major concern of the System.
6. Do supplies of vocational education graduates meet changing manpower needs in Illinois?	Yes	The System provides no useful information about supply-and-demand relationships.	The System must be heavily augmented if supply-and-demand relationships are to be understood.



LONG RANGE RECOMMENDATIONS

The Three Phase System has as its major deficiency lack of information about job entry performances of students who complete occupational programs. This weakness exists at the center of a cluster of closely related information deficiencies all of which urgently require attention if statewide evaluation is to be made comprehensive. What jobs are available? What placement successes have students had? What skills are needed to perform well on jobs? How satisfied are students and employers with the preparation provided in occupational programs? All of these questions have concern for the outputs of programs. Lack of success at assessing outcomes is the primary deficiency of the Three Phase System. Ultimately, evidence of program effectiveness must be sought and reasons for program planning and modification must be assembled. This will require long range development in the three areas that follow:

1. *A four-year plan for performance assessment should be initiated.*

The primary deficiency of the Three Phase System is that it has lacked really productive concern for job entry skill assessment and for questions which relate to it. A very good reason for not having an operational performance assessment program is that its development costs would have far exceeded those for the Three Phase System. However, at the same time that some task analysis projects have been initiated in Illinois, many other performance assessment projects have been started about the country. Project Career in Massachusetts is illustrative. Illinois should actively involve itself in these types of development.

The selection of a four year cycle for performance development assessment by the DVTE is arbitrary but meant to make known the minimum amount of time that may be required to develop such an approach.

The evolutionary development of a new output-focused evaluation system for the Division might, it must be noted, follow along lines where site visitations become more and more keyed to output assessment. For example, two years from now visitation teams might become involved in the field trial of performance assessment studies. This type of

development would require collaboration with external agencies. It is for this reason that establishment of a Technical Advisory Committee is recommended as part of the short range actions in the next section. No single state can afford the expense of developing this type of system. Indeed, even a consortium of states and agencies will have difficulty doing so. Therefore, it is critically important that the Division seek to avail itself of all information and opportunities open to it. Collaborative development with other agencies seems to be the only approach that can keep costs within the limits that exist in Illinois.

2. *A continuous effort should be made to improve supply-and-demand studies.*

The Three Phase System has been designed with the assumption that local education agencies should undertake much of the work necessary to determine what opportunities will exist for its students and to achieve a fit between the opportunities that exist and the educational programs designed for them. It is true that local agencies are expected to use information given them by the employment services and other groups. But the information those groups have provided to date is not good enough to permit the local agency to closely tie its curriculum to opportunities.

This problem is also one that is too great for local agencies and, perhaps, even for states to meet. It can easily be seen that patterns of industrial plant development, changes in consumer demand, and national and international economic development forces are far beyond the capabilities of restricted areas to understand or sense. These influences produce demands for regional, state, and national study. They also require high levels of cooperation among agencies and competent long range planning. Clearly, the potential effectiveness of the Three Phase System has been severely restricted by lack of this type of information.

3. *Formal, continuing efforts should be made to improve comprehensive evaluation and development.*

Comprehensive planning for statewide evaluation of programs may be initiated through the use of a half-dozen guidelines. The guidelines will seem idealized and impossible of attainment in the short range.

Indeed, they may be so general as to discourage some groups from attempting to approach them. However, their intended purpose is not to set standards for immediate attainment but rather to help planners to establish long range goals. Six guidelines follow:

Guideline I: Responsibility for establishing statewide goals is shared by many groups within the state. Any differences in either philosophical or programmatic goals should be resolved as part of initiation of a system of statewide evaluation.

Guideline II: If evaluation is to be a continuous process, it must be built into the fabric of the state administrative structure. This means that an appropriate staff organization with funds necessary to function must be provided.

Guideline III: Since evaluation should be a continuing process, not a one-shot endeavor, budget provisions should be made on a continuing basis.

Guideline IV: A comprehensive plan for statewide evaluation should show (a) major and minor objectives; (b) concern for needs of all the institutions, agencies and offices involved; (c) proposed evaluation processes and procedures, complete with a detailed accounting of the purposes for evaluation components; (d) the way each evaluation component will work; and (e) how evaluation data will be used.

Guideline V: If we accept the idea that good evaluation is a dynamic continuing process, it is imperative that feedback mechanisms for improving both the evaluation system and the statewide vocational technical education system it purports to analyze are built into the system.

Guideline VI: The worst thing that can happen to a carefully developed evaluation report is to have its recommendations ignored or lost in bureaucratic processes. Whenever an evaluation system is designed, it is very important that the results of the evaluation will be transformed into specific plans of action by specific offices of the State and by Local Education Agencies. Therefore, the Three Phase System must have input into the total planning system for Vocational-Technical Education in Illinois.

SHORT RANGE RECOMMENDATIONS:

Both long and short range recommendations are made to be implemented as promptly as possible. The difference is that short range recommendations may be met within a year while long range recommendations cannot possibly be attained in that time. Seven short range recommendations follow.

1. *Establish a technical advisory panel to advise on the evolution of a more output-centered system.*

The committee might have a half-dozen members with most from out of state and involved in state level evaluation. The charge of the committee would be to recommend changes in the current system through research and development.

2. *Fiscal audits should be rapidly pursued so that agencies will no longer experience as many discrepancies as have appeared in the past.*

Fiscal audits have not caught up with current operations. Also, the type of audit that is undertaken is not sufficient to establish a sound financial basis for the pooling of resources and allocation of money toward needy areas. It has served to make agencies aware of their responsibilities for financial accountability and has revealed that procedures in use before adoption of the Three Phase System were inadequate.

3. *Profile analyses should be conducted for each new round of evaluation reports.*

Composite ratings for personnel lack variability although no evidence arose from analyses of profile data to suggest systematic biases were induced by team leaders. Strengths and weaknesses of the composite rating system are partially assessable by the types of analyses that were undertaken for this study. These analyses should be repeated and improved over time; the Division has shown it is capable of doing this.

4. *The follow-up of students who have been enrolled in programs should receive greatly expanded emphasis.*

Follow-up instrumentation should ask students to evaluate their educational experience. They should be asked to identify skills they

found most valuable to them and to tell which they did and did not get from their schooling. Their supervisors should be asked for evaluations of the performance of former students, especially regarding areas in which their training was inadequate. Employers should also be asked to describe the work habits and attitudes of the former student as they would compare with those desired in responsible workers. Collection of this information should, if at all possible, be made an integral, mandatory feature of evaluation with summary information provided to the Advisory Council, the state agencies, and individual schools.

5. *Improvements in the software of the system should be sought. In particular, the instructional sections of the Criteria and Guidelines documents should be considered for simplified revision.*

The versions of these documents that were in use during Fiscal Year 1972 were brief and could not be easily understood or used. Descriptions of the allocation of funds are, for example, hard to understand. Improvement of these documents will probably require close working relationships with local agencies.

6. *A strenuous effort should be made to overcome the unduplicated-duplicated count problem of student accounting.*

It should be possible to adopt, modify or develop a procedure whereby educational agencies would be able to complete but one set of records, as for example course registration cards from which both state and federal reporting requirements could be met. If necessary, alterations should be sought in state and federal reporting requirements.

7. *More formal procedures should be sought for decision-making within the DVTE so that evaluative information can be better used.*

Management procedures of the Division have not formally provided for inclusion of Program Approval and Evaluation Unit information in the decision-making activities of the Division. For an evaluation system to be comprehensive and effective, it is necessary that it be formally designed to respond to the information needs of the Division. A fully comprehensive system cannot be developed without this type of involvement at the Division level nor can existing strengths of the present system be most effectively used without it.

SUMMARY

The Illinois Three Phase System should be temporarily retained as an administrative tool to be used in relationships between the Division of Vocational and Technical Education and local education agencies. But it is clear that such a system, with its scope directed toward local school districts, with its lack of outcome assessment, and with its lack of state priorities should not be judged a fully satisfactory vehicle for statewide evaluation. It is not necessary to do additional research to recognize that the greatest need for improvement and modification of the System is for improved, fully comprehensive follow-up procedures. Similarly, there is a great need for progress in the area of performance assessment for students who complete programs.

Because the Three Phase System as it has been developed and implemented is in many respects a model of how to get the greatest good from visitation procedures, and because the individuals responsible for its use have actively sought and built into its design procedures by which it can be changed, one cannot recommend that current uses of the System be suddenly and totally changed. A supplemental development program is needed. The development program should lead to progressive modification of the present System with the goal of ultimately replacing it (perhaps within four years) with a more comprehensive output-focused system. Improved performance assessment and follow-up should be the cornerstones of a modified system.