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ABSTRACT

Described here is a rating scale to provide feedback about the success of training and of program implementation when a new program is being adopted. It allows project personnel to determine whether trainees possess the knowledge and skills necessary to implement a new program for which they are being trained. It also informs project personnel of the extent to which a program has been implemented. The elements of the rating scale include columns containing descriptions of the activities and attributes associated with the educational program, criterion levels for each attribute, data sources and monitoring or documenting activities for measurement of each attribute, reports of the level of implementation, and an indication of whether the criterion level has been met. The level of implementation is stated in terms of precise levels of compliance. Information concerning the implementation of program attributes is collected by internal and external program evaluators using multiple techniques. Programs adapted for use in new situations can be evaluated using the same attributes and criteria used for the original program. (Author/JM)

A Method For Enhancing Training and Monitoring of Program Adaptions and Adoptions in New Situations

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The dissemination and implementation of innovative educational programs are of vital interest in education. Organizations such as the National Diffusion Network (NDN) function to disseminate validated programs to interested and new LEAs nationwide. The assumption underlying the validation of projects is that such projects can be transported and can be implemented in much the same way as that in which they were originally validated. Experience has demonstrated, however, that LEAs often encounter substantial difficulty when they attempt to implement the innovative, validated project. It is apparent that the successful implementation of an innovative program in a new situation is dependent on the training local personnel receive and the provision of formative evaluation.

Implementation may be viewed as an attempt to put into practice an idea, program, or set of activities which is new to the individual or organization using it. Various investigators have studied the educational change and implementation process. Their conclusion is that successful implementation depends, in part, on circumstances specific to the local situation and the strategies used to insure installation in the new situation. Fullan and Pomfret (1977) identify several mechanisms important for implementation: (1) training; (2) resource support; (3) feedback mechanisms; and (4) participation in decision-making.

Most educational programs which have been transported and implemented in adapting or adopting communities have not been evaluated for the level

of implementation of their innovation. Evaluating the extent of implementation of a program permits program developers to define critical attributes of the program. Once these critical attributes have been defined, the criteria for judging an adaption of adoption can be established. Most programs have not specified these criteria and consequently, the newly implemented adapting or adopting programs do not know the extent of implementation that is required for an adaption as compared to an adoption. Very often, adaptions and adoptions are indistinguishable from one another. In addition, the new adapting or adopting sites do not know the relevance of the attributes being implemented. One reason for this lack of implementation information collected by programs for their "new" adapting or adopting programs is the concern about the imposition placed upon these new programs once implementation data collection is required. The "original" programs may fear losing potential adaptions or adoptions once verification procedures are imposed upon "new" LEAs.

It is necessary that staff in "new" communities be subjected to methods of verification that may be used to insure whether they have acquired the skills and knowledge necessary to implement the program. Therefore, service and inservice training of the key personnel in a program is essential for its successful implementation. Although some kind of training for the program participants is usually prescribed and practiced, very often a competency or achievement test is used as evidence of successful completion of the training. We know from experience that there is a problem in translating what is learned in the classroom to a real-life situation. In some cases, program developers have not prepared for the unexpected and unanticipated vagaries of the local situation. Also, when a program is initially implemented, the provision of appropriate time and material resources may prove inadequate.

An appropriate evaluative and feedback mechanism which stimulates interaction and problem identification among the program developers and implementers is essential for successful implementation. There is a need to collect information which may identify difficulties encountered during implementation. Once problems are identified, attempts can then be made to alleviate them. The program developers and program implementers should participate in the process of finding solutions to the identified implementation problems. In this way, viable solutions to the problems of implementation may be found which fit the local situation.

The present authors became particularly aware of the problems associated with implementing programs and practices as a result of their own involvement in several such efforts. They concluded, independently, that the problems occurred at two stages, the training stage and the implementation stage. Further, they concluded that full implementation was dependent upon the interest and the requisite competencies required to implement fully. Variations among "adoptions" can usually be attributed to these two factors, intent and technical competency. The procedure discussed in this paper for enhancing training and monitoring of program adaptions and adoptions relates to the technical competencies required for the proper installation of a product or practice that has been transported.

From the technical standpoint, proper training for and implementation of a program depends upon knowing what are the critical attributes of the program being implemented. The implementer should also know the criterion level that constitutes implementation. Too often, programs are described in general terms and training is based upon these general descriptions. Seldom does the person being trained know exactly which program attributes are "absolutely essential" and which ones are "desirable." Even when

programs are implemented by well trained individuals, program changes often occur because of turnover in personnel. A system that ensures quality control and maintenance usually does not exist. The method described in this paper is one that should be useful in ongoing training and monitoring activities to ensure the maintenance of proper program implementation.

Any effective training and monitoring system must provide feedback to trainees and project personnel. In the case of training, the feedback should allow the trainee and the project personnel to accurately determine when he/she possesses the knowledge and skills necessary to implement a given program. Likewise, in the case of implementation, the feedback should inform the implementer of the extent to which a program has been implemented. Obviously, this requires more than indicating to the implementer whether or not a particular facet of the program has been implemented. Rather, the feedback should inform the implementer of the extent to which a criterion level, indicative of proper implementation, has been reached. The need for implementation feedback never ends. Not only should implementation data be collected and feedback provided, the implementation data should also be related to achievement outcomes. This is the only way it is possible to establish over time in a given situation which program attributes are responsible for program effects.

Before work was begun on the training and monitoring method described in the following paragraphs, a search of existing tools was conducted. The search revealed that various strategies exist for assessing the degree of implementation of innovative curriculum programs (Alkin, 1969; Hall & Loucks, 1977; Leinhardt, 1976; Leithwood & Montgomery, 1980; Stallings, 1975). Most of them, however, possess serious shortcomings for determining

the implementation of programs which are not classroom-oriented (Revicki, Rubin, & Stuck, 1981). Therefore, work was begun on the training and monitoring method discussed next in this paper.

The Proposed Method

The proposed method involves the development and use of a rating scale. The elements of the rating scale include columns which contain descriptions of the activities and attributes associated with the educational program, criterion level for each attribute, data sources and monitoring/documenting activities for measurement of each attribute, reports of the level of implementation, and an indication of whether the criterion level has been met. For each attribute, a criterion level is specified and the monitoring activity associated with the attribute is indicated. There is also a specification of the level of implementation of each program feature. This is not stated in terms of compliance versus noncompliance but rather, in precise levels of compliance. Finally, an indication of whether the criterion level was achieved is recorded on this rating scale (Rubin, Stuck, & Revicki, 1982).

The first step in developing the rating scale is to identify the major attributes of the particular education program (Morris & Fitz-Gibbons, 1978). The set of attributes will vary across different programs. The range of activities which constitute these programs should be specified by the model developer. Only those persons from the model developer's shop who are intimately familiar with the operation should participate in selecting the essential elements or attributes of the program. If the program is going to be transported, a minimum set of these attributes for implementation should be specified at the outset by the model developer. This minimum set of core components of the program will help to facilitate the training and implementation processes.

After the major program attributes and characteristics have been agreed upon, the specification of implementation levels is required for each attribute. For each attribute, a criterion level should be specified and the associated data collected and reported as precisely as possible. The results should indicate the extent to which an objective was or was not achieved. The information about the level of achievement should be reported as a continuous variable, whenever possible (Rubin, Stuck, & Revicki, in press). In this paper, several examples of attributes from two very different types of programs will be described. The first program involves a learning for mastery strategy which was developed by Bloom (1968) and was based upon the work of Carroll (1963). The second program, the Parent Education Follow Through Program (PEFTP), is a field-based parent education program within the national Follow Through Project.

Two examples of attributes from the Learning for Mastery approach are shown in Table 1. As noted in this table, the following columns are included in the rating scale: descriptions of the activities and attributes associated with the innovation; criterion levels for each attribute; data sources and monitoring/documenting activities for measurement of each attribute; reports of the level of implementation; and an indication of whether the criterion level has been met.

Attribute number 1 addresses the identification of items on a progress test that were answered incorrectly by nonmasters. If at least 5, or 50%, of the nonmasters missed a particular item, then group correctives should be used. The criterion level for analyzing the items correctly in order to assign group or individual correctives is 90%. As seen in the example in Table 1, under the column labelled monitoring/documentation activity and data source, the external evaluator's results should be compared to

the teacher's results. In this example, 95% of the formative test items were analyzed correctly and the criterion level was met. Similarly, the criterion level for attribute number 2 was met (see Table 1). In this case, the appropriate kind of corrective (e.g., group or individual) should be administered for 80% of the items analyzed. The monitoring activity needed to document this attribute involves the observation of instruction to determine the correspondence between the appropriate type of corrective previously assigned and the corrective actually administered.

In contrast to the Learning for Mastery approach in which implementation takes place in a school environment, the Parent Education Follow Through Program (PEFTP) is a field-based educational program which is primarily implemented in the home and the school. The rating scale referred to in this paper can be easily used as a training and implementation device in both of these types of programs.

Presented in Table 2 are two examples of activities associated with the PEFTP. Attribute number 1 is related to home visitation frequencies by the paraprofessionals employed in this program. The criterion level associated with this attribute is specified as having 50% of the paraprofessional's employment time spent in making home visits and having at least 3/4 of the scheduled home visits completd for at least 80% of the program children. The monitoring/documenting activity associated with this attribute involves checking the reported percentage of time spent in home visits which is included on a paraprofessional's weekly report. The monitoring/documenting activity also involves observing a random sample of paraprofessionals in a subsample of their visits for a week. It should be noted that the other attribute stated in this table follows the same pattern. For example, attribute number 2, attendance at Policy Advisory Committee meetings, has a criterion level set at 35% attendance

and has two types of monitoring activities (e.g., record review and observation) (see Table 1).

These examples serve to emphasize the point that the attributes of programs are as diverse as having a very structured classroom situation to a less structured home environment situation. The proposed method can be used with all types of programs.

Advantages of the Proposed Method

Preservice and inservice training is required for the effective implementation of any innovative educational program. The goals and objectives of the training program must be consistent with the attributes and criterion levels specified in the rating scale. These, of course, are derived from the program being implemented. If this is the case, the rating scale may be used as a measure of the effectiveness of the training in bringing about observable changes in the behaviors of the program participants consistent with the design of the innovative program. Discrepancies between the expected and observed behaviors are indicative of less than successful transferral of program objectives into practice in the local situation. Further in-service training may be required to alleviate the observed lack of program implementation.

The rating scale may also be used to monitor and provide feedback regarding the level of implementation in the local situation. It may also provide valuable information related to the operation of the various program features. Implementation evaluation data could be collected periodically to keep program administrators informed and to identify problems in the implementation process. Systematic feedback could be provided to the program personnel concerning their behavior and its approximation to the implementation objectives of the program. Problems that are identified may be solved jointly through the cooperation of

program developers and personnel in the field. This ensures the participation of all relevant stakeholders and improves the likelihood of program survival.

Educational Implications

Programs implemented in new situations should be evaluated using the same attributes and criteria that are used for the "original" program from which it is adapting or adopting. This evaluation would help to insure the fidelity of the program in "new" locations. In addition, program developers can gain further understanding of the operation of certain attributes of their program. Clearly, the end result would be a more successful program adapted to the LEA's needs. Research could be conducted which would link the program attributes to desired outcomes which would contribute to the identification of the program features most related to the outcomes. Once these program features have been defined, program developers may then modify their program resulting in a more cost effective and improved educational program which is responsive to the needs of the constituents that it serves.

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Table 1

Sample Training and Implementation Rating Scale

Learning for Mastery Approach

Activity or Attribute Associated with the Program	Criterion Level	Monitoring/Documenting Activity and Data Source	Level of Implementation	Criterion Level Met or Not Met
1. Identifying items on diagnostic progress test that many (e.g., ≥ 50% or ≥ 5) and few (e.g., < 50% or ≤ 4) of the nonmasters answered incorrectly.	90% of the formative test items will be analyzed correctly by the teacher	Analyze formative test results to identify students for group or individual correctives Compare external evaluator' results with the teacher's results regarding group or individual correctives	95%	Yes
2. Providing group correctives related to items missed by many (e.g., ≥ 50% or ≥ 5) of the nonmasters and individualized correctives related to items missed by few (e.g., < 50% or ≤ 4) of the nonmasters.	For 80% of the items, the appropriate kind of corrective (e.g., group vs. individual) will be administered	Observe instruction to determine the correspondence between the appropriate type of corrective determined by the external evaluation of items missed by nonmasters and the correctives administered.	85%	Yes

Adapted from: Rubin, R.I., St[illegible], G., & Revicki, D.A. A model for assessing the degree of implementation in field based education programs. Education Evaluation and Policy Analysis. in press.

Table 2

Sample Training and Implementation Rating Scale:

Parent Education Follow Through Program

Activity or Attribute Associated with the Program	Criterion Level	Monitoring/Documenting Activity and Data Source	Level of Implementation	Criterion Level Met or Not Met
1. Visiting homes of Program children by paraprofessionals	50% of paraprofessional's employment time	Check for the reported percentage of time in the paraprofessional's weekly reports of the randomly selected paraprofessionals. Observe paraprofessionals in a subsample of their visits for a week. Do this for at least 5 randomly selected paraprofessionals.	50% Home Visits 50% Classroon	Yes
	At least 75% of the scheduled home visits will be completed for at least 80% of the program children		75%	Yes
2. Attending Policy Advisory Committee (PAC) meetings by parents	At least 35% of the parents attend one PAC meeting during the school year	Check for randomly selected sign-in PAC attendance sheets for those parents affiliated with the randomly selected paraprofessionals. Observe a PAC meeting and verify the sign-in sheets at the meeting.	40%	Yes

Adapted from: Rubin, R.I., Stuck, G., & Revicki, D.A. A model for assessing the degree of implementation in field based education programs. Education Evaluation and Policy Analysis, in press.