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A study of the effect of a teacher training program on the implementation of an elementary school substance abuse education curriculum in the Boston public schools.

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A STUDY OF THE EFFECT OF A TEACHER TRAINING PROGRAM ON THE IMPLEMENTATION OF AN ELEMENTARY SCHOOL SUBSTANCE ABUSE EDUCATION CURRICULUM IN THE BOSTON PUBLIC SCHOOLS

A Dissertation Presented

By

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My husband and children

ABSTRACT

A STUDY OF THE EFFECT OF A TEACHER TRAINING PROGRAM ON THE IMPLEMENTATION OF AN ELEMENTARY SCHOOL SUBSTANCE ABUSE EDUCATION CURRICULUM IN THE BOSTON PUBLIC SCHOOLS

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Substance abuse prevention programs at all grade levels are proliferating in schools throughout the country. The dissemination of ready-made curriculum packages has been one of the major activities of school systems receiving funding for prevention programs, but efforts at evaluating the implementation of the curricula have been limited. Teachers at the elementary school level are often not prepared to present material in the area of substance abuse prevention.

This study hypothesized that intensive teacher training in the use of a special substance abuse prevention curriculum would result in increased teaching about this topic. The project evaluated the results of a three-day training program involving one hundred fourth grade teachers in an inner city school system in the use of a

special substance abuse prevention curriculum called D-E-C-I-D-E. Three months after the completion of the training program, teachers were sent an anonymous questionnaire which sought to discover correlates of successful implementation and the degree and methods of use of the curriculum.

Before the training started, only 41% of the sixty-four teachers who responded to the questionnaire had been teaching about substance abuse. After the training program, 79% were using the curriculum in their classrooms; 40% had started before the last training session had been completed. Eighty-one percent rated D-E-C-I-D-E better than any previously used curriculum materials. Seventy percent liked the idea of the use of substitute teachers in their classrooms while they were being trained. A majority had used the curriculum in other subject areas including language arts, and 98% recommended the use of the curriculum at other grade levels. There was a positive correlation between satisfaction with the training program and use of the curriculum. Those who had taught longer at the elementary level and those who had never taught about substance abuse were more likely to be low implementers.

Administrative provision of time for intensive training in the use of the curriculum, staff support activities and adequate resource materials are essential to the successful implementation of the program.

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CHAPTER I

INTRODUCTION

General Problem

Curriculum development and innovation is a commendable activity on the part of school systems. Much effort on the national, state and local level has been expended in developing new curricula and in training teachers to use them. A major problem, however, is that the classroom implementation of these innovations has not been planned for or followed through with the same degree of commitment -- of time, finances or inservice staff support sessions. Implementation has been correctly called "a neglected phase in curriculum change." Lofty curriculum revision goals will not be realized successfully if the new programs do not "incorporate planning for implementation, an appropriate change strategy and related staff development and staff support activities."[1]

Teacher training in the use of the innovation does not automatically guarantee that the curriculum will be adopted. In an aptly titled article, Hall and Loucks reported on their research to find out whether they could develop a "model for determining whether the treatment [was] actually implemented." They discovered that there were various "Levels of Use" of curriculum implementation

which could be observed in the classroom, ranging from "non-use" to "refinement," "integration," and "renewal."[2]

Loucks and Pratt[3] found that teachers had various concerns about the implementation of innovative curricula, as they began to use them in their classrooms. Concerns such as those raised by Loucks and Pratt must be addressed by those who wish to see successful implementation take place. As the teacher who has been trained in the use of the innovation prepares to implement it in the classroom, he or she seeks assistance and support -- a support which is often not available because more attention is given to curriculum development and the dissemination of curriculum goals rather than to the day-to-day concerns of teachers and their needs for assistance with implementation.

The result of teacher training in the use of an innovative curriculum should be the relatively faithful adherence to the curriculum as it is presented in the classroom. Teacher adaptation to the local classroom situation is certainly allowable, but the adaptation should not violate the intent of the new program; rather, it should permit the teacher to be creative in its use and to have a role in determining the way it is implemented, based on the needs of the individual school and classroom. Staff support programs should aim at training the teacher to use the innovation and to continue its use for a prolonged period of time while providing guidance and consultation

for problems which may arise during the implementation process.

Ultimately, the goal of teacher involvement in training for the use of the curriculum should be the "refinement" of the product, in which the teacher makes changes which result in improvements for the students, and, finally, in integration and collaboration with others to achieve broader changes. Teachers should be in touch with each other throughout the implementation process in order to share ideas for successful implementation of the curriculum. The process of sharing of ideas should take into account the problem of isolation teachers encounter when they close their classroom doors and begin to teach. This problem exists both within and between schools and must be overcome by staff support planning which allows teachers to meet to discuss their mutual problems and successes.

Whether using the guidelines of Hall and Loucks for investigating "Levels of Use," or those set down by authors such as Leithwood and Montgomery,[4] it should be possible to obtain "information comparing intended and actual implementation practices across critical dimensions of the curriculum." This should provide assistance in developing strategies for helping teachers to use the curriculum as well as "detailed information about obstacles" encountered when using the curriculum. Results should be valuable both

to staff training and staff support personnel as they plan inservice sessions.

Specific Aspects of General Problem

Massachusetts was the first state to mandate the teaching of health education (1838) in the United States. Recent amendments to the Massachusetts General Laws[5] in the 1970's specify the areas in which health instruction should ideally take place. The amendments to Chapter 71 of the General Laws have resulted in an increase in the number of communities in the state which teach health, but there has been no effort to mandate the amount of time which is to be allotted to health in the curriculum; each community must decide for itself whether students must complete health education requirements for graduation, how many hours of health should be required and in what grades.

The lack of enforcement of any kind of general requirements for health education in Massachusetts or other states has led to "a wide variation in organizational plans or curricular patterns for health education...throughout the elementary and secondary grades" and a kind of "crazy quilt" curriculum with "no discernible pattern."[6] The lack of planning and overall attention to health education implementation is not just a local or state problem but one which has disturbed school health educators nationwide.

The Boston Public School system has recently undergone a significant curriculum reform movement, the goal of which is the adoption and use of citywide curriculum objectives. Health education is the last of these curriculum documents to be written and disseminated. The Boston school system is therefore in a position of seeking to implement these new curriculum objectives at all grade levels. These objectives are based on recommendations made by the Massachusetts Department of Education.[7] Students at all grade levels will be required to master the curriculum objectives, and high school students will be tested on a one-semester course in Health Education in order to graduate. In subsequent years, all students will be tested in health at all grade levels.

Teachers must now prepare their students for testing in the health curriculum area, and teachers themselves must master the knowledge and strategies needed in order to teach health in the classroom. Many are not prepared to do this teaching and may be unwilling to add this new course to their curricular offerings. At the middle and high school levels, health may be taught by the physical education, the science teacher, a bilingual teacher or a special education teacher. These teachers may or may not have had any health courses in their baccalaureate or graduate school training. Elementary school teachers are usually educational generalists and may be unprepared

and/or unwilling to add health to their already full teaching schedules.

In their review of the first draft of the Boston Public Schools' K-5 Health Curriculum Objectives, many elementary school teachers, while approving of the document, commented on their need for assistance in implementing the curriculum objectives in their own classrooms. Of 396 elementary school teachers who responded to a questionnaire sent out with the new Elementary School Health Curriculum Objectives to 1500 teachers in the fall of 1986, (Appendix A), the largest number (163) indicated a need for assistance in implementing the curriculum objectives in the area of Substance Abuse Prevention. Other areas in which the teachers indicated a need for staff support were in the areas of Nutrition (133), Growth and Development (100), Safety and Accident Prevention (92), Mental Health (90), Sex Education (86), and Prevention and Control of Disease (85).

In a recent study of teacher training in the use of a special health curriculum, Fors and Doster found that teaching health is different from teaching "academic" subjects, in which "personal (and collective) application of the knowledge gained is the ultimate goal." The authors decried "simplistic" approaches to health curriculum development and implementation strategies resulting from the "anybody can teach it" mentality. Health teachers must

be able to teach in the affective domain, as they try to influence not only knowledge but also attitudes and behaviors. Influencing these two important areas in a student's life requires a "much more powerful and salient learning experience." Achieving this desired learning experience requires that there be:

> ...appropriate teacher preparation and/or inservice time (allotted).
> ...Teachers will then have the knowledge, skills and desire to teach the curriculum as it was designed to be taught.[8]

Without suitable and meaningful assistance for teachers which will provide a way for them to become users of the health curriculum in a site-specific way and to help them to infuse health activities into their basic subject areas, these curriculum documents may join all the others which are "gathering dust" on the shelves of every school in this and every school district.

Fors and Doster also reported that, although 80% of the states have some type of mandated program of health education,

> What passes for health education...is viewed by many administrators and teachers as a rainy day activity, if not a necessary evil. [Therefore] even if the resources for appropriate evaluation were available, the results could be disappointing because the program being evaluated did not have adequate resources to be implemented correctly.[9]

However, in the recent comprehensive School Health Evaluation Study (SHEE), as reported by Walbert et al.,[10] findings indicated that "well-designed programs <u>can</u> affect

subsequent student knowledge, attitudes, and -- most important -- behavior." The study also found that the greatest results appeared in those classrooms in which teachers were fully trained to use the programs. "High quality inservice" training was found to be a major factor in the success of the programs.

Kolbe and Iverson have stated that:

> The effectiveness of health education is ultimately determined by whether it is implemented, and how it is implemented. Although a given health education innovation may be designed and experimentally assessed to promote well-being with some measure of effectiveness and efficiency, the actual impact of the innovation will depend upon the manner in which it is disseminated, initiated, and maintained.[11]

The authors pointed out that the implementation of health education programs in schools "essentially involves social change to establish educational innovations." Those who wish to implement school health education programs must therefore pay attention to factors which affect social change in institutions. Implementation of health education programs in schools requires "normative, administrative, and organizational changes." The authors noted:

> ...The actual impact of the curriculum will be a function not only of its design, but the degree to which the curriculum is...disseminable, implementable, and evaluable... [Therefore] if education administrators are not readily convinced that it is an appropriate alternative, if teachers find it difficult to use in the classroom, or if the effectiveness of the curriculum remains unknown, it is less likely to be implemented.[12]

There has been a major emphasis in recent years on the initiation and expansion of substance abuse education programs for students in all grades. Much time and effort have been expended in developing drug education curricula and in disseminating them to school systems throughout the country. New curriculum packages are being advertised and extolled, especially with the announcement of large amounts of federal funding under the Drug-Free Schools and Communities Act of 1986 of the U.S. Department of Education. The present government's "Just Say No to Drugs" campaign has spawned a legion of print and non-print materials and complete K-12 curricula, many of which require teacher training. Both sponsoring publishers, training centers and private consultants are active in pursuing the avenue of teacher training programs.

The federal Anti-Drug Abuse Act of 1986 allocated $70.1 million to fighting substance abuse, of which $23.4 million were used to establish a new Office of Substance Abuse Prevention (OSAP), which was designed to undertake a number of national activities, including an alcohol and drug abuse information clearinghouse, regional workshops on prevention and the development and dissemination of materials. The grant also provided $200 million for a variety of federally-supported drug abuse education and prevention programs in FY87 and $250 million for the program in FY88 and FY89. Half of these funds have

been designated for awards for prevention programs, the development and distribution of public information, training and technical assistance, or the coordination of prevention activities. The remaining 70% of a state's allotment was designated for use by the state education agency; 90% of this sum was designated for grants to local education agencies, which must establish, implement, or augment mandatory drug abuse education programs for students at all grade levels.

The recent publication by the U.S. Department of Education, "What Works: Schools Without Drugs,"[13] is designed to describe ways in which schools can work to eliminate the problems created by drug and alcohol abuse. Recommendation #7 asks schools to "implement a comprehensive drug prevention curriculum from kindergarten through grade 12, teaching that drug use is wrong and harmful and supporting and strengthening resistance to drugs." In implementing a program, the document states that all grades should be included and that expertise in drug education should be developed through teacher training. The document has been disseminated to school systems throughout the country, and, in order to compete for federal grants under the new legislation, schools must follow the mandates for teaching about drugs as outlined in the booklet.

The emphasis on substance abuse education in Massachusetts gained impetus with the issuance of a

document entitled, "A Report to the Governor's Statewide Anti-Crime Council on Massachusetts High School Student Drug and Alcohol Use," in November 1984. This survey of alcohol and drug use among adolescents in the state reported that experimentation with alcohol and drugs was, at that time, a common part of adolescent culture. Of the high school students sampled in the study, "Three out of every five (60%) had used illicit drugs at least once and approximately one out of every three (31%) had used illicit drugs in the month prior to the survey." In addition, the study concluded that "a large percentage of youth are trying drugs and alcohol at a very young age." The findings called attention to the need to "target drug prevention and early intervention efforts toward a young population, including students in elementary school."[14]

In 1987, the Governor's Alliance Against Drugs, in cooperation with the Massachusetts Department of Public Health and the Massachusetts Department of Education, published the results of a study of drug and alcohol use among sixth grade students across the state.[15] In the first year of this seven-year study, it was found that two-thirds of the students (65%) reported that their class had received lessons on drug and alcohol prevention education. Eighty-eight percent of the students found that the classes about drugs and alcohol were useful. Elementary school students seem to be getting more

information about alcohol and drugs, and almost all students stated that they had no intention of using illicit drugs during the next year. Two-thirds of these sixth grade students had never drunk alcohol and 8% did not plan to drink alcohol in the next year. Five out of six students had never smoked a cigarette, and 93% did not plan to smoke cigarettes in the next year.

The Governor's Alliance also sponsored a follow-up study of the high school students who were questioned in 1984; in this group, the use of all illegal drugs was down across the state; however, the use of alcohol was up. These findings mirror national figures which indicate that the use of hard drugs, except cocaine, is down, but the use of alcohol is up.

One might draw the conclusion from these studies that primary substance abuse prevention efforts are paying off in terms of their effect on elementary and high school students. However, the population used in the study was 86% White, and 98% of the high school students in the study planned to complete high school; 71% planned to go to college. These demographic characteristics do not reflect the inner city population which one would find in a city like Boston. A high drop-out rate, low potential for after high school job placement or a college career, and environmental and peer pressures exert a strong influence

on inner city students to be at high risk for substance abuse.

Longitudinal studies such as the one mentioned above have led the way to an increased awareness of the importance of substance abuse education in schools across the state. Local school departments have reacted to the demand for increased drug education programs by developing various prevention efforts, varying from the use of police officers as classroom instructors to the use of peers as role models for other students and for younger students. Grant moneys have been made available for some of these activities through state and federal funding, and many cities and towns have scrambled to get on the drug education "bandwagon." Teacher training in the use of various substance abuse prevention curricula is one of the major activities of the school systems involved in the grant programs.

The training of elementary school teachers in substance abuse prevention is important because primary prevention efforts started at an early age may forestall the development of attitudes and behaviors leading to substance abuse at a later age, especially when the child first enters middle school. As pointed out earlier, the elementary school teacher has little training in health, and more especially in substance abuse education. He or she may be hesitant to venture into this "unknown

territory" and to use curricula which require the use of group process for affecting attitudes and helping students to make decisions and to resist peer pressure. In the Boston schools, teachers specifically requested assistance in teaching about substance abuse at the elementary school level.

Substance abuse prevention programs which merely provide information have not proven to be successful. The development of self-esteem and the provision of opportunities for critical thinking and problem-solving are essential, and teachers must be prepared to engage in activities which promote these life skills. Curricula chosen for teacher use should stress these skills, but teachers must also continue to remain informed about the latest information on addicting substances and their effects on the body.

Globetti found that, "A socio-psychological approach may be best for minority youth." Curricula which stress the affective domain and help the student to "meet the stressors of minority status" can be valuable. Emphasis must be placed on "inner controls" and "self-concept" in order to reduce misuse of drugs and alcohol, and students must be helped to develop "a sense of self-worth and personal responsibility."[16] Carrying out these features of a substance abuse prevention program may be difficult for

the average teacher, regardless of the grade level, without adequate training and support.

In a recent article evaluating the reasons for the failure of many drug education programs, the author found as a major problem the difficulties involved in implementing these programs. He stated that:

> Despite extensive investment of resources to develop drug education programs, insufficient resources have been invested to ensure that these programs are used. There is little empirical evidence concerning implementation of drug education programs...Little effort is usually invested to ensure successful progression beyond the adoption phase...The implementation process...requires resources equal to those invested in the developmental phases of the program, such as administrative support, staff training, and resource availability.[17]

Because so little effort has so far been given to following up efforts in teacher training and staff development in the area of health education and in particular, drug education, this study has been aimed at discovering the factors which contribute to successful curriculum implementation. The success of these efforts will be evident when we can see teachers move through the various Levels of Use to activities which involve the sharing of ideas, the refinement of use in the classroom, integration with other subjects and ultimately renewal of teaching strategies.

It is hoped that the present study will contribute to the body of research in the area of school health education

teacher training and follow-up classroom implementation of curriculum goals and objectives. This study is concerned with substance abuse education, but its results would be applicable to other areas of preventive health education.

In a recent study of the classroom use of the "Teenage Health Teaching Modules," Nelson et al. found that:

> Findings of this...study suggest that inservice teacher training is an important factor which determines program implementation and effectiveness. Greater attention to the components of teacher inservice training appear warranted. [There is a] need to understand the teacher's interests and abilities and adapt the curriculum accordingly.[18]

In order to complete the study reported in this dissertation, four areas had to be considered: factors involved in the implementation of curricular innovation; factors involved in staff development programs; the implementation of health education in classrooms and, more specifically, the implementation of substance abuse prevention programs. These areas will be considered in the review of literature in the next chapter.

Purpose of Study

The purpose of this study was the investigation of the results of an intensive staff training program on teacher implementation of a new elementary school substance abuse education curriculum.

Primary Question to be Answered by Study

The primary question to be answered by the study was whether teachers exposed to a specially-designed training program would be more likely to use this new curriculum in their classrooms than teachers who were merely handed a set of Health Curriculum Objectives and asked to teach their elementary school students about drugs and alcohol. Would these specially trained teachers not only adopt the curriculum but also continue to plan for implementation in subsequent years, for adaptation or "refinement" of the curriculum as they put it into use and for sharing ideas about successful implementation with other teachers?

Implementing Questions

Questions to be considered in studying the effects of the teacher training effort were the following:

How many years of teaching experience did the teachers have?

Had they ever taught about drug abuse prevention before? If so, what kind of curriculum had they used? Did they consider the previously-used curriculum superior to the one in which they were trained?

How did they feel about the training in which they participated? Did they feel that the training prepared them adequately to present the material?

How did they feel about the method of training used -- the provision of substitute teachers to replace them in their classrooms while they attended the three-day workshops during the school year? If they did not like this method, what was the reason, and what other method would have been preferable?

Did the philosophy and goals of the teacher about alcohol and drug education agree with those of the curriculum used?

When did the teacher start implementing the curriculum, and if he/she did not start, what factors were impeding the initiation of the project?

How have teachers incorporated the curriculum into their regular classroom work? How often did they teach the material and for how many minutes during the day or week?

What resources and supplementary materials have the teachers used in implementing the curriculum? How has this material dovetailed with curriculum goals in other subjects which are required?

Specifically, which parts of the curriculum are most often used? Why are some sections considered more successful than others? Is the recommended order and content being faithfully adhered to, or are teachers

adapting the order of the lessons to their own classroom needs?

In general, what recommendations do teachers who have participated in the project make for further training and use of the curriculum?

Would some teachers like to be involved in sharing with others what they have discovered as they have started to use the curriculum?

Researchers have found that "process evaluation," which is defined as "standards of acceptability in terms of organizational and teaching practice," followed by "impact evaluation," which is the "evaluation of the immediate effects of programs, evaluation that is done during the programs or at their conclusions" can be carried out as part of a limited short-term study, with equally limited financial resources.[19] This may include evaluation of what goes on in the classroom as well as short-run assessments of students' knowledge and skills. Long-term evaluations, on the other hand, require a major research effort, with large amounts of financial support. Therefore, for the purposes of the study, evaluation of teacher training and usage of the curriculum in the classroom were targeted for study.

All elementary school teachers were queried regarding their teaching in the area of drug abuse education. (See

Appendix A.) 390 questionnaires were returned. The questionnaires revealed that the greatest area of need for inservice training was in drug education. Following this assessment, a special series of three full days of training was conducted with one hundred fourth grade teachers in the use of a new drug education curriculum. Two months after the training, participating teachers were asked to complete a questionnaire which aimed at assessing their use of the new alcohol and drug abuse prevention curriculum in which they were trained. In this way, the study sought to discover whether a special effort at teacher training was successful in assisting teachers in implementing the curriculum. The answers to the questions also sought to reveal some of the reasons which might have prevented the teacher from using the curriculum and possible support services which needed to be provided to increase teacher use.

The questionnaire also tried to reveal fidelity to the goals of the curriculum and whether teachers had adapted the curriculum to their special needs or planned to adapt it further during the next school year.

Significance of Study

This study will be of value to educators interested in the general area of curriculum implementation and in the

development of related successful teacher inservice programs. Specifically, the study will be of greatest value to school health education personnel who wish to ensure that the national emphasis on improved drug and alcohol education programs will be implemented in an effective way and that the hours and finances expended in developing new health education curricula will not be wasted.

Those communities interested in replicating teacher training in a priority area of health education such as drug and alcohol education may examine the results of this study to see whether similar efforts in teacher training should be undertaken.

Basch and Sliepcevich have stated that:

> Research focusing on factors commonly associated with successful and unsuccessful efforts to plan, select, implement, maintain, and diffuse school health education curricula may contribute to a historical data base for planning and assessing curriculum designs and may facilitate promotion of school health education programs.[20]

The results of this study will serve to point the way toward planning, maintaining and diffusing drug and alcohol abuse education programs. In light of the present pressure on school systems to conduct substance abuse prevention activities in the schools, research which will help to develop guidelines for workable programs of teacher training and subsequent staff support activities will be extremely valuable and useful.

Assumptions

This study assumed administrative support for staff development activities which would enhance the chance for implementation of health curriculum objectives in the elementary schools of the system which was being studied. In this particular study, support for the project came from a grant from a state agency, The Governor's Alliance Against Drugs. School administrators supported the project by allowing teachers to attend the sessions during school time.

It also assumed that teachers would cooperate by returning the questionnaires sent to them as a follow-up to the inservice training sessions.

Because the questionnaire required self-reporting information, this study relied on the truthfulness of the replies of the respondents; this factor must be taken into consideration in assessing the results. Self-reporting studies may cause respondents to reply in a manner which will reflect favorably upon their performance as teachers. However, the anonymity of this questionnaire attempted to alleviate the bias which could be present were the questioner to know the name of the school in which the respondent taught or were teachers to be questioned in personal interviews.

Exclusions

This study concentrated on the effects of staff development activities on teacher implementation of drug/alcohol abuse curriculum objectives. Because of time and financial limitations, it was not possible to study knowledge, attitudinal or behavioral effects of the curriculum on the students involved. The study was therefore limited to the value of the format and content and the effects of the teacher training effort on the use of the curriculum by the teachers involved.

Definition of Terms

The following definitions apply to terms used in this study.

CHAPTER 188: A Massachusetts law designed to improve public schools by ensuring educational excellence and equity.

CURRICULUM IMPLEMENTATION: The process of putting into use a course of study in a manner intended by the developers of the curriculum.

CURRICULUM INNOVATION: A new idea or teaching technique which is introduced into a classroom course of study.

D-E-C-I-D-E: A substance abuse prevention curriculum developed at Stanford University. The acronym stands for Determine; Explore; Consider; Invite; Decide; Evaluate.

DRUG-FREE SCHOOLS AND COMMUNITIES ACT OF 1986: A major funding program at the U.S. Department of Education awarded to the states for a variety of substance abuse prevention activities.

GOVERNOR'S ALLIANCE AGAINST DRUGS: An organization established by Governor Michael Dukakis of Massachusetts in 1984 to provide cities and towns with assistance in developing and conducting substance abuse prevention programs.

INSERVICE TRAINING: A process of conducting staff education during duty-free work time.

INTEGRATION: The merging of one part of the curriculum into an already existing core of learning/ teaching materials.

"LEVELS OF USE": Various stages through which the user of an innovation must go before the innovation is fully implemented.

THE PREVENTION CENTER: A regional organization funded by the Massachusetts Department of Public Health dedicated to assisting schools in developing comprehensive substance abuse prevention programs.

STAFF DEVELOPMENT: The process of training teaching staff in the use of new methods, material and curricula.

STAFF SUPPORT: The process of providing guidance and assistance to staff members in a school system as they attempt to implement new methods or materials.

"STAGES OF CONCERN": Problem areas with which users of an innovation are involved. These areas must be addressed by those who wish the innovation to be used.

SUBSTANCE: A chemical which affects the physical, mental, emotional or behavioral activity of the user; the phrase usually incorporates drugs, alcohol and tobacco.

SUBSTANCE ABUSE: The use of a substance for other than medical purposes, resulting in impaired physical, mental, emotional or behavioral activities in the user. Prescription or over-the-counter drugs may also be misused.

Footnotes

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CHAPTER II

REVIEW OF THE LITERATURE

As Basch stated in a recent article, "No matter how effective a given program may be...its impact will be determined by the extent to which it actually is disseminated and maintained in classrooms." The author expressed his hope that, "Discovering efficient ways to disseminate and implement health education programs in schools [will] be a high research priority."[1] A review of the literature will indicate the extent to which researchers have found the necessity for testing whether the curriculum innovation has indeed been implemented in the classroom, or whether efforts at improving health education programs in the schools have justified the time, effort and money spent in developing these programs. In addition, it is important to review efforts at helping teachers with the implementation process through staff development and support activities.

Essential to the understanding of this research proposal is the theoretical and historical background of health education in schools, especially in the schools of Massachusetts, and the evaluation of school health education projects nationwide. It is important to know what kinds of assistance teachers need in order to ensure that the intent of the curriculum projects is realized in

their classrooms. Is it enough to present teachers with curriculum objectives and expect them to be followed, or should teachers be trained in the use of the curriculum and have an opportunity to adapt the documents to their particular classroom needs?

For the purpose of this study, it will therefore be necessary to survey the literature regarding strategies for curriculum implementation and for teacher training in the use of innovative curricula. It is also important to examine recent studies of implementation of health curriculum projects and, more specifically, those in the field of substance abuse prevention.

Studies of Implementation of Curriculum Innovation

Studies of federal dissemination efforts have found that teachers do need support at the local level in using curriculum innovation and that they prefer to adapt curriculum changes to their own classroom needs. Berman and McLaughlin[2], in their review of the Rand studies; Crandall and Loucks, who reviewed R,D and D efforts for the Abt Corporation[3]; Karen Seashore Louis, who did the NETWORK studies[4] all reviewed the effects of dissemination efforts on local school systems. These summaries, among others, revealed that there were many factors leading to the success (or lack of success) of dissemination efforts.

They concluded that some of the factors contributing to success were support for the changes at the local level -- on-site liaison teachers and administrators, who worked closely with teachers seeking to make the changes.

Berman and McLaughlin found that:

> An innovation's local institutional setting has the major influence on its prospects for effective implementation...In particular, the local organizational climate and the motivations of project participants had major effects on perceived success and on changes in teacher behavior.

The authors concluded that local innovators should be supported in the development of "adaptive" implementation strategies, which include:

-continuous and on-line planning
-regular and frequent staff meetings
-in-service training linked to staff meetings
-local material development

In another major study of curriculum implementation, Fullan and Pomfret[5] sought to discover the reasons for the varying degrees of implementation which took place in different school systems. The authors referred to two broad stages of the innovative process: the initiation stage, in which teacher are "acceptors," and implementation, which has two stages: planning for the implementation and initial implementation. The authors referred to two types of participation: the "managerial" and the "user" perspectives. In the managerial perspective, the user is seen as a person who must adhere to previously identified characteristics of the innovation. This

perspective assumes that users are "information-processing systems." By contrast, the "user" perspective assumes that users may decide or co-decide what parts of the innovation to implement and how to implement them. Users are co-deciders in both sub-stages of implementation. Fullan and Pomfret described the differences among users at various stages in the innovative process as follows:

Stages	Managerial	User
Initiation & Adoption	Acceptors or advisors to authorities	Co-deciders with authorities
Planning for Implementation	Trainees	Co-planners of training experience
Implementation	Information providers (hierarchical)	Problem solvers Evaluators (peer or non-hierarchical-based

Although authors differ on the details of the stages of integration, there is general agreement that there is a definite sequence of stages. Kolbe and Iverson's "integration"[6] includes five generic stages: mobilization of the perceived need for program improvement and ways in which the improvement may be achieved; adoption, or commit-

ment to change or improvement; implementation, in which the course of action is put into practice; maintenance of the changes; and further evolution of the changes.

These stages reflect to a great extent the findings of Loucks and Hall[7] who developed a system for measuring "Levels of Use," or LoU's in the classroom which indicated to what extent the teacher was using the innovation. (See Appendix D.) At the user level, implementation of innovations involves eight Levels of Use. The content of each level reflects the behavior of the user and what he/she is doing with the innovation. The authors trained interviewers to use a branching format to evaluate in twenty minutes the Level of Use of the teacher.

Leithwood and Montgomery described a method for evaluating program implementation[8] by developing a "multidimensional profile" of the program as it evolves. Instruments designed to evaluate implementation assess use in relation to the dimensions described, and levels of use may be determined by examination of adherence to the profile. The authors pointed out that:

> Every curriculum innovation is in some sense incomplete from the point of view of those who are to put it into practice...The policymaker [has an] understandable inability to fully predict the context in which the innovation will be used and the resulting modification of the innovation necessary to meet such contextual demands.

The success of the innovation may depend on its potential for use in a variety of ways. Teacher behavior and classroom activity stimulated by the teacher as he/she uses the curriculum may create new ways of implementing the curriculum which may be useful and productive. Therefore, the methodology for evaluation should be able to describe the innovation, specify practices implied by the innovation, describe actual practices and compare these practices with those intended by the curriculum developers and teacher trainers. Changes may be made, but one would not wish for a "drastic mutation" of the curriculum and its features by the teacher/user.

The authors were able to develop a profile by which teachers could be questioned and/or observed regarding their adherence to the profile developed for the specific curriculum in use. They called this an "Innovation Profile," and, after observation and questioning, they were able to develop a "User Profile" for teachers using the innovation.

Morris and Fitz-Gibbon[9] also developed a model for judging program implementation by outlining a program's context -- resources and setting, as well as the activities in which the program staff must take part. This would include materials and how they were used; procedures teachers were to follow; activities in which students were to engage; administrative arrangements for the program.

Findings may be summarized by developing an estimate of the "degree of implementation." The evaluator would have to select a set of the program's most critical characteristics and then "compute the index from judgments of how closely the program...has put these into operation."

These articles referred to methods of evaluating program implementation. We should also consider the role of the teacher in the implementation process. Should he/she be a passive implementer, or should the teacher take an active role in adaptation to local needs? How far can adaptation go without violating the goals of the curriculum?

In his article in The Encyclopedia of Educational Research, Short[10] referred to the "Site-Specific/Balanced Coordinated/Open Adaptation Strategy," which takes place in the actual educational setting where the curriculum is to be used. Teachers who will be using the curriculum are actively involved in the planning to ensure that the results will be usable in their own classroom situations. Cooperative interaction among all the experts developing the curriculum is required. This type of strategy develops a "sense of ownership" in developer-users, who base their own curriculum on a general model and are given freedom to use the materials in a way which they think best meets their immediate needs. Short defines three types of curriculum use: "implementation as directed," "limited

adaptation," and "open adaptation." These have often been expressed as:

1. The "teacher-proof" curriculum, which must be used as intended by its developers
2. Teachers as active implementers: Limited adaptation is allowed according to the situation.
3. Teachers as user-developers: The realities of the setting are taken into account.

William A. Reid, in his article, "Schools, Teachers, and Curriculum Change: The Moral Dimensions of Theory-Building,"[11] described the trend of the past two decades, in which teachers lost the freedom to make their own decisions about adopting or adapting curriculum materials. Teachers are not "passive instruments in the educational process," but rather should be able to take an active role in determining what materials they are to use in their classrooms.

M. Frances Klein[12] found that, "The teacher cannot be bypassed in effective curriculum change," and that he/she "must have an important and active role in curriculum development, if a curriculum is to accomplish all that is hoped for it." And she pointed out that teachers must be involved as decision-makers if they are not to "resist it and choose not to implement it in their classrooms."

Connolly and Ben-Peretz, in their 1980 article,[13] found that, "There is a re-awakened awareness of teachers' functions in curriculum development," and that:

> It is generally recognized that teachers do not neutrally implement programs; they develop programs of study for their classrooms by adaptation, translation, and modification of given programs and research findings.

The authors stated that, in their opinion, the relationship of the teacher to the development team should be shifted from that of mere implementer to that of decision-maker and independent developer. The teacher's experiences and wisdom in the classroom situation make him/her invaluable in the development of usable curriculum materials. The writers concluded that any curriculum development strategy should give teachers a chance for "action research," which would involve them as equal partners with others on the development team. Teachers may be treated as:

(a) mere transmitters of curricular ideas
(b) active implementers, aided by action-research
(c) adapters through the use of materials in the classroom

Tanner and Tanner[14] referred to three levels of curriculum development and implementation:

I. Imitative-Maintenance: use ready-made materials adoption without adaptation
II. Mediative: make necessary adaptations, adjustments and accommodations to the local situation
III. Creative-Generative: engage in cooperative planning, experiment and communicate, engage in problem-solving

Walker[15] found that local involvement of teachers is always a necessity in working toward effective implementation of a new curriculum. Teachers and administrators are ideally situated to know about...

> Site-specific information, including ... the distinctive characteristics of the community, the school, the student body, the teaching staff and the educational system.

Walker felt that the whole curriculum development/ implementation process requires that various groups be involved from the beginning, including local teachers and school administrators, parents and others concerned with education.

Saylor, Alexander and Lewis found[16] that the failure to implement new curriculum plans both puzzled and frustrated researchers and program developers. They pointed out that since successful implementation involves some "resocialization" of teachers and administrators...

> The methods employed in introducing and implementing innovations should support this process...Those involved in <u>implementing</u> a decision should participate in <u>making</u> the decision.

The practice of involving those affected by a decision in helping to make the decision is a lesson learned from psychological and sociological studies and is often used in business and industry with great success. The authors agreed that the process of development and implementation should have a positive effect on teachers, that when the project is completed, teachers should have grown in their professional stature and have a good self-image.

In his book, <u>The Culture of the School and the Problem of Change</u>, Sarason referred to the conclusions of

Berman and McLaughlin in the Rand Studies. Sarason felt that:

> ...In the bulk of the studies, the proponents for change proceeded in ways that guaranteed conflict and failure...because the needs and self-interests of significant people were ignored...The high frequency of failure of educational programs can in part be attributed to the failure to see teachers as a constituency that...needed to be informed and involved at all stages in the change process.[17]

McClure[18] found that teachers wanted to be engaged in curriculum development efforts at the institutional level, and that their failure to do so in the past may have been based on their concern about a lack of preparation to do the work and a feeling that their efforts would not have an impact.[19]

McClure also pointed out that, of primary importance to the success of a curriculum development project, is the need for sufficient <u>time</u> on a sustained, prolonged basis.

> Those groups which either had demonstrably better curricular products or perceived success <u>all</u> had large blocks of time which were provided as part of the working day, not, as Ole Sand used to say, 'In after-school faculty meetings in which everyone quivers in unison.'

These observations seem to indicate that it is necessary to plan inservice training and assistance with implementation on a long-term basis and to set aside time during teacher inservice time or during the summer for intensive work on curriculum development and adaptation.

Ben-Peretz[20] referred to teachers as "user-developers" of a curriculum. She concluded that their ideas are of great importance because they know about the local milieus in which they are to use the material. They should be allowed to voice their concerns about the materials they are asked to use and be allowed to adapt the materials as they see fit.

Brown and McIntyre[21] found in their long-term study of teachers' attitudes toward innovation that the likelihood of implementation (or institutionalization) of the change depended on the type of innovation which was required of the teacher. In Scotland, as in studies conducted in the U.S., the authors found that:

> The innovation will be implemented in the classroom only insofar as the individual teacher has a favorable attitude toward it, has the motivation, skills, and resources to modify his current patterns of teaching, and understands what is meant by the innovation and how to go about introducing it.

A support system for those schools wishing to introduce changes in curriculum and other educational innovations is needed for all subject areas. In situations in which teachers have felt that what they do and say about an innovation does make a difference, educational change has been more successful. In this sense, teachers are not unlike workers in other organizational settings who have a need for representation and recognition as an integral part of the power structure.

Models for assessing successful curriculum implementation do exist and can provide guidelines for evaluation of the value of teacher training. The authors cited seem to agree that curriculum change must take into account the teachers who are to use the curriculum, the organization of the school and the needs of its students. In addition, teachers must be made to feel that the changes they are asked to make must make an important difference to the students in their classrooms. They do not wish to be passive implementers of innovations developed by external forces. If they are to implement curriculum change, they must be allowed the freedom to adapt the materials to their own situations and to use them as they see fit. Historically, there has been a great distance between where curriculum decisions are made and where they are implemented. This distance can be removed by the provision of time and training for teachers to make curriculum decisions which involve references to their own milieus and their own student populations.

The need for good leadership and strong support services cannot be overstated. Ongoing staff support for innovative practices should be provided by central offices of school departments and the sharing of ideas among teachers through teacher centers or curriculum support groups. Through these measures, the evaporation of good

new ideas will be forestalled. Valuable curriculum innovations, as well as time and money, will be wasted if the teacher has no support in adaptation and implementation of the material in the classroom.

Financial and released-time support for development activities can and should be provided administratively. Teachers cannot produce creative materials in lengthy after-school or weekend workshops. Whether such financial and time assistance can be arranged is a problem for the local school department, perhaps with the help of federal and/or state financial assistance. Chapter 188 in Massachusetts is a forward step in this direction; it is to be hoped that this law will continue to provide support to teacher creativity.

Readings on Teacher Inservice Training (Staff Development)

Ann Lieberman described "staff development" as a process which affects the whole school (the staff) and indicates the need for long-term growth possibilities (development). She stated:

> We reject the idea of giving courses and workshops to individual teachers in isolation from their peers and their school...Development means working with at least a portion of the staff over a long period of time with the necessary supportive conditions.[22]

Major writers in the area of staff development for the inservice training of teachers in the use of the innovation have included Loucks and Hall[23] and Loucks and Pratt[24], who referred to the "Concerns-Based Approach to Curriculum Change" and to "Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development." Their research was conducted at the R&D Center for Teacher Education at the University of Texas in Austin, with support from the National Institute of Education. The authors pointed out the need for staff developers to provide answers to the concerns of teachers as they try to implement a curriculum innovation.

Staff developers should look at the "Stage of Concern" (SoC) of the teachers involved in the innovation and address this stage or stages in inservice offerings. The researchers found that more than one year is required for training in all areas of teacher concern. The "concerns-based" approach emphasized the roles of individuals in the change process.

In the article, "Staff Development and School Change,"[25] the authors summarized the findings of the Rand Study in the area of staff development. They concluded that staff learning must be individualized according to learning rate and learning style and must address teachers' day-to-day classroom responsibilities. Outside groups should no longer decide what teachers need to know;

teachers should be the major decision-makers about the innovative process.

Swenson also stressed the importance of on-site teacher training.[26] He also referred to the need for "job-embedded" inservice opportunities which take place close to the scene of teaching; teachers can then use the innovation while actually working with students in a "hands-on" approach. Teachers themselves should be involved in the planning of the training and in the delivery of the training.

Zigarmi, Betz and Jensen[27] studied teachers' preferences in and perceptions of inservice education and found that teachers wanted to learn new skills and have some choice about what they learn. They wanted long-term experiences and liked to learn from each other and to exchange ideas.

Hutson, in his article on "best inservice practices,"[28] reviewed the research on inservice training of teachers for classroom change and concluded that there are three domains of inservice education: "the procedural; the substantive and the conceptual." The "procedural" includes the question of control: Who is responsible for inservice education? The author felt that the responsibility should stem from a collaboration between inservice clients, providers and other constituencies.

Inservice programs should be adequately supported, preferably with long-term hard money and with "human support," in the form of district and building administrators. Outside agencies should merely play an advisory role and should serve to help teachers to "adapt, not adopt." The delivery function of inservice training should stress the local adaptation of materials and should be planned in response to assessed needs. Teachers themselves should be leaders and trainers, and the school site should be the center of professional development activities. Inservice sessions should use good teaching methods by encouraging active learning, using self-instructional methods, allowing freedom of choice, involving demonstrations and adapting to the needs of adult teacher/learners.

Lieberman and Miller summarized some of their findings in the volume, Teachers: Their World and Their Work,[29] in which they reviewed a number of findings on staff development and concluded that:

> Where there is a possibility for involvement, experience, and participation, growth is possible. Where ideas cannot be translated into practical realities, there are lectures better left undelivered.

Lieberman also collaborated with Loucks in the summary article, "Curriculum Implementation," which appeared in the 1983 ASCD Yearbook.[30] In their article, they summarized findings on teacher involvement in

curriculum development and again stressed the use of teachers as peer trainers and/or advisors. As a few teachers become experts in the use of the curriculum, they can be part of a school (or inter-school) team to train others in its use. They can also set up a plan for inservice training for other teachers.

The authors also stressed the need for continued material and human support required for inservice efforts. Time is needed to plan, adapt materials, train, solve problems and provide peer support. If the goal is the provision for ongoing "refinement" of the curriculum, teacher support groups must periodically be convened to discuss and share with others successes and problems, new ideas and strategies for using the innovation. The authors favored flexibility in training for the use of a new curriculum.

Cox offered the opinion that, "Central office staff may well be the "linchpins" of school improvement efforts, linking together the external assisters and the building level administrators and teachers.[31] She stressed the need for "in-person assistance" in getting teachers to use the innovation in the classroom. Her findings indicated that:

> The most helpful activities for teachers were efforts to actually work through the specifics of using the practice in the classroom. This kind of assistance is very different from being passively trained in a workshop setting...The major effects of local facilitators' assistance were at the individual teacher level.

A. Michael Huberman, in studying "School Improvement Strategies That Work" in the same issue, found that "strong-arm" tactics from school administrators did not work, but that substantial assistance must be supplied from knowledgeable sources, including other teachers.[32]

The careful planning of inservice support activities for classroom implementation is an important aspect of this study, which will be useful to others who wish to replicate these activities. Research into the kind, format, location and content of inservice sessions and follow-up support activities will be of value to those wishing to use new curricular ideas successfully, regardless of the subject matter or content orientation. Many of the recommendations made by these authors were taken into account in planning the research study reported in the next three chapters.

Readings in Health Education Practice and Case Studies of Curriculum Implementation

David C. King has outlined the recent trend (1970-1980) toward a demand for better school health programs, with the commitment of schools across the country to the development of a sequential K-12 health education curriculum.[33] Another support for health education has appeared in the form of two federal reports: Healthy People: The Surgeon General's Report on Health Promotion

and Disease Prevention, which appeared in 1979, and the 1980 publication, Promoting Health/Preventing Disease: Objectives for the Nation, which laid out 227 specific goals to be completed by the year 2000. The two reports stressed the importance of the prevention of disease through the development of healthy lifestyle behavior. The goal of the health education programs has become not just the advancement of student knowledge about health but changes in attitude and behavior. The federal reports also endorsed the development of new health courses and related classroom resource materials.

In 1981, the Education Commission of the states published a task force report entitled Recommendations for School Health Education: A Handbook for State Policy-makers.[34] The Handbook listed major health topics which should be covered by school districts and state departments of education in drawing up new program outlines. In addition, three forces which have contributed to the drive for better health education programs have been the recent major studies of schooling; the support of businesses, such as the Metropolitan Life Insurance Company; and the growth of organizations such as the American School Health Association. In 1984, this group published a position paper, Comprehensive School Health Education, which endorsed a K-12 sequence aimed at developing decision-making and

problem-solving skills of students -- skills which would help them to make decisions about healthy behavior.

Despite this encouragement, however, King pointed out that the results of these efforts, on a nationwide basis, have been far from satisfactory. Some cities and states are doing very exciting things in health education and are succeeding in implementing their mandates; others are slow to plan and implement, hiding behind such factors as promotional requirements and a need to concentrate on basic skills.

In the publication A Framework for Health Education in Massachusetts Schools (1982),[35] the Massachusetts Department of Education issued an outline for a recommended comprehensive health curriculum, which could be used as a basis for teaching health in any school system. However, there is no statewide mandate for the number of hours which must be given to this subject, and the suggested areas of study are merely that -- suggestions, rather than requirements. Whether health is an elective or a requirement is also left to each school system, and the grades in which it is taught are also only suggested. In addition, the background of those teaching health varies considerably from town to town and within school systems. State certification of health teachers has only in the last few years been upgraded to require a certain number of hours of training in the health field, and those who are now teach-

ing health under the old certifications are "grandfathered" and may have had few, if any, health courses.

The School Health Education Evaluation Study (SHEE), which took place recently, was reported by Walberg et al.[36] and used information gathered from nearly 1100 classrooms in which four widely used health curriculum programs were used. The results of the study showed that health education can produce knowledge gains in a relatively short time, but that for changes in attitudes and behavior, more time and an expenditure of effort and attention to classroom implementation were necessary. Fewer than one-third of the states reported in the study require elementary school health instruction, and there have been very few efforts to evaluate the results of the instruction. The SHEE did, however, provide a new effort at evaluation. Among the findings were the following:

1. Teachers who only partially implement health programs may meet knowledge-related instructional objectives but fall short of more far-reaching attitudinal and behavioral objectives.
2. Teachers who were fully trained to use the program were found to teach far more of it with greater fidelity to the program design.

In another article summarizing the important findings of the SHEE, the authors, Connell et al.,[37] stated that implementation cost represented about 92% of the total costs of the four programs evaluated. They also found that...

> A commitment to teacher training and/or support materials may be a crucial factor fostering widespread teacher acceptance of health programs and subsequently insure that an administrative commitment to health instruction will be carried into the classroom.

The time required for training teachers, especially elementary school teachers, was felt by the teachers to be highly demanding, considering their already busy teaching schedules. In addition, few primary grade teachers have a background in health education and feel comfortable in teaching some of the specific topics. In the view of the authors, it may be possible to devise methods of inservice training which will not require specific knowledge but will assist instructors in teaching health in the affective and behavioral areas.

Fors and Doster issued a separate report on the four-year study of the SHEE. They concluded that administrative support, in the form of a commitment to inservice training, can help to ensure that the teachers are prepared to teach the curriculum. Administrative support also can "persuade" the teacher that the curriculum is important. They compared degrees of implementation of the health curriculum when teachers received no training, partial training, or full training. Teachers who had received no training were only 60% faithful to the program; teachers who had received partial training were 70.5% faithful to the program; and teachers who were fully trained (at the same or a greater number of hours than

those prescribed by the program) taught the program with 81% fidelity. In the case of the percent of program actually taught in the classroom, teachers who received no training taught only 70% of the program; teachers partially trained taught 75% of the program, and teachers fully trained taught 84% of the program. The authors concluded that adequate teacher preparation and the commitment to inservice time is indeed necessary to the successful implementation of the program.[38]

The authors also sought to find out if the degree of implementation made any difference on the dependent variables of program-specific knowledge, general knowledge, general attitudes, and self-reported practice. They discussed differences in posttest measures between all classrooms and comparison classrooms, and the raw percentage differences between "fully implemented" program classrooms and comparison classrooms. "Fully implemented" was defined as more than 80% of the program activities taught and greater than the program average degree of fidelity to program materials. All differences shown were statistically significant.

Knowledge has never been as difficult to change as attitudes and actions. The variables of interest reported were attitudinal and behavioral differences; differences are 90% greater in the measure of attitudinal changes and

85% greater in measurement of practices. It therefore appears that, "Level of implementation is most critical for the areas that seem to be the most difficult to change: those of attitudes and practices."[39]

It is clear from these articles and from other summaries of the SHEE that, if health education programs are to be successful, appropriate teacher preparation and inservice follow-up time will be necessary. Some recent examples of case studies which prove this point follow.

Frances Lawrenz described the operation of the Portal School Program at Arizona State University[40] in which the suggestions of the American Federation of Teachers and the National Education Association were followed to the extent that teachers were able to control the nature of the inservice training which they received. The program provided a model for training teachers in the use of health education curriculum materials and included the identification and selection of local "master teachers," who were trained to present the material to others. The state university assisted with the training, and the final inservice plan met all the criteria of successful inservice programs, as outlined by Hutson, which included: involvement of health teachers in decision-making, providing incentives for participation, meeting previously identified needs, changing existing teaching practices, involving outside agencies, and planning for training to

take place at local school facilities. Costs were covered by a combination of sources, including local businesses and foundation grants.

In DuShaw's article,[41] the author reported her study of three model comprehensive elementary school health education programs and found that inservice training for teachers and the use of teacher-trainers for less experienced teachers was very effective. She found that those programs which were most successful had regularly sustained inservice programs and a coordinator who regularly updated materials and assisted teachers in managing and sharing curricular materials.

Weiss and Kien found that inservice programs "significantly improved instructors' nutrition knowledge" in the elementary classroom, and that, "...The training is associated with the amount of classroom time spent on nutrition." Those attending nutrition education workshops included an average of 2.8 more hours each year of nutrition activities in their classrooms than those teachers who did not attend workshops.[42]

In a recent study of the implementation of the Teenage Health Teaching Modules, developed by EDC, Nelson et al. found that:

> Implementation failure occurs when the teacher is unsuccessful in achieving the desired learning outcomes because of non-adherence to a curriculum protocol previously determined to be effective.

Teachers were given an intensive course in the use of the modules, and as a result, approximately 60% of the modules were used by participating teachers in the year following the training. Teachers self-reported their use of the modules. The single best predictor variable of the use of the curriculum was the teacher's evaluation of the workshop. Inservice training which meets the needs of the teachers involved is therefore an important factor in determining the use of this particular curriculum.[43]

Implementation of Substance Abuse Prevention Curricula

The following studies report progress in analyzing the result of curriculum implementation projects in the area of substance abuse education.

Beale conducted a study in 1986 in the Boston Public Schools to evaluate the effectiveness of a developmentally-oriented substance abuse curriculum, The Ombudsman Program. The study used a quasi-experimental design. Eight middle schools participated in the study. Instructors' attitudes toward the teacher training were measured, as well as the extent to which the program was taught. The results indicated that, although the instructors were adequately trained to implement the curriculum and the students liked the program, there were insignificant effects on the students' high risk attitudes. The author concluded that,

"A contributing factor to the lack of OP's effect was poor implementation." Instructors attributed poor implementation to a variety of reasons, including insufficient preparation time and lack of administrative leadership and support. The author concluded that successful program planning must include program development, program planning and program implementation. Each of these components are mutually dependent on each other.[44]

Michael Goodstadt in his article entitled "School-Based Drug Education in North America: What Is Wrong? What Can Be Done?" concluded that, among other factors, "Drug education programs have been inadequately implemented...[and that] insufficient resources have been invested to ensure that these programs are used." Diffusion has been the major goal of most programs, with little follow-up to study actual utilization of the programs. Little effort is put into staff support beyond the adoption phase. Attention to the implementation process of drug education programs necessitates the commitment of resources for follow-up and evaluation of the programs. Part of the failure to evaluate programs may stem from the inherent "threat" to program developers if the program is felt to be unsuccessful.[45]

Tricker and Davis studied conditions in which two substance abuse prevention curricula were implemented in

three Oregon school districts. Data related to teacher involvement were collected from on-site interviews in 21 schools, using a 43-item personal interview questionnaire. The authors used a stratified random sample of 44 teachers of drug education. The authors concluded that:

> The time spent by teachers to implement drug education in schools involves two important perspectives...The degree of impact from drug education is essentially a function of the quality of teaching, involving the degree of teacher commitment and the length of time allowed for instruction...Organizers of drug education in schools should adopt a long-term approach to implementation...and continue to think about implementation problems.[46]

Young et al. conducted a study to determine the impact of teacher training workshops in elementary school drug education on actual implementation of drug education programs. The authors also sought to find out whether a set of variables could be identified to distinguish between workshop participants who used a majority of curriculum activities in their classrooms and those who did not. Teachers had attended a five-day workshop to prepare them to teach the curriculum and subsequently responded to a "masked" questionnaire asking how much of the curriculum they had used. 324 questionnaires were sent out, with a total of 195 returned (60% return rate). A group of 105 subjects indicated that they had implemented the curriculum, while 86 did so in a limited way only or not at all. Four variables were found to affect how much of the curriculum they had used: perception of parental interest;

perceived freedom in deciding what to teach; perception of the value of their participation in continuing education workshops; and sex of the respondents.[47]

Sheppard studied barriers to the implementation of a new school-based alcohol education program in Ontario and found that time needs to be given to discuss the large problem of alcohol and drug addiction and that teachers need more than a half-day workshop allocated for the presentation of materials in order to cover the discussion. Time must also be allocated by planners of the teacher training sessions to the assessment of the needs of teachers and administrators and to the development of ways of meeting these needs or the program will not be implemented.[48]

Two articles about the Alcohol and Drug Education Program (ADE) in Chicago discuss some of the "realities" of alcohol and drug education. Sherman et al. described the problems which were encountered during program implementation as well as some of the "creative" responses of staff members to these problems.[49,50] The ADE Program made a concerted effort to provide an ongoing support network to trained teachers, entitled, "The Teacher Support and Exchange Network." Trained teachers are provided year-round continuing education sessions, a newsletter and membership in a resource library. Teachers are encouraged to share experiences they have had in implementing sub-

stance abuse education activities in their schools. (A high Level of Use) Teachers are also provided with professional consultation regarding their individual programs. Teachers also voluntarily participate on an Advisory Board to provide suggestions for continuing education activities.

The authors concluded that these support activities are extremely important because, although teachers seemed genuinely motivated and eager to start teaching the curriculum,

> ...The ADE Program [was] operating without a mandate from the involved school boards and must realistically be viewed as existing rather low on the list of priorities seeking classroom time. Aware of this reality, ADE Program staff recognize that teachers cannot expect a great deal of support from their school administrations.

This program, like others reported above, must receive ongoing support in order to maintain the impetus of highly trained teachers to continue to implement what they have learned in their training sessions in their own classrooms.

These readings indicate that staff training and administrative support supplement the teacher's knowledge about health and are more likely to ensure that the teacher will add the activities to his/her daily teaching. Without a special effort on the part of professional development personnel to train and give supplementary assistance to teachers, curriculum efforts will not be a success.

Administrative commitment to staff training and staff support activities indicates to teachers that the program is important to the school system and that what they are doing is of value. Follow-up to training through evaluation activities of the implementation process is essential in proving the success of the training in affecting teacher behavior, as well as in reaching students with the goals of the curriculum.

Footnotes

[1] Charles E. Basch, Research on Disseminating and Implementing Health Education Programs in Schools, JOSH 54:55-65, 1985.

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CHAPTER III

DESIGN OF STUDY

Fifteen hundred elementary school teachers received copies of the new Health Curriculum Objectives at the end of February, 1987. Each teacher received with the document a questionnaire (see Appendix A), which sought to find out his/her level of teaching of the various parts of the health education curriculum prior to receiving the document. In particular, results were analyzed to see how many fourth grade teachers were, at that time, teaching about substance abuse prevention, including alcohol and tobacco. In addition, all elementary school teachers were asked to indicate the areas of the curriculum in which they felt they needed the most inservice training.

Results of the survey indicated that, of 396 elementary school teachers who responded to the questionnaire, 163 -- or 44% -- stated that they needed assistance implementing the Substance Abuse Education section of the curriculum document; Substance Abuse Education was the area in which the largest number of teachers wished assistance.

Because the Boston Public School system serves a high risk group of young people, many of whom live in inner city neighborhoods blighted by crime and poverty, education in the prevention of substance abuse is greatly needed. Names of streets and areas of the city have become synonymous

with drug dealing, gangs and violence. Drugs are a problem on the streets and in the schools and affect student performance in a variety of negative ways in the classroom. The Superintendent of Schools has made the prevention of drug abuse one of the top priorities for the next few school years, in accordance with the goals of the Boston Education Plan.

While problems related to drug abuse are evident at the middle and high school levels, without major intervention at the elementary school level, where student attitudes and decision-making abilities are more amenable to change and development, drug and alcohol abuse may continue to affect the opportunities of many children for full and healthy lives. Globetti has suggested, in his study of alcohol education programs for minority youth, that "Target groups need to include youth at the elementary level because children of six and seven have already formulated ideas about alcohol."[1] Hutchinson and Little have suggested that students need to know the effects of substance use and abuse and to develop problem-solving skills and that, "Assistance needs to be offered not only to teenagers but also to younger elementary school children [who] are increasingly experimenting with alcohol and drugs at an earlier age."[2]

The Study Group

With strong governmental emphasis on drug and alcohol abuse education, Boston, along with other school systems, has turned to federal/state funding for teacher training in this priority area of health education. In the 1986-87 school year, The Governor's Alliance Against Drugs agreed to fund a one-year grant to train fourth grade teachers in the Boston Public Schools in the use of a drug abuse prevention curriculum called D-E-C-I-D-E. The curriculum was selected by a special Drug Curriculum Advisory Sub-Committee of the Department of Instructional Services. The curriculum was developed at Stanford University by Project Pegasus and has been nationally validated. It is available for grades K-12 and not only contains substantial information about drugs and alcohol but also includes important lessons in the affective domain. Lessons include areas such as: decision-making; resisting peer pressure; developing self-esteem; recognizing the effects of advertising on drug usage. (Appendix B)

The fourth grade was selected for the initial introduction of the curriculum because it was felt to be a "gateway" grade, in which young children are easily influenced by their peers to start to use drugs; therefore, it is important to reach these children before they make the crucial decision to start to use drugs. The goal of

the substance abuse prevention program is aimed at providing them with the knowledge and skills to refuse to become involved in the local drug "scene," which many of the children at the fourth grade level are able to describe in detail to their teachers. Therefore, the Department of Instructional Services requested all elementary school principals to release one or more of their fourth grade teachers to participate in a three-day training session in the use of this curriculum. Teacher training was provided by The Prevention Center of The Medical Foundation, which is funded by the Massachusetts Department of Public Health. The Center provided three highly qualified and experienced trainers for the sessions.

The design for the training was developed jointly by the Department of Instructional Services and by The Prevention Center. The size of the groups of Boston Public School teachers designated by their principals to be trained averaged 20-25 participants. Teachers were assigned to one of five training sections by their principals, and they were assigned to the groups according to the district in which their school was located. Each section consisted of three six-hour training sessions, one or two weeks apart -- the equivalent of three full school days. Teachers arrived at 8 A.M. and left at 2:30 P.M. All training sessions were completed between the beginning of March and the beginning of April.

The time lapse between classes was arranged specifically to allow the teachers to try out some of the material with their classes and to report back about how the lessons were received. They were encouraged to bring to the following class(es) some of the resources they had used in teaching the lessons or materials their students had developed as they took part in the program.

Funding from the grant provided financial support for the hiring of substitute teachers; the concept of using substitute teachers was a major issue which needed to be resolved in order to set up the program. The ability of the teachers to attend the training sessions was dependent upon administrative support for the allocation of substitute teachers to their classrooms.

The Method of Teacher Training

Training consisted of the following: an opening session which included an investigation of the participants' own attitudes toward drugs and alcohol; up-to-date knowledge about the subject; an overview of substance abuse prevention methods; introduction to group process education; introduction to group process drug education; introduction to the D-E-C-I-D-E model for decision-making; modeling of D-E-C-I-D-E lessons; and identifying community resources for drug abuse prevention.

Teachers were given true-false pre-tests on their knowledge about drugs and alcohol as well as an attitude questionnaire about drugs and alcohol; they were also given post-tests by the Prevention Center to determine how much they had learned from the training and to assess their attitude toward the format and presentation of the sessions. (Appendix C)

The curriculum involved (D-E-C-I-D-E) required a possible re-orientation of teachers to the presentation of materials through group process sessions. Students are asked to share ideas, feelings and experiences with the teacher and with each other. The group process educator must provide an atmosphere in which this kind of open discussion can take place. Group process drug education is also a new approach for some teachers. Lessons concentrate less on factual presentations and more on the meaning and function of drug use. Personal decision-making is a large issue stressed in this type of education, and teachers must become involved in all the elements of this strategy including the discussion of peer pressure, risk-taking, value development, problem-solving, self-image, developing empathy and other crucial areas in the affective domain. Teachers must be able to guide discussions and help students develop their communication skills, and they must be flexible enough to adapt the curriculum to the interests, needs and limitations of each class.

The results of the final assessment by the teachers of their training program, as summarized by The Prevention Center, are shown in Appendix D. In general, the training sessions were found to have met the objectives of the teachers who attended. The content and teaching strategies were felt to be appropriate and effective and the three trainers provided by the Center of excellent quality.

Although 130 teachers were assigned to attend the sessions, only 100 teachers completed the training sessions. Some of the problems encountered in attending all three sessions included: the lack of substitute teachers, illness and administrative duties in their schools. However, of the 76 schools invited to send teachers, all but 12 participated in the project by sending at least one fourth grade teacher to the training sessions.

The Implementation Questionnaire

Two months after the completion of the training sessions, teachers participating in the project were sent a follow-up questionnaire (see Appendix E) to determine their degree of implementation of the curriculum and the areas in which they needed further assistance. The questionnaires were anonymous so that teachers would not be afraid to respond frankly about their use or non-use of the curriculum. The questionnaire sought to discover the degree of

implementation of the curriculum as well as the relationship between implementation of the curriculum and various other factors. The questionnaire was pre-tested with a group of twelve teachers who had been involved in the training program. A letter of transmittal explaining the importance of the return of the questionnaire was sent by the Director of Research and Development of the Boston Public Schools as an accompaniment to it. (See Appendix F) Questionnaires were to be returned in unmarked envelopes to the Health Coordinator in the Department of Instructional Services.

Questions asked were the following:

Background questions:
- Years of teaching at the elementary level
- Class size and composition
- Previous teaching about drug abuse

Questions on training:
- Which "strand" did you attend?
- How many sessions did you attend?
- How did you feel about the method of using substitute teachers?
- What other method would you suggest?
- Did you feel you were adequately prepared by your training?

Questions on implementation:
- Do your philosophy and goals agree with those of the curriculum?
- When did you start implementing the curriculum?
- If you haven't started, why not?
- How have you incorporated this curriculum into your classroom work during the school week?
- How often do you teach the material? For how many minutes?
- What resources and supplementary materials have you used?

Specifics about the curriculum:
What parts of it have you completed?
How many lessons have you used? How successful were they?
Why do you think they were successful?
What group process methods have you used?

What future changes and recommendations would you make?
Would you like to be involved in training others?

The central questions to be considered in this study were: Is this type of inservice training model valuable in ensuring teacher implementation of a curriculum innovation? How can successful innovation be measured? How can teachers integrate this material into their regular classroom work? If they agree with the philosophy and goals of the curriculum, will teachers be more likely to implement it? How can they be provided with an opportunity to be creative about the use of the material which is given to them? What assistance do they need in order to do a good job of implementing the curriculum? What resources have they improvised to assist them in their work? What stage of implementation (or Level of Use) had they reached at the end of the first semester after the initial training? What were their major "Stages of Concern" regarding future use of this curriculum during the next school year? How much of the curriculum as it was written is actually being used, and which parts of it are considered most successful with fourth grade inner city students and why?

The survey sought to find clues about successful training programs and the type of format teachers preferred. With the present emphasis on basic skills training, solutions found by the teachers to integrate the material into the regular classroom would be of value to future use of the curriculum. If this type of subject matter could be successfully incorporated into Language Arts, Science, Social Studies and other parts of the regular elementary school curriculum, the prospect for the inclusion of substance abuse prevention activities during the regular classroom day would be more positive. In addition, the teacher and the school administrator would feel more comfortable in devoting time to using the curriculum.

The degree of implementation of a curriculum may be measured in various ways. Morris and Fitzgibbon have referred to data collection methods including record review, observation, trace evidence and self-report.[3] Two recent surveys using the self-reporting method should be mentioned here. Both sought to inquire about the degree of implementation of a prescribed curriculum. One involved an evaluation of the use of the "Teenage Health Teaching Modules," which were developed by EDC of Newton. In this study, data collection methods included a measure of the self-reported number of modules used by trained teachers. The use of the modules was then related to certain key

variables in the training or in teacher characteristics.[4] A second related study involved the correlation of certain variables with the implementation of a drug education curriculum in Arkansas. This survey evaluated the use of the curriculum by participants in previously held workshops. The evaluators used a "bogus" source for their questionnaire -- an independent educational research institution -- so that teachers would not send in a biased response. There was a 60% return rate, and the authors categorized teachers as "implementers" and "non-implementers" and tried to identify the variables which differentiated them from each other.[5]

Data Analysis

Data analysis of the 64 questionnaires returned by the 100 participants was conducted, using statistical methods. Frequency distribution tables were developed using the SPSS-X program. Open-ended answers were coded and summarized. Implementers who had used 12-14 lessons were separated from those who had used 0-2 lessons, and characteristics of these two groups were studied. Cross-tabs were investigated in order to seek relationships between certain key variables. Tests of significance were applied to findings.

Footnotes

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CHAPTER IV

RESULTS OF STUDY

This chapter will present the findings of the 64 questionnaires returned by the 100 instructors who took part in the D-E-C-I-D-E training.

Question One concerned the years of experience of the teachers at the elementary school level.

Table 1. Respondents' answers to question: "How many years have you been teaching at the elementary school level?"

Value Label	Frequency	Valid Percent
1 to 5 years	9	14.1
6 to 10 years	6	9.5
11 to 15 years	13	20.6
16 to 20 years	13	20.6
More than 20 years	22	34.9
	1	MISSING

In observing the results, it is clear that the teachers involved in this training program were highly experienced teachers, that the largest number had been teaching at the elementary school level for more than twenty years, and over 76% for longer than eleven years.

Question Two concerned the characteristics of the teachers' classes with regard to number of students, sex of students, racial composition of the classes and number of bilingual and special education students.

Table 2. Characteristics of classes of teachers involved in training program.

Total number of students:	1265
Male students:	636
Female students:	629
White students:	359 (28%)
Black students:	646 (51%)
Latino students:	152 (12%)
Other minority students:	108 (9%)
Bilingual Students:	186 (15%)
Special Needs students (mainstreamed):	202 (16%)

This racial/ethnic breakdown may be compared to the characteristics of the school population at the fourth grade level (4,049), which is 22% White, 49% Black, 22% Latino, 8% Other Minority. The group of teachers in this study had more White and fewer Latino students than the system as a whole. The bilingual breakdown for the fourth grade as a whole is 16% and for Special Needs students, it is 17%. The average number of students per class was 19.8, which is smaller than the average for fourth grade classes across the city.

Question Three asked whether or not the teacher had previously taught about drug/alcohol abuse in his/her class.

Table 3. Answers to question: "Have you previously taught about substance abuse in your classroom?"

Value Label	Frequency	Valid Percent
Yes	26	41.3
No	37	58.7
	1	MISSING

Although the teachers were highly experienced, almost 59% had not previously taught about substance abuse. As mentioned in an earlier chapter, drug education was the area in which the largest number of elementary school teachers stated that they needed assistance.

The next question reveals what materials the teachers who had previously taught about substance abuse had used in their classes.

Table 4. Answers to question: "If you have previously taught about substance abuse, what type of curriculum have you used?"

Value Label	Frequency	Valid Percent
Teacher-made materials	22	84.6
A special curriculum	4	15.4

Of the 26 teachers who had taught about substance abuse, 22, or almost 85%, had used teacher-made materials. Most of these materials consisted of pieces of curricula they had received from various agencies or from participating in courses of study in college or in after-school workshops. They were usually compilations of materials the partici-

pants had found valuable in their previous teaching about substance abuse.

The next question asked the same teachers how they rated the materials they had previously used with D-E-C-I-D-E.

Table 5. Answers to question: "How would you rate the curriculum you previously used with D-E-C-I-D-E?"

Value Label	Frequency	Valid Percent
Previous: Better	5	19.2
Previous: Not as good	21	80.8

Almost 81% felt that D-E-C-I-D-E was better than the materials they had previously used to teach about drugs and alcohol.

The teachers were then asked to reply to a question about <u>why</u> they rated D-E-C-I-D-E better. Eighteen of the 21 teachers who preferred D-E-C-I-D-E replied to the question, and their answers fell into various categories.

Table 6. Answers to question: "Why did you rate D-E-C-I-D-E better than your previously used curriculum materials?"

Value Label	Frequency	Valid Percent
More up-to-date information	2	11.1
Better resources/ideas	3	16.7
More comprehensive	9	50.0
Easier to use	2	11.1
Geared toward children	2	11.1

The largest number of teachers felt that D-E-C-I-D-E was more comprehensive than material they had previously used. One of the five teachers who preferred his/her own materials stated that it was because D-E-C-I-D-E relied too much on the use of additional audiovisual resources.

The next set of questions asked about teacher training. Teachers were asked about what strand they attended and whether they had attended all three sessions. The respondents were fairly evenly divided among the five sections, and almost 83% had attended all three sessions.

Table 7. Answers to question: "Did you attend all three training sessions?"

Value Label	Frequency	Valid Percent
Yes	53	82.8
No	11	17.2

Respondents were asked how they felt about the use of substitute teachers to come into their classrooms so that they could attend the training. Table 8 shows that 70% of the respondents (n=60) felt this was a good idea. 16.7% felt it was only a fair idea, and 13.3% thought it was a poor idea.

Table 8. Attitudes of program participants to the use of substitute teachers to replace them in the classroom during the training sessions.

Value Label	Frequency	Valid Percent
Good idea	42	70.0
Fair idea	10	16.7
Poor idea	8	13.3
	4	MISSING

Respondents were then asked why they answered as they did about the use of substitutes, whether positive or negative. Teachers gave the reasons for their feelings on the subject and why they felt as they did.

Table 9. Teachers' reasons for their answers about the use of substitute teachers to replace them in the classroom during the training sessions.

Value Label	Frequency	Valid Percent
Positive Comments		
Left teachers free	6	12.0
Substitute teachers were available	7	14.0
Teachers are not as tired	7	14.0
Needed the three days	3	6.0
Good idea if subs available	4	8.0
Negative Comments		
Substitutes can't handle class	1	2.0
Class suffered as a result	5	10.0
Substitutes weren't reliable	15	30.0
Poor arrangement	1	2.0
Condense information into one day	1	2.0
	14	MISSING

The positive comments were indicative of the teachers' appreciation of the ability to have days free in which to concentrate on the subject matter of the training sessions and not be as tired as they would have been at the end of a long school day. Teachers whose building administrators had found substitute teachers to replace them responded in a positive way. Of the negative responses, the largest number had found that substitutes were not provided for their classes, and they worried about the adequacy of the handling of their students while they were away.

Teachers were then asked what alternative method they could suggest for the training sessions and how they thought they could be set up so that the students would not "suffer" from their absence from the classroom.

Table 10. Teachers' suggestions for alternative methods of conducting training sessions.

Value Label	Frequency	Valid Percent
Use of principals/ admin. to cover	5	18.5
Get more substitutes	3	11.1
Pay stipends for overtime	4	14.8
Use inservice days	10	37.0
Use the same substitutes	3	11.1
Use other teachers to cover	2	7.4
	1	MISSING

The largest number of teachers who made suggestions thought inservice time was the best time for these training

programs. The next largest number suggested that principals or other school administrators cover classes for the teachers being trained. Four teachers preferred overtime pay for after school or Saturdays. The comment about "using the same substitutes" refers to the use of substitutes who would be asked to stay for a period of subsequent days during the training. Getting more substitutes or using other teachers to cover were strategies which were also suggested.

Teachers were asked if they felt they were adequately prepared to go ahead and start to teach the curriculum in their classrooms.

Table 11. Teachers' attitudes toward preparation for use of curriculum.

Value Label	Frequency	Valid Percent
Yes, well-prepared	42	65.6
Not sure	20	31.3
Not well-prepared	2	3.1

Almost 66% of the teachers said they felt they had been adequately prepared to use the curriculum. Another 31% said they were not sure, perhaps because they had not yet started to use the curriculum. Only two teachers said they had not been well prepared.

The next set of questions concerned the use of the curriculum in the classroom. The first consideration was

whether the teacher him/herself agreed with the goals of the D-E-C-I-D-E curriculum, as outlined in the introductory chapter and as presented by the trainers. The very title of the curriculum indicates that it stresses the goal of enabling the child to make decisions about drugs and alcohol. The curriculum is not one which states, "Just Say No" to drugs and alcohol! Rather, it encourages the young child to think about why he or she should decide against using drugs and the consequences of starting to use them. Some people do not agree with this philosophy; that is the reason for asking this question.

Table 12. Respondents' answers to question about how goals of the curriculum relate to their own goals for teaching children about drugs.

Value Label	Frequency	Valid Percent
Same as mine	59	95.2
Different from mine	3	4.8
	2	MISSING

In answer to the question, 95.2% of the respondents said they had the same philosophy of teaching about substance abuse; only 4.8% (n=3) differed with the philosophy as stated in the introduction to the curriculum.

It is clear that teachers did not differ substantially from the goals of the curriculum for the children in their classes. Those who did differ were not specific about what their goals were in relation to their students,

except for one teacher, who stated that he/she thought the curriculum presented too much information about drugs and alcohol. In a recent study of the implementation of a health education curriculum in central Minnesota, the author found that the degree of implementation to and fidelity to the curriculum reflected the "perceived compatibility of the formal curriculum with personal educational philosophy."[1]

Teachers were then asked when they started to use the curriculum.

Table 13. Responses to question about when teachers started to use the curriculum (D-E-C-I-D-E).

Value Label	Frequency	Valid Percent
Before last training session	25	40.3
After last session	24	38.7
Haven't started	13	21.0
	2	MISSING

Forty percent of the respondents had started to use the curriculum before the last training session. (Sessions were spaced one or two weeks apart.) Another 39% had started to use it after the end of the training sessions. Thirteen respondents or 21% had not yet started to use the curriculum.

Teachers were asked their reasons for not starting to use the curriculum before the end of the school year.

Table 14. Teachers' reasons for not starting to use the curriculum.

Value Label	Frequency	Valid Percent
Not applicable to class	1	8
Lack of time to teach	9	69
Other reasons	3	23

The largest number of teachers who had not started to use the curriculum said that they did not have time to teach the class. Because the funding for the project came through so late in the year, teachers may have already planned the months of April, May and June. A few also indicated that they were very involved with end-of-the-year testing and preparation for the testing procedures.

The next set of questions were concerned with the use of the curriculum in the classrooms of the teachers who had started to implement the lessons.

Table 15. Teachers' responses to question about how they incorporated the curriculum into the regular school day.

Value Label	Frequency	Valid Percent
Integrated into language arts	9	18.0
Integrated into social studies	5	10.0
Integrated into art	5	10.0
Integrated into health	11	22.0
Set up as a special class	7	14.0
A combination of two subjects	13	26.0
	14	MISSING

The largest group of teachers had integrated the curriculum into two subject areas, one of which was usually health. Other subjects mentioned were science and math. The next largest group had used the material in health alone, and the third largest group had used it in language arts classes. Seven teachers had set it up as a special part of the school day.

Teachers were then asked about how long they devoted to each segment of the curriculum. Among those teachers who indicated that they had used a specific time allotment, the most frequent response was for varying times in order to fit the lessons into the school day. The curriculum is flexible enough to permit this. The next preferred time allotment was for 15-20 minutes, a relatively short period of time for the fourth grade level. Thirty-seven percent used a flexible amount of time to teach the lessons.

Table 16. Number of minutes teachers allotted to lessons.

Value Label	Frequency	Valid Percent
15-20 minutes	16	31.4
20-30 minutes	12	23.5
30-40 minutes	4	7.8
Varying amounts of time	19	37.3
	13	MISSING

Teachers were next asked about their use of additional resource materials.

Table 17. Response of teachers to question about their use of additional resource materials to teach the curriculum.

Value Label	Frequency	Valid Percent
Yes, used materials	21	42.0
No, did not use	29	58.0
	14	MISSING

Forty-two percent of the respondents had used additional resource materials in teaching the curriculum. However, a larger number had not, perhaps because of difficulty in obtaining them from the teacher resource center.

Table 18 indicates that teachers used a variety of materials to teach the lessons, including the ones listed. In addition, those who used a combination of materials mentioned the use of television commercials and programs to illustrate the impact of the media on drug use.

Table 18. Types of additional resource materials used by teachers to teach curriculum.

Value Label	Frequency	Valid Percent
Materials from agencies	3	13.6
Filmstrips	3	13.6
Magazines	9	40.9
A combination of two resources	7	31.8
	42	MISSING

Table 19 indicates teachers' use of supplementary activities in teaching the curriculum.

Table 19. Supplementary activities used by teachers to teach the curriculum.

Value Label	Frequency	Valid Percent
Newsletters	2	4.2
Displays	3	6.2
Poster contests	2	4.2
Compositions	10	20.8
Worksheets	1	2.1
Story writing	2	4.2
A combination of two	28	58.3
	16	MISSING

Teachers indicated that a wide variety of materials was used. Teachers were inventive, especially in areas related to language arts, in order to get students to use the skills needed to master reading and composition while learning about drugs and alcohol. In addition to the areas listed above, in the category, "A combination of two," some teachers mentioned the use of skits and games, which would enable the students to use dramatic and imaginative skills as they became involved with the lessons.

Teachers were asked about whether they needed additional help in teaching the curriculum in their classes. Table 20 indicates that almost 47% said they would like more resource materials. Twenty percent wanted more assistance with classroom strategies, and 29% wanted a combination of these two modes of assistance.

Table 20. Type of additional help requested by teachers to assist them to teach the curriculum.

Value Label	Frequency	Valid Percent
More resource materials	21	46.7
Assistance in classroom	9	20.0
Sharing with other teachers	2	4.4
A combination of two	13	28.9
	19	MISSING

Respondents were asked whether they were able to complete all the lessons before the end of the school year.

Table 21. Response of teachers to question about whether they were able to complete all of the lessons during the remainder of the school year.

Value Label	Frequency	Valid Percent
Yes	5	9.4
No	48	90.6
	11	MISSING

Table 21 shows that almost 91% of the respondents were unable to complete all of the lessons before the end of the school year. This is not surprising in that there were only three months remaining after the last training session and that there were fourteen lessons in the curriculum. In addition, testing in the basic skills and criterion-referenced tests occur at the end of the school year, and preparation for testing starts in May. Therefore, the results were understandable in terms of time demands upon the teacher.

Respondents were asked about the reactions of students to the lessons conducted in the classroom. They were asked to rate them on a scale of 1-5 (1=least positive; 5=most positive). If the session was not covered, the teacher was asked to write "NA." Table 22 indicates the teachers' rating of the lessons and is listed in order of popularity with the students.

Table 22. Teachers' views on the reaction of students to the lessons.

Title of Lesson	Mean	Mode
Marijuana	4.625	5.000
Wrap-up/summary	4.478	5.000
OTC/prescription drugs	4.371	5.000
Resolution of peer conflict	4.233	5.000
Overview of drugs/alcohol	4.146	5.000
Getting along with others	4.103	4.000
Influence of others on decisions	4.083	5.000
Peer pressure	4.050	5.000
Pre-session/orientation	4.000	5.000
Decision-making strategies	3.975	4.000
Self-expectations	3.84	3.000
Developing empathy	3.704	3.000

Table 22 indicates that the lesson which was most successful with the students was the one on marijuana. Marijuana is a commonly used drug, which even very young children have seen in use and with which they may have been asked to experiment. The lessons on over-the-counter and prescription drugs and on resolution of peer conflict were

also highly successful. The three lessons concerned with group relationships, which included getting along with others, influence of others on decisions and the effects of peer pressure on decisions were also considered successful with these fourth graders.

An analysis of the number of lessons completed by each teacher leads to the discovery that the average number of lessons completed by the 64 respondents was six (43%).

The next question to be asked was why teachers thought these particular lessons were successful. Table 23 indicates their reasons.

Table 23. Teachers' opinions about why lessons were successful.

Value Label	Frequency	Valid Percent
Interest of class in topic	13	20.3
Lessons were simple	1	1.6
Group has had experience	15	23.4
Hands-on experience provided	1	1.6
Children worked with others	3	4.7
Helped develop self-esteem	2	3.1
Good teacher training	1	1.6
Controversial topic	1	1.6
Provided new information	2	3.1
Children able to experiment	1	1.6
	24	MISSING

Teachers felt that the reasons for the success of the lessons stemmed from the children's experiences of substance abuse problems in their own lives -- in their families, in their neighborhoods or schools -- even at their

young age. Possibly, "Interest of class in topic," could also be combined with "Group has had experience." The interest of the class in the topic could be merely because of all the media attention to the problem; however, it is likely that the great interest also came from personal experiences of the children.

Teachers were asked whether they had taught the lessons in the order in which they were listed in the curriculum guide to see how faithfully they were adhering to the recommended sequence of lessons.

Table 24. Teachers' responses to whether they taught the lessons in the order listed in the curriculum guide.

Value Label	Frequency	Valid Percent
Yes	10	20.0
No	40	80.0
	14	MISSING

Table 24 shows that 80% of the teachers did not follow the order of lessons as prescribed in the curriculum guide. However, it should be pointed out that the trainers did not follow the exact order of lessons; they used a sequence which they thought would be more meaningful to the students. Therefore, the teachers were following the recommendations of the trainers. They were also "adapting" the materials to their own classroom needs; they may have felt

that this order would be more suitable to the needs of their particular group of students.

Nelson et al. found that "...Non-adherence to a protocol previously determined to be effective," may not be altogether undesirable. The authors of this recent study stated:

> ...Teacher infidelity to a curriculum such as modifying the curriculum according to one's teaching style may have a more favorable impact than strict adherence to established procedures.[2]

The next set of questions concerned the teachers' ability to function as group process facilitators. This curriculum requires the teacher to master certain skills of working with students in small groups to develop trust and confidence and an ability to share ideas and information about drugs and alcohol.

Table 25. Teachers' ranking of their ability to function as a group process facilitator.

Group process activity	Frequency	Valid Percent
Encouraged students to participate	45	70.3
Maintained open group atmosphere	37	57.8
Maintained group rules	30	61.2
Encouraged interaction between students	28	43.8
Used a variety of techniques/ materials	17	34.7
Maintained rules of confidentiality	16	32.7

This table indicates that, as a result of their training, the largest number of teachers were able to encourage students to participate in group process activities. The next largest number were able to maintain an open group atmosphere for discussion. The next largest number were able to maintain group rules and to encourage interaction between students within the group. On the other hand, 65% were not able to use a variety of materials to work with the group, and 67% said they had not had a chance to set up and maintain rules of confidentiality.

Table 26 indicates the activities which the teachers felt they had been able to complete at the end of the teaching sessions. They are listed in order of presentation in the following chart.

Table 26. Activities teachers were able to complete by the end of the classroom teaching sessions.

Activity	Mean
Review benefits of proper drug use	.784
Discuss OTC and prescription drugs	.745
Talk about effects of smoking	.725
Discuss reasons why people smoke	.633
Present materials on advertising	.612
Use posters to illustrate lessons	.571
Develop vocabulary about drugs/alcohol	.569
Discuss basic steps in decision-making	.569
Discuss influence of others on decisions	.510
Discuss rules and laws about drugs	.469
Explain rules and procedures for group process activities	.451
Practice D-E-C-I-D-E format	.392
Discuss handling of dilemmas about drugs	.373
Discuss marijuana	.327
Practice role-playing situations	.275

- Table 26 continued -

Table 26. Continued

Activity	Mean
Discuss individual expectations/social roles	.275
Define resolution of conflict	.265
Give quiz on alcohol	.224
Review alcohol reference materials	.224
Give pre-test (Drug Knowledge and Attitude Scale)	.216
Discuss "Being a Good Friend"	.163
Discuss material on resolving conflicts	.163
Use "Getting Along with Others" worksheet	.124
Use "Imagine That You..." worksheets	.122
Give post-test	.020

This table indicates the teachers' presentations of the various lessons. Advantages and benefits of proper drug use is one of the highlights of the curriculum for this age group, and that may be the reason for their stress on this topic. The difference between over-the-counter and prescription drugs is also considered of importance for the middle grades. Information about smoking and the effects of advertising on drug/alcohol use were stressed by the trainers, and teachers were able to provide resource material on this subject through the sue of magazine advertisements and television commercials. Decision-making and the influence of peers was also stressed in the training sessions and in the curriculum itself. The post-test and worksheets appeared at the end of the curriculum, and perhaps teachers did not have time to get to them. The low ranking of the lesson on marijuana was surprising considering that in Table 22, this lesson was considered most

successful by the teachers who used it. Perhaps teachers did not have time to get to this part of the curriculum, or perhaps they thought that teaching about the "hard" drugs was more important.

The next set of questions was concerned with future use of the curriculum. Teachers were asked about the changes they would make in the teaching of the curriculum during the following school year.

Table 27. Teachers' responses to question about how they would make changes in their use of the curriculum during the following school year.

Value Label	Frequency	Valid Percent
Would begin earlier	23	54.8
Examine attitudes of class	1	1.6
Simplify lessons	2	4.8
Improve materials used	6	14.3
Need more comfort in teaching	1	1.6
Integrate more	1	1.6
Allow more time	2	4.8
Make no change	6	14.3
	22	MISSING

The largest number of teachers would begin earlier in the school year in order to allow time for the completion of the lessons. The next largest number of teachers would improve the materials/resources used, and an equal number would make no changes. More than 14% would make no change. Twenty-two teachers did not respond to this question; it is not known whether that meant they would make no changes or whether they did not reply for other reasons.

Table 28 shows the response to a question about teachers' recommending the use of the curriculum in other grades. A positive response to this question would indicate a favorable reaction to the curriculum.

Table 28. Response to question about recommending use of curriculum in other grades.

Value Label	Frequency	Valid Percent
Yes	57	98.3
No	1	1.7
	6	MISSING

The response to this question was overwhelmingly favorable. 98.3% of the respondents said they would recommend the use of the curriculum in other grades. Only one person said "No," and six did not respond.

Teachers were asked whether they would like to become involved in training other teachers in the use of the curriculum in the future.

Table 29. Teachers' response to question about whether they would like to become involved in training other teachers to use the curriculum.

Value Label	Frequency	Valid Percent
Yes	21	37.5
No	35	62.5
	8	MISSING

Table 29 showed that 37.5% of the teachers would like to become involved in being a teacher/trainer in future years, using this curriculum to train other teachers at the elementary school level. 62.5% of the teachers did not want to become involved in this type of project.

The final question asked for comments about the program. Table 30 separates the comments into positive and negative comments.

Table 30. Teacher comments about the program.

Value Label	Frequency	Valid Percent
Positive Comments:		
Excellent program	16	47.1
Extend to grades K-5	3	8.8
Use school nurse/doctor	3	8.8
Negative Comments:		
Make training simpler; too long	3	8.8
Poor facilities	5	14.7
More resources available	3	8.8
Evaluation too long	1	2.9
	30	MISSING

The largest number of comments (n=22) were of a positive nature. 47% stated that they considered this program excellent. Some complained about the facilities for the training, mainly because the room was small and had no windows. Teachers mentioned the need for more resource materials and also suggested using the school nurse/doctor to help teach the lessons.

Cross-Tabulations

An attempt was made to develop cross-tab relationships between some of the variables. In dividing the respondents into a group termed "high implementers," which was made up of those who had taught 12-14 lessons (n=16) and another group called "low implementers," who taught 0-2 lessons (n=19), the following relationships can be observed.

Table 31. Cross-Tabulation between high implementers/low implementers and years of teaching experience (Question One).

	0-2 lessons	12-14 lessons
1-5 years	0	1
6-10 years	0	6
11-15 years	5	1
16-20 years	5	3
20+ years	8	5
# of years not indicated	1	

The differences between the high and low implementers were significant. The chi square figure is 10.48. The degrees of freedom = 4, and the significance is .03. Twenty-nine respondents are missing (taught between 3 and 11 lessons). The low implementing group contained a larger number of more experienced teachers. Were these "older" teachers less likely to experiment with a new curriculum and one which required ore teaching in the affective domain? Or

were they more involved in completing their assignment to prepare students for basic skills testing.

A second cross-tab relating high and low implementers to degree of satisfaction with their training is also of interest and may be seen in the next table.

Table 32. Cross-Tabulation relating degree of implementation with satisfaction with training program (Question Eleven).

	Well Prepared	Not Sure
0-2 lessons	7	10
12-14 lessons	13	3

The chi square figure for this cross-tab is 5.54. The degree of freedom is 1, and the significance is .02. There are 29 respondents missing (taught 3-11 lessons). One person said he/she was "not well prepared;" one did not reply.

This table indicates that those who were high implementers felt that they had been well prepared by the teacher training. Those who were low implementers were not as sure about their level of preparation. There are two possible explanations for this: The first is that the low implementers were not sure about whether they were well-prepared because they had not yet started to use the curriculum. The other possibility is the reverse; they had not started to use the curriculum because they weren't confident enough as a result of their training to handle the lessons and the group process education required by the curriculum.

Another cross-tab of interest is the relationship of low implementers to their previous teaching about drugs and alcohol. Thirteen of the nineteen low implementers had never taught about drugs (68%) (Question Three). (There was no significant relationship between high implementers and their previous teaching about drugs.) See Table 33.

Table 33. Cross-Tabulation between low implementers and previous teaching experience in the area of substance abuse (Question Three).

	Taught About Drugs	Never Taught About Drugs	Percent
0-2 lessons (n=19)	6	13	68

Various other cross-tabs were investigated, but there were no significant findings.

Discussion

In this study, in addition to analyzing the frequency distributions, an attempt was made to analyze the data by developing cross-tabs between the variables.

Sixty-four of the one hundred teachers initially trained in this project returned their questionnaires. We must, of course, acknowledge possible bias in this type of questionnaire response; those who did hot favor or intend to use the curriculum may have been the teachers who failed

to mail in their responses. Because the questionnaires were anonymous, we do not know the answers to these considerations. Also, the type of questionnaire used in the study requires self-reporting of teaching activities, which may be unreliable. Ideally, classroom observation and personal interview should supplement the mailed questionnaires.

It is, however, quite clear that a teacher training program such as this one, although limited in scope, was able to make an impact on the amount of teaching about drugs and alcohol taking place at the fourth grade level in the school system. Prior to the training program, there was no comprehensive approach to the teaching of the subject; it was a catch-as-catch-can situation, with teachers using a variety of materials they had obtained from various sources. This curriculum provided them with a comprehensive approach to the problem, with ready-made activities which they could use. The quality of the trainers, with whom they showed great satisfaction, increased their ability to present the curriculum and gave them confidence in their knowledge about drugs and alcohol. Without this training, the mere handing out of the curriculum document would not have been satisfactory.

The number of teachers who eagerly started to implement the curriculum before the end of the three

training sessions indicated their excitement about the program and their confidence in their ability to try out the new teaching strategies on their classes. Indeed, many of them started to bring in materials they had used with their classes and projects developed by the students after the first session. They shared this material with other members of their training section.

One should consider the results of this study in the light of the Levels of Use studies of Loucks, Newlove and Hall,[2] as described in Appendix G. Classroom observation is the most reliable method of evaluating LoU's. However, in examining the written responses of the teachers, it appears that they have advanced fairly high on the scale of Levels of Use. "Levels of Use" are defined as:

> ...distinct states that represent observably different types of behavior and patterns of innovation use as exhibited by individuals and groups. These levels characterize a user's development in acquiring new skills and varying use of the innovation. Each level encompasses a range of behaviors, but is limited by a set of identifiable Decision Points.

In this study, only 21% said that they had not started to use the curriculum before the end of the school year (Level O = Non-Use). Level I indicates "Orientation," in which the user is exploring the curriculum and its value orientation. Ninety percent of the users agreed with the values implied in the use of the curriculum, and 83% had attended all three of the training sessions. Decision

Point A between Levels 0 and I had been decided for the teacher by school administrators who sent teachers to the training sessions; only twelve schools out of 77 did not participate in the project.

Decision Point B was reached when the teacher decided when to begin to use the curriculum. 40% of the respondents were so excited about the curriculum that they started to use it before the training sessions had ended; 39% started to use it after the last training session. Thus, it appears that many of the teachers had reached Level II before the end of the training sessions and had gone on to Decision Point C and Level III in which actual use of the curriculum started during or soon after the training sessions took place. Teachers who were proceeding to use the curriculum soon moved into Decision Point D-1, in which a routine pattern of use was established. They seemed to prefer to use the curriculum once a week for a variable period of time. They had moved into Level IV A, in which use of the curriculum had become stabilized. Decision Point D-2 was reached when they were able to alter their activities by adding supplementary materials and new ways of presenting the information to their classes. This is referred to as Level IV B or Refinement.

Decision Point E came in early June when a small group of teachers convened to discuss changes and new ideas

with their colleagues. These ideas were shared with others and disseminated to the 100 participants, enabling many of them to reach Level V (Integration).

Decision Point F involves the exploration of alternatives to or major modifications of the innovation and leads to Level VI, which is Renewal, or alternative ways of presenting the material to achieve increased impact on the students. Teachers are now examining new developments in the field and exploring new ways to relay the information to their students, through networking and sharing of ideas with other teachers.

Level VI has been achieved in this project during the subsequent school year (1987-88), during which a small group of teachers have been able to investigate ways of relating the curriculum to language arts through the creation of a document which will cross-reference the original D-E-C-I-D-E lessons and their own newly-developed activities to language arts curriculum objectives. In addition, some teachers are investigating the use of other teaching devices such as television productions, guest speakers and citywide poster contests to improve ways of teaching the materials. Support groups have met, and a Newsletter for trained "D-E-C-I-D-E teachers" has been issued four times during the subsequent school year.

Reaching out to colleagues has become a major way of spreading the word about the success of the program, with the resultant follow-up registration of 24 additional teachers in a fourth grade after-school series of training sessions; these teachers were not included in the original training program, either because they were not teaching fourth grade at the time or because they were not notified by their principals about attending or were unable to attend the sessions. As requested by the original group of teachers, the program has been expanded to the fifth grade in some schools.

Teachers have also become "Creative-Generative," as described by Tanner and Tanner,[3] as they "engage in cooperative planning, experiment and communicate and engage in problem-solving" with each other. Hopefully, as more teacher engage in higher Levels of Use, more sharing of ideas and teaching strategies will take place, and more teachers will be willing to become teacher/trainers or mentors for others in the use of the curriculum.

Cross-tabs revealed that there was a negative relationship between years of teaching and degree of implementation, with the more experienced teachers using less of the curriculum. There was also a relationship between teacher satisfaction with the training and curriculum implementation, but whether this relationship

was cause or effect is not known. Those who were not sure of their ability to teach the lessons may have been more reluctant to start. Or those who had not started may not have been sure about how adequately their training had prepared them for this type of curriculum effort. Teachers who had never taught about drugs were less likely to use the curriculum.

Footnotes

[1] Jean Marie Herman, Implementation of the Health Education Curriculum: An Assessment of Fidelity and Adaptation, University of Minnesota, Unpublished dissertation, 1987.

[2] Gary D. Nelson et al., Implementation of the Teenage Health Teaching Modules: A Case Study, Health Education 22:14-18, June/July 1988.

[3] S.F. Loucks, et al., Measuring Levels of Use of the Innovation: A Manual for Trainers, Interviewers and Raters, Austin: The Research and Development Center for Teacher Education, The University of Austin, 1975.

[4] D.L. Tanner and Laurel Tanner, Curriculum Development: Theory Into Practice, 2nd ed., New York: Macmillan, 1980, 636-640.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Lohrmann, Gold and Jubb have found that:

> The two most important factors influencing program effectiveness were curriculum implementation and priorities of developers and teachers. Teacher inservice training was the variable that most strongly affected degree of implementation.[1]

In this study, an attempt was made to evaluate a special teacher training effort in the use of a new substance abuse prevention curriculum.

The responses of the teachers involved in the study who returned the questionnaires revealed some of the strengths and weaknesses of this teacher training experience and provided some considerations for future teacher training efforts.

Although substance abuse prevention activities at early grades has been targeted on a nationwide basis, the training of teachers in this area has not been fully addressed. Handing teachers a ready-made curriculum, such as D-E-C-I-D-E, and asking them to go about using it in their classrooms, is a recipe for failure. Teachers <u>want</u> and <u>need</u> a chance to review the materials and to examine the impact of the curriculum on their own classroom activities. Their "Stages of Concern" must be addressed in any planning for teacher training.

It is important to note that the teachers who participated in the study were primary experienced teachers and yet, 58% had never taught about drugs and alcohol in their classrooms! Although teaching about health for two periods a week in the elementary school classroom has been recommended in the particular school system involved in the study, it has never been mandated, and there is no test for health knowledge at the end of the school year. Therefore, it has been up to the discretion of the individual teacher and his/her interest in the subject to teach health for two of the five periods per week allotted to science. If a teacher is inexperienced in teaching health, he or she may end up not spending any time on health.

Of the teachers who indicated that they had indeed done some teaching about drugs and alcohol, most had used teacher-made materials. Therefore, the introduction of a totally new curriculum (D-E-C-I-D-E) was an innovation and something about which they might well have been concerned. What was it? How would it affect them and their students? What effect would it have on their classroom activities? And how could it be fitted into other subject areas? After the training sessions, teachers who had used their own teacher-made materials to teach about drugs and alcohol (n=13) rated the material not as good as D-E-C-I-D-E, which they felt was more comprehensive and timely.

The "Concerns-Based Adoption Model" (CBAM)[2] referred to by Loucks and Hall, described teacher reaction to new curriculum ideas which may range from awareness about an innovation to informational concerns, personal concerns (How will it affect me?), management concerns, concerns about consequences (effects on children), collaboration with other teachers, and refocusing (ideas for something that would work better); these concerns must be addressed if the program is to succeed.

The training program described in this study attempted to answer some of these concerns by involving the teachers in strategies which would enable them to become knowledgeable about the curriculum itself and to adopt/adapt the materials to their own classroom use. The expressed need for ongoing support and assistance with resources was recognized and provided for after the initial training took place.

The findings of the study indicated that, while many teachers were unable to complete all the lessons, many others (79%) had started to teach the curriculum -- some even before the training program had been completed. It is understandable that, because the program took place late in the school year, the entire set of lessons could not be implemented. Teachers had adapted the curriculum to their own needs by using the lessons in a different order than

that in the teaching guide and by infusing the material into other subject matter areas, such as language arts.

Since the participation of the teachers was mandated from the "top down," that is, they were told to report to the training sessions on a certain day and for the full three days of training, this was not a program in which they had chosen to participate. They had also not been involved in the planning of the sessions. On the whole, however, their attitude was not one of antagonism or hostility; rather, as the survey showed, they enjoyed the opportunity to participate in the training during the school day when they were less tired and were treated as professionals. Their main concern was for the welfare of their students, who may have suffered because of the lack of substitutes available to replace them in the classroom. Teachers were pleased at the chance to participate in sessions which not only gave them information but also provided a source of professional growth as they learned about the group process and methods of teaching subjects which required skills in areas involving the affective domain.

One concern expressed by teachers was the lack of adequate substitute coverage of their classes. Because of their concern, 16% of teachers responding suggested a possible alternative method of teacher training during monthly two hour inservice time; this plan would be an

ideal compromise but would require administrative agreement with the proposal that time allotted to inservice activities be devoted to curriculum development or adaptation, teacher training and staff support.

Unfortunately, most school-based administrators prefer to use inservice time for discussion of school-based matters and do not allow substantial blocks of time for teacher sharing of ideas and resource materials. The small curriculum support staff at the central and district offices have limited time in which to work with trained teachers to assist them with problems which may have arisen during attempts to implement the curriculum. Furthermore, teachers are not eager to give up their after-school time to teacher training, regardless of the overtime remuneration which they receive. If teachers are to work for overtime pay or stipends, they cannot be mandated to use a curriculum, since this overtime activity is voluntary. Thus, within a large urban school system, there is no single method for training teachers. Systems must experiment with various methods of teacher training, including the use of Saturdays and school and summer vacations, with additional remuneration, or the planned use of inservice time.

One of the "Stages of Concern" mentioned by Hall and Loucks was that of management of the innovation in the classroom. Seventy-nine percent of the teachers who

returned the questionnaire indicated that they had started to implement the curriculum before the end of the school year and that they had been well-prepared to do this by receiving and modeling ideas about classroom management procedures during the training sessions. A full 40% had started before the end of the third session. One reason for their eagerness to start may have been the fact that 90% of them agreed with the goals and philosophy of the curriculum itself. As Brown and McIntyre pointed out, "...The innovation will be implemented if the teacher has a favorable attitude toward it."[3]

A number of teachers were able to incorporate some of the activities into language arts, social studies and other ongoing curriculum activities. They were also able to use a large number of supplementary activities to teach the curriculum. Brown and McIntyre also pointed out that the teacher must be able to "...modify his current patterns of teaching" and that he must learn how to introduce the new curriculum.[4] The large number of teachers who were satisfied with the preparation they received through the training sessions would seem to have had this need met successfully.

When asked about the use of additional resource materials and supplementary activities teachers were using to teach D-E-C-I-D-E, they indicated that they had used a wide variety of activities. Their willingness to experi-

ment with many different ways of teaching the materials indicates that they have been able to reach a higher level "Stage of Concern" about the curriculum, namely that of "refocusing," or looking for new ways to present the subject. With the current emphasis on reading and writing as goals of the elementary school teacher, a major interest of teachers in this project was the problem of fitting this curriculum into the ongoing language arts program. At the very end of the school year, a group of fifteen teachers met to share ideas about classroom presentations with each other and developed a set of materials to be used during the following school year in conjunction with the curriculum; the central office mailed this document to all participants in the program.

Although 91% of the teachers who responded were unable to complete all of the sixteen lessons, 79% had started to use the lessons before the school year ended. An average of six lessons was completed by the teachers. Teachers rated the lessons they had used according to how successful they had been with the students in their own classrooms and why they thought these lessons had been successful. Because students had had personal experiences with the topics they were discussing, teachers felt that interest was extremely high in many of the areas discussed in the curriculum. Thus, the "Stage of Concern" which involved "consequences," or effect on the children, was

satisfied for many teachers when they discovered that their students were knowledgeable about the problem of substance abuse.

Teachers were able to involve their students successfully in group process education, which is the essential to the teaching of this curriculum. Ninety-two percent of the teachers who returned the questionnaires felt able to encourage their students to participate in the group process. If one looks at the fidelity of the group of respondents to the curriculum, it appears that, although they adapted some of the material to their own classroom needs, they were able to complete a number of the activities included in the teaching plan despite the limited amount of time remaining in the school year. (Training was done between March 1 and April 1 because of a delay in the funding source for the grant.)

Teachers did not adhere to the order of lessons in the curriculum guide, but in the training sessions, the trainers presented the lessons in an order they thought would be more appropriate. Therefore, the teachers were adhering to the recommendations of their trainers. They may also have adapted the order of lessons to the current needs of their students.

Although the lessons were not completed in the order in which they appeared in the training manual, teachers were able to incorporate a number of the most important

lessons. In this way, they became "user-adapters," as described earlier by Ben-Peretz.[5] Hopefully, in future years, they will be able to include more sections of the curriculum in their presentations -- especially if they start earlier in the school year.

Regarding future use of the curriculum, almost 90% recommended the use of the program in other elementary grades, and 55% said they would plan to begin earlier in the following school year. Forty-seven percent of those who commented on the program at the end of the questionnaire said that it was an excellent program. It should also be noted that, although teachers were told that they need not sign their names to the questionnaires, almost half of them signed their names and that of the schools, indicating a positive feeling about the project and a willingness to continue to be involved in follow-up activities. Even teachers who had some negative comments provided their name and school identification.

The cross-tabulations revealed that teachers with more classroom experience were less likely to implement the curriculum. The "low-implementers" were also more likely to be those who were unsure about whether or not their training had prepared them adequately to teach this kind of curriculum. The possibility that the "low-implementers" were less comfortable with this kind of group process drug

education increases the necessity for follow-up staff support efforts for teachers in their classrooms.

General Recommendations

In a recent study of implementation of substance abuse education programs in schools, Tricker and Davis concluded that:

> The degree of impact from drug education is essentially a function of the quality of teaching, involving the degree of teacher commitment and the length of time allowed for instruction.[6]

The SHEE study, reported earlier, defined full implementation as

> [the devotion of] at least the minimum number of instructional hours prescribed by program designers, completing over eighty percent of the program activities, and using program materials faithfully.[7]

Thus, in order to evaluate "true" implementation of substance abuse prevention efforts, there needs to be dual commitment to the program -- from the administration of the school system, both central and on-site. The central office is in a key position to mandate the number of hours which must be devoted to substance abuse education. It is only in this way that a school system can forcefully indicate its commitment to the prevention of substance abuse. Many systems give "lip service" to prevention

programs but fail to mandate adequate teacher training or classroom hours of instruction. Nor do they provide for follow-up with teachers already trained through the provision of staff support activities.

Cox[8] felt that central office staff should be the "linchpins" of curriculum efforts, but in a large school system with an emphasis on basic skill development, money for staff support will usually be allocated to the areas of language arts and mathematics, in preference to "frill" areas such as health education. What, then, will be the source of staff training and support for programs such as this one? Must they rely for moneys and staffing on grant funding, with its inevitable unpredictability?

One creative solution has been found in Boston through a two-year training program for the development of an Institute for Drug Education Area Specialists (I.D.E.A.S.) at Boston University School of Education. The eighteen specialists will be trained to provide site-specific, on-the-job peer group assistance to other teachers at their own grade level and in their own district. The teacher/trainers will also be rewarded for their efforts by receiving free course credits to apply to their own graduate programs and to advance their professional growth. It is interesting to note that four of the six elementary school teachers selected for this project were involved in the original D-E-C-I-D-E training!

School systems will need to seek innovative ways both to develop and to adapt curricula, to train teachers and to support them after they are trained. Administrators must make a commitment to devoting inservice time to these efforts and to funding the work of central and district office curriculum specialists to make on-site visits to observe and to assist implementing teachers with new ideas and strategies for using the curriculum.

When one compares the number of teachers trained in the D-E-C-I-D-E curriculum in 1986-87, who were assigned to attend during the school day (100), with the number who attended after-school sessions in 1987-88 for overtime pay (40), it is easy to see that administrative support for in-school time spent on curriculum issues is crucial to the success of the program. Teachers are tired at the end of a long school day and prefer not to engage in lengthy training sessions. While they admit their preference for released time for training, they worry about their students' welfare while they are away from their classes, especially since substitutes are in such short supply. A cadre of carefully recruited long-term substitutes might be specially trained to cover for such training programs and could be rotated to the schools and grades which need their services during the school year.

Teacher training alone is not enough; as Loucks and Hergert[9] have pointed out, "Help and support given teachers

after planning and initial training is much more crucial for success than the best training money can buy." The long-term effects of any large-scale training effort such as that used for D-E-C-I-D-E will surely fail if follow-up activities are not maintained and evaluated. Tricker[10] found that program coordinators who work to ensure the maintenance of the program are essential to the success of the implementation of a substance abuse prevention curriculum.

Two studies evaluating the Alcohol and Drug Education Program (ADE), a teacher strategy developed in Chicago for alcohol and drug education,[11,12] found that a support network for teachers involved in the training was very important in ensuring that the program was implemented. Therefore, the ADE Teacher Support and Exchange Network was developed so that teachers could receive help from their peers. Since implementation was not felt to be a high priority of administrators, the teachers themselves had to develop this method of sharing information about problems and successes encountered in implementation. Newsletters served to inform the ADE-trained teachers about newly-received curriculum materials, films, resources and other program ideas. Twenty-seven of the 100 trained teachers volunteered to serve on an Advisory Board which would continue to plan and maintain an inservice education network.

School systems must be watchful of the continued support given to their highly trained teachers to ensure that time, money and manpower expended have paid off in terms of classroom implementation which really works! Central office maintenance of a communications network with trained teachers is a valuable strategy, using newsletters and advisory councils which meet on a regular basis to share ideas and resources. Using trained teachers to train their peers in subsequent years is also a strategy worth pursuing. The Boston University "IDEAS" model, referred to earlier, is a possible solution. The Philadelphia Public Schools use a cadre of "prevention specialists," one for every two schools, who visit the schools and support the teachers in their work. This program is funded by local businesses. Rex Graeme found, in his study, "Organizational Supports for Implementing Educational Innovation,"

> ...significant relationships between the amount of organizational support received to assist implementation and the degree to which the innovation had been implemented.[13]

The support of administrators and parents can also help to ensure that these programs are continued. Training parents and administrators in the same curriculum is a strategy which can be successful in supporting teacher efforts. Part of the training plans for the teachers in D-E-C-I-D-E included a parent component. Ten parents were trained during four three-hour evening sessions at the same

time the teachers were participating in their training sessions in the use of the curriculum. They have been able to continue to reach out to other parents at the district and school level to let them know how the D-E-C-I-D-E curriculum works. Several parents have also been able to assist teachers with their classroom presentations.

Principals should also be included in training programs in the future. At minimum, they should be invited to an orientation to the program, since the first part of the teacher training includes an investigation of the participants' own attitudes toward drugs and alcohol. Administrators also need to be given an overview of the substance abuse problem. Because the "fine line" between illegal substances, such as marijuana and cocaine, and alcohol are difficult for some adults to draw, both parents and school administrators need to re-examine their own attitudes toward the "recreational" use of drugs and the tendency to accept the use of alcohol as a "safe" drug.

Sherman, et al., also found that, after teachers complained about not being given an opportunity to implement their drug and alcohol education curriculum, it was advisable to make an attempt to gain the cooperation and support of principals in the schools involved in the program; therefore, building administrators were invited to the orientation session at the beginning of the training program. Principals from 24 of the 62 participating

schools attended these session; this attendance was considered a positive step toward involving administrators in committing themselves to the implementation of the program in their buildings.[14]

Long-term evaluation of the staff training program reported in this project, or another project of its type, should include follow-up and classroom observation of teachers involved in the initial training. Ideally, after the first full year and for several years thereafter, it should include testing of student knowledge, attitudes and behavior in the areas of substance abuse prevention.

A control group of teachers and students might be found in the schools which did not participate in the initial teacher training project. Originally, there were twelve schools which did not participate; because additional teachers were trained this year on a voluntary basis, after school, the number has now dropped to nine schools. Teachers and administrators in these schools should be asked why they did not participate in the program. Was it a failure on the part of their administrators to commit themselves to the program? Are these administrators the same ones who do not usually recommend that their staffs take part in special training programs? Did the schools participating have more supportive administrators -- those who were committed to ensuring that curriculum implementation would take place

once the teachers were trained? Do the teachers in these non-participating schools generally fail to participate in teacher training programs and why?

If substance abuse prevention is to begin at an early age, we must put the time and effort into a comprehensive program of staff training and support of elementary school teachers. We must also assist them in implementing the curriculum in a way in which they can teach the necessary knowledge and skills in a meaningful way during their crowded, hectic and highly pressured classroom schedules. If, because of the emphasis on basic skills, programs of health education are put on the "back burner," we must also make it easier for the material to be used in other subject matter areas, such as language arts, social studies and science. Tricker and Davis found, in their interviews with 171 teachers, that "100% felt the curriculum should be integrated into other subject areas to more effectively diffuse the impact of the program.[15]

Health education topics <u>can</u> successfully be integrated into other subject areas, and health curriculum specialists are increasing their attempt to move in this direction. The recent articles by Meckler and Vogler and by Tow and Smith[16,17] indicate the trend in this direction. The American Heart Association, for example, was recently awarded a grant funded by the Massachusetts Division to relate the material in the "Getting to Know Your Heart"

curriculum at the elementary level to language arts curriculum objectives. This project will incorporate major parts of the heart health curriculum into reading resource materials. In addition, as mentioned earlier, a group of teachers trained in the D-E-C-I-D-E project were able to integrate the curriculum into fourth grade Language ARts Curriculum Objectives. Diller and Glessner have also reported a recent experiment in integrating a drug education curriculum into language arts and science at the middle school level.[18]

Writing and listening skills as well as oral discussions and debates are easily expandable into the health education area; school health administrators and teachers should be aware of the possibilities for infusing their subject matter into these other classroom activities. It may mean a cooperative arrangement with other subject matter teachers, especially at the middle and high school levels. Problem situations related to substance abuse can easily be incorporated into subject areas such as social studies (debates on legal issues, provision of clean needles to drug addicts; essays on the effects of substance abuse on society and the family), in science (chemical components of common drugs, alcohol and tobacco; effects on the brain and other organs of the body). As Lorhmann, et al, pointed out:

> To fully exploit the potential of health instruction to produce behavioral outcomes in students, it must be taught in health classes and reinforced across the entire school curriculum in areas such as science, home economics, psychology, sociology, civics, social studies, and physical education so the learner can see the biological, social, cultural, economic, and political implications of his/her actions in regard to health matters.[19]

And Michael Goodstadt found that:

> Drug education programs have failed to provide links with other areas of the school curriculum...Informal evidence indicates that... rarely are drugs discussed in an integrated health curriculum. Even less common is the integration of drug education within the broader (non-drug) curriculum...The broader relevance of drug use can be conveyed through its integration into curricular areas such as history, geography, chemistry, and English literature.[20]

In conclusion, the provision of a well-planned and well-supported staff training program can increase the likelihood that substance abuse prevention will be taught at the elementary school level. The interest of students in the subject is an incentive to the teachers to present the material and to integrate the material into other subject areas in a creative manner. Teachers appreciate an opportunity to advance their knowledge in areas such as substance abuse education and wholeheartedly approved of the training sessions. They had mixed feelings about the use of substitute teachers while they were away from their classes; while they appreciate the opportunity to learn about a comprehensive type of curriculum in a relaxed

manner, they were worried about how their students were managing without them. Therefore, alternative ways of presenting the training were suggested by some teachers.

Teachers agreed with the philosophy and goals of the curriculum and were able to adapt it to their regular classroom schedule. Although they were unable to complete the lessons in the time left in the school year, many said that they would start earlier in the following year in order to complete the lessons. They asked for assistance with resource materials and with classroom demonstrations and support services. Most recommended the use of the curriculum in other elementary grades.

Specific Recommendations

Based on the findings of this study and on follow-up activities which have been conducted during the subsequent school year, the following recommendations are made:

1. An appropriate curriculum in substance abuse education should be carefully selected for a school system, and training of teachers in the use of the curriculum should be an integral part of the program. Before the teachers involved in this study had received their training, 59% had never taught about drugs and alcohol in their classrooms. Those who had taught about substance abuse had used a variety of teacher-made materials; of these 81% found that

D-E-C-I-D-E was preferable. Merely handing the teachers the curriculum document would not have ensured that they would teach about substance abuse prevention in a comprehensive manner.

2. School systems should encourage thoughtful, comprehensive staff development programs, which will prepare teachers adequately for a sensitive subject such as substance abuse. Table 11 revealed that 66% of those participating in this project felt well-prepared to teach the subject, and that 40% had started to use the curriculum before the end of the training sessions. Cross-tabs (Table 32) revealed a definite relationship between the teacher's feeling of preparedness and the implementation of the curriculum.

3. The school system must be committed to arranging for adequate coverage for teachers during the training period. Although 70% stated that they considered the plan of released time was a good idea, 48% of the teachers in this study felt that substitute coverage of their classes was inadequate. Table 10 showed that almost 52% of the teachers recommended the use of stipends or inservice days for training. Since the lack of availability of good substitute teachers is common, especially on a large scale in a city school system, it might be helpful to train a "cadre" of substitute teachers who could be prepared to take over the classroom of the elementary school teacher

during training sessions. If the providers of training programs could collaborate and pool their financial resources, this might be more easily accomplished.

The use of inservice time is recommended over stipends/overtime because the latter method makes the teacher a "volunteer" participant, and he/she cannot then be required to use the curriculum. If school administrators wish teachers to use a special curriculum or innovative method of teaching, they must provide "access" to their teachers.

4. Administrators from the top down must commit the school system to the provision of substance abuse prevention training for teachers and to the continued staff support needed by the teachers as they implement the curriculum. Inviting school administrators to an orientation session when the training of teachers begins might be a method of ensuring their support for the program. In a recent study of the implementation of a drug education program in Utah, the author found "a positive, significant association" between the support of the principal and the use of the substance abuse prevention curriculum.[21]

5. Table 15 indicates that 86% of the teachers had integrated D-E-C-I-D-E into other subjects, including language arts, social studies and science. Since administrators and teachers are under pressure to improve basic skills, the more time which is devoted to these

subjects, the more acceptable the program will be to them. Whenever possible, the substance abuse program should be taught "across the curriculum," and documents giving teachers step-by-step instructions on relating the program to other curriculum objectives should be developed. Orienting all teachers on the staff about the program may also help to make the program successful.

6. Follow-up activities and staff support for trained teachers must be part of the plan for curriculum adoption. Table 20 showed that 47% trained teachers wanted more resource material provided to them, and 20% asked for further assistance with classroom management of the innovation. School systems should seek funding for a Substance Abuse Prevention Coordinator whose role it is to provide these needed services.

7. It is important to start this training early in the school year or perhaps toward the end of the school year prior to the one in which the curriculum is to be used. In this way, teachers can plan their yearly activities and will be ready to start as soon as is feasible after the initial orientation to the class begins. Although Table 13 showed that 79% had started to teach the lessons after the training sessions, Table 21 showed that 91% of the teachers involved in this study had not been able to finish the lessons. Table 27 indicated that 55% of the teachers

wanted to begin earlier in the school year to implement the curriculum.

8. Although not specifically mentioned in the questionnaire, follow-up experience and readings indicate that parental involvement in the substance abuse prevention program is essential. The training of parents in the same curriculum used by the students would be ideal, if they can give up the time required for this training. Alternatively, an overview of the program should be provided to parents through school or district parent meetings. Teachers willing to have parents assist in their classrooms may then have an additional resource for teaching their students.

The influence of parents, through School Improvement Councils or School Parent Councils, can be of great importance in determining the priority given to the teaching of health, and specifically topics such as substance abuse prevention. Young et al. found that among the four variables which made a significant contribution to predicting whether a teacher would or would not implement a substance abuse prevention curriculum was "perception of parental interest."[22]

Final Remarks

The ultimate question to be asked in any school system is: is a subject such as health education a "frill," or is it essential to the development of the child as a whole person? Mortimer Adler, in Paideia: Problems and Possibilities,[23] stated bluntly that:

> Drug abuse, unsafe driving, and the defrauding of consumers are doubtless serious matters, but it is unfair and unwise to designate the schoolroom as the one place where these things are dealt with. If the school is made the repository of every social concern, education itself is bound to be crowded out -- and the social problems will remain.

David C. King asked, however, "Can you disengage social from academic content? Coping skills, once optional, are now mandatory preparation for adult life in tomorrow's world."[24] And he proceeded to quote John Goodlad, who, in A Study of Schooling, stated that "...Schools should help every child to prepare for a world of rapid changes and unforeseeable demands."[25]

Substance abuse prevention is essential for students in today's society, and it must start at an early age. Teacher training in this complex subject is a need which must be addressed by school systems committed to a program of substance abuse prevention. Teacher training must be carefully planned and evaluated, and the success of the training must be maintained through follow-up of curriculum

implementation activities in the classroom; only in this way can a school system be sure that the goals of the program are carried out in the ways in which they were intended.

Footnotes

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[24] David C. King, Broad-Based Support Pushes Health Education Beyond What the Coach Does Between Seasons, Alexandria, VA, ASCD Curriculum Update, June 1986.

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APPENDIX A

Questionnaire for Elementary School Instructors

Re: Health Curriculum Objectives

QUESTIONNAIRE FOR ELEMENTARY SCHOOL INSTRUCTORS

RE: HEALTH CURRICULUM OBJECTIVES

SCHOOL: DISTRICT:

Please circle the answer which applies:

1. How many years have you been teaching health?

   a. 1 - 5
   b. 6 - 10
   c. 11 - 15
   d. 16 - 20
   e. more than 20

2. What grade (s) do you teach?

   a. K
   b. 1st
   c. 2nd
   d. 3rd
   e. 4th
   f. 5th

3. Have you seen the first draft of the Elementary School Health Curriculum Objectives?

   a. yes
   b. no

4. Did you complete a Rating Sheet for these objectives?

   a. yes
   b. no

5. How did you rate these objectives?

   a. Excellent
   b. Good
   c. Fair
   d. Poor

6. How many minutes per week do you now devote to health education?

   a. 50 - 60
   b. 25 - 49
   c. 10 - 24
   d. less than 10
   e. none
   f. infused into other subjects. Which? _____

   _____

(please turn page over)

7. Have you ever taken college or post - graduate courses in health?

a. yes
b. no

If yes, in what topic(s)?

---

8. Have you participated in any inservice training programs in health or related to health issues?

a. yes
b. no

If yes, what topics were covered?

Approximate date(s) of training

---

9. Which of the following health education areas do you cover in your classes? (Circle as many as apply.)

a. Growth and Development
b. Mental Health
c. Prevention and Control of Disease
d. Nutrition
e. Drug Use and Abuse
f. Safety and Accident Prevention
g. Consumer Health Issues
h. Health Careers
i. Sex Education
j. Other (Please list.)

10. In which area(s) of the curriculum would you like assistance in order to implement the objectives in your classroom? (Circle one or more.)

a. Growth and Development
b. Mental Health
c. Prevention and Control of Disease
d. Nutrition
e. Drug Use and Abuse
f. Safety and Accident Prevention
g. Consumer Health Issues
h. Health Careers
i. Sex Education

11. What kind of assistance would you like:

    a. Subject matter review (Which area (s)?)

    ---
    b. Locating resource materials
    c. New techniques of teaching subject
    d. Other (List)

12. When would you like this assistance to be presented?

    a. During inservice days
    b. After school
    c. On weekends
    d. Other (Suggestions)

13. Where would you like these sessions held?

    a. In your school
    b. In your district
    c. In a central meeting place

14. Would you like to become a trainer of other teachers as part of a health education leadership team?

    a. yes
    b. no

    If yes, what is your specialty?

    If yes, please give your name, school and telephone number:

    ---

15. Would you like to receive a copy of a Boston Public Schools Health Education Newsletter, which would update you on materials/resources/programs?

    a. yes
    b. no

Thank you for spending the time to complete this questionnaire. Please return it to our office in the enclosed envelope. Your input will help us to plan future inservice training in health education.

Name: (optional) _____

School: _____

APPENDIX B

D-E-C-I-D-E Curriculum Outline for Grade Four

D-E-C-I-D-E CURRICULUM OUTLINE FOR GRADE FOUR
Project PEGASUS, Stanford University

D-E-C-I-D-E =

D = define alternatives
E = explore values, feelings, self-image, risks, goals, abilities, past experiences, chances of success
C = consider the influence of others--friends, adults in authority, parents, friends, family, school, law
I = invite advice from parents, friends, other adults, sources of information
D = decide what to do
E = evaluate the results of your action on yourself and others

Outline of Sessions

SESSION ONE

Overview of Nature of Drugs and Medicine

1. Use Drug Knowledge and Attitude Scales
2. Review Rules and Regulations for classroom activities (above)
3. Review definitions of drugs and medicine
4. Show filmstrip, "Drugs: Helpful and Harmful."

SESSION TWO

Influence of others on decision-making

Examine 1) ways in which peers influence decision-making
2) ways of making independent decisions despite the influence of others

Discuss: 1) ways students try to influence peer decisions
2) situations in which others have tried to influence your decisions

DILEMMAS: Read Dilemmas aloud. After each hypothetical situation, students may discuss their decisions, as a whole group, in small groups reporting to class, or as a written assignment to be shared.

SESSION THREE

Reasons People Use Drugs--include religious, social, medical

Show filmstrip, "Let's Talk About Drugs: Part 4"

Activities:
1) List why people take drugs
2) Show filmstrip and discuss
3) Discuss fads and customs surrounding drug-related products

SESSION FOUR

General drug effects: Basic facts about major classes of drugs and their effects on the body.

Activities:
1) Filmstrip: "Let's Talk About Drugs: Part V"
2) Transcript: Inhalant Information Sheet
3) Class Activity: "Let's See If You Can"--put drugs in correct column on blackboard/worksheet

Review Section Three: Show filmstrip.
Discuss: Feeling high; Stimulants and depressants; hallucinogens; differences in effects on different people
Review drug vocabulary

SESSION FIVE

General drug effects (cont.)
Objective: Discuss variables that determine subjective drug effects
Materials: "Let's Talk About Drugs: Part VI"
Worksheet: Prescription drugs
Differences between OTC and prescription drugs
"Drug Reactions"--fact sheets from FDA
Self-Medication fact sheets

SESSION SIX

Expectations. Handout: Data on Me

SESSION SEVEN

Tobacco

SESSION EIGHT

Drugs and Advertising: Select ads and examine critically. Make collages

SESSION NINE

Developing Empathy: Imagine That You...

SESSION TEN

Alcohol

SESSION ELEVEN

Resolution of Peer Conflict: Can You Think of Good Ways...

SESSION TWELVE

Rules and Laws of Society

SESSION THIRTEEN

Marijuana

SESSION FOURTEEN

Getting Along With Others

APPENDIX C

Outline of Teacher Training in D-E-C-I-D-E

DAY 1

INTRODUCTIONS

Boston Public Schools
The Prevention Center/The Medical Foundation

PRE TEST

Ice breaker activity

Concepts of prevention

Film - "The Mountain"

Spectrum of approaches to prevention education

Film - "Drugs are Dangerous"

Introduction of DECIDE Curriculum

Exploring attitudes
Distribute agree/disagree sheet (encourage completion and discussion of sheet during lunch)

****
L U N C H
****

Process attitude sheet

Reasons why people drink
Identify and model lesson #3

Cultural and social influences
Identify and model lesson #8

Film - "Calling the Shots"

Process film

Closure

Evaluation

DAY 2

Welcome and Review

Introduce DECIDE model for decision making

Influence of others on decision making
- Identify and model lesson #2

Resolution of peer conflicts
- Identify and model lesson #11

Values
- Identify and model lessons on:
  - Expectations #6
  - Developing Empathy #9
  - Rules and Laws #12
  - Getting Along with Others #14
- Film - "I Dare You"

Distribute information sheet about drugs and alcohol

****

L U N C H

****

Process information sheet
- Identify and model lessons on:
  - Alcohol #10
  - Tobacco # 7
  - General Information #4 and #5
  - Marijuana #13
- Film - "Huff and Puff"

Process film

Evaluation

DAY 3

Welcome and Review

Rank order activity
Addiction and alcoholism - definitions and discussion

Film - "Soft is a Heart of a Child"

Process film

Teacher's role as Helper (from CASPAR curriculum)

****
L U N C H
****

Identify Resources
The Prevention Center/The Medical Foundation

Schools
Services within school

Community
Agencies

Question and answer period

Closure

Post-test

Evaluation

APPENDIX D

Teacher Training Prevention Program:

Evaluation Summary

TEACHER TRAINING PREVENTION PROGRAM
EVALUATION SUMMARY
STRAND I - MARCH 31, 1987

Please circle the number which indicates your opinion:

I.	OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
	A. To understand the concept of primary substance abuse prevention	14	01		
	B. To differentiate among primary, secondary, and tertiary prevention strategies	06	07	01	01
	C. To identify physical and psycho social effects of drugs, both while using and after prolonged use	11	04		
	D. To examine personal, professional and societal attitudes towards substance use/abuse and prevention	11	04		
	E. To identify the problems involved with mixing alcohol and other drugs	09	05	01	
	F. To differentiate between healthy and unhealthy reasons to drink and use other drugs	11	03	01	
	G. To identify three effects of alcoholism on the family	14	01		
	H. To be able to define and distinguish between drug use, abuse, and addiction	13	02		
	I. To identify two ways to help children living in alcoholic homes	13	02		
	J. To increase awareness of the extent to which society's values are expressed and/or influenced by advertising	15			
	K. To examine the influence of group norms	11	03	01	
	L. To explore ways to cope with pressure to drink or smoke	12	02	01	

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
M. To become familiar with Center resources (films, pamphlets, curricula, etc.)	08	06	01	
N. To list the components of decision making and learn to present to students	13	01	01	
O. To practice prevention activities appropriate for target population	13	02		

II. CONTENT:	YES	NO	N/A
A. Related to objective	15		
B. Well organized	14		01
C. Understandable	14	01	
D. Realistic time frame	14	01	
E. Applicable to my area of practice	15		
F. Met my personal objectives	13	01	01

III. TEACHING STRATEGIES:	YES	NO	N/A
A. Methods			
1. Related to objectives	14	01	
2. Effective	13	01	01
B. Materials			
1. Appropriate	13	01	01
2. Useful	12	02	01

IV. TRAINERS:	EXCELLENT	GOOD	FAIR	POOR
A. Preparation	11	04		
B. Knowledge of subject	12	03		
C. Quality of material	11	02	02	
D. Presentation of material	12	02	01	
E. Utilization of time	10	04		01

V. PHYSICAL FACILITIES	EXCELLENT	GOOD	FAIR	POOR
	06	09		

STRAND I

COMMENTS:

Beneficial - both personal and professional.

Confident - to share knowledge with other professionals and my students.

Excellent program.

Excellent lunch facility - ample parking.

Very informative program.

Well presented and enjoyable.

Material to be covered too extensive for the time allocated for training. I would have liked to implement part of the curriculum and come back with questions and training in specific aspects of curriculum.

Trainer
very knowledgeable, sense of commitment. She believes in what she is doing.

Presenting style was interesting, never boring.

Excellent presenter, sessions well organized and she related warmly to the group. Her work seemed important to her personally and as a result she made me feel its importance.

Better distribution policy of materials and information.

Time for research and retrieval is non existent. There is no planning and development time.

Support groups and agencies for referral should be available at the onset of the school year. (No counselors in building).

RECOMMENDATIONS:

Have hands on materials, films, etc. for the target groups.

More parental involvement needs to be implemented.

Curriculum should be ongoing, teachers re-trained annually.

Curriculum should be broadened to include third and fifth graders.

Arrange a list of police officers or speakers to do classroom presentation.

Individuals should be available for in-service training in individuals schools.

Include more activities that facilitate the teachers understanding of drug abuse.

To deal with issues that are prevalent in school systems today.

TEACHER TRAINING PREVENTION PROGRAM
EVALUATION SUMMARY
STRAND II - APRIL 1, 1987

Please circle the number which indicates your opinion:

I.	OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
	A. To understand the concept of primary substance abuse prevention	16	02		
	B. To differentiate among primary, secondary, and tertiary prevention strategies	09	09		
	C. To identify physical and psycho social effects of drugs, both while using and after prolonged use	16	02		
	D. To examine personal, professional and societal attitudes towards substance use/abuse and prevention	16	01		01
	E. To identify the problems involved with mixing alcohol and other drugs	13	05		
	F. To differentiate between healthy and unhealthy reasons to drink and use other drugs	18			
	G. To identify three effects of alcoholism on the family	16	02		
	H. To be able to define and distinguish between drug use, abuse, and addiction	15	03		
	I. To identify two ways to help children living in alcoholic homes	17			01
	J. To increase awareness of the extent to which society's values are expressed and/or influenced by advertising	18			
	K. To examine the influence of group norms	14	04		
	L. To explore ways to cope with pressure to drink or smoke	17	01		

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
M. To become familiar with Center resources (films, pamphlets, curricula, etc.)	12	06		
N. To list the components of decision making and learn to present to students	17	01		
O. To practice prevention activities appropriate for target population	16	02		

II. CONTENT:	YES	NO	N/A
A. Related to objective	18		
B. Well organized	18		
C. Understandable	18		
D. Realistic time frame	16	02	
E. Applicable to my area of practice	18		
F. Met my personal objectives	18		

III. TEACHING STRATEGIES:	YES	NO	N/A
A. Methods			
1. Related to objectives	18		
2. Effective	18		
B. Materials			
1. Appropriate			
2. Useful			

IV. TRAINERS:	EXCELLENT	GOOD	FAIR	POOR
A. Preparation	18			
B. Knowledge of subject	18			
C. Quality of material	18			
D. Presentation of material	18			
E. Utilization of time	18			

V. PHYSICAL FACILITIES	EXCELLENT	GOOD	FAIR	POOR	N/A
	05	08	03		02

STRAND II

COMMENTS:

Enjoyable workshop.

Excellent trainer.

Excellent presentation, informative and interesting.

Films were a helpful addition.

The workshop was well organized, coordinated and run.

The method of presentation was successful.

Films are a basic part of curriculum and serve as a starting off place.

Knowledgeable and motivating presentation of subject matter and materials.

The presenter was open, perceptive and sensitive to teacher's needs, problems, situations and level of clinical expertise.

RECOMMENDATIONS:

Keep up the good work.

Resources for teachers to contact services for children in need i.e. school-based psychologist.

Would like to see films more accessible to areas and building. Need to pick up and deliver is not realistic.

Follow-up with 4th grade teachers.

TEACHER TRAINING PREVENTION PROGRAM
EVALUATION SUMMARY
STRAND III

Please circle the number which indicates your opinion:

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
A. To understand the concept of primary substance abuse prevention	18	03		
B. To differentiate among primary, secondary, and tertiary prevention strategies	18	02		
C. To identify physical and psycho social effects of drugs, both while using and after prolonged use	18	03		
D. To examine personal, professional and societal attitudes towards substance use/abuse and prevention	18	03		
E. To identify the problems involved with mixing alcohol and other drugs	16	05		
F. To differentiate between healthy and unhealthy reasons to drink and use other drugs	19	02		
G. To identify three effects of alcoholism on the family	20	02		
H. To be able to define and distinguish between drug use, abuse, and addiction	20	02		
I. To identify two ways to help children living in alcoholic homes	19	02		
J. To increase awareness of the extent to which society's values are expressed and/or influenced by advertising	21	02		
K. To examine the influence of group norms	18	02		
L. To explore ways to cope with pressure to drink or smoke	18	02		

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
M. To become familiar with Center resources (films, pamphlets, curricula, etc.)	18	03		
N. To list the components of decision making and learn to present to students	16	04		
O. To practice prevention activities appropriate for target population	21			

II. CONTENT:	YES	NO	N/A
A. Related to objective	20		
B. Well organized	20		
C. Understandable	20		
D. Realistic time frame	15	02	
E. Applicable to my area of practice	20		
F. Met my personal objectives	18	02	

III. TEACHING STRATEGIES:	YES	NO	N/A
A. Methods			
1. Related to objectives	20		
2. Effective	20		
B. Materials			
1. Appropriate	20		
2. Useful	20		

IV. TRAINERS:	EXCELLENT	GOOD	FAIR	POOR
A. Preparation	20	01		
B. Knowledge of subject	21			
C. Quality of material	20	01		
D. Presentation of material	19	02		
E. Utilization of time	17	04		

V. PHYSICAL FACILITIES	EXCELLENT	GOOD	FAIR	POOR

TEACHER TRAINING PREVENTION PROGRAM
EVALUATION SUMMARY
STRAND 4

Please circle the number which indicates your opinion:

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
A. To understand the concept of primary substance abuse prevention	15	01		
B. To differentiate among primary, secondary, and tertiary prevention strategies	08	07		
C. To identify physical and psycho social effects of drugs, both while using and after prolonged use	13	03		
D. To examine personal, professional and societal attitudes towards substance use/abuse and prevention	12	03		
E. To identify the problems involved with mixing alcohol and other drugs	09	07		
F. To differentiate between healthy and unhealthy reasons to drink and use other drugs	14	02		
G. To identify three effects of alcoholism on the family	15	01		
H. To be able to define and distinguish between drug use, abuse, and addiction	15	01		
I. To identify two ways to help children living in alcoholic homes	15	01		
J. To increase awareness of the extent to which society's values are expressed and/or influenced by advertising	15	01		
K. To examine the influence of group norms	13	02		
L. To explore ways to cope with pressure to drink or smoke	12	04		

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
M. To become familiar with Center resources (films, pamphlets, curricula, etc.)	10	05		
N. To list the components of decision making and learn to present to students	14	01		
O. To practice prevention activities appropriate for target population	14	01		

II. CONTENT:	YES	NO	N/A
A. Related to objective	15		
B. Well organized	14	01	
C. Understandable	15		
D. Realistic time frame	13	02	
E. Applicable to my area of practice	14	01	
F. Met my personal objectives	14	01	

III. TEACHING STRATEGIES:	YES	NO	N/A
A. Methods			
1. Related to objectives	15		
2. Effective	15		
B. Materials			
1. Appropriate	15		
2. Useful	15		

IV. TRAINERS:	EXCELLENT	GOOD	FAIR	POOR
A. Preparation	13	02		
B. Knowledge of subject	15			
C. Quality of material	12	03		
D. Presentation of material	13	02		
E. Utilization of time	10	04	01	

V. PHYSICAL FACILITIES	EXCELLENT	GOOD	FAIR	POOR

TEACHER TRAINING PREVENTION PROGRAM
EVALUATION SUMMARY
STRAND 5

Please circle the number which indicates your opinion:

I.	OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
	A. To understand the concept of primary substance abuse prevention	17			
	B. To differentiate among primary, secondary, and tertiary prevention strategies	15	02		
	C. To identify physical and psycho social effects of drugs, both while using and after prolonged use	15	02		
	D. To examine personal, professional and societal attitudes towards substance use/abuse and prevention	15	02		
	E. To identify the problems involved with mixing alcohol and other drugs	12	05		
	F. To differentiate between healthy and unhealthy reasons to drink and use other drugs	15	01		
	G. To identify three effects of alcoholism on the family	16			
	H. To be able to define and distinguish between drug use, abuse, and addiction	15	01		
	I. To identify two ways to help children living in alcoholic homes	17			
	J. To increase awareness of the extent to which society's values are expressed and/or influenced by advertising	17			
	K. To examine the influence of group norms	15	02		
	L. To explore ways to cope with pressure to drink or smoke	14	03		

I. OBJECTIVE	MET	PARTIALLY MET	NOT MET	N/A
M. To become familiar with Center resources (films, pamphlets, curricula, etc.)	14	03		
N. To list the components of decision making and learn to present to students	15	01		
O. To practice prevention activities appropriate for target population	17			

II. CONTENT:	YES	NO	N/A
A. Related to objective	17		
B. Well organized	17		
C. Understandable	17		
D. Realistic time frame	16	01	
E. Applicable to my area of practice	16		
F. Met my personal objectives	17		

III. TEACHING STRATEGIES:	YES	NO	N/A
A. Methods			
1. Related to objectives	17		
2. Effective	17		
B. Materials			
1. Appropriate	17		
2. Useful	17		

IV. TRAINERS:	EXCELLENT	GOOD	FAIR	POOR
A. Preparation	17			
B. Knowledge of subject	17			
C. Quality of material	16	01		
D. Presentation of material	17			
E. Utilization of time	17			

V. PHYSICAL FACILITIES	EXCELLENT	GOOD	FAIR	POOR

STRAND 5

COMMENTS:

Enjoyed varied techniques.

Enjoyed group interaction, handouts.

Informality.

Nicely done presentation.

Instructors "Professional".

An excellent, well organized sessions.

This was an excellent experience. Hopefully, I will have an opportunity to be involved in another workshop given by you.

I came to the program "Kicking and screaming" because I had to come. Leaving with a wealth of teaching tools, techniques and materials.

Material well covered and excellently presented.

An excellent workshop, very beneficial.

Well done program enjoyable and allowed us time to vent frustrations about our children and other school related problems.

Informative, highly interesting, motivating to go back and impact knowledge to my pupils.

The program both help extend my knowledge of the drug and alcohol problems and also provided a drug education program in my classroom.

Felt like I was in a fish bowl. Would have preferred a room with outside ventilation.

Windows please.

An eye opener - the most complex problem in our society.

A greater danger to society than aids etc.

Really good training because it helped me a lot and answered many questions that I had in how to handle the situation if it ever crosses my path.

RECOMMENDATIONS:

Parental intervention - Awareness

Community intervention

Career ed. Sep Ed.

Career Awareness

Psychological help for children.

Seminars to expand on teaching students life skills for coping with drug and alcohol issues.

Extend training to five days with a yearly meeting for follow up.

APPENDIX E

Questionnaire for Teachers Who Have Taken Part in Project D-E-C-I-D-E Training (1987)

QUESTIONNAIRE FOR TEACHERS WHO HAVE TAKEN PART IN PROJECT D-E-C-I-D-E TRAINING (1987)

You recently participated in inservice training sessions in the use of a special drug education curriculum. Would you kindly complete the answers to the following questions regarding this training and your use of this curriculum? Your answers will help us to evaluate the success of the training and to plan inservice programs for elementary school teachers next year.

First, a few background questions:

1. How many years have you been teaching at the elementary school grade level?
   a. 1-5
   b. 6-10
   c. 11-15
   d. 16-20
   e. more than 20

2. What are the characteristics of your class at this time?
   Total number of students _____ Male ___ Female ___
   Number of bilingual students _____ Special Education _____
   Racial composition: Black___ White___ Hispanic___ Other ___

3. Have you previously taught about drug/alcohol abuse in your class?
   a. yes
   b. no

4. If you answered yes to Question 3, what curriculum did you use?
   a. teacher-made materials
   b. a special drug education curriculum, _____

5. Referring again to Question 3, how would you rate the curriculum compared with D-E-C-I-D-E?
   a. Better
   b. About the same
   c. Not as good
   Reasons for your answer: _____
   _____

The following questions concern your training in D-E-C-I-D-E:

6. Please indicate which "strand" you attended:
   a. 1 (March 3, 16 and 31)
   b. 2 (March 4, 18 and April 1)
   c. 3 (March 5, 12 and 26)
   d. 4 (March 10, 19 and 25)
   e. 5 (March 11, 24 and April 2)
   f. don't remember

7. Did you attend all three sessions of the training program?
   a. yes
   b. no

8. How did you feel about the method of training teachers by using substitute teachers to replace you in the classroom?
   a. good idea
   b. fair idea
   c. poor idea

9. Can you explain your answer?: _____
   _____
   _____

10. If you thought this was <u>not</u> a good method, can you indicate a better method/time for conducting the training? _____
    _____

11. Do you feel that the training sessions prepared you to present the D-E-C-I-D-E curriculum?
    a. yes, well-prepared
    b. not sure
    c. not well-prepared
    If your answer was (c), what reasons do you think could have caused the problem: _____
    _____

The following questions concern your implementation of the curriculum in your own classroom:

12. How do the goals of this curriculum relate to your own goals for teaching your class about drugs and alcohol?
    a. same
    b. different. If different, please explain how: _____
    _____
    _____
    _____

13. When did you start to use this curriculum in your class?
    a. before the last training session
    b. after the last training session
    c. have not started to use the curriculum this year

14. If you have not used the curriculum, what were some of the reasons?
    a. not applicable to my classroom at this time
    b. lack of time to teach this material
    c. not well prepared by training sessions
    d. lack of administrative support
    e. other _____

15. If you have been teaching this curriculum, how have you incorporated it into your classroom?
    a. integrated into other subjects. Which one(s)?(e.g. language arts,, social studies, art, etc.) _____
    _____
    b. part of special time allotted to health education
    c. set up as a special part of the school day

16. How often have you taught the material?
    a. once a week
    b. 2-4 times a week
    c. every day for a period of weeks

17. How many minutes have you allotted to the lessons?
    a. 15-20
    b. 20-30
    c. 30-40
    d. varying times

18. Have you used additional resource materials to assist you in teaching the lessons?

a. yes
b. no

Please indicate some additional resources (audiovisual, etc.) which you have used: _____

_____

19. What supplementary activities have you used with your students to teach some of this material?

a. newsletters
b. displays
c. poster contests
d. compositions (language arts)
e. homework involving parents
f. other _____

_____

20. What additional help would have assisted you with your presentation of the program? Circle one or more answers:

a. more resource materials
b. more assistance with classroom strategies
c. sharing of ideas with other teachers
d. other _____

The following questions are concerned with specifics about the curriculum itself:

21. Were you able to complete all the lessons?

a. yes
b. no

22. Please indicate on a scale of 1-5 the reaction of your students to the lessons you conducted: (1 = least positive; 5 = most positive)
If you did not cover the lesson, place NA in the blank.

a. Pre-session ( )
b. Overview of nature of drugs and medicine ( )
c. Decision-making techniques ( )
d. Influences of others on decision-making ( )
e. Handling peer pressure ( )
f. Self-expectations and social roles ( )
g. Over-the-counter drugs and prescription drugs ( )
h. Developing empathy ( )
i. Alcohol ( )
j. Resolution of peer conflict ( )
k. Rules and laws of society ( )

l. Marijuana ( )
m. Getting along with others ( )
n. Wrap-up session ( )

23. Did you teach the lessons in the order shown above?
    a. yes
    b. no

24. Of the lessons you ranked as most successful, (5 or 4 rating), why do you think they were so successful? _____
    _____
    _____

25. As a group process facilitator, please place a check ( ) beside the items you feel you were able to include in the majority of your presentations:
    a. encourage students to be active participants _____
    b. maintain an open group atmosphere _____
    c. encourage interaction between students _____
    d. maintain confidentiality _____
    e. set up ground rules and maintain them _____
    f. use a variety of materials _____

26. As a user of the D-E-C-I-D-E curriculum, please check the items which you feel you accomplished:
    a. assisted students in understanding rules and procedures for group process activities _____
    b. reviewed advantages and benefits of proper drug use _____
    c. administered pre-test (Drug Knowledge and Attitude Scale) _____
    d. reviewed vocabulary _____
    e. reviewed basic steps in decision-making _____
    f. practiced using D-E-C-I-D-E format _____
    g. discussed influence of others on decision-making _____
    h. discussed "dilemmas" _____
    i. practiced role-playing sessions using refusal skills _____
    j. examined individual expectations and social roles _____
    k. used "Data on Me" worksheet _____
    l. helped students to differentiate between over-the-counter and prescription drugs _____
    m. discussed effects of smoking tobacco _____
    n. reviewed reasons why people smoke _____
    o. discussed material on alcohol/tobacco advertising _____
    p. used "Imagine That You" worksheet on developing empathy _____
    q. reviewed alcohol reference materials _____
    r. completed quiz on alcohol _____

s. defined "conflict" and discussed examples and possible solutions _____

t. used material on resolving conflicts, "Can You Think of Good Ways?" _____
u. discussed rules and laws in society _____
v. reviewed material on marijuana _____
w. used "Getting Along with Others" worksheet _____
x. wrote a paragraph about "Being a Good Friend" _____
y. completed post-test "Drug Knowledge and Attitudes Scale _____
z. created posters on drugs _____

Now, a few final questions about your future use of the curriculum:

27. What changes, if any, will you make in the teaching of this curriculum next year? _____
_____
_____

28. Would you recommend the use of this curriculum in other grades?
a. yes
b. no

29. Would you like to be involved in training other teachers to use this curriculum?
a. yes
b. no

30. What other comments would you like to make about this program?
_____
_____
_____
_____
_____

Your Name (optional) _____
School (optional) _____

Thank you for taking the time to complete this questionnaire. Please return it as soon as possible to your principal.

APPENDIX F

Letter of Transmittal to Accompany Questionnaire

BOSTON PUBLIC SCHOOLS

TO: Elementary School Principals, Project DECIDE Schools

FROM: Yohel Camayd-Freixas

DATE: June 3, 1987

RE: Project DECIDE Training and Implementation Evaluation

This is to inform you that the Office of Research and Development has approved the research proposal submitted by Shirley Handler, Program Director for Health Education, to examine the training and implementation of Project DECIDE, a drug education project. Given the importance of health education efforts within BPS, the Department of Evaluation Research and Accountability will be collaborating on this project. Dr. Rocky Shwedel, Manager of the Department of Evaluation Research and Accountability will be supervising this project.

To assess the training and implementation of Project DECIDE, a questionnaire has been designed for 4th grade teachers who have participated in the project. A copy of the questionnaire is enclosed. Shirley Handler will be sending copies of the questionnaire for teachers to complete. The materials for teachers will be distributed to you by Monday, June 8th. Please distribute the questionnaires and return them to Shirley Handler by June 19th.

If you have any questions regarding this research and evaluation project, please contact either, Shirley Handler (ext.: 5827), Dr. Rocky Shwedel, Manager of the Department of Evaluation Research and Accountability (ext.: 5795). Thank you for your assistance with this important project.

enclosure

26 COURT STREET • BOSTON, MASSACHUSETTS 02108 • 720-6200 EXT 5800 AREA 617

(DECIDE.603)

APPENDIX G

Levels of Use: Scale Point Definitions of the Levels of Use of the Innovation

LEVELS OF USE: SCALE POINT DEFINITIONS OF THE LEVELS OF USE OF THE INNOVATION

Levels of Use are distinct states that represent observably different eypes of behavior and patterns of innovation use as exhibited by individuals and groups. These levels characterize a user's development in acquiring new skills and varying use of the innovation. Each level encompasses a range of behaviors, but is limited by a set of identifiable Decision Points. For descriptive purposes, each level is define by seven categories.

LEVEL 0: NON-USE
State in which the user has little or no knowledge of the innovation, no involvement with the innovation and is doing nothing toward becoming involved.

DECISION POINT A: Takes action to learn more about the innovation.

LEVEL I: ORIENTATION
State in which the user has acquired or is acquiring information about the innovation and/or has explored or is exploring its value orientation and its demands upon the user and user system.

DECISION POINT B: Makes a decision to use the innovation.

LEVEL II: PREPARATION
State in which the user is preparing for first use.

DECISION POINT C: Begins first use of the innovation.

LEVEL III. MECHANICAL USE
State in which the user focuses most effort on the short-term day-to-day use of the innovation with little time for reflection. Changes in use are made more to meet user needs than client needs. The user is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use.

DECISION POINT D-1: A routine pattern of use is established.

LEVEL IV A: ROUTINE. Use of the innovation is stabilized. Few if any changes are made in ongoing use. Little preparation or thought is given to improving use.

DECISION POINT D-2: Changes in use of the innovation are based on formal or informal evaluation in order to increase client outcomes.

LEVEL IV B: REFINEMENT. State in which the user varies the use of the innovation to increase the impact on clients. Variations are based on knowledge of both short- and long-term consequences for clients.

DECISION POINT E: Initiates changes in use of innovation based on input of and in coordination with what colleagues are doing.

LEVEL V: INTEGRATION. State in which the user is combining own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients.

DECISION POINT F: Begins exploring alternatives to or major modifications of the innovation.

LEVEL VI: RENEWAL. State in which the user re-evaluates the quality of use of the innovation, seeks major modifications or alternatives to achieve increased impact on clients, examines and explores new goals for self and system.

CATEGORIES: KNOWLEDGE
ACQUIRING INFORMATION
SHARING
ASSESSING
PLANNING
STATUS REPORTING
PERFORMING

SOURCE: Procedures for Adopting Educational Innovations Project. Research and Development Center for Teacher Education, University of Texas at Austin, 1975, N.I.E. Contract No. NIE-C-74-0087.

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