DOCUMENT RESUME

ED 134 628 95 TM 006 039

AUTHOR Arends, Richard I.; Green, David
TITLE Outcome Evaluation Report for Preparing Educational Training Consultants: Skills Training (PETC-1).
INSTITUTION Northwest Regional Educational Lab., Portland, Oreg.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C. Basic Skills Group. Learning Div.
PUB DATE Mar 76
CONTRACT NE-C-00-3-0072
NOTE 161p.; For the summary report, see TM 006 038

EDRS PRICE MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS Classroom Environment; Educational Programs; Evaluation Methods; *Group Dynamics; Inservice Education; Inservice Teacher Education; Instructional Materials; *Instructional Systems; Participant Satisfaction; Preservice Education; *Process Education; *School Personnel; Skill Development; *Summative Evaluation; *Training Techniques; Workshops
IDENTIFIERS *Preparing Educational Training Consultants I

ABSTRACT

This report presents the results of a field test for the Preparing Educational Training Consultants: Skills Trainers instructional system (PETC-I), one of several instructional systems developed by the Improving Teaching Competencies Program of the Northwest Regional Educational Laboratory. The PETC-I is designed for mass distribution and use in the preservice or inservice training of educators. The materials of this system include training strategies and procedures plus participant instructional materials. The first chapter describes the PETC-I instructional system including its history, objectives, and components. Specific evaluation activities (designs, instrumentation, samples), data analyses and results from three independent studies are described and discussed in the second, third, and fourth chapters. The first study tested the effects of the program on skills trainers in terms of their satisfaction with and their perceptions that the program is relevant, useful, and needed, and their knowledge. The second study compared the effectiveness of skills trainers to produce satisfaction in Group Process Skills (GPS) trainees, and their perceptions of relevance, utility, and need of the training, and the knowledge outcomes of the GPS trainees. The third study investigated the impact of GPS training on the classroom climate for teachers participating in GPS workshops and compared these climates to teachers in a control group. Chapter five presents a summary of the evaluation and a brief discussion of the results. (RC)

OUTCOME EVALUATION REPORT FOR PREPARING EDUCATIONAL TRAINING CONSULTANTS: SKILLS TRAINING (PETC–I)

Richard I. Arends
David Green

March 1976

Northwest Regional Educational Laboratory
710 S.W. Second Ave., Lindsay Building
Portland, Oregon 97204

March 1976

Published by the Northwest Regional Educational Laboratory, a private nonprofit corporation. The work upon which this publication is based was performed pursuant to Contract NE-C-00-3-0072, with the Basic Skills Group/Learning Division of the National Institute of Education. It does not, however, necessarily reflect the views of that agency.

Northwest Regional Educational Laboratory, 710 S.W. Second Avenue, Portland, Oregon 97204

CONTENTS

DIAGRAMS AND TABLES

PREFACE

This publication is one of a series of technical evaluation reports issued by the Northwest Regional Educational Laboratory to document evaluation findings for selected products. The subject of this report is *Preparing Educational Training Consultants: Skills Training (PETC-I)*, an instructional system developed in the Improving Teaching Competencies Program. This technical report is based on summative evaluation data and provides information for the benefit of potential users of the *PETC-I* training system.

The report has been reviewed by staff members of the Improving Teaching Competencies Program Evaluation Coordination Unit. Also, an institutional technical review has been conducted by Laboratory specialists external to the Program.

Lawrence D. Fish

Lawrence D. Fish
Executive Director

ACKNOWLEDGMENTS

This technical report reflects the contributions of many persons besides the authors. We would like to acknowledge with appreciate the efforts of:

Dean Nafziger and Rachel Rassen who took primary responsibility for the initial evaluation design and the construction of the various instruments used in the study.

Nick Smith who served as senior evaluator and helped complete the instrumentation and establish the test sites.

Sue Hiscox who took primary responsibility for conducting the study and analyzing the classroom climate data used in this evaluation.

Bill Ward and Marilyn Rieff of the Office of Field Relations, who acquired and set up the test sites.

The senior trainers at each workshop site. These included: Bill Ward, Ralph Glasier, Bob Ward, Al Coward, Chic Jung, Don Osborne, Bob Munson and Marilyn Rieff.

Saralie Northam who edited various drafts of the report.

Michael B. Northam who provided computer programming and data processing assistance.

Jane Arends, John Lohman and Steve Murray who provided very able technical evaluation assistance.

Warren Bell and Tom Jovick who were responsible for most of the data analysis in studies 1 and 2.

Shirley Gilbert who typed the initial drafts and Nancy Tupper who provided the able manuscript typing.

The developers, Ruth Emory, René Pino and Charles Jung who extended their continued cooperation.

The participants in each of the studies who cooperated and gave of their time with our data collection efforts.

INTRODUCTION AND OVERVIEW OF THE EVALUATION

The overall goal of the Improving Teaching Competencies Program (ITCP) of the Northwest Regional Educational Laboratory (NWREL), as stated in its *Resource Allocation and Management Plan (RAMP)* (Improving Teaching Competencies Program, 1974), is "To develop instructional systems for training school personnel in process skills which will promote student self-understanding, self-sufficiency and independence." The *RAMP* further specifies that:

> These instructional systems will be competency based, low cost and mass diffusible for preservice and inservice training in: (a) supportive curricular materials which encourage pupils to be active learners; (b) verbal behaviors that enable students to derive personally usable meanings for what they learn; (c) analyzing and improving individual teaching styles and using problem-solving processes; (d) using basic interpersonal skills; (e) providing for continuous growth of teachers and contributing to increased functional capabilities of organizations. (p. 6)

This report focuses on the *Preparing Educational Training Consultants: Skills Trainers* Instructional System *(PETC-I)*, one of several instructional systems developed by the Improving Teaching Competencies Program in accordance with these goals. Based upon summative evaluation data, this technical report provides information for the benefit of potential users of the system.

Preparing Educational Training Consultants (PETC) is a series of three cumulative and sequential instructional systems currently being developed by the Improving Teaching Competencies Program of the Northwest Regional Educational Laboratory. The purpose of this report is to present the results of a field test for the first system in the *PETC* series, *Skills Trainers (PETC-I)*. This instructional system is designed for mass distribution and use in the preservice or inservice training of educators.

The materials of this system include training strategies and procedures plus participant instructional materials.

The training for *PETC-I* is divided into two segments. The first part consists of a 40-hour workshop designed to familiarize participants with the skills, concepts, knowledge, instructional strategies and materials needed for conducting training in group process skills. The second part consists of a 35-hour practicum experience in which teams of participants (called skills trainers) with guidance of a senior trainer as needed, conduct a workshop in *Group Process Skills (GPS)* for teachers and other educational personnel. The latter individuals are called *GPS* participants.

PURPOSE OF THE TECHNICAL REPORT

This document reports on the final phase of the process employed by the Improving Teaching Competencies Program in the development of *PETC-I*. This development was based on a model which divides the work flow of an instructional system into five phases: planning, pilot, interim, field test and outcome. Each phase consists of specified development, evaluation and field relation activities which differ according to the phase under consideration. A brief description of the model is provided in Appendix A.

In the final or outcome phase, development of the instructional system has been completed and interest is focused on a summative evaluation of the system's ability to produce specified short- and long-term outcomes. Short-term outcomes are participant satisfaction, skill acquisition, awareness and immediate performance change; long-term outcomes include retention of knowledge and information. Of interest is the general impact of the instructional system on secondary audiences such as students and/or peers. For this reason, the terms "impact study" and "outcome evaluation" are used interchangeably throughout this report.

The purpose of this technical report, then, is to present the results of the outcome evaluation/impact study. Although the evaluation was conducted primarily for the purpose of assessing the long-term outcomes of *PETC-I*, some short-term outcomes are also addressed. The technical report of the outcome evaluation of the *PETC-I* instructional system will fulfill the contractual agreements of the Improving Teaching Competencies Program of NWREL with its funding agency.

PURPOSE OF THE EVALUATION

This evaluation submitted the *PETC-I* instructional system to a series of tests where information was collected to determine:

1. The effects of the instructional system on (a) skills trainer satisfaction, (b) their perceptions of the relevance, utility and need of the training and (c) knowledge outcomes
2. The importance of *PETC-I* prerequisites and different conditions of training for meeting satisfaction, perceptions of relevance, utility and need of the training and knowledge outcomes
3. The effects of skills trainers with different prerequisites and conditions of training in producing outcomes of satisfaction, perceptions of relevance, utility and need and of knowledge of *GPS* trainees
4. The impact of *GPS* training on classroom climates of teachers who have completed *GPS* workshops

Three quasi-experimental studies were conducted to examine the major issues cited above. The first study compared outcomes of three groups of skills trainers. Subjects were recruited and assigned at random, when possible, to three different treatment conditions so as to afford test of (a) the importance of the *PETC-I* prerequisites and (b) the efficacy of *PETC-I* training versus an abbreviated treatment.

Study 2 provided a comparison of the effectiveness of three groups of skills trainers in producing outcomes of satisfaction, perceptions of relevance, utility and need and of knowledge in *GPS* trainees.

Study 3 investigated the impact of *GPS* training on the classroom climate of teachers participating in *GPS* workshops. This study compared three groups of teachers--teachers trained in *GPS*, teachers trained in *Interpersonal Influence* and teachers receiving an abbreviated treatment.

AUDIENCES FOR THE TECHNICAL REPORT

Several potential audiences have been considered in the planning and implementation of the outcome evaluation of the *PETC-I* system and in the preparation of this report. The information contained in this evaluation report should be relevant to the concerns of three groups:

1. Personnel in the Improving Teaching Competencies Program at NWREL who are responsible for possible revisions or extensions of the systems
2. Educators who may potentially use the system and who need valid and reliable information in order to choose among inservice educational alternatives; these educators may include the teachers and administrators who desire to become workshop participants, curriculum specialists or those who provide training opportunities for teachers
3. Members of the National Institute of Education (NIE) who monitor the progress and assess the quality of output from the Improving Teaching Competencies Program

REPORT FORMAT

This report includes five chapters. In Chapter One, the *PETC-I* instructional system is described including its history, objectives and components. Specific evaluation activities (designs, instrumentation, samples), data analyses and results from three independent studies are described and discussed in Chapters Two, Three and Four. Chapter Five presents a summary of the evaluation and a brief discussion of the results.

CHAPTER ONE

DESCRIPTION OF THE *PETC-I* INSTRUCTIONAL SYSTEM

This chapter provides a description of the *PETC-I* instructional system. The first section provides an overview of the *PETC* series, while the second section describes the strategies and materials. Objectives of the system and its developmental history are included in the final sections.

OVERVIEW OF THE *PETC* SERIES

One of the basic goals of the Improving Teaching Competencies Program is to improve the organizational effectiveness of educational organizations. This goal is accomplished by providing educators with practical knowledge and skills drawn from the literature and research of human relations, group dynamics, organizational development and planned change.

The following two-fold strategy is used:

1. Provide preservice and inservice training programs for all educators in the knowledge, skills and values of basic group processes such as, interpersonal communication, problem solving and interpersonal influence

2. Train a small proportion of educators to provide training in group process skills *(PETC-I)*, consultation in a temporary relationship *(PETC-II)* and long-term organizational consultation *(PETC-III)*

The first strategy is expected to provide individuals and intact groups with particular group process knowledge, skills and values, while the second strategy is expected to provide support for the implementation of the systems. Whether these learnings can be put to effective use in schools and whether they will lead to improved organizational functioning depends on (a) the effectiveness of the knowledge, skills and values in

attaining the desired ends and (b) the degree of existing support for such knowledge, skills and values in the larger organizational context of the school.

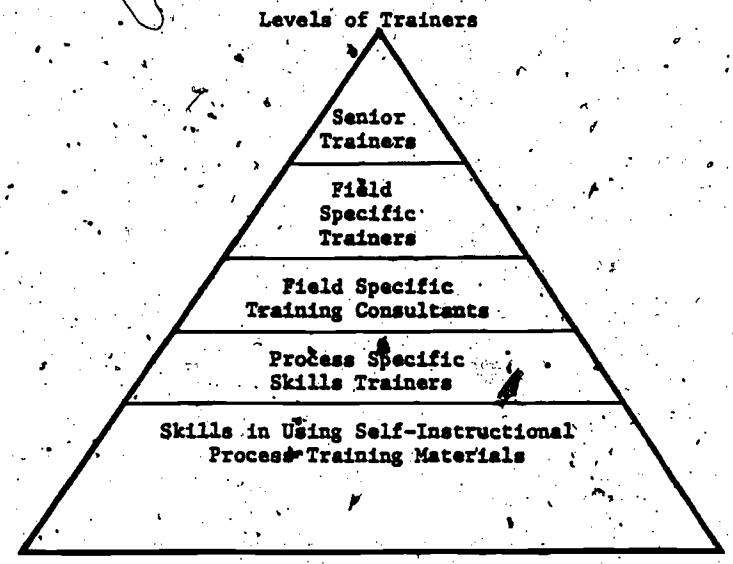
The *PETC* systems are based on the rationale that educators with these abilities can help schools continue to grow in organizational effectiveness by facilitating development of a climate supporting application of the process skills. Educators trained in the *PETC* systems are expected to use their abilities to help others increase their competencies in carrying out their educational programs. Although only a small portion of educators will be trained in these systems, these persons will improve the functional capabilities of groups and organizations and will influence the ways administrators, teachers, students and parents set goals, clarify communication, reach out to use relevant resources, systematically solve problems and make decisions, assess progress toward goals and cope with interdependence and conflict.

The developers of the *PETC* systems propose that levels of trainership be conceived as a hierarchical pyramid shown in Diagram I, in which trainers at the top know and can do more than those at the bottom. As one moves up in the hierarchy, both the breadth and the depth of trainer competencies increase.

The pyramidal distribution of trainership levels and relationships makes simpler levels feasible for less skilled trainers. This breaks a long standing bottleneck in process training in which costly experts are needed for even simple process learning experiences. Pressures for this breakthrough come both from positive need for process learning and from the negative backlash of experiences created by inadequately trained trainers. This breakthrough has become possible through being explicit about the processes and trainer competencies and by the creation of support materials.

Diagram I

The Pyramid of Process Trainership[a]



[a]Pino, R. and R. Emory. *Preparing Educational Training Consultants: Skills Training (PETC-I)*. Portland, Oregon: Northwest Regional Educational Laboratory, 1976. p. 131.

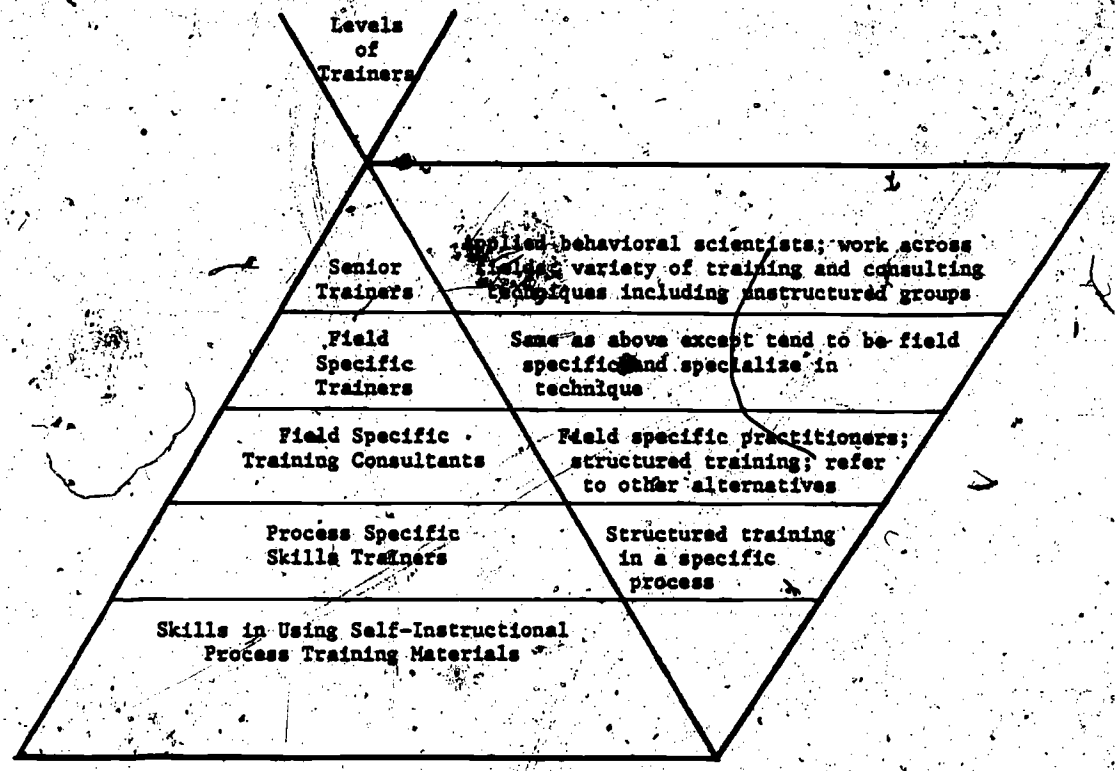
In Diagram II, a second inverted triangle is shown to represent the things that a trainer at each level of the pyramid knows and can do.

Trainees who complete the *PETC* series belong in the category of Field Specific Training Consultants. Other NWREL instructional systems, such as *Interpersonal Communications (IPC)* and *Research Utilizing Problem Solving (RUPS)* belong to the category of Process Specific Skills Trainers.

PETC-I is the first in the series of the three *PETC* systems, and is constructed to be a prerequisite to the other two programs. The *PETC-I* trainee (skills trainer) is expected to be able to work with small groups to assist in improving process skills such as goal setting, problem solving, communicating, influencing and decision making. The intended relationships among the *PETC* systems are shown in Diagram III.

Diagram II

Competencies of Process Trainers[a]



[a]Pino, R. and R. Emory. *Preparing Educational Training Consultants: Skills Training (PETC-I)*. Portland, Oregon: Northwest Regional Educational Laboratory, 1976.

Diagram III

Relationships Among the *PETC* Systems

Factors Involving the Client	*PETC-I (Skills Training)*	*PETC-II (Consulting)*	*PETC-III (Organizational Development)*
Usual client system	Small group	Small group or major subsystem of the organization	The organization (although most of the work may be with a major subsystem)
Assistance for the client	To increase process skills such as goal setting, communicating, influencing or decision making	To help the group obtain a goal by supplementing weak functions such as planning or validating	To add and maintain improved functional capability of the organization
Usual duration of client relationship	A few hours or days	A few days or weeks	A few months or 2 or 3 years

DESCRIPTION OF *PETC-I* STRATEGIES AND MATERIALS

The *PETC-I* system is a two-week workshop that is organized into two parts. The first part of the program consists of a one-week training program during which the *PETC-I* trainees (skills trainers) study the basic concepts of the instructional system and group process skills training. These workshops are conducted by senior trainers who meet criteria specified by the development team. These criteria and the criteria for selection of skills trainers are listed in Appendix B. The first section of the workshop is designed to accommodate between 12 and 24 skills trainers. The number of skills trainers must be a multiple of three so that trios can be formed. The second part of the workshop is a practicum for the skills trainers in which they form trios to work with a group of 12 to 24 people. The second training week is referred to as the *Group Process Skills (GPS)* workshop, and the second set of participants are called *GPS* trainees. *GPS* trainees learn group process skills from the trio of skills trainers.

Skills trainers are educators who wish to acquire skills for training others in group process skills. To be eligible for *PETC-I* training, they must complete two other NWREL programs, *Research Utilizing Problem Solving (RUPS)*[1] and *Interpersonal Communications (IPC)*[2]. Participation in *PETC-I* is voluntary.

GPS trainees may be classroom teachers, aides, support staff, parents, central office staff, principals, vice-principals and others in the educational setting who wish to improve their group and interpersonal skills. There are no prerequisites.

---

[1] *RUPS: Research Utilizing Problem Solving;* 1972. Available from Commercial Educational Distributing Services, P.O. Box 3711, Portland, Oregon 97208.

[2] *IPC: Interpersonal Communications;* 1972. Available from Xicom, Inc., RFD #1, Sterling Forest, Tuxedo, New York 10987.

Materials supplied in the *PETC-I* instructional system include two leader's manuals (Part I: *Skills Training* and Part II: *Group Process Skills*); two sets of participant materials (Parts I and II) and a collection of skill exercises and theory papers. In addition, senior trainers and skills trainers supply the usual accouterments of a workshop--names tags, three-ring binders, newsprint pads, felt-tip pens, paper, crayons and masking tape.

Leader's Manual, Part I

The manual for senior trainers who conduct the first week of *PETC-I* training is 140 pages in length. It includes guidelines for setting up and conducting the workshop, describes workshop format and environment, outlines the design and schedule of training and briefly discusses the objectives, outcomes, target participant population and the role of the senior trainer. The body of the manual for senior trainers is organized session-by-session. For each session there are comments on the purpose, time required, the rationale for the session's activities, expected participant outcomes, trainer preparation needed and the instructional strategy. The strategy describes a sequential set of activities for each session, the time and materials needed for each activity and specific directions to the trainer. Senior trainers also receive copies of participant materials for each session and the collection of exercises and theory papers from which the participant activities and materials for Sessions 8-9 and 12-17 are drawn. Each kind of material appears on a different color of paper and all are packaged to fit into a three-ring binder.

Leader's Manual, Part II

The skills trainer's manual for conducting the *GPS* workshops is 87 pages in length. It includes session summaries, instructional strategies

and participant materials similar to those in the leader's manual, part I. The skills trainer also receives the collection of exercises and theory papers, from which to draw participant activities and additional materials for Sessions 8-18. The materials are color-coded and packaged to fit a three-ring binder.

Participant Materials, Part I

The participant manual for the first part of *PETC-I* is 102 pages in length. These materials include brief theory papers, introductory materials to exercises, instructions, worksheets, rating forms and other self-administered items. In addition, during Session 12, participants recieve copies of the collection of exercises and theory papers. These become a component of their leader's manual used to train the *GPS* workshop in Part II.

Participant Materials, Part II

Participant materials for the *GPS* workshop are 64 pages in length. They consist of the same type of materials as in the participant manual for Part I.

Collection of Exercises and Theory Papers

The collection of exercises and theory papers is 334 pages in length. It consists of 30 exercises which deal with different aspects of group processes and skills needed to benefit group process. Exercises cover such issues and skills as problem solving, the helping relationship, leadership styles, communication skills--giving/receiving feedback and two-way/one-way communication, consensus decision making and group roles. There are 16 theory papers which accompany some of the exercises as aids to skills trainers' understanding of a particular concept of group process. The materials are color-coded to facilitate distinguishing between instructional strategies, participant materials (exercise handouts) and theory papers. They are packaged to fit into a three-ring binder.

In addition, each workshop requires a supply of exercise handouts to cover those exercises selected by trainers for their participants.

Orientation Kit

This kit, no longer commercially available, delineates the different responsibilities of the host and senior trainer, gives a list of necessary materials and a partial list of supplies and presents a sequential preparation checklist for the host to follow in arranging for a local *PETC-I* workshop. Two information flyers (orientation brochures) have also been developed to allow potential participants in either part of *PETC-I* to know what they can expect to gain from participation and the obligations which they have to the *PETC-I* program and teammates. A sample of each of these flyers is included in the orientation kit.

GOALS AND OBJECTIVES OF *PETC-I*

The general goal of *PETC-I* is to teach skills trainer participants to train others in process skills and to facilitate the functioning of small groups. To this end, skills trainer graduates of the *PETC-I* system are expected to meet the cognitive and performance objectives listed below.

Cognitive Objectives

Following the *PETC-I* workshop, skills trainers should:

1. Understand the roles of a skills trainer (manager, facilitator, diagnoser, designer and trainer)
2. Understand dimensions essential for group growth
3. Understand skills needed by members of productive groups
4. Understand the guidelines for selecting, sequencing, modifying and conducting skills training exercises

Performance Objectives

Following the *PETC-I* workshop, skills trainers are expected to be able to:

1. Assess issues and problems and diagnose skill needs of individuals and groups
2. Identify the skills needed to influence or reduce those problems
3. Develop and implement a plan to improve the group's processes

Many of the knowledge outcomes expected from skills trainers are also expected for *GPS* trainees.

In addition to providing knowledge and skills for the *PETC-I* and *GPS* trainees, the *PETC-I* system includes some implicit expectations about the impact of the trainees on their work environments. For example, because *PETC-I* and *GPS* trainees are expected to be able to facilitate communication, decision making and other group process skills, the groups with which they work should develop more open and effective climates. Trainees who are school administrators should promote these qualities among their school faculties. Trainees who teach should promote open and effective climates in their classrooms.

DEVELOPMENTAL HISTORY

In the mid-1960's, the National Training Laboratory developed a training program to provide educational consultants with group process skills. This skills training was coupled with techniques and materials from human relations training and organizational development and involved a four-week training workshop. This program, funded by the Research Training Branch of the U.S. Office of Education and the Fund for Advancement of Education of the Ford Foundation, was first conducted during the summer of 1966 in Bethel, Maine, and continued a number of years on a self-sustaining basis.

The NTL training program was originally designed to improve education by providing linkage agents for local districts. Havelock's review of the literature concerning knowledge utilization models appropriate to educational innovation (1969) further clarified the role of linkage agents. Havelock concluded that such a role is critically needed in education and his proposal that role-holders need a knowledge base closely parallels content of the National Training Laboratory's program.

The NTL program failed to meet a national need for training in two ways. First, the training design was exploratory from year to year as the staff changed and focused on their current social science interests. The second limitation concerned the fact that highly skilled trainers were needed to conduct this type of training, and they could not be found or trained rapidly enough.

The development of *PETC-I* began in December, 1968. The following is a summary of major field trials and revisions to date.

December 1968 through June 1970. The development of a prototype of the instructional system and its pilot testing were completed. Pilot trials were conducted in Seattle, Washington and Portland, Oregon.

July 1970 through April 1971. Field trials of a revised version were conducted by developers at Menucha, Oregon and Spokane, Washington, with 34 and 10 participants respectively. Developer observations and experiences at the trial sites plus participant reactions obtained from postsession questionnaires provided data which led to further revisions.

May 1971 through August 1972. The revised version of the instructional system was used by senior trainers other than the developers. The following is a list of workshops which were held:

Place	Date	Senior Trainer(s)	No. of Skills Trainers	No. of *GPS* Groups	No. of *GPS* Trainees
Brookings, S.D.	11/72	M. Cochran	6	2	24
Billings, Mont.	2/72	S. Buel, B. Ward	12	3	36
Seattle, Washington	4/72	B. McGlone C. Harper	15	4	57
Corvallis, Ore.	5/72	W. Hill	12	3	24
Minneapolis, Minn.	6/72	B. Ward, B. Mills	30	11	199

The materials and instructional strategies which comprise *PETC-I* underwent further revisions during this period.

The current revision was completed during the summer of 1972 and was then used during the following field test workshops:

Place	Date	Senior Trainer(s)	No. of Skills Trainers	No. of *GPS* Groups	No. of *GPS* Trainees
Mission Viejo, Ca.	6/73	B. Ward, M. Rieff	10	3	32
Minneapolis, Minn.	7/73	M. Hendrickson	12	4	43
Minneapolis, Minn.	7/73	R. Scobie	16	3	39
Portland, Oregon	8/73	A. Spanjer	12	4	63
Seattle, Wash.	10/73	B. McGlone, A. Kolb	9	3	25
Cheney, Wash.	11/73	D. Gaudette, P.George	13	4	43

Evaluation of the *PETC-I* instructional system during the field test revealed participants found the materials relevant and useful. They also considered the training to be worthwhile. Furthermore, participants showed significant positive changes in attitude towards themselves as learners and toward anticipated use of the learnings. Although degree of mastery of concepts and skills varied, trainees were considered to have performed satisfactorily in five of the seven focal areas. The technical quality of the instructional system was perceived as quite high by both trainees and trainers.

CHAPTER TWO

EVALUATION ACTIVITIES AND RESULTS OF STUDY 1

In this chapter the evaluation activities and the results of Study 1 are described and discussed. Topics include: (a) the purpose of the study, (b) the evaluation questions which guided the study, (c) the research methods including design, sampling procedures, instrumentation and data analysis and (d) the results.

PURPOSES OF STUDY 1

This study tested the effects of *PETC-I* instructional system on skills trainers in terms of (a) their satisfaction with and their perceptions that *PETC-I* is relevant, useful and needed and (b) their knowledge. The study was designed to compare these effects among three groups with different prerequisites. The three groups were formed to test the importance of the *PETC-I* prerequisites and of the efficacy of *PETC-I* training versus an abbreviated treatment.

EVALUATION QUESTIONS

Two evaluation questions guided evaluation activities and data analysis in Study 1.

1. How do the three forms of treatment compare in producing satisfaction and perceptions of relevance, utility and need in *PETC-I* skills trainers?
2. How do the three forms of treatment compare in producing knowledge outcomes in *PETC-I* skills trainers?

DESIGN

A three-comparison group, posttest only design was used. Group A was to include people who had previously taken both *IPC* and *RUPS* but who

received only an abbreviated *PETC-I* treatment to familiarize them with the *PETC-I* system. The abbreviated treatment consisted of a one-day orientation session conducted by the developers of *PETC-I*. Instructional activities consisted of (a) an overview and discussion of *PETC-I*, (b) an explanation on how to select, sequence and conduct skill exercises used in *GPS* workshops and (c) time for the trios of skills trainers to make initial plans and to discuss these plans with the developers. Group B was to include people who had not taken *IPC* or *RUPS*, but who participated in the full *PETC-I* workshop. Group C was to include those who had taken both *IPC* and *RUPS* and who received a full week of *PETC-I* training.

The posttest only design was used for two reasons: (a) legitimate differences between subjects in Groups A and B would be expected to occur prior to treatment because of differences in training background, and (b) pretests would likely be reactive for subjects in Group C as they would increase their exposure to the system.

FIELD SITES AND SUBJECTS

The original evalation design called for using mailed invitations to recruit subjects for five workshops throughout the United States. It was anticipated that at least 30 subjects would volunteer for each workshop. Volunteers were to be placed into two subject pools on the basis of qualifications: Pool One would include those who had completed both prerequisites, *IPC* and *RUPS*, and Pool Two would include those who did not have the prerequisites. From these pools, subjects were to be randomly assigned to Groups A, B, and C. Six subjects for Group A and six subjects for Group C were to be randomly assigned from Pool One. Six subjects for Group B were to be randomly selected from Pool Two.

Constraints in the field caused some deviation from this design. First, instead of five sites, only two could be secured in time to conduct the tests. Second, a lack of response to mailed invitations resulted in fewer participants than the original design had called for. Because it was not possible to recruit enough subjects that had both prerequisites of *IPC* and *RUPS*, subjects were selected for Groups A and C if they met one of the prerequisites--either *IPC* or *RUPS*--not both. Third, scheduling constraints and participant preferences to work with specific friends or colleagues prevented complete random assignment of subjects in Pool One to Groups A and C. This reflects the problems associated with implementing experimental designs in field settings. Readers should recognize that the amount of bias introduced into the study because of this factor is unknown. Characteristics of the two sites and of the *PETC-I* skills trainers are described in more detail in the section that follows.

Houston, Texas

Central office personnel of the Houston Independent School District coordinated recruitment of participants at this site. Special invitations were extended to persons who were interested in preparing themselves to serve in a cadre of staff development trainers. To meet testing requirements, subjects were recruited from the two previously described populations--those who met at least one of the *PETC-I* prerequisites and those who did not.

The school district provided the workshop facilities and $4,500 to partially cover senior trainer fees and expenses. The remainder of the trainer fees and installation expenses were provided by NWREL. The Laboratory also provided participants with the opportunity to receive three units of college credit through United States International University.

Vancouver, Washington

NWREL and the Evergreen School District worked together to recruit participants at this site. The school district adapted brochures and application materials developed by NWREL and mailed these to selected personnel in the district who had been identified as having the *PETC-I* prerequisites. Because Evergreen wanted *PETC-I* training for their school administrators and central office staff, most subjects came from this population.

The NWREL Office of Field Relations assisted with recruiting persons who did not meet the prerequisites by mailing invitations to all educators in the local county of the Evergreen School District and to persons in adjacent areas who had previously expressed an interest in acquiring *PETC-I* training.

Evergreen School District provided space for the workshop and two of their staff assisted as senior trainers. NWREL provided three senior trainers and the training materials. As in Houston, NWREL arranged for college credit for participants through United States International University.

Characteristics of Skills Trainers

A Background Questionnaire (Appendix C), developed by the Northwest Regional Educational Laboratory, was administered to all skills trainers prior to *PETC-I* training. Information collected from this quesionnaire included sex, age, occupation, years of work experience, education of the participant and previous experience with NWREL workshops and other group interpersonal dynamics training. Summaries of the background characteristics of skills trainers are presented in Table 1.

Table 1

Distribution of Participant Characteristics by Sites and Groups: *Skills Trainers*[ab]

	Houston									Evergreen								
	A		B		C					A		B		C				
	N	%	N	%	N	%	X^2	df	p	N	%	N	%	N	%	X^2	df	p
PARTICIPANTS	N=8		N=10		N=6					N=8		N=8		N=8				
Female	5	62	6	60	6	100	1.442	2	NS	1	12	7	88	0	0	11.6719	2	.05
Male	3	38	4	40	0	0				7	88	1	12	8	100			
AGE																		
Under 25	0	0	0	0	0	0	1.9282	4	NS	0	0	2	29	0	0	2.3453	4	NS
25-34	1	12	3	33	4	66				4	50	3	42	1	12			
35-44	4	51	3	33	1	17				2	25	0	0	4	50			
45-54	2	25	3	33	1	17				2	25	2	29	3	38			
55+	1	12	0	0	0	0				0	0	0	0	0	0			
POSITION																		
Teacher 1-3	0	0	0	0	0	0				0	0	1	20	0	0			
Teacher 4-6	0	0	0	0	0	0				0	0	2	40	0	0			
Teacher 7-9	0	0	0	0	4	67				0	0	0	0	0	0			
Teacher 10-12	1	12	0	0	0	0				1	14	1	20	0	0			
Administrator	1	12	4	40	2	33				6	86	1	20	7	100			
Staff	6	76	6	60	0	0				0	0	0	0	0	0			
YEARS EXPERIENCE																		
1-4	1	12	0	0	3	49	5.65	8	NS	1	12	3	43	0	0	4.4678	8	NS
5-9	1	12	2	20	1	17				3	39	2	29	0	0			
10-14	2	25	6	60	1	17				2	25	1	14	4	57			
15-20	1	12	0	0	1	17				1	12	1	14	3	43			
21+	3	39	2	20	0	0				1	12	0	0	0	0			
EDUCATION																		
BA/BS	2	29	1	10	3	50	1.4716	2	NS	0	0	5	62	1	12	5.4863	2	NS
MA/MS	5	71	9	90	3	50				8	100	3	38	6	76			
Doctorate	0	0	0	0	0	0				0	0	0	0	1	12			
PREVIOUS NWREL WORKSHOPS																		
SOAI	0	0	0	0	0	0	.2292[c]	1	NS	0	0	1	12	1	12	1.0018[c]	1	NS
Interaction Analysis	0	0	1	10	0	0				0	0	0	0	1	12			
Inquiry	0	0	0	0	0	0				0	0	0	0	0	0			
Hi. Level Think.	0	0	0	0	0	0				0	0	0	0	0	0			
SAFE	0	0	0	0	0	0				0	0	0	0	0	0			
Conflict	0	0	0	0	0	0				0	0	0	0	2	25			
INF	0	0	1	10	0	0				1	12	0	0	1	12			
IPC	8	100	0	0	3	50				1	12	0	0	5	62			
RUPS	8	100	0	0	3	50				6	75	0	0	5	62			
GPS	0	0	0	0	0	0				0	0	1	12	1	12			
OTHER TRAINING	3	38	2	20	0	0				5	12	6	75	4	50			

[a] No answers (N.A.'s) not included

[b] While specific tests of significance were calculated on the background and outcome data, it should be pointed out that because of the sampling procedures used in some cases, legitimate statistical inferences are often not possible. The tests simply emphasize the magnitude or lack of some actual differences found and, therefore, are primarily of descriptive utility.

[c] Chi-square analysis used only the figures for IPC and RUPS and was only done for Groups A versus C since all values for Group B were zero.

TABLE 1. Continued

	Groups (Combined Sites)									Sites (Combined Groups)							
	A		B		C					Houston		Evergreen				Total	
	N	%	N	%	N	%	X^2	df	p	N	%	N	%	X^2	df	p	N	%
PARTICIPANTS	N=16		N=18		N=14					N=24		N=24					N=48	
Female	6	38	13	72	6	43	3.195	2	NS	17	71	8	33	5.3426	1	.05	25	52
Male	10	62	5	28	8	57				7	29	16	67				23	48
AGE																		
Under 25	0	0	2	12	0	0	.3918	4	NS	0	0	2	9	.0642	2	NS	2	4
25-34	5	31	6	38	5	36				8	35	8	35				16	36
35-44	6	38	3	19	5	36				8	35	6	26				14	30
45-54	4	25	5	31	4	28				6	26	7	30				13	28
55+	1	6	0	0	0	0				1	4	0	0				1	2
POSITION																		
Teacher 1-3	0	0	1	7	0	0	5.5911[d]	4	NS	0	0	1	5	12.9663[f]	3	.05	1	2
Teacher 4-6	0	0	2	13	0	0				0	0	2	11				2	5
Teacher 7-9	0	0	0	0	4	31				4	17	0	0				4	9
Teacher 10-12	2	13	1	7	0	0				1	4	2	11				3	7
Administrator	7	47	5	33	9	69				7	29	14	73				21	49
Staff	6	40	6	40	0	0				12	50	0	0				12	28
YEARS EXPERIENCE																		
1-4	2	12	3	18	3	23	4.3324	8	NS	4	17	4	18	2.0890	4	NS	8	17
5-9	4	25	4	24	1	8				4	17	5	23				9	20
10-14	4	25	7	40	5	38				9	37	7	31				16	35
15-20	2	12	1	6	4	31				2	8	5	23				7	15
21+	4	25	2	12	0	0				5	21	1	5				6	13
EDUCATION																		
BA/BS	2	13	6	33	4	29	.8815[e]	2	NS	6	26	6	25	.1127[e]	1	NS	12	26
MA/MS	13	87	12	67	9	64				17	74	17	71				34	72
Doctorate	0	0	0	0	1	7				0	0	1	4				1	2
PREVIOUS NWREL WORKSHOPS																		
SOAI	0	0	1	6	1	6	.1191[c]	1	NS	0	0	2	8	.3514[g]	1	NS	2	4
Interaction Analysis	0	0	1	6	1	6				1	4	1	4				2	4
Inquiry	0	0	0	0	0	0				0	0	0	0				0	0
Hi. Level Think.	0	0	0	0	0	0				0	0	0	0				0	0
SAFE	0	0	0	0	0	0				0	0	0	0				0	0
Conflict	0	0	0	0	2	11				0	0	2	8				2	4
INF	1	6	1	6	1	6				1	4	2	8				3	6
IPC	9	56	0	0	8	57				11	46	6	25				17	35
RUPS	14	88	0	0	8	57				11	46	11	46				22	46
GPS	0	0	1	6	1	6				0	0	2	8				2	4
OTHER TRAINING	8	50	8	44	4	29				5	21	15	62				16	33

[c]Chi-square analysis used only the figures for IPC and RUPS and was only done for Groups A versus C since all values for Group B were zero.

[d]Chi-square analysis used only figures for "Staff, Administrator," and "Teacher 10-12."

[e]Chi-square analysis excluded figures in the "Doctorate" category.

[f]Chi-square analysis excluded figures for "Teachers 1-3" and "Teachers 4-6."

[g]Chi-square analysis used only the figures for IPC and RUPS.

Statistical tests were conducted to identify significant differences between the treatment groups at each site, between the treatment groups with the two sites combined and between the two sites with the treatment groups combined. The tests revealed differences on only two characteristics: sex and position. A Chi square showed the Group B at Evergreen had a significantly greater percentage of females, than did Groups A and C in that site. Also, the Houston site combined groups showed a significantly greater percentage of females in Group B than did the combined groups at the Evergreen site. A Chi square also revealed a significant difference in the distribution of educator roles at the two sites: Evergreen participants were predominately administrators (73 percent) whereas the greatest number of Houston participants were in the "Staff" category (50 percent).

Workshop participants in the groups and sites did not differ significantly in the other four categories: age, years of work experience, education and previous NWREL workshops and training. The ages of the participants were fairly evenly distributed between 25 and 55. Overall, nearly three-quarters of the participants had either one to nine years experience or ten to fourteen years (37 percent and 35 percent respectively). The vast majority (72 percent overall) of the participants in all treatment groups except Evergreen's Group B had Master's degrees. Prior exposure of participants to NWREL workshops was negligible, with the exception of the *IPC* and *RUPS* training required of participants in Groups A and C.

INSTRUMENTATION

Two instruments were used to collect information in response to the two previously stated evaluation questions. Items on the Final

Questionnaire (Appendix D) were presented as rating scales with six (in some cases five) choices between a positive and negative statement. For example, Item 35 reads:

Would you recommend this workshop to a friend whose interests are like yours?

Yes, recommend it highly /___/___/___/___/___/___/ Definitely not recommend

Responses were scored with six (or five) as the most positive and a score of one as the most negative.

The Knowledge Test (Appendix E) for skills trainers was developed to measure understandings of the meaning and implications of particularly important concepts taught in the instructional system. This multiple-choice instrument was developed through two phases. First, an open-ended test covering concepts from the training materials was given to participants at *PETC-I* workshops conducted in June and July, 1974. Second, response categories were constructed from the answers given to the open-ended questions. From this item pool, a preliminary version of the multiple-choice test was developed and again pilot tested. Item analysis performed after this test determined which items to keep and which to delete. Face validity of the instrument was established by the judgment of the system developers, senior trainers and evaluators. This analysis resulted in a 49-item test which was administered to the *PETC-I* skills trainers after they had completed their training.[3]

RESULTS: SATISFACTION AND PERCEPTIONS OF RELEVANCE, UTILITY AND NEED

Three items on the Final Questionnaire assessed the overall satisfaction of trainees with *PETC-I* training. Specifically, each trainee was asked

[3]In the process of coding data from the Knowledge Test, it was discovered that Item 9 had two possible correct answers. This item thus was deleted from the test.

Table 2

Frequency Distributions, Percent and Mean Response
For Skills Trainers' Satisfaction by Workshop Group

Item	Group A MiniPETC-I with IPC/RUPS					Group B PETC-I without IPC/RUPS					Group C PETC-I with IPC/RUPS				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question 17 In an overall assessment of your training experience, was it:															
6 Extremely valuable	10	62.5	16	5.50	87.5	14	77.8	18	5.72	94.5	7	50	14	5.36	85.7
5	4	25				3	16.7				5	35.7			
4	2	12.5				1	5.6				2	14.3			
3															
2															
1 Little value															
0 No response															
Question 22 Now that the workshop is over, how would you sum up the experience?															
6 Extremely worthwhile	8	50	16	5.38	87.5	14	77.8	18	5.88	88.9	6	42.9	14	5.42	100
5	6	37.5				2	11.1				8	57.1			
4	2	12.5													
3															
2															
1 Not very worthwhile															
0 No response						2	11.1								
Question 35 Would you recommend this workshop to a friend whose interest are like yours?															
6 Yes, recommend highly	12	75	16	5.64	81.3	17	94.4	18	6.00	94.4	11	78.6	14	5.79	100
5	1	6.3									3	21.4			
4															
3															
2	1	6.3													
1 Definitely not recommended															
0 No response	2	12.5				1	5.6								

how valuable and how worthwhile the workshop had been and if he or she would recommend it to a friend. Table 2 presents and compares the responses of skills trainers from Groups A, B and C to these three items.

The data in Table 2 show that respondents who experienced *PETC-I* training reported high satisfactions. At least 80 percent of the subjects in all three groups marked the two most positive points on the scale on all three items. Differences between groups in terms of means and cumulative positive responses are slight, although Group C appears to result in a slightly higher percentage of satisfied participants.

Skills trainers rated the relevance of the instructional system on three Final Questionnaire items. They were asked if the system offered new insights, spoke to vital concerns and if the materials maintained their interest. Table 3 presents and compares the responses of skills trainers from Groups A, B and C to these three items.

The data in Table 3 show that over 60 percent of the skills trainers marked each item in the top two positive categories. However, some variance can be observed between items and between groups. At least 88 percent of skills trainers, regardless of group, felt the system maintained their interest, but only 69 percent of respondents in Group A felt the system spoke to vital concerns and only 64 percent in Group B reported that the system offered new insights. It appears that Group B produces the highest percentage of skills trainers who perceive the workshop as relevant and that few differences appear between Groups A and C.

Skills trainers indicated their perceptions of the utility of the knowledge and skills presented in *PETC-I* on three questionnaire items. They were asked to decide if the ideas and skills could be used immediately, if the system provided real help for actual work and how extensively they planned to use the ideas, skills and materials. Skills trainer responses to these questions and by condition are summarized in Table 4.

Table 3

Frequency Distributions, Percent and Mean Response
For
Skills Trainers' Perceptions of Relevance by Workshop Groups

Item	Group A MiniPETC-I with IPC/RUPS					Group B PETC-I without IPC/RUPS					Group C PETC-I with IPC/RUPS				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question B3[a]															
6 Offered new insights, new ways of viewing old problems	4	25	16	5.00	75	8	44.4	18	5.33	88.8	5	35.7	14	4.92	64.3
5	8	50				8	44.4				4	28.6			
4	4	25				2	11.1				4	28.6			
3											1	7.1			
2															
1 Only restated or proved what I already know															
0 No response															
Question B4[a]															
6 Spoke to important issues, vital concerns	6	37.5	16	4.93	68.8	7	38.9	18	5.39	100	8	57.1	14	5.29	85.7
5	5	31.3				11	61.1				4	28.6			
4	4	25.0													
3											2	14.3			
2	1	6.3													
1 Missed the important issues, vital concerns															
0 No response															
Question B8[a]															
6 Material maintained my interest	10	62.5	16	5.63	100	11	61.1	18	5.59	88.9	3	21.4	14	5.14	92.8
5	6	37.5				5	27.8				10	71.4			
4						1	5.6				1	7.1			
3															
2															
1 Material failed to interest me															
0 No response						1	5.6								

[a]Question B: Think for a moment about the informational materials, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

Table 4

Frequency Distributions, Percent and Mean Response[1]
For
Skills Trainers' Perceptions of Utility by Workshop Groups

Item	Group A MiniPETC-I with IPC/RUPS					Group B PETC-I without IPC/RUPS					Group C PETC-I with IPC/RUPS				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question B6[a]															
6 Ideas, skills methods can be used immediately under existing conditions	2	12.5	16	4.62	62.5	7	38.9	18	4.61	66.7	6	42.9	14	5.00	85.8
5	8	50.0				5	27.8				6	42.9			
4	4	25.0				1	5.6								
3	2	12.5				2	11.1								
2						3	16.7				2	14.3			
1 Usage would require changes in conditions that I have no control over															
0 No response															
Question B7[a]															
6 Provided real "how to" help for my actual group work	5	31.3	16	5.12	81.3	8	44.4	18	5.41	88.8	5	35.7	14	4.79	64.3
5	8	50.0				8	44.4				4	28.6			
4	3	18.8				1	5.6				4	28.6			
3															
2															
1 Little "how to" help for my actual group work											1	7.1			
0 No response						1	5.6								
Question E20[b]															
6 Extensively	7	43.8	16	4.94	62.6	9	50.0	18	5.50	100	5	35.7	14	4.93	71.4
5	3	18.8				9	50.0				5	35.7			
4	4	25.0									3	21.4			
3	2	12.5													
2											1	7.1			
1 Not at all															
0 No response															

[a] Question B: Think for a moment about the informational materials, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

[b] Question E: In all honesty, how much do you plan to use the ideas, skills and/or materials presented in this workshop as an integral part of your work?

On all items, over 60 percent of the respondents marked the top two positive categories. Differences between Groups A and C are slight, with it appearing that Group B produced the highest percentage of participants who perceived the workshop as useful.

Finally, skills trainers indicated their perceptions of the educational community's need for *PETC-I* skills and the potential of *PETC-I* for meeting such a need on two items on the Final Questionnaire. Their responses are presented in Table 5.

Table 5 shows that over 80 percent of skills trainers in all groups reported there was a definite or some need for *PETC*-type skills and abilities. They also felt the *PETC-I* instructional system had excellent or good potential for meeting this need. It appears that Groups B and C produced skills trainers who see this need and the potential of *PETC* to fulfill it slightly better than Group A.

To make a clearer comparison between the three groups according to the criteria of skill trainer satisfaction and their perceptions of relevance, utility and need, the percent of respondents marking the top two response categories for all items in a cluster was averaged. These data are presented in Table 6.

The data in Table 6 show that, in general, a smaller percentage of skills trainers in Group A marked these two categories of overall satisfaction, relevance, utlity and need for *PETC-I* skills and abilities than did skills trainers in Groups B and C and in most instances, the differences between Groups B and C are slight. The differences found between Group A (Mini*PETC-I* treatment) and Groups B and C on perceptions of utility may suggest that a minimum exposure to *PETC-I* does not produce as high a level of satisfaction and perceptions of relevance, utility and need on the part of participants as does full involvement with the instructional system.

Table 5

Frequency Distributions, Percent and Mean Response
For
Skills Trainers' Perceptions of Need by Workshop Groups

Item	Group A MiniPETC-I with IPC/RUPS					Group B PETC-I without IPC/RUPS					Group C PETC-I with IPC/RUPS				
	f1	Percent	N	$\bar{X}$	Percent 5 or 6	f1	Percent	N	$\bar{X}$	Percent 5 or 6	f1	Percent	N	$\bar{X}$	Percent 5 or 6
Question G33[a]															
5 Definitely strong need	12	75.0	16	4.86	87.5	17	94.4	18	5.00	94.4	13	92.9	14	4.93	100
4	2	12.5									1	7.1			
3															
2															
1 No opinion															
0 No response	2	12.5				1	5.6								
Question G34[a]															
5 Excellent	10	62.5	16	4.64	81.3	13	72.2	18	4.76	94.4	8	57.1	14	4.57	100
4	3	18.8				4	22.2				6	42.9			
3	1	6.3													
2															
1 None															
0 No response	2	12.5				1	5.6								

[a]Question G: Please circle the response that best reflects your opinion of the following characteristics of the workshop.

Table 6

Average Percent Marking Top Two Categories
For Item Clusters by Workshop Group

Item Clusters	Group A	Group B	Group C
Satisfaction	85.4	92.6	95.2
Relevance	79.7	93.0	83.9
Utility	68.8	85.2	73.8
Needs	84.4	94.4	100.0

RESULTS: KNOWLEDGE OUTCOMES

The second evaluation question of this study focused on whether different forms of treatment influenced knowledge outcomes of *PETC-I* skills trainers. The previously described Knowledge Test administered to trainees at the conclusion of their training was used to measure this variable.

Before analysis was done to examine differences between the three groups, t-tests for independent samples were performed on the means in order to determine if site differences existed. The mean scores for all respondents at the Houston and Evergreen sites were 11.63 and 12.5, respectively. This produced a t of 1.01 (df, =43) which was not statistically significant. Because no differences existed between sites, scores were combined.

Using the total scores from the 48 items on the Knowledge Test, means for the three groups were computed and submitted to an alalysis of variance. Table 7 displays the means for the three groups and the analysis of variance of these scores.

Table 7

Analysis of Variance and Mean Scores on
PETC-I Knowledge Test for Three Workshop Groups

Source	Analysis of Variance					Mean Scores		
	Sum of Squares	df	Mean Squares	F	α	A	B	C
Between Groups	54.84	2	27.42	1.38	0.262	31.25	30.22	32.86
Within Groups	895.84	45	19.91					
Total	950.68							

These data and the analysis of variance between means showed no significant differences among groups. Reasoning that the lack of differences may have been due to error variance from the unknown internal consistency of the test, additional analysis was performed.

Using the scores from *PETC-I* skills trainers in the study, the internal consistency (Cronbach's ALPHA, See Nunnally, 1964) was calculated. Items that correlated low with total scores were discarded. Total scores for the remaining items were recomputed, and then internal consistency of the instrument was recalculated.

Using the 48 items, the ALPHA equaled .6, a relatively low value for a test with this many items. The new instrument used in the analysis consisted of 17 items from which new total scores and ALPHA were calculated. The new ALPHA was .78 which is considered acceptable for a test of this length. Items were discarded if the original item-total correlation was less than .2.

Table A in Appendix F displays the correlations between original total scores and retained items and new total scores and retained items. Table B in Appendix F shows the item-total correlations for the discarded items.

Using scores from the 17-item scale, again analysis or variance was performed, and as can be observed from the data displayed in Table 8, no significant differences among groups were found.

Table 8

Analysis of Variance and Mean Scores on *PETC-I* Knowledge Test for Three Workshop Groups

Source	Analysis of Variance					Mean Scores		
	Sum of Squares	df	Mean Squares	F	α	A	B	C
Between Groups	29.94	2	14.97	1.77	0.182	12.33	10.94	12.84
Within Groups	355.97	45	8.48					
Total	385.91	47						

Again in an attempt to explain the lack of differences among groups in regard to participant knowledge scores, one final analysis was conducted. Each item on the knowledge test was examined and the percentange of participants in each group who answered the item correctly was compared. Again, no striking differences were observed. These data are displayed in Table C in Appendix F.

It appears from these analyses that the amount of prior training in NWREL systems or the amount of treatment in *PETC-I* iteself does not influence the amount of knowledge accrued, at least as measured on the Knowledge Test. Further discussion of this finding will be discussed in the final chapter.

CHAPTER THREE

EVALUATION ACTIVITIES AND RESULTS OF STUDY 2

In this chapter the evaluation activities and results of Study 2 are described and discussed. As in Chapter Two topics include: (a) the purpose of the study, (b) the evaluation questions which guided the study, (c) the research methods including design, sampling procedures, instrumentation and data analysis and (d) the results.

PURPOSES OF STUDY 2

This study compared the effectiveness of skills trainers in Groups A, B and C described in Study 1 to produce (a) satisfaction in *GPS* trainees, and their perceptions of relevance, utility and need of the training and (b) knowledge outcomes in *GPS* trainees.

EVALUATION QUESTIONS

Two evaluation questions listed below guided the analysis in Study 2.

1. How do skills trainers from the three treatment groups compare in producing satisfaction and perceptions of relevance, utility and need in participants of *GPS* workshops?

2. How do skills trainers from the three treatment groups compare in producing knowledge outcomes in participants of *GPS* workshops?

DESIGN

Prior to the *GPS* workshops, the skills trainers used in Study 1 were grouped into three-person training teams in such a way that each trio was composed of only subjects from Groups A, B, or C. *GPS* participants were then randomly assigned to each of these trios.

Satisfaction and knowledge skills of the *GPS* participants were used as criteria to measure the effectiveness of the three groups of skills trainers. As in Study 1, a posttest only design was employed so as to prevent pretest reactivity.

FIELD SITES AND SUBJECTS

The same sites, Houston and Evergreen, were used for this study. Recruitment procedures and characteristics of the *GPS* participants at each site are described in the sections that follow.

Houston, Texas *GPS*

Recruitment of *GPS* subjects was coordinated by school district personnel from Houston. They mailed brochures and applications prepared by NWREL to all teachers in the district. When this resulted in an insufficient response, they also requested teachers from the district's "Magnet School Project" to participate. Subjects were randomly assigned to workshops over the three conditions of the study. Although, as in the case of the *PETC-I* skills trainers, subjects' requests to be in workshops with friends or colleagues were honored. Undoubtedly, this introduced some bias into the various training groups, but the exact amount is unknown.

Vancouver, Washington *GPS*

The Evergreen School District provided NWREL a mailing list of educators in their district and the surrounding area. Persons on this list were invited to participate in *GPS* workshops through mailed invitations. Again, because the response rate was insufficient for the study, informal word-of-mouth recruiting also occurred. As in Houston, subjects were randomly assigned to workshops and some deviations were allowed:

Characteristics of *GPS* Participants

Recruitment at both Houston and Vancouver resulted in fewer subjects than called for by the design. Only seventeen groups were assembled and some of these lacked one or two persons from the recommended working size of twelve persons.

Information collected from *GPS* subjects at both Houston and Vancouver with a Background Questionnaire (Appendix C) are displayed in Table 9.

The background characteristics of *GPS* participants were analyzed using the same statistical tests and format as was used for the skills trainers' data. A Chi square showed there to be a significantly greater percentage of female subjects at the Houston site than at Evergreen.

No significant differences were discovered in any of the other categories. Subjects in Evergreen tended to be slightly younger than those at Houston; overall, 68 percent of the subjects were evenly distributed between the ages of 24 and 45. The *GPS* groups were made up primarily of teachers (76 percent overall), although the greatest percentage (36 percent) of subjects in Evergreen's Group A were in the "staff" category. The work experience of *GPS* subjects was fairly evenly spread between one and twenty years. However, 73 percent of the subjects in the three sets of Group B skills trainers at Evergreen had from 1 to 9 years, while 76 percent of the subjects in Group B at Houston had over 9 years experience. The majority (55 percent) of the subjects had bachelor degrees rather than graduate degrees, although nearly three-fifths of the subjects in Group C at both sites had graduate degrees, predominately master's degrees. In general, previous training with NWREL workshops was minimal.

Table 9

Distribution of Participant Characteristics: *GPS* Participants[ab]

PARTICIPANTS	Houston A N	Houston A %	Houston B N	Houston B %	Houston C N	Houston C %	X^2	df	p	Evergreen A N	Evergreen A %	Evergreen B N	Evergreen B %	Evergreen C N	Evergreen C %	X^2	df	p
	N=37		N=29		N=15					N=28		N=31		N=30				
Female	29	78	23	79	13	87	.1077	2	NS	15	54	22	71	18	60	1.9479	2	NS
Male	8	22	6	21	2	13				13	46	9	29	12	40			
AGE																		
Under 25	2	6	0	0	1	7	1.244[c]	4	NS	1	4	1	3	0	0	.2374[c]	4	NS
25-34	8	22	9	31	4	27				10	36	14	47	12	41			
35-44	15	41	9	31	6	39				9	33	9	30	8	28			
45-54	6	17	9	31	3	20				7	26	6	20	5	17			
55+	5	14	2	7	1	7				0	0	0	0	4	14			
POSITION																		
Teacher 1-3	4	11	7	24	2	14	1.7208[d]	6	NS	4	16	2	10	2	8	13.105	10	NS
Teacher 4-6	18	51	12	42	4	30				5	20	5	24	3	12			
Teacher 7-9	3	8	1	3	1	7				3	12	4	19	3	12			
Teacher 10-12	7	19	4	14	3	21				2	8	8	37	6	26			
Administrator	0	0	3	10	2	14				2	8	0	0	7	30			
Staff	4	11	2	7	2	14				9	36	2	10	3	12			
YEARS EXPERIENCE																		
1-4	8	22	3	10	4	32	2.0933	8	NS	7	28	11	38	4	14	8.8113	8	NS
5-9	7	19	4	14	2	15				5	20	10	35	8	28			
10-14	7	19	8	28	2	15				6	24	6	21	5	17			
15-20	11	32	9	31	3	32				5	20	1	3	5	17			
21+	3	8	5	17	2	15				2	8	1	3	7	24			
EDUCATION																		
BA/BS	23	62	17	59	6	40	.6979[e]	2	NS	16	57	17	59		41	2.6939[e]	2	NS
MA/MS	14	38	9	31	7	47				10	36	12	41		59			
Doctorate	0	0	3	10	2	13				2	7	0	0	0	0			
PREVIOUS NWREL WORKSHOPS																		
SOAI	0	0	0	0	0	0				1	4	2	6	4	13	1.4859[f]	8	NS
Inter. Anal.	0	0	2	7	0	0				2	7	2	6	1	3			
Inquiry	0	0	0	0	0	0				1	4	0	0	0	0			
Hi Level Think.	0	0	0	0	0	0				0	0	0	0	0	0			
SAFE	0	0	0	0	0	0				1	4	0	0	0	0			
Conflict	0	0	0	0	0	0				2	7	0	0	1	3			
Influence	0	0	0	0	0	0				2	7	2	6	1	3			
IPC	0	0	0	0	1	7				5	18	3	10	4	13			
RUPS	0	0	0	0	0	0				3	11	1	3	2	7			
OTHER TRAINING	7	19	9	31	1	7				17	61	10	32	15	50			

[a] No answers (N.A.'s) not included.

[b] While specific tests of significance were calculated on the background and outcome data, it should be pointed out that because of the sampling procedure used in some cases, legitimate statistical inferences are often not possible. The tests simply emphasize the magnitude or lack of some actual differences found and, therefore, are primarily of descriptive utility.

[c] Chi-square analysis excluded data for "under 25" and "55+" categories.

[d] Chi-square analysis excluded data for "teacher 7-9" and "administrator" categories.

[e] Chi-square analysis excluded data for "doctorate" category.

[f] Chi-square analysis used only data from "SOAI, Interaction Analysis, Influence, IPC and RUPS" categories.

TABLE 9, Continued

	Groups (Combined Sites)								Sites (Combined Groups)							
	A		B		C				Houston		Evergreen				Total	
	N	%	N	%	N	%	X^2	df	p	N	%	N	%	X^2	df	p	N	%
PARTICIPANTS	N=65		N=60		N=45					N=81		N=89					N=170	
Female	44	68	45	75	31	69	.8877	2	NS	65	80	55	62	6.092	1	.05	120	71
Male	21	32	15	25	14	31				16	20	34	38					
AGE																		
Under 25	3	5	1	2	1	2	1.2468[c]	4	NS	3	4	2	2	3.9062[h]	3	NS	5	3
25-34	18	29	23	39	16	36				21	26	36	42				57	34
35-44	24	37	18	31	14	32				30	38	26	30				56	34
45-54	13	21	15	25	8	18				18	22	18	21				36	22
55+	5	8	2	3	5	11				8	10	4	5				12	7
POSITION																		
Teacher 1-3	8	13	9	18	4	11	15.1383	10	NS	13	16	8	11	10.5442	5	NS	21	14
Teacher 4-6	23	38	17	34	7	17				34	44	13	19				47	32
Teacher 7-9	6	10	5	10	4	11				5	6	10	14				15	10
Teacher 10-12	9	15	12	24	9	24				14	18	16	23				30	20
Administrator	2	3	3	6	9	24				5	6	9	13				14	9
Staff	13	21	4	8	5	13				8	10	14	20				22	15
YEARS EXPERIENCE																		
1-4	15	25	14	24	8	19	4.1262	8	NS	15	19	22	27	6.6502	4	NS	37	23
5-9	12	20	14	24	10	24				13	17	23	28				36	23
10-14	13	21	14	24	7	17				17	22	17	20				34	21
15-20	16	26	10	17	8	19				23	29	11	13				34	21
21+	5	8	5	10	9	21				10	13	10	12				20	12
EDUCATION																		
BA/BS	39	60	34	59	18	41	4.5626[e]	2	NS	46	57	45	52	.5289[e]	1	NS	91	55
MA/MS	24	37	21	36	24	54				30	37	39	46				69	41
Doctorate	2	3	3	5	2	5				5	6	2	2				7	4
PREVIOUS NWREL WORKSHOPS																		
SOAI	1	2	2	3	4	9	2.3541[g]	6	NS	0	0	7	8	2.0381[f]	4	NS	7	4
Inter. Anal.	2	3	4	7	1	2				2	2	5	6				7	4
Inquiry	1	2	0	0	0	0				0	0	1	1				1	1
Hi. Level Think.	0	0	0	0	0	0				0	0	0	0				0	0
SAFE	1	2	0	0	0	0				0	0	1	1				1	1
Conflict	2	3	0	0	1	2				0	0	3	3				3	2
Influence	2	3	2	3	1	2				0	0	5	6				5	3
IPC	5	8	3	5	5	11				1	1	12	13				13	8
RUPS	3	5	1	2	2	4				0	0	6	7				6	4
OTHER TRAINING	24	37	19	32	16	36				17	21	42	47				59	35

[c]Chi-square analysis excluded data for "under 25" and "55+" categories.

[e]Chi-square analysis excluded data for "doctorate" category.

[f]Chi-square analysis used only data from "SOAI, Interaction Analysis, Influence, IPC and RUPS" categories.

[g]Chi-saure analysis used only data from "SOAI, Influence, IPC, and RUPS" categories.

[h]Chi-square analysis excluded data from the "under 25" category.

INSTRUMENTATION

Two instruments were used to collect information which responded to the evaluation questions. A Final Questionnaire (Appendix G) similar to the one described previously for *PETC-I* skills trainers was administered to *GPS* subjects at the conclusion of their training.

The Knowledge Test (Appendix H) for *GPS* subjects was developed using essentially the same procedures described earlier for the *PETC-I* Knowledge Test. Using the original 17 items, internal consistency was calculated which produced and ALPHA of .64 (see Table A in Appendix I). The new instrument contained 15 items from which a new total score and ALPHA were calculated. The new ALPHA was .89 (see Table A in Appendix I). Items 2 and 3 were retained even though their item-total correlations were less than .2. The reason for retaining these items was that the value internal consistency index relies upon test length. It was believed that the large sample size (170) would offset much of the sampling error in the correlations.

RESULTS: SATISFACTION AND PERCEPTIONS OF RELEVANCE, UTILITY AND NEED

Since those items on the *GPS* Final Questionnaire which were to measure satisfaction, relevance, utility and need were identical to those on the *PETC-I* Final Questionnaire, they will not be described here. Tables 10-13 present and compare the responses of *GPS* subjects who took workshops from skills trainers from the three treatment groups for the four categories of items.

The data in Tables 10-13 show that respondents who experienced *GPS* workshops were highly satisfied and saw the workshop as relevant, useful, and needed. Except for two items on the utility category, at least 75 percent of respondents in all groups marked the two most positive points on all items.

Table 10

Frequency Distributions, Percent and Mean Response
For
GPS Trainees' Perceptions of Need by Workshop Group

Item	Group A Mini*PETC-I* with *IPC/RUPS*					Group B *PETC-I* without *IPC/RUPS*					Group C *PETC-I* with *IPC/RUPS*				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question G33[a]															
5 Definitely strong need	58	89.2	65	4.89	100	50	83.3	60	4.85	98.3	43	95.6	45	4.96	100
4	7	10.8				9	15.0				2	4.4			
3															
2															
1 No opinion															
0 No response						1	1.7								
Question G34[b]															
5 Excellent	34	52.3	65	4.48	97	27	45.0	60	4.39	91.6	29	64.4	45	4.66	97.8
4	29	44.6				28	46.7				15	33.3			
3	1	1.5				4	6.7								
2	1	1.5													
1 None															
0 No response						1	1.7				1	2.2			

[a] Question G33: Please circle the response that best reflects your opinion of the following characteristics of the workshop. Do you believe there is a need in the educational community for educators with group process skills and abilities?

[b] Question G34: Please rate the potential of *GPS* for meeting such a need. Circle one.

Table 11

Frequency Distributions, Percent and Mean Response
For
GPS Trainees' Satisfaction by Workshop Group

Item	Group A Mini*PETC-I* with *IPC/RUPS*					Group B *PETC-I* without *IPC/RUPS*					Group C *PETC-I* with *IPC/RUPS*				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question D17[a]															
6 Extremely valuable, worthwhile	17	26.2	65	4.98	78.5	21	35.0	60	5.07	70.3	24	53.3	45	5.40	86.6
5	34	52.3				26	43.3				15	33.3			
4	11	16.9				9	15.0				6	13.3			
3	2	3.1				4	6.7								
2	1	1.5													
1 Little value, no learning															
0 No response															
Question F22[b]															
6 Extremely worthwhile	25	38.5	65	5.06	80.0	27	45.0	60	5.24	80.0	27	60.0	45	5.42	88.9
5	27	41.5				21	35.0				13	28.9			
4	9	13.8				9	15.0				3	6.7			
3	1	1.5				2	3.3				1	2.2			
2	2	3.1									1	2.2			
1 Not very worthwhile	1	1.5													
0 No response						1	1.7								
Question G35[c]															
6 Yes, recommend highly	35	53.8	65	5.38	90.7	30	50.0	60	5.25	78.3	37	82.2	45	5.71	93.3
5	24	36.9				17	28.3				5	11.1			
4	4	6.2				9	15.0				2	4.4			
3	1	1.5				3	5.0								
2											1	2.2			
1 Definitely not recommend	1	1.5													
0 No response						1	1.7								

[a] Question D17: In an overall assessment of your training experience, was it:

[b] Question F22: Now that the workshop/course is over, how would you sum up the experience?

[c] Question G35: Would you recommend this workshop to a friend whose interests are like yours?

Table 12

Frequency Distributions, Percent and Mean Response
For
GPS Trainees' Perceptions of Relevance by Workshop Group

Item	Group A MiniPETC-I with IPC/RUPS					Group B PETC-I without IPC/RUPS					Group C PETC-I with IPC/RUPS				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question B3[a]															
6 Offered new insights, new ways of viewing old problems	21	32.3	65	5.00	81.5	20	33.3	60	4.97	76.6	12	26.7	45	5.05	80.0
5	32	49.2				26	43.3				24	53.3			
4	6	9.2				9	15.0				7	15.6			
3	4	6.2				3	5.0								
2	1	1.5				1	1.7				1	2.2			
1 Only restated or proved what I already knew	1	1.5				1	1.7				1	2.2			
0 No response															
Question B4[a]															
6 Spoke to important issues, vital concerns	21	32.3	65	5.03	76.9	19	31.7	60	4.60	56.7	19	42.2	45	5.31	91.1
5	29	44.6				15	25.0				22	48.9			
4	12	18.5				15	25.0				3	6.7			
3	2	3.1				7	11.7				1	2.2			
2	1	1.5				2	3.3								
1 Missed the important issues, vital concerns						2	3.3								
0 No response															
Question B8[a]															
6 Material maintained my interest	30	46.2	65	5.18	80.0	18	30.0	60	4.83	68.3	25	55.6	45	5.40	88.9
5	22	33.8				23	38.3				15	33.3			
4	9	13.8				15	25.0				3	6.7			
3	3	4.6									2	4.4			
2	1	1.5				3	5.0								
1 Material failed to interest me						1	1.7								
0 No response															

[a]Question B: Think for a moment about the informational materials, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

Table 13

Frequency Distributions, Percent and Mean Responses
For
GPS Trainees' Perceptions of Utility by Workshop Group

Item	Group A Mini*PETC-I* with *IPC/RUPS*					Group B *PETC-I* with *IPC/RUPS*					Group C *PETC-I* with *IPC/RUPS*				
	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6	fi	Percent	N	$\bar{X}$	Percent 5 or 6
Question B6[a]															
6 Ideas, skills methods can be used immediately under existing conditions	25	38.5	65	4.89	67.7	24	40.0	60	4.87	63.3	19	42.2	45	5.29	88.9
5	19	29.2				14	23.3				21	46.7			
4	14	21.5				15	25.0				4	8.9			
3	4	6.2				5	8.3				1	2.2			
2	2	3.1				1	1.7								
1 Usage would require changes in conditions that I have no control over	1	1.5				1	1.7								
0 No response															
Question B7[a]															
6 Provided real "how to" help for my actual group work	22	33.8	65	4.83	70.7	16	26.7	60	4.63	70.0	14	31.1	45	4.98	71.1
5	24	36.9				26	43.3				18	40.0			
4	10	15.4				8	13.3				11	24.4			
3	6	9.2				3	5.0				2	4.4			
2	1	1.5				4	6.7								
1 Little "how to" help for my actual group work	2	3.1				3	5.0								
0 No response															
Question E20[b]															
6 Extensively	23	35.4	65	4.98	79.2	16	26.7	60	4.92	71.7	16	35.6	45	5.04	75.6
5	22	33.8				27	45.0				18	40.0			
4	17	26.2				14	23.3				9	20.0			
3	2	3.1				2	3.3				1	2.2			
2	1	1.5				1	1.7				1	2.2			
1 Not at all															
0 No response															

[a] Question B: Think for a moment about the informational materials, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

[b] Question E: In all honesty, how much do you plan to use the ideas, skills and/or materials presented in this workshop as an integral part of your work?

When the percentages of respondents marking the top two response categories for all items in a cluster were averaged, the following pattern emerged. Group C consistently had the greatest number of participants marking the top two categories; second best was Group A. Group B always did the poorest. This trend, displayed in Table 14 prompted further analysis.

Table 14

Average Percent Marking Top Two Categories For Item Clusters by Workshop Group

Item Cluster	Group A	Group B	Group C
Satisfaction	83.1	78.9	89.6
Relevance	79.5	67.2	86.7
Utility	72.6	68.3	78.7
Need	98.5	94.9	98.9

The open-ended items on the Final Questionnaire were eliminated as were others that did not employ the 5- or 6-point Likert response scales. Responses for the remaining items were then summed and produced a maximum possible score of 204. Item-total correlations were then computed with an obtained ALPHA of .95. No items, therefore, were discarded.

Next, to determine if sites could be combined, preliminary t-tests were performed on the means on the Final Questionnaire. The means, out of a possible 204, at Houston and Evergreen were 177.9 and 171.0, respectively. This produced a t which was significant at the .05 level of confidence, but the population estimate of the proportion of variance in scores that is explained by difference between sites was so minimal (omega squared = .02 or two percent of variance accounted for) that it was decided to pool the sites and inspect differences between Groups A, B and C.

One-way analysis of variance on responses to the Final Quesitonnaire showed significant differences among Groups A, B and C. These data and analyses are displayed in Table 15.

Table 15

Analysis of Variance and Mean Scores
On *GPS* Final Questionnaire
For Three Workshop Groups

Source	Analysis of Variance					Mean Scores		
	Sum of Squares	df	Mean Squares	F	ω²	Group A	Group B	Group C
Between Groups	2223	2	1111.5	3.03	.049	173.9	170.5	179.8
Within Groups	61216	167	366.6					
Total	63439	169						

The Tukey HSD post hoc multiple-range test indicates that the major difference is attributable to the discrepancy between responses of those in Group B and those in Group C, with Group C scoring higher. Again the Omega squared is minimal, accounting for only two percent of the variance. Essentially, no differences existed between responses in Groups A and B or between those in Groups A and C.

RESULTS: KNOWLEDGE OUTCOMES

The second evaluation question of this study focused on the effects of different forms of treatment of skills trainers on the knowledge outcomes of *GPS* subjects. To measure this variable, the previously described *GPS* Knowledge Test was administered to subjects at the conclusion of the *GPS* workshops.

The mean scores for *GPS* subjects at the Houston and Evergreen sites were 10.20 and 10.78, respectively. Preliminary t-tests showed these very slight differences to be not significant, so sites were combined. Table 16 displays the mean scores for Groups A, B and C and the analysis of variance of these means.

One-way analysis of variance on responses to the *GPS* Knowledge Test showed no signficant differences among Groups A, B and C.

Table 16

Analysis of Variance and Mean Scores
On *GPS* Knowledge Test For
Three Workshop Groups

Source	Analysis of Variance					Mean Scores		
	Sum of Squares	df	Mean Squares	F	~	Group A	Group B	Group C
Between Groups	11.80	2	5.90	.84	.438	10.46	10.83	10.18
Within Groups	1176.70	167	7.05					
Total	1188.50	169						

CHAPTER FOUR

EVALUATION ACTIVITIES AND RESULTS OF STUDY 3

In this chapter the evaluation activities and results of Study 3 are described and discussed. As in the previous chapters, the format is organized around (a) the purpose of the study, (b) the evaluation question which guided the study, (c) the research methods including design, sampling procedures, instrumentation and data analysis and (d) the results.

PURPOSES OF STUDY 3

This study investigated the impact of *GPS* training on the classroom climate for teachers participating in *GPS* workshops and compared these climates to teachers in a control group. The study was conducted in conjunction with another Improving Teaching Competencies Program product, *Interpersonal Influence (INF)*.

EVALUATION QUESTION

One evaluation question guided the analysis of Study 3.

1. Do students in classrooms where teachers have been trained in *GPS* report a more positive classroom climate than those in classrooms where teachers have not been trained?

DESIGN

A comparison group, pretest, posttest design was used in this study. The two groups compared included (a) teachers trained in *Group Process Skills (GPS)*, and (b) teachers receiving an abbreviated treatment (Control). Table 17 shows the treatment and observation schedule.

Table 17

Treatment and Observation Schedule

Group	September 1974	October 1974	November 1974
Target Group *(GPS only)*	O_1	*GPS*	O_2
Comparison Group *(Abbreviated treatment)*	O_1	One-day orientation to learn evalution requirements	O_2

RECRUITMENT, FIELD SITES AND SUBJECTS

The original design of Study 3 called for the recruitment of 108 upper elementary teachers and their random assignment to one of three treatment groups.

One of the treatments was to involve participants in a one-week *GPS* workshop. A second was to involve participants in a one-week workshop on *Interpersonal Influence (INF)*. (another instructional system developed by the Improving Teaching Competencies Program and thought suitable for making cross-system comparisons). People selected for the third group would serve as a control group with the promise of receiving a one-week workshop after the study was completed.

Recruitment began in April, 1974. Brochures describing the *GPS* and *INF* workshops, the requirements of the study and a promise for a delayed workshop for those chosen to be in a control group were distributed to fourth through sixth grade teachers in the Seattle metropolitan area. The response rate was short of the number of subjects required for the study, so brochures were again circulated in late September and early October.

Prior to the workshops, subjects were assigned to treatments. Those subjects indicating a preference for *GPS* or *INF* were randomly assigned to one of these groups. Those preferring the delayed workshop were put into the control group. Subjects indicating no preference were randomly assigned to the three group, with the stipulation that all groups have approximately the same number of participants. By the day of the workshop, the required number of participants (36) had been assigned to each treatment. However, at the meeting of the 3 groups only 25 people appeared for the *GPS* workshop, 22 attended the *INF* workshop, and 24 came to the control group meeting.

During this time it was discussed that eight of the participants were concurrently involved in another ITCP workshop. It was felt that this additional training might influence the results so the eight were eliminated from the study.

During the initial meetings with the three groups, subjects were asked to name a person who would be willing to administer classroom climate questionnaires to their students. During the following week three members of the evaluation staff personally delivered a set of climate questionnaires and directions to the designated test administrators. Questionnaires and instructions are described on pages 151-169. The trainees and test administrators were asked to administer the questionnaires by Ocboer 4, and send them to the evaluators as soon as possible. Administration of the questionnaires occurred in the subjects' classrooms when the subjects were not in the room. Administrators were directed not to show the responses to the subjects and to mail the questionnaires and responses immediately.

When the pretests were returned, it was discovered that seven of the subjects did not have usable data. Two control group teachers taught as

a team and returned only one set of questionnaires. Three other teachers who taught as a team had been assigned to different treatments and had been instructed not to return the questionnaires. One set of questionnaires was never delivered, due to difficulties in locating the school at which the teacher taught. Two sets of questionnaires were returned without any teacher identification, making it impossible to assign an identification number.

In late November, posttest questionnaires were sent to the test administrators from whom usable data had been received. They were asked to return the questionnaires by the end of the first week in December. At this time, the number of usable questionnaires dropped to 47. Two teachers were no longer teaching the same group of students and did not readminister the questionnaires. One teacher had been using a student teacher most of the time, so the data were not used. Data from one teacher were received too late for analysis. Three sets of questionniares were returned without the teacher's names and could not be used. Nine teachers did not return questionnaires.

Difficulties obtaining school district permission to use one of the climate questionnaires precluded any followup on the nonreturns until late January. By this time, it was decided not to contact teachers from whom no questionnaires were returned since too much time had elapsed between the major testing and the followup testing. It was also decided not to make comparisons between the three groups but to compare the *Interpersonal Influence* participants to controls and *GPS* participants to controls separately.

Of the teachers from whom complete data were collected and used in subsequent analyses, 16 were in *GPS* and 13 were in the control group.

During the first training session, all subjects completed a Background Questionnaire which asked what grade level they taught, their sex and age, their years of teaching experience, highest degree obtained and reasons for attending the workshop. On the questionnaire, subjects also indicated what other Improving Teaching Competencies Program workshops they had attended. The responses of the 29 subjects from whom complete climate data were obtained and used in this study are presented in Table 18.

It should be noted that most of the subjects were in their thirties and forties and had more than seven years of teaching experience. Few of the subjects had participated in other ITCP workshops. The main reasons the subjects signed up for the workshop were that it satisfied some requirement, that there was no cost for attending and that they really wanted to learn about the subject.

INSTRUMENTATION

The climate inventory was used to detect differences in classroom climate. The questionnaire needed to be appropriate for students in the fourth through sixth grades, since only teachers of these grades were included in the study.

Because it was not feasible to develop and validate a climate inventory specifically for this study, intact subscales from existing instruments were used. Existing instruments were examined and inventories which were described as measuring classroom climate were reviewed on the basis of whether they (a) indicated direct teacher behaviors (since teachers were the workshop participants) or (b) indicated consideration on the part of teachers (e.g. letting more people talk in the classroom or paying more attention to students' feelings and motives.) Initial

Table 18

Background Questionnaire Responses by Participants
With Complete Climate Data

Question	Percentage of Participants In Each Category	
	GPS N=16	Control N=13
Sex		
Female	88%	54%
Male	13	46
Age		
20-29	13	15
30-39	31	23
40-49	31	31
50-59	13	23
60-69	0	0
No Answer	13	0
Grade Taught		
4th	25	31
5th	50	23
6th	25	46
No Answer	0	0
Years of Experience		
0	0	8
1-3	6	0
4-6	6	0
7-10	44	15
11+	44	69
No Answer	0	8
Highest Degreee Obtained		
BA/BS	69	54
MA/MS	25	38
No Answer	6	8
Other Workshops		
Other ITCP Workshops	19	0
Other Human Relations Workshops	25	62
None	56	38
Reasons for Attending the Workshop		
It satisfies a requirement or gives me credits I need	63	54
Many others in my school were attending	0	0
My superiors suggested I go	0	8
My superiors gave me the opportunity to go	0	8
I was selected to attend	0	31
My attendance was paid for	50	46
I came because I really wanted to learn	75	46
I'd heard...	19	8
I had a particular problem to solve	31	23
Other	25	15

scales were selected from four instruments, the Student Activities Questionnaire (SAQ), (Ellison, Callner and Fox, 1973); Student Behavior Description Questionnaire (SBDQ), (Croft, 1972); My Class Inventory (MCI), (Anderson, 1973); and Student Attitude and Activity Survey (SAAS), (Nelson, 1973). More information about the four tests is included in Appendix J.

The four tests from which subscales were selected were first considered in terms of the criteria listed above. As a second step, the evaluator listed the selected subscale items and summary descriptions of what the subscales were intended to measure. A review of the list and summary by several evaluators narrowed the selection of scales to those which seemed most appropriate to the system. This resulted in the selection of 17 subscales. A summary of the scales is presented in Table 19.

A description of these subscales, along with the items themselves, was then circulated to the developers of the system with a request for their comments about any inappropriate subscales or any areas which seemed to be missed. The developers were satisfied that the subscales related to the system and said they could add no other scales for consideration.

Because of the large number of items involved, two forms of the climate inventory were developed. Form A consisted of items from MCI and SAQ, while Form B was comprised of the items from SAAS and SBDQ. Answer format varied for the different instruments: the MCI and SBDQ have "Yes--No" answers while the SAAS and SAQ require multiple-choice responses. In Form A, all items from the MCI are followed by the SAQ items. In Form B, SBDQ items were followed by SAAS items. Items from each original instrument were randomly ordered. Copies of Form A and Form B are included in Appendix K.

Table 19

Subscales for the Climate Inventories

Subscale Title	Test Selected From	No. of Items	Description
Climate	SAAS	7	Measures child's feelings of freedom in talking with school authorities and following rules.
Reinforcement of Self-Concept	SAAS	6	Measures the amount of feedback the teacher provides to make a child feel good about his/her work.
General School Sentiment	SAAS	13	Measures general feelings about school and specific activities the child does which indicate feelings about school.
Process Approach	SAAS	4	Measures amount of class discussions which cause the child to think about alternate views of an issue.
Individualized Approach (Decision Making)	SAAS	4	Measures the amount of input children have in deciding on class activities.
Teacher Consideration	SBDQ	8	Measures teacher behavior which is characterized as friendly and courteous to students. The teacher is considerate of student feelings and is easy to get along with, pleasant, and cheerful to the student.
Teacher Thrust	SBDQ	7	Measures the teacher behaviors which motivate, instruct and obtain student participation in academic activity. It describes the ability of teachers to appropriately structure class activities, encourage students to express their opinions and allow the students to discuss and clarify their thinking about the subject matter.
Domination	SBDQ	7	Measures teacher behaviors that are authoritarian, critical and impersonal. The dimension describes behaviors to dominate, restrict and allow little freedom for students to discuss class material.
Cohesiveness	MCI	9	Measures the amount of intimacy students feel within their class. This would distinguish between children who feel like members of the class as opposed to nonmembers. Cohesive classes sanction only goal-directed behavior.
Friction	MCI	9	Measures the amount of quarreling and tension within the class.
Satisfaction	MCI	9	Measures the amount students enjoy their class.
Competitiveness	MCI	9	Measures student perceptions of the amount that students in the class compete with one another.
Enjoyment of School	SAQ	6	Measures the student's enjoyment of class activities and school work.
Reinforcement of Self-Concept	SAQ	7	Measures the amount of positive feedback received by students, either through personal contact or structured class activities.
Classroom Participation	SAQ	5	Measures student participation in class activities--frequency of class discussions, number of students who typically participate and opportunities for participation.
Democratic Classroom Control	SAQ	7	Measures amount of student input into classroom decision making, planning of individual activities and enforcement of rules.
Individualization of Instruction	SAQ	6	Measures the extent that students perceive their teachers as sensitive to their own individual needs, progress and goals.

Specific instructions were created for the administration of the questionnaires. The instructions asked that each child write in the teacher's name and his or her grade level. The children worked a sample test item with the test administrator and then began work on their own. The test administrator was told to answer any questions the students had about taking the test. A copy of the instructions for the test administrator is also included in Appendix K. In pretesting each classroom, Form A and Form B were given alternately to students in the classroom. During posttesting, directions to test administrators suggested that students with reading problems might be given Form B, since it was shorter than Form A.

RESULTS

Analysis and covariance was performed on the posttest scales of both forms of the climate inventory. The pretest score of the scale being analyzed was used as the covariate.

Mean and adjusted mean scores for the *GPS* and the control classrooms on each of the 17 climate scales are presented in Table 20.

Inspection of the differences between adjusted mean scores for *GPS* and control classrooms shows that the *GPS* classrooms were more favorably rated on nine of the seventeen climate scales. The control classrooms were more favorably rated on seven scales and the classrooms from the two groups were equal on one climate scale.

The resulting F-ratios from the analysis of covariance are presented in Table 21.

No statistically significant differences were observed between *GPS* and the control group classrooms. The data in Tables 20 and 21 seem to suggest a slight trend toward more positive climate in *GPS* classrooms,

Table 20

Adjusted Means for Analysis of Covariance of Climate Postdata

Scale	Treatment	Unadjusted Mean	Adjusted Mean
My Class Inventory (MCI)			
Satisfaction	GPS	14.08	14.07
	Control	13.81	13.82
Friction[a]	GPS	14.62	14.62
	Control	15.01	15.01
Competitiveness[a]	GPS	14.12	14.11
	Control	13.92	13.94
Cohesiveness	GPS	13.98	14.03
	Control	14.42	14.34
Student Activities Questionnaire (SAQ)			
Enjoyment of School	GPS	11.64	11.67
	Control	12.27	12.24
Reinforcement of Self-Concept	GPS	11.51	11.51
	Control	11.30	11.30
Classroom Participation	GPS	9.71	9.81
	Control	10.08	9.94
Democratic Classroom Control	GPS	14.47	14.46
	Control	14.71	14.71
Individualization of Instruction	GPS	11.70	11.69
	Control	11.84	11.85
Student Attitude and Activity Survey (SAAS)			
Climate	GPS	12.07	11.99
	Control	11.72	11.83
Reinforcement of Self-Concept	GPS	8.36	8.27
	Control	8.14	8.27
General School Sentiment	GPS	17.12	17.13
	Control	16.99	16.98
Process Approach	GPS	9.93	9.89
	Control	9.92	10.01
Individualized Approach	GPS	2.77	2.74
	Control	2.60	2.64
Student Behavior Description Questionnaire (SBDQ)			
Teacher Consideration	GPS	22.15	21.80
	Control	20.76	21.21
Teacher Thrust	GPS	21.78	21.58
	Control	20.40	20.68
Domination	GPS	13.67	14.03
	Control	14.37	13.91

[a]These scales represent negative qualities so that a low score indicates a favorable rating.

Table 21

Analysis of Covariance of Climate Questionnaire Postdata

Scale	Source	df	SS	MS	F
My Class Inventory (MCI)					
Satisfacti	Treatment	1	.31	.31	.58
	Error	22	11.85	.54	
Friction	Treatment	1	.88	.88	1.71
	Error	21	10.78	.51	
Competitiveness	Treatment	1	.15	.15	.27
	Error	18	9.98	.55	
Cohesiveness	Treatment	1	.46	.46	1.11
	Error	20	8.37	.42	
Student Activities Questionnaire (SAQ)					
Enjoyment of School	Treatment	1	1.81	1.81	1.33
	Error	23	31.42	1.37	
Reinforcement of Self-Concept	Treatment	1	.31	.31	.51
	Error	25	15.29	.61	
Classroom Participation	Treatment	1	.08	.08	.11
	Error	25	17.50	.70	
Democratic Classroom Control	Treatment	1	.42	.42	.31
	Error	25	33.61	1.34	
Individualization of Instruction	Treatment	1	.18	.18	.15
	Error	25	29.42	1.18	
Student Attitude and Activity Survey (SAAS)					
Climate	Treatment	1	.16	.16	.55
	Error	23	6.54	.28	
Reinforcement of Self-Concept	Treatment	1	.00	.00	.00
	Error	26	5.36	.21	
General School Sentiment	Treatment	1	.14	.14	.17
	Error	23	19.21	.84	
Process Approach	Treatment	1	.06	.06	.25
	Error	26	6.02	.23	
Individualized Approach	Treatment	1	.06	.06	.55
	Error	22	2.27	.10	
Student Behavior Description Questionnaire (SBDQ)					
Teacher Consideration	Treatment	1	1.80	1.80	.46
	Error	19	74.86	3.94	
Teacher Thrust	Treatment	1	5.15	5.15	1.93
	Error	26	69.59	2.68	
Domination	Treatment	1	.07	.07	.05
	Error	20	26.87	1.34	

but these differences are small and statistically insignificant. These data may reflect a lack of training effects. However, several problems with the study itself may also have contributed to the lack of effect. The small number of teachers with usable climate data, selection bias, the higher than fourth grade reading level of several scales decreased the possibility of finding significant differences. A short time period between pretesting and posttesting may have prevented observation of a long-term effect on teacher behavior, if in fact it is present.

In summary, while the lack of evidence may reflect a lack of training effect on climate, it may also result from several difficulties in the study. Until more carefully controlled studies have been conducted, it is impossible to determine what effect, if any, training in *GPS* might have on classroom climate.

CHAPTER FIVE

SUMMARY AND DISCUSSION

In this final chapter, the methods of the *PETC-I* evaluation are briefly reviewed and results of three evaluation studies are summarized and discussed.

REVIEW OF EVALUATION ACTIVITIES

This evaluation submitted the *PETC-I* instructional system to a series of tests where information was collected to determine:

1. The effects of the instructional system on (a) skills trainer satisfaction, (b) their perceptions of the relevance, utility and need of the training and (c) knowledge outcomes
2. The importance of *PETC-I* prerequisites and different conditions of training for meeting satisfaction and knowledge outcomes
3. The effects of skills trainers with different prerequisites and conditions of training in producing outcomes of satisfaction and knowledge in *GPS* trainees
4. The impact of *GPS* training on classroom climates of teachers who have completed *GPS* workshops

Three quasi-experimental studies were conducted to examine the major issues cited above. The first study compared satisfaction and knowledge outcomes of three groups of skills trainers. Subjects were recruited and assigned at random, when possible, to three different treatment conditions. Subjects in Group A had completed at least one of the forementioned prerequisites but received only a one-day abbreviated treatment intended to familiarize them with, but not to train them in, the *PETC-I* system. Group B consisted of subjects who had not taken any of the *PETC-I*

prerequisites but who received the full *PETC-I* workshop. Group C, the full treatment group, consisted of subjects who had taken at least one of the *PETC-I* prerequisites--*Interpersonal Communications* or *RUPS* and received the full week of *PETC-I* training.

Study 2 provided a comparison of the effectiveness of Group A, B and C skills trainers in producing outcomes of satisfaction and knowledge in *GPS* trainees. Recruitment at two test sites produced 170 *GPS* participants. These participants were randomly assigned to trios of trainers from the three groups described in Study 1. The number of *GPS* participants receiving training from Group A, B and C skills trainers were 65, 60 and 45, respectively.

Instruments to measure the system and trainer effectiveness for Studies 1 and 2 included a questionnaire to measure participant satisfaction and perception of utility, relevance and need and a test to measure knowledge outcomes. Posttest only designs were used in both studies to eliminate test reactivity.

The third study investigated the impact of *GPS* training on the climates of classrooms taught by teachers participating in *GPS* workshops. The study compared two groups of teachers--teachers trained in *GPS* and teachers receiving an abbreviated treatment. Subjects were randomly assigned from a pool who signed up for the workshop. Classroom climate data was gathered from students in the classrooms of teachers in both groups prior to and following the training.

SUMMARY OF RESULTS AND DISCUSSION

On a number of different items intended to measure satisfaction, perceptions of relevance, utility and need, skills trainers in Study 1 responded very positively toward *PETC-I* and the training experience.

Averaging the responses in the two most positive response categories, these dimensions showed over 85 percent marking high satisfaction, 80 percent high relevance, 70 percent much utility and 84 percent seeing the need and potential offered by *PETC-I*.

When the responses of subjects in the three treatment groups were compared, a slight trend was identified that showed Group C (the full treatment group) producing higher results than Groups A and B. In most instances, however, these differences were slight and their importance unknown.

As in any evaluation study of any training system, responses of participants regarding their impressions of the system are a criterion of varying utility. If one is willing to accept favorable responses from participants concerning their experience as being a sufficient good to justify the system, then further evaluation may not be necessary. On the other hand, an enjoyable and seemingly relevant as well as useful experience may not be sufficient justification for some people.[4]

On a specially developed Knowledge Test, participants produced a mean score of 31.3 out of a possible 48 over both sites and the three groups. One-way analysis of variance between means for the three groups showed no significant differences among the conditions. In other words, the results indicated no consistent or meaningful pattern of differences among groups, with differing amounts of prerequisites and training, in knowledge acquired.

There are at least two possible explanations for this finding. First, it is possible that prior knowledge of concepts taught in *PETC-I* or the fact that the treatments are equally weak resulted in no differences

[4]The authors are indebted to Robert L. Ellison for raising the issue in this paragraph and recognize that it is only one of many value dilemmas which cannot be easily resolved regarding the value of human relations or group process skills training.

between subjects. Since pretests were not given to avoid reactivity, it is impossible to speak of differences in knowledge gains for those who came to the training with varying amounts of prior knowledge.

Second, it is possible that the measuring instruments were deficient. Perhaps the items measured other content such as test-taking skills that are not associated with prerequisites of treatment differences. Perhaps the items were not sensitive to the amount of treatment or did not sufficiently "cover" the content taught or learned.

In Study 2, *GPS* participants' responses to items intended to measure satisfaction and perceptions of relevance, utility and need also resulted in a very favorable response toward *GPS* training. The average percent marking the top two categories for item clusters showed over 75 percent reporting high satisfaction, over 65 percent reporting high relevance and utility and over 95 percent responding positively to the need for and the potential of *GPS* training.

When the responses for subjects assigned to the three groups were analyzed, the results showed those in Group B evidencing significantly less favorable responses than those in Group C. Essentially, no differences existed between responses in Groups A and B or between those in Groups A and C. This finding would suggest that the full treatment produces the most favorable responses but, given a choice, a one-day briefing of would-be *GPS* trainers who have completed one or more similar instructional systems in the past would have higher pay off than a week of *PETC-I* training for would-be trainers who had not had experiences in similar instructional systems. Again, one must ask if favorable reactions by participants is of sufficient good to justify *GPS* training apart from the question of who would provide that training.

Group Process Skills participants across sites and groups produced an average mean score on the Knowledge Test of 10.5 out of a possible 15. One-way analysis of variance between the means for the three groups showed no significant differences among groups. As with the Knowledge Test for *PETC-I*, it is impossible to determine what mix of prior knowledge weakness of treatment or inadequacies of measurement instruments are responsible for the findings of relatively low knowledge. However, for a study that focused on *PETC-I*, the finding of no differences among *GPS* trainee groups suggests that amount of prerequisites and training for *GPS* trainers are equally important or unimportant.

The major finding in Study 3 was that students in classes taught by *GPS* trainees did not report any more positive classroom climate than those in classrooms taught by teachers who had not been trained. In the future, an even broader range of evaluation strategies might be considered to verify or disprove this and the findings of Studies 1 and 2. These strategies might include followup interviews and observations to collect "critical incidents" concerning use of knowledge and skills gained in *PETC-I*; the examination of other treatments in addition to training in the total system and the one-day briefing to determine features that produce more or less marked treatment effects, and monitors (senior trainers) of *PETC-I* to observe climates in classrooms of *PETC-I* trainees for differences that might be compared to the effects of prerequisites and *PETC-I* training.

REFERENCES

Anderson, G. J. *The Assessment of Learning Environments: A Manual for the Learning Environment Inventory and the My Class Inventory.* Halifax, Nova Scotia: Atlantic Institute of Education, second edition, 1973.

Croft, D. B. "An Assessment of the Interpersonal Needs of Students." Paper read at the Summer Consortium Support Course, Kansas State University, Manhattan, Kansas, June 29, 1972. (mimeo).

Ellison, R. L., A. Callner and D. Fox. "The Measure of Academic Climate in Elementary Schools." Paper presented at the American Psychological Association Convention, Montreal, Quebec, 1973.

Improving Teaching Competencies Program. *Resource Allocation and Management Plans.* Portland, Oregon: Northwest Regional Educational Laboratory, 1974.

Nelson, D. "Construct Validity, Reliability and Selected Correlates of the Student Attitude and Activity Survey." (Draft.) Salt Lake City, Utah: University of Utah, 1973.

Nunnally, J. C. *Educational Measurement and Evaluation.* New York: McGraw Hill, 1974.

Appendix A:

STAGES OF EVALUATION AND
PRODUCT DEVELOPMENT OF THE
IMPROVING TEACHING COMPETENCIES PROGRAM

The management plan for the Improving Teaching Competencies Program (see *Resource Allocation and Management Plans*, 1974) divides the work flow for the development of an instructional system into five phases: planning, pilot, interim, field test and outcome. Each phase consists of certain development, evaluation and field relations activities that culminate in a milestone report.

The range of activities associated with developing an instructional system is summarized in Diagram I. These activities are divided into five major categories: needs, objectives, product development, testing and implementation. Diagram I also partitions these activities among seven fuctional areas including management, development, field relations, dissemination, formative evaluation, internal summative evaluation and external summative evaluation. The matrix is not necessarily prescriptive nor are the evaluation relationships among each part strictly linear.

The specific activities engaged in during the development of an instructional system differ according to the phase under consideration, the unique needs of the specific product or change support process being developed and, occasionally, due to style preferences among work unit teams. For more specific and detailed statements, reference should be made to the development and evaluation plans and documents for each work unit.

Evaluation differs according to each phase of the development. During the initial phases, evaluation focuses on formative issues and provides information primarily for system developers. During the latter phases, the emphasis is on summative evaluation which provides information

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	External Summative Evaluation	External Summative Evaluation
NEEDS Theoretical/Value Empirical Field Desire/Readiness Expert Review	Approves a documented need statement as: 1. Compatible with Program and value position 2. A feasible priority for the Program to undertake. Approves the feasibility and appropriateness of approaches to data gathering determined necessary from field of potential users and from experts, except for external summative assessment of needs. Approve any iterations of needs statement.	Generates rationale statement including theoretical content and strategies, value and social problem. Collaborates with evaluators on product review, literature review and justification. Initiates reassessment of need when appropriate.	Arranges for data collection from the field. This would include following procedures for identifying sample populations, arranging for data collection from identified samples and collecting the data as well as delivering the data for processing, analysis and interpretation. Works with formative evaluators on a needs assessment to determine field demand for development of product.	Initiates needs assessment with regard to dissemination activities. Determines dissemination performance requirements and constraints. Performs mission analysis, functional analysis, task analysis and method/means analysis for dissemination of product.	Develops procedures and collects information concerning the need. This should include such factors as an indication of the number of people affected, the social significance of the need, the absence of substitutes, the urgency of the matter, the possibility of multiplicity affects. Need statements may be derived from such sources as the learner, the society or the subject matter.	Arranges for any external summative evaluation of the need statement.	Evaluates the adequacy of the need statement.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
OBJECTIVES Purpose Behavioral Outcome Objectives Behavioral Instrumental Objectives	Approves statements of instructional system's purpose and behavioral objectives at each stage during planning, product development and evaluation as iterated. These statements are considered in relation to their appropriateness to Program purpose, values and feasibility within Program resources. Approves appropriateness of expert reviewers and review procedures, except for external summative reviews.	Generates general goals and refines objectives of instructional system; to be completed by iterative process. Collaborates and concurs with evaluation to operationalize and classify objectives. Revises statements of objectives when appropriate on the basis of testing and inputs from field relations and formative and summative evaluation.	Reviews product objectives. Provides feedback to developers and evaluators concerning potential target groups for whom the objectives are relevant.	Generates dissemination objectives in collaboration with developers and evaluators.	Initiates the operationalization of product objectives for measurement purposes. (Determines relevant domains of variables from objectives.) Classifies objectives into categories as appropriate. One possible categorization scheme might be: 1. Instructional objectives (trainee behavior) 2. Instrumental objectives (trainee behavior) 3. Outcome objectives or indicators (trainee objectives) 4. Impact objectives or indicators (evidence that changes in trainee behavior made any differences in a secondary target group) 5. Implementation objectives (trainer behavior) Other factors to be considered are the prerequisite competencies or experiences of the learner and social and psychological characteristics of the learner. Arranges for external review of objectives. Provides feedback to developers.	Arranges for any external summative evaluation of the objectives. Provides feedback to formative evaluators concerning the degree to which the statements of objectives serve to delimit the selection or development of instrumentation (technique items, scoring keys, empirical base for constructs implied).	Evaluates the objectives.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
PRODUCT Design Specifications Content Instructional Design Materials Expert Review Instructional System Reports	Approves design specifications as appropriate to purpose, feasibility, those which are prespecified, those which are emergent. Approves selection and iterations of content, instructional design and materials as consistent with design specifications and evaluations at each stage of development. Approves appropriateness of expert reviewers and expert review procedures except for external summative assessment. Approves reports of planning and progress on creation and iterations of the instructional system.	Responsible for generation and revision, as a result of testing, of content, materials, instructional processes, participant processes, workshop climate specifications, participant prerequisites, workshop specifications and trainer qualifications. Oversees editing needs in collaboration with editor. Contributes to identification and review of potentially competitive systems.	Initiates and arranges for marketing surveys to ascertain the likely, reachable market.	Generates the strategy for dissemination. This would include identifying the role of the regional network, publishers, training cadres, colleges and universities, state departments of education and school districts. Determines promotional material for different audiences and potential distribution. Projects potential target audiences.	Provides for feedback concerning the degree to which content fits specifications or if content specifications are not made explicit, then formative evaluation provides for feedback on the apparent content domain (may require expert review). The same function as described above for content specifications is appropriate for materials specifications and strategies specifications. Formative evaluation obtains and feeds back cost information partitioned into the following categories: 1. Development only costs 2. Product costs 3. Delivery costs exclusive of product costs 4. Maintenance costs Arranges for external review of product in regard to goals, content, strategies, disseminability and cost/benefit potentials for developers.	Arranges for any external summative evaluation of content, materials and strategies.	Evaluates the content, materials and strategies.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
TESTING Evaluation Designs Instrumentation Criteria Short-Term Effects Long-Term Effects Critical Comparisons Expert Review Test Reports	Approves appropriateness and feasibility of evaluation designs and instrumentation criteria for short- and long-term effects throughout formative evaluation. Critiques the appropriateness and adequacy of evaluation designs and instrumentation criteria for internal summative evaluation and advises on feasibility. Approves Program claims for use in critical comparisons. Provides recommendations of possible comparisons. Approves reviewers selected for substantive appropriateness except for external summative evaluation. Approves appropriateness of review procedures. Approved adequacy and validity of formative test reports and critiques appropriateness of internal summative test reports. Determines that arrangements are completed for the necessary forms, clearance procedures and protection of human subjects procedures.	Provides evaluators with formative evaluation needs. Provides inputs to summative evaluation. Participates and observes in field trial during early stages of development; later stages, observes. Helps develop instrumentation criteria for evaluative system including trainee outcomes, secondary outcomes, costs installation and critical competitors. Concurs with evaluators on formative evaluation designs. Inputs and critiques internal summative designs.	Reviews evaluation design. Provides feedback concerning feasibility of design. Identifies subjects and arranges appropriate site conditions for testing products during all stages of development. Provides competent installers and trainers for formative and internal summative evaluation. Identifies potential sites for external summative evaluation. Identifies pool of competent trainers and qualified participants, when appropriate, for external summative evaluation.	Disseminates results of testing to various appropriate audiences.	Selects and/or develops instrumentation for formative use. This would include instrumentation for capturing responses made during the process of instruction and responses made to end of workshop criterion tests or measures. Develops designs and instrumentation to assess immediate workshop effects. Possible areas in which effects may be examined include: 1. Trainee knowledge 2. Trainee attitudes a. About self b. About other people or things 3. Trainee behavior (skills, etc.) Develops designs and instrumentation to assess long-term effects when this information is needed by development staff to assist product development. Conducts the designed studies. Provides inputs to the file on critical competitors.	Reviews and approves formative instrumentation for summative use. Selects or develops instrumentation for summative study. Instrumentation would be developed for the following: 1. Workshop outcomes 2. Long-range trainee effects 3. Impact 4. Other variables which can be identified as important control variables or have been demonstrated to interact with the treatment to affect outcomes Initiates and collaborates with formative evaluator to design instrument development and validation procedures to be used for both formative and summative work. Designs and conducts summative studies for assessing workshop effects under field conditions. Develops designs and instrumentation to assess long-range effects. Collaborates with formative evaluators when early interaction is needed. Designs would include provision for assessing retention, transfer and application. Conducts the designed studies. Arranges for the external summative evaluation with respect to possible critical competitors. Maintains a file on critical competitors identified by staff.	Evaluates instrumentation. Replicates evaluation studies conducted to assess immediate workshop effects. Replicates the evaluation studies conducted to assess long-range effects. Identifies any additional critical competitors which may have been recently generated or had been overlooked by the Program. Makes judgments on the relative merits of the product and the various critical competitors.

Column headings should be read as functions (not roles of person). Headings in Column 1 denote five major classes of activites. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as descriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

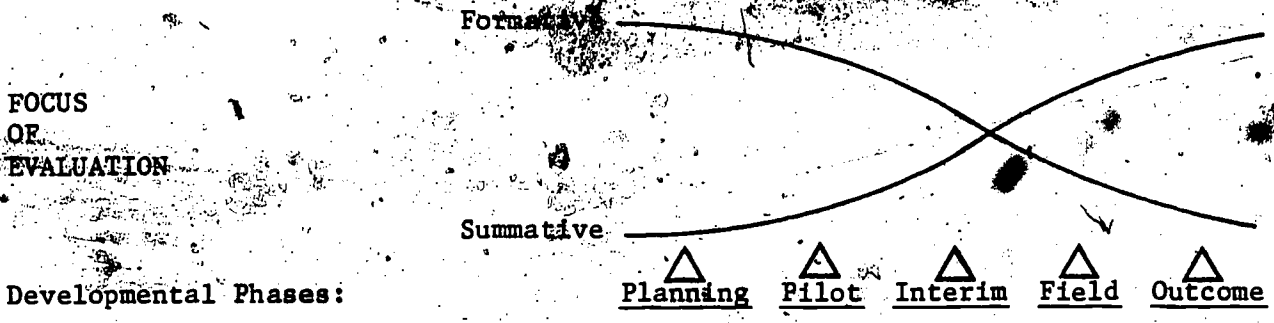
	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
IMPLEMENTATION Conditions for Use Installation Steps Alternative Diffusion/ Dissemination Strategies Product Reports/Sales Literature	Approves procedures and materials for implementing use of instructional system as congruent with Program purpose and values, evaluation data, and logical conceptions regarding user conditions and steps for installation. Approves Program strategies to support diffusion and dissemination including sales literature as appropriate to purpose and values of the Program and as consistent with perceptions and evaluations gained during development. Approves and recommends product readiness for publication.		Generates dissemination issues. Provides feedback concerning problems and constraints for developers, evaluators and program managers. Arranges for installation sites. Provides trainers when needed. Provides information for evaluators and developers concerning necessary installation procedures. Provides training for installers and trainers for formative and internal summative evaluation tests.	Provides a dissemination plan which includes: 1. Arranging for training of dissemination managers and senior trainers 2. Preparing regional network, cadres, colleges, universities, state departments and school districts to deliver products 3. Providing training for installation managers 4. Developing alternative diffusion/ dissemination strategies 5. Arranging for any market research 6. Collaborating with publishers in identifying different types of dissemination/sales [illegible] and [illegible] sales [illegible] meetings Works collaboratively with evaluators in evaluating the Program's dissemination strategies.	Works collaboratively with dissemination to develop procedures for and collects information concerning the Program's diffusion/dissemination strategies. Develops procedures for and collects information concerning the marketing and sales of Program's products. Helps identify alternative diffusion/dissemination/ marketing strategies. Arranges for any external review of strategies.	Arranges for any external evaluation of diffusion/dissemination strategy.	Evaluates the diffusion/dissemination strategy.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

and judgments for potential users of the system. This shift in emphasis is illustrated in Figure 1.

Figure 1

Evaluation Emphasis in the Developmental Phases



The following paragraphs describe in general terms the ways development and evaluation activities are organized for each phase of product development.

Planning Phase. In this phase, several key activities provide the focus for effort. The initial conception of the proposed instructional system is described along with its intended objectives. A need for the proposed system is documented and evidence provided that adequate conceptualizations and instructional strateiges exist or can be developed feasibly for the proposed training package. Initial development, evaluatuion and dissemination plans are produced, as are timelines, staffing needs and budgets.

Pilot Phase. In this phase, a prototype of the instructional system is developed and tried out on a small group of users from the target group. Objectives of the system and entry conditions for participants are clarified. Program evaluators provide formative evaluation information to assist developers with revisions. The information includes observer

and trainer assessments of participant involvement in the activities, measurements of participant satisfaction with the content, strategies and utility of the system. The workability of the activities, the logic of the content and the quality of the teaching aids and materials are also assessed at this phase by the user groups. Description and preliminary assessment of trainee outcomes are initiated.

The collection of information regarding the marketability and costs of the instructional system commences during the pilot phase as does the documentation of the developers' claims regarding the intents of the system in comparison to existing alternatives.

Interim Phase. During this phase, the instructional system goes through one or more cycles of revision and a nearly finished product is completed. By the end of this phase, the appropriateness of objectives has been determined, statements of objectives finalized and instrumentation to measure these selected or developed. For instructional systems requiring a workshop format, specifications are determined for desirable workshop conditions and qualifications for effective trainers.

The major focus of the evaluation activities for this phase is on confirmation of the system's ability to produce specified short-term outcomes and to test the workshop conditions, trainer qualifications and dissemination feasibility. This may be accomplished partially through conducting a "criterion workshop" designed to resemble closely the field conditions. The basic decision served by evaluation is whether the instructional system is ready for internal summative evaluation and adequate for comprehensive field and outcome testing.

Field Test Phase. In this phase, minor revisions are made on the instructional system and a product close to finished form is expected to exist. Also, in this phase, an internal summative evaluation will

focus on assessment of short-term outcomes of the instructional system. Specifically, this means finding answers to questions regarding knowledge, awareness and attitudinal growth, and participant performance change that can be expected as a result of active participation in the system's training design under field conditions with typical trainees, trainers and workshop settings. Variables related to problems of installation and dissemination may also be examined at this point.

Outcome Phase. During this phase, which may occur simultaneously with the previous phase, the instructional system is finished and internal summative evaluation will assess the system's ability to produce, not only specified short-term outcomes in terms of participant satisfaction, knowledge, awareness or attitudinal gain and performance change, but also transfer, retention and impact upon secondary audiences such as students and/or peers. At this point evaluation plans are made for external summative evaluation studies such as critical comparisons between the outcomes of the instructional system being evaluated and outcomes produced by other relevant treatment efforts. External summative validations of the product are also completed in this stage.

Appendix B:

CRITERIA FOR *PETC-I* SKILLS TRAINERS AND SENIOR TRAINERS

CRITERIA FOR *PETC-I* SKILLS TRAINERS

By the competion of the two week *PETC-I* system, the skills trainers will meet the following criteria:

1. Have and use valid rationale(s) for maintaining the design of the *PETC-I* system.
2. Have and use valid rationale(s) for selecting, sequencing and modifying skills training exercises appropriate for the needs of the *GPS* groups.
3. Be capable of being constructively responsive when confronted.
4. Be able to create group conditions that are supportive of giving and receiving constructive feedback.
5. Be able to recognize and apply interpersonal influence skills as well as to allow self to be influenced when appropriate.
6. Know and apply basic skills learned in the prerequisite *Research Utilizing Problem Solving (RUPS)* training.
7. Know and apply basic skills learned in the prerequisite *Interpersonal Communications (IPC)* training.
8. Have had the experience of being a participant in a *PETC-I* skills training workshop prior to conducting a *GPS* workshop.
9. Have skill in assuming and using each of the five roles of a trainer.

CRITERIA FOR *PETC-I* SENIOR TRAINERS

The *PETC-I* senior trainers will meet the following criteria:

1. Have and use valid rationale(s) for maintaining the design of the *PETC-I* system.
2. Be capable of being constructively responsive when confronted.
3. Be able to create group conditions that are supportive of giving and receiving constructive feedback.
4. Be able to recognize and apply interpersonal influence skills as well as to allow self to be influenced when appropriate.
5. Have skill in assuming and using each of the five roles of a trainer.
6. Be able to modify the participants' skills training experiences to meet group and individual needs based on valid rationale(s).

7. Know and apply the skills presented in the *Research Utilizing Problem Solving (RUPS)* training.

8. Know and apply the skills presented in the *Interpersonal Communications (IPC)* training.

9. Have a participant oriented experience before attempting to conduct a *PETC-I* workshop.

10. Understand the relationship(s) of structured process training designs and priorities to unstructured process training designs.

11. Be able to differentiate between client needs and self needs.

12. Be capable of maintaining a "client-centered" orientation and have a clear rationale for any deviations from it.

Appendix C:

BACKGROUND QUESTIONNAIRE

BACKGROUND QUESTIONNAIRE

PETC-I and GPS Workshops

1. Trainee Identification Number: /__/__/__/__/__/__/
   1 2 3 4 5 6

Please do not write in this margin

2. Name: _____

3. Home Mailing Address: Street _____ Phone _____

   City: _____ State _____ Zip _____

4. Work Address: Street _____ Phone _____

   City: _____ State _____ Zip _____

   (This information needed for gathering follow-up data)

5. Age: _____ 6. Sex: F___ M___

7. Position:

(1) Teacher_____	(1) Primary, 1-3_____
(2) Administrator_____	(2) Elementary, 4-6_____
(3) Staff_____	(3) Jr. High, 7-9_____
	(4) Sr. High, 10-12_____

8. Highest Degree Obtained:
   (1) BS/BA_____ (2) MS/MA_____ (3) Ed. D./Ph.D.___

9. Years Experience:

   Teaching_____ Administration_____

   Staff Work_____

10. NWREL Instructional Systems Previously Attended:

(1)___Systematic & Objective Analysis of Instruction	(1)___Interpersonal Communications(IPC)
(1)___Interaction Analysis	(1)___Research Utilizing Problem Solving (RUPS)
(1)___Facilitating Inquiry	(1)___Group Process Skills(GPS)
(1)___Higher Level Thinking	(1)___PETC I
(1)___System Approach for Education(SAFE)	(1)___PETC II
(1)___Conflict-Negotiations	(1)___PETC III
(1)___Interpersonal Influence(INF)	

11. (1) In addition to the systems listed in Question 10, please indicate below all other training experiences you have participated in related to group and interpersonal dynamics, and problem solving. Please specify whether you participated as a student or trainer, when the training took place, and what the general nature of the training was. (Include courses, workshops, on-the-job training, etc.)

Please do n
write in th
margin

12. PETC I Skills Trainers only: What were the dates that you participated in the NWREL:

_____Interpersonal Communications workshop

_____Research Utilizing Problem Solving workshop

13. Current Workshop Trainers: _____ /__/__/__/__/__/__/

_____ /__/__/__/__/__/__/

_____ /__/__/__/__/__/__/

_____ /__/__/__/__/__/__/

_____

14. Date: ____/____/ 75

Appendix D:

PETC-I FINAL QUESTIONNAIRE

FINAL QUESTIONNAIRE

PETC-I Skills Trainers

Trainee's Name _____

Trainee Identification Number | | | | | | |
1 2 3 4 5 6

Trainer's Names _____, _____

Please do not write in this margin

DIRECTIONS: For most of the questions that follow, please give us your honest appraisals by making a mark "X" in the space that best represents your opinion.

A. To what extent has this workshop fulfilled your expectations about what you personally might get out of it?

1. Has not come up to my expectations /___/___/___/___/___/___/ Has exceeded my expectations.
1 2 3 4 5 6

2. What exactly has happened that brings you to this conclusion?

B. Think for a moment about the informational materials, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

3. Only restated or proved what I already know /___/___/___/___/___/___/ Offered new insights, new ways of viewing old problems
1 2 3 4 5 6

4. Spoke to important issues, vital concerns /___/___/___/___/___/___/ Missed the important issues, vital concerns
6 5 4 3 2 1

5. Hard to understand complex, full of "jargon" /___/___/___/___/___/___/ Clear, concise, understandable
1 2 3 4 5 6

6. Ideas, skills methods can be used immediately under existing conditions /___/___/___/___/___/___/ Usage would require changes in conditions that I have no control over
6 5 4 3 2 1

97

Please do write in margin

7.	Little "how to" help for my actual group work	/1/2/3/4/5/6/	Provided real "how to" help for my actual group work
8.	Material maintained my interest	/6/5/4/3/2/1/	Material failed to interest me
9.	Demanded much original thinking	/6/5/4/3/2/1/	Demanded no original thinking
10.	Practice exercises were of little or no value.	/1/2/3/4/5/6/	Practice exercises were of great value
11.	Session time was well used	/6/5/4/3/2/1/	Time in the sessions was wasted
12.	Structure useful, promoted learning	/6/5/4/3/2/1/	Too structured, blocked learning
13.	Gained new insights about my style of consulting	/6/5/4/3/2/1/	Learned nothing new about my style of consulting
14.	Allowed time for reflection about self and personal growth	/6/5/4/3/2/1/	Did not allow time for reflection about self and personal growth

C. Considering this workshop as a training program for colleges and school districts-- (CHECK ONE SPACE FOR EACH QUESTION)

15. How would you rate it in terms of its potential for school improvement?

Low potential /1/2/3/4/5/6/ High potential

16. How would you rate this workshop compared to other professional education courses you have taken?

Very low /1/2/3/4/5/6/ Very high

Please do not write in this margin

D. Conducting the GPS Skills Training

17. In an overall assessment of your training experience, was it:

Extremely valuable, worthwhile experience. Much learning accomplished.

/___/___/___/___/___/___/

6 5 4 3 2 1

Little value, no learning accomplished

What are the major factors contributing to your assessment?

18. What were the specific learning for *you* as a result of your training experience?

19. Problems arise in almost every training experience. What sort of problems, if any, did you encounter?

E. In all honesty, how much do you plan to use the ideas, skills and/or materials presented in this workshop as an integral part of your work?

20. Extensively Not at all

/___/___/___/___/___/___/

6 5 4 3 2 1

21. How do you think this workshop experience will be of value to you in the future?

Please do no write in thi margin

F. Now that the workshop/course is over, how would you sum up the experience?

22. Not very worthwhile /___/___/___/___/___/___/ Extremely worthwhile
1 2 3 4 5 6

23. What are the major factors contributing to your assessment?

24. Which of the following costs did you incur out of your own pocket in order to attend this workshop? If so, please estimate the amount.

$_____Travel costs

$_____Room and board

$_____Tuition or fees

$_____Other expenses (what?)_____

25. Did you give up potential income in order to attend (e.g., other jobs?)

(1)_____No

(2)_____Yes. If yes, please give an estimate of how much $_____

26. Considering the costs (e.g., monetary, time, etc.) that you incurred in order to attend this workshop, how do you feel?

(1)_____The costs were too great compared to what I got out of it.

(2)_____The costs were about right for what I got out of it.

(3)_____The costs were small compared to what I got out of it.

Additional Comments:

Please do not write in this margin

G. Please circle the response that best reflects your opinion of the following characteristics of the workshop.

27. Please rate the goals and objectives for:

a. Clarity

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Significance/Importance

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

28. Please rate the workshop *content:* Skills, concepts, principles, and values for:

a. Appropriateness for your experience and understanding

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Relevance for learning to be a skills trainer

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

c. Clarity of presentation and definition

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

d. Parsimony (little or no unimportant or not useful material)

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

e. Practical significance for successful skills training

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

29. Please rate the workshop *methods/strategies/procedures* for:

a. Appropriateness for learning to be a skills trainer

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Practical usefulness in learning training skills

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

c. Efficient use of time

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

Please do
write in t
margin

Please do not write in this margin

31. Will you have the opportunity to actually do PETC-I training again?

(1)_____Yes

(2)_____No (Why?)_____

(3)_____Uncertain (please explain)_____

_____

32. Do you think time commitments and pre-requisites for PETC-I are excessive?

(1)_____Yes, definitely; could be reduced somewhat

(2)_____No, they are demanding but necessary

(3)_____No strong opinion either way

33. Do you believe there is a need in the educational community for educators with group process training abilities?

CHECK ONE: (5)_____Definitely strong need

(4)_____Probably some need

(3)_____Probably not much need

(2)_____Definitely no need

(1)_____No opinion

34. Please rate the potential of PETC-I for meeting such a need:

CIRCLE ONE:

Excellent	Good	Fair	Poor	None
5	4	3	2	1

35. Would you recommend this workshop to a friend whose interests are like yours?

Yes, recommend highly							Definitely not recommend
/	5	5	4	3	2	1	/

Appendix E:

PETC-I KNOWLEDGE TEST

PETC-I KNOWLEDGE TEST

Name_____ Site_____

I.D. Number /___/___/___/___/___/___/___/
1 2 3 4 5 6

Trainer_____ Date_____

Please do not write in this margin

Instructions

We have designed this test to help us assess to what degree participants have learned the major ideas and skills presented in the PETC-I Instructional System. It is intended to evaluate the system, NOT YOU. Your responses to this test will be completely confidential.

Each question has a group of responses from which to choose your answer. Please indicate the response which you think best answers the question by either circling the number next to the response (as in Questions 1-5) or marking the number for the correct response in the space provided next to the question (as in Questions 6-12).

---

1. The skills trainer's purpose in relation to a GPS group is: (Choose one)

   1. To gain diverse group experiences and sharpen trainer skills.
   2. To help the group grow in its ability to work effectively and productively.
   3. To provide feasible solutions to the immediate problem of the group.
   4. To guide the group through the GPS System.

2. The purpose of developing a group profile of skills needs is: (Choose one)

   1. To insure that everyone knows what skills everyone wants to learn.
   2. To determine top priority skills needs of the group.
   3. To identify appropriate exercises so that individual needs are met.
   4. To give skills trainers information about skills needs of the GPS participants.

Please do not write in this margin

3. When writing a force field, the line down the center of the page represents: (Choose one)

   1. The way things are now.
   2. A way to keep your lists of forces separated.
   3. The goal that you wish to achieve.

4. When rank ordering forces in a force field for importance, "importance" means: (Choose one)

   1. How difficult it would be to change the force.
   2. How much movement there would be toward the goal if the force were changed.
   3. The degree of concern you feel towards the force in terms of bringing about change.

5. When rating a force for clarity, "clarity" means: (Choose one)

   1. How positive you feel about the way this force is working
   2. How much objective data you have about the way this force is working.
   3. How specific you have been in describing how you believe this force is working.

The five roles of a PETC-I skills trainer are: 1) Manager, 2) Facilitator, 3) Diagnoser, 4) Designer, and 5) Trainer.

All of these roles are carried out in the context of a Group Process Workshop. The following statements are descriptions of situations which may confront the skills trainer. Each requires the skills trainer to adapt a particular role in order to deal with the situation. For questions 6-12, indicate in the space provided the number from those above of the appropriate role called for by each situation.

6.____ The participants are listing and prioritizing their skills needs. You are making your own record of their skills needs. You plan to do a force field analysis to identify the importance and clarity of the skills identified.

7.____ You are preparing to conduct a workshop. You have been informed the session must be completed in 4 instead of 5 days.

8.____ You become aware that some members of your workshop are not quite sure what to do next. You get the attention of the whole group and repeat the instructions.

Please do not write in this margin

9. ____Your PETC-I training is complete and your administrator has asked you to share your training with the staff in a one-day meeting. You agree to do so.

10. ____It is time for the first session of the day to begin. You discover that the person who was to make arrangements for mid-morning refreshments has failed to do so.

11. ____You have selected 5 exercises and determined the sequence in which they will be conducted.

12. ____The participants are raising questions about the appropriateness of the exercises you have selected. In the discussion that follows you respond by checking your perception of their needs against the information they gave you in their needs assessment.

There are five major dimensions along which groups typically grow and develop. They are as follows:

1) Membership
2) Influence
3) Productivity
4) Feelings
5) Individual differences.

Items 13-18 are questions that members often ask about their groups. Identify and write the number of the dimension to which each question is related in the space provided.

13. ____When problems are raised, is there a value for working them through thoroughly as opposed to moving quickly toward action?

14. ____How do decisions get made?

15. ____When others like an idea or action, do they say so?

16. ____How do others in the group expect me to act?

17. ____Is effort spent on diagnosing situations to bring out underlying issues?

18. ____What opportunities are there for me to fulfill leadership functions?

The four guidelines for writing a problem statement are based on four questions. For items 19-29, write 1 in the space provided if the question represents a guideline for writing a problem statement, or 2 if it is *not* appropriate for writing a problem statement. (1 = appropriate, 2 = not appropriate).

Please do not write in this margin

19. ___ Who is affected?

20. ___ Exactly what is wrong?

21. ___ How did it become a problem?

22. ___ How did you discover it?

23. ___ Who is causing it?

24. ___ What kind of a problem is it?

25. ___ Who should solve it?

26. ___ How can it be solved?

27. ___ How many goals are there?

28. ___ What is the goal for improvement?

29. ___ How will you measure change?

30. Indicate which of the following definitions is the BEST definition of the term "hidden agenda." (Choose one)

1. A goal divergent from the group's goal.
2. Unstated items that influence group process.
3. Individual expectations that may be at variance with group tasks.
4. Initiation of a different topic while the group is discussing something else.
5. A goal someone wants to accomplish but does not state openly.

Please do not write in this margin

31. Parapharasing is: (Choose one)

1. Quoting as nearly as possible the person who just spoke.
2. Interpreting the meaning of the person who just spoke.
3. Repeating in your own words the person who just spoke.

32. Feedback, in Interpersonal Communications, is defined as occurring when one person: (Choose one)

1. Describes the behavior of another.
2. Interprets the meaning of the other's behavior to him.
3. Shares his reaction to the behavior of another.

As a PETC-I skills trainer, how would you approach the following problem situation? Items 33-58 will be based on the following situation:

The Problem

Teachers of a new department in a new high school building have no knowledge of how to utilize a team approach to teaching.

The Setting

It is June 15. The high school in a community of 50,000 is moving into a new building on September 1. The school has been constructed in such a way as to take full advantage of the potential for more open teaching opportunities. It will be possible to engage in what is being termed an "interdisciplinary approach to teaching."

The Situation

One of the new departments in the school will be comprised of the old Social Studies and English departments. The title for this department will be "World Culture." The staff of this new department are all from the old units. They expect work as a team, but are vague as to the implications of this task. At the same time, as a group they have given no evidence of inclination to work on this problem. One teacher, Ms. Williamson, is concerned about the lack of experience and training of the staff to become a team and to plan for and manage a complete new approach to teaching and learning. Ms. Williamson thinks the staff team needs training in team building, problem solving and communication skills. She shared concerns wtih the principal. The principal told Ms. Williamson that he would call a skills trainer to see if some help could be provided.

The Staff Team

Please do not write in this margin

The seven staff members from the old Social Studies and English departments will meet for a one week workshop with the skills trainer. Ms. Williamson, a member of the Social Studies department, has made the other staff members aware of the need for this workshop. This is her second year at this high school. She is the only teacher who has had experience in team teaching as this was the method used in her previous high school.

Mr. Price, Ms. Loyd, and Mr. Robinson comprise the school's Social Studies department. Mr. Price is 24 years old, and this is his second year as a high school teacher. The exclusive focus of his course is European History; he strongly believes in the "tried and true" method of presenting history in chronological order, and views himself as having firm control of his classroom. Ms. Loyd teaches American History, and used a democratic approach to teaching. She feels that students learn best when they are presented overviews of key concept upon which the "facts of history are hung." Mr. Robinson is the World Affairs teacher; his method of teaching is the discovery method and can best be described as "laissez faire." Many teachers have complained of Mr. Robinson's noisy classes; he has defended himself by saying, "When students become excited about something, they'll become noisy. And more than anything, I want my students to be excited about their work." Mr. Robinson is also a strong advocate for the inclusion of anthropology, sociology and psychology into the curriculum.

The English department is composed of Mr. Chaitovitch, Ms. Dean, and Ms. Howard. Mr. Chaitovitch views himself as the grammarian of the department. He feels grammar is an important but underrated aspect of English--long suffering from a history of poor, boring, and unimaginative presentations. He spends most of his free time divising ways of making grammar exciting and interesting for the students. Ms. Dean is a classicist from the word go. Her students are required to read and report on books from her prescribed list of required reading. Ms. Dean feels that frequent and long essay tests are the best method for inspiring students to study hard and to gauge the quality of their work. Ms. Howard, on the other hand, emphasizes modern literature. She has recently come under severe criticism for prescribing books and authors such as James Baldwin, Henry Miller and Kurt Vonnegut, which are unacceptable to certain elements in the community.

33. ____Choose which ONE of the following problem statements would be the BEST statement of the preceding problem situation.

1. A diversity of educational philosophies and experiences have inhibited the development of a team approach to teaching. It will be necessary to provide similar experiences and develop a common philosophy for the team approach to proceed.

Please do not write in this margin

2. The staff of the World Culture department needs to become aware of the implications of being a teaching team. They need to identify and work on issues that will arise as a result of increased awareness of this educational approach. The staff appears to need skill training in order to be effective.

3. The principal has been put in the position where he is responsible for organizing teaching teams for a new World History department. The new department will include staffs from the current English and Social Studies departments. He has had no experience with team teaching and does not know how to proceed. He feels that training in group process skills will help the teachers form a team.

4. The staff teachers of the English and Social Studies departments need training in team building, problem solving and communications skills in order to learn how to use a team approach to teaching. The staff will meet for a one week workshop with the skills trainer.

As skills trainer for this group, you plan to do a force field analysis of the situation described above. For the forces listed below, questions 34-42, mark the appropriate category for each force in the space provided.

1. Force for change
2. Force against change
3. Force that is neither for nor against change, or is not particularly relevant to the above situation

Do not make inferences beyond the data in the written account of the situation.

34. ___ The teachers are expected to work as a team

35. ___ The teachers have strong, divergent opinions about how to teach.

36. ___ Ms. Williamson has had experience working on teaching teams.

37. ___ Professional jealousy exists among the teachers.

Please do not write in this margin

38. ____The design of the building encourages the team approach.

39. ____Team teaching is better for kids and is easier to use.

40. ____There is an age lag within the faculty.

41. ____There is a broad diversity of individual resources.

42. ____The teachers are not committed to a new teaching style.

In his first meeting with the GPS group, one of the participants tells the skills trainer, "In our group, nobody gives anyone a chance to finish what they are saying before somebody gets in on top of them and starts talking about something else".

43. Which ONE of the following statements would be the BEST way to paraphrase the preceding statement?

1. You think we need more time to hear and understand people when they talk?
2. Do you mean that you are so intent on what you want to say that you don't listen to who is speaking?
3. Are you saying that you don't feel that anyone in this group is listening to each other?
4. It sounds to me that interruptions are a real roadblock to group productivity. This is an example of hindering behavior.

44. When assessing this group's skills needs, what would you, as the skills trainer, consider the most crucial question to answer? (Choose one)

1. Is each member of the group aware of the skills needed as well as the skills being used?
2. What are the expected outcomes and the present level of skills, and what are the skills that need to be developed?
3. Are group members able to allow other members to express divergence without "laying their trip" on them?
4. How do I get on board with the system and get them to start listening to each other?

Please do not write in this margin

Questions 45-48 describe four group exercises and their purposes. As skills trainer for the group described above, which of the exercises are appropriate and which are inappropriate for the needs indicated by the situation? For each question, mark in the space provided using the following:

1. Exercise is appropriate to the group situation
2. Exercise in *not* appropriate to the group situation

45. ____Leadership Patterns
- To observe and practice various leader behaviors and to assess their effects on group interaction
- To identify helping and hindering leadership behaviors

46. ____Speaking Precisely
- To sharpen listening and saying skills
- To identify helping and hindering leadership behaviors

47. ____Introduction to Group Roles
- To observe and identify task roles and maintenance roles needed for group achievement
- To become self-analytical of contributions to group effectiveness

48. ____Group Pressure Toward Uniformity
- To focus attention on ways groups function to obtain conformity
- To identify ways in which group members influence
- To study the behavior of individuals being pressured to conform
- To sharpen awareness of group interaction

After completing the first three sessions, the group seems dissatisfied and uninterested. Group members make remarks such as: "Why are we doing these exercises anyway? Tell us what we're supposed to be learning. Do we have to have more of those meetings? How does this apply to our situation?"

The skills trainer responds by saying: "Don't worry, I know what I'm doing. I'm sure you'll understand this in time. I know what things are best for you." Or say, "What had the team done that would cause such a reaction?"

49. Choose one of the following statements that would be the most likely thing the skills trainer had done incorrectly.

1. The skills trainer didn't clearly outline purpose(s). He did not allow the group sufficient part in the diagnostic process.

Please do not write in this margin

2. The trainer should have directed the group to the "do-look-learn" system for the long range goal of learning skills, not the short range goal of solving the problem.

3. The skills trainer has made assumptions which hinder the group process; he generalized instead of just speaking for himself.

Appendix F:

ITEM-TOTAL CORRELATIONS,
PETC-I KNOWLEDGE TEST

Table A

Correlations Between Original Total Scores and Retained Items and New Total Scores and Retained Items, *PETC-I* Knowledge Test

Question Number	Item-Total Correlations	
	Original (49 Items)	New (17 Items)
2	.26185	.4553
4	.37149	.4361
5	.38564	.4297
13	.31131	.4849
14	.32365	.46
16	.30248	.5127
19	.26509	.3068
20	.31064	.49
22	.21492	.33
23	.26509	.3868
24	.27883	.498
25	.22639	.3150
26	.41004	.6439
35	.26509	.3068
44	.2776	.4273
46	.25454	.2882
49	.25256	.3667

Table B

Item Total Correlations for
Discarded Items, *PETC-I* Knowledge Test

Question Number	Item-Total Correlation	Question Number	Item-Total Correlation
1	.04345	31	-.09032
3	.06335	32	-.04984
6	.04029	33	.17645
7	-.01651	34	-.01771
8	.10176	36	.02693
10	.08256	37	-.08199
11	.17645	.38	.19106
12	.11777	39	.09933
15	-.12334	40	.17645
17	-.00243	41	.04454
18	.11257	42	.17953
21	-.01571	43	.14387
27	.15985	45	.05121
28	.15985	47	.05456
29	.11257	48	.16187
30	-.17405		

Table C

Number and Percentage of Participants Who Responded Correctly to Items on the *PETC-I* Knowledge Test by Group

Question	Group A		Group B		Group C	
	N	%	N	%	N	%
1	(12)	75.0	(7)	38.9	(8)	57.1
2	(7)	43.8	(9)	50.0	(8)	57.1
3	(11)	68.8	(11)	61.1	(12)	85.7
4	(6)	37.5	(7)	38.9	(7)	50.0
5	(5)	31.3	(7)	38.9	(10)	71.4
6	(13)	81.3	(17)	94.4	(11)	78.6
7	(6)	37.5	(3)	16.7	(2)	14.3
8	(13)	81.3	(14)	77.8	(8)	57.1
10	(13)	81.3	(15)	83.3	(10)	71.4
11	(13)	81.3	(13)	72.2	(11)	78.6
12	(3)	18.8	(3)	16.7	(3)	21.4
13	(11)	68.8	(11)	61.1	(13)	92.9
14	(10)	62.5	(11)	61.1	(11)	78.6
15	(12)	75.0	(15)	83.3	(6)	42.9
16	(10)	62.5	(9)	50.0	(6)	42.9
17	(4)	25.0	(7)	38.9	(7)	50.0
18	(7)	43.8	(3)	16.7	(3)	21.4
19	(16)	100.0	(17)	94.4	(14)	100.0
20	(14)	87.5	(11)	61.1	(9)	64.4
21	(14)	87.5	(17)	94.4	(14)	100.0
22	(16)	100.0	(17)	94.4	(13)	92.9
23	(16)	100.0	(17)	94.4	(14)	100.0
24	(12)	75.0	(12)	66.7	(9)	64.3
25	(14)	87.5	(16)	88.9	(13)	92.9
26	(12)	75.0	(11)	61.1	(9)	64.3
27	(16)	100.0	(16)	88.9	(13)	92.9
28	(15)	93.8	(17)	94.4	(13)	92.9
29	(11)	68.8	(15)	83.3	(9)	64.3
30	(11)	68.8	(10)	55.6	(9)	64.3
31	(10)	62.5	(8)	44.4	(11)	78.6
32	(11)	68.8	(15)	83.3	(11)	78.6
33	(4)	25.0	(4)	22.2	(3)	21.4
34	(14)	87.5	(16)	88.9	(12)	85.7
35	(16)	100.0	(17)	94.4	(14)	100.0
36	(15)	93.8	(14)	77.8	(12)	85.7
37	(6)	37.5	(7)	38.9	(7)	50.0
38	(16)	100.0	(16)	88.9	(14)	100.0
39	(13)	81.3	(12)	66.7	(8)	57.1
40	(11)	68.8	(13)	72.2	(13)	92.9
41	(12)	75.0	(16)	88.9	(11)	78.6
42	(13)	81.3	(14)	77.8	(12)	85.7
43	(4)	25.0	(13)	72.2	(6)	42.9
44	(13)	81.3	(10)	55.6	(11)	78.6
45	(5)	31.3	(6)	33.3	(9)	64.3
46	(14)	87.5	(13)	72.2	(12)	85.7
47	(11)	68.8	(13)	72.2	(12)	85.7
48	(7)	43.8	(7)	38.9	(5)	35.7
49	(5)	31.3	(6)	33.3	(8)	57.1

Appendix G:

GPS FINAL QUESTIONNAIRE

Trainee's Name _____

Trainee Identification Number | | | | | | |
1 2 3 4 5 6

Trainer's Names _____, _____, _____

Please do not write in this margin

DIRECTIONS: For most of the questions that follow, please give us your honest appraisals by making a mark "X" in the space that best represents your opinion

A. To what extent has this workshop fulfilled your expectations about what you personally might get out of it?

1. Has not come up to my expectations /___/___/___/___/___/___/ Has exceeded my expectations
1 2 3 4 5 6

2. What exactly has happened that brings you to this conclusion?

B. Think for a moment about the informational materals, practice exercises and methods used in this workshop. All in all, how would you rate them? (CHECK ONE BOX IN EACH LINE)

3. Only restated or proved what I already know /___/___/___/___/___/___/ Offered new insights, new ways of viewing old problems
1 2 3 4 5 6

4. Spoke to important issues, vital concerns /___/___/___/___/___/___/ Missed the important issues, vital concerns
6 5 4 3 2 1

5. Hard to understand complex, full of "jargon" /___/___/___/___/___/___/ Clear, concise, understandable
1 2 3 4 5 6

6. Ideas, skills, methods can be used immediately under existing conditions /___/___/___/___/___/___/ Usage would require changes in conditions that I have no control over
6 5 4 3 2 1

Please do write in margin

7.	Little "how to" help for my actual group work	/1/2/3/4/5/6/	Provided real "how to" help for my actual group work
8.	Material maintained my interest	/6/5/4/3/2/1/	Material failed to interest me
9.	Demanded much original thinking	/6/5/4/3/2/1/	Demanded no original thinking
10.	Practice exercises were of little or no value	/1/2/3/4/5/6/	Practice exercises were of great value
11.	Session time was well used	/6/5/4/3/2/1/	Time in the sessions was wasted.
12.	Structure useful promoted learning	/6/5/4/3/2/1/	Too structured, blocked learning
13.	Gained new insights about my style of working with others	/6/5/4/3/2/1/	Learned nothing new about my style of working with others
14.	Allowed time for reflection about self and personal growth	/6/5/4/3/2/1/	Did not allow time for reflection about self and personal growth

C. Considering this workshop as a training program for colleges and school districts: (CHECK ONE SPACE FOR EACH QUESTION)

15. How would you rate it in terms of its potential for school improvement?

Low potential /1/2/3/4/5/6/ High potential

16. How would you rate this workshop compared to other professional education courses you have taken?

Very low /1/2/3/4/5/6/ Very high

Please do not write in this margin

D. Receiving Skills Training

17. In an overall assessment of your training experience, was it:

Extremely valuable, worthwhile experience. Much learning accomplished	/ 6	/ 5	/ 4	/ 3	/ 2	/ 1	/	Little value, no learning accomplished

What are the major factors contributing to your assessment?

18. What were the specific learnings for *you* as a result of your training experience?

19. Problems arise in almost every training experience. What sort of problems, if any, did you encounter?

E. In all honesty, how much do you plan to use the ideas, skills and/or materials presented in this workshop as an integral part of your work?

20. Extensively	/ 6	/ 5	/ 4	/ 3	/ 2	/ 1	/	Not at all

21. How do you think this workshop experience will be of value to you in the future?

Please do
write in
margin

F. Now that the workshop/course is over, how would you sum up the experience?

22. Not very worthwhile /___/___/___/___/___/___/ Extremely worthwhile
1 2 3 4 5 6

23. What are the major factors contributing to your assessment?

24. Which of the following costs did you incur out of your own pocket in order to attend this workshop? If so, please estimate the amount.

$_____Travel costs

$_____Room and board

$_____Tuition or fees

$_____Other expenses (what?)_____

25. Did you give up potential income in order to attend (e.g., other jobs)?

1._____No

2._____Yes. If yes, please give an estimate of how much $_____

26. Considering the costs (e.g., monetary, time, etc.) that you incurred in order to attend this workshop, how do you feel?

1._____The costs were too great compared to what I got out of it.

2._____The costs were about right for what I got out of it.

3._____The costs were small compared to what I got out of it.

Additional Comments:

Please do not write in this margin

G. Please circle the response that best reflects your opinion of the following characteristics of the workshop.

27. Please rate the *goals and objectives* for:

a. Clarity

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Significance/Importance

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

28. Please rate the workshop *content*: Skills, concepts, principles, and values for:

a. Appropriateness for your experience and understanding

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Relevance for learning

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

c. Clarity of presentation and definition

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

d. Parsimony (little or no unimportant or not useful material)

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

e. Practical significance

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

29. Please rate the workshop *methods/strategies/procedures* for:

a. Appropriateness for learning

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Practical usefulness in learning process skills

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

c. Efficient use of time

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

30. Please rate your *workshop trainers* for:

a. Clarity and relevance of presnetation

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

b. Sensitivity to group skill needs

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

c. Knowledge of content area

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

d. Preparation and organization

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

e. Effectiveness in improving trainee skills

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

Please write margin

Please do not write in this margin

f. Self confidence and ease of presentation

Excellent	Good	Satisfactory	Barely Adequate	Unsatisfactory
5	4	3	2	1

31. Will you have the opportunity to actually use the kind of process skills taught in GPS?

1. _____Yes _____

2. _____No (Why?) _____

3. _____Uncertain (please explain) _____

_____

32. Do you think time commitments and prerequisites for GPS are excessive?

1. _____Yes, definitely; coulf be reduced somewhat

2. _____No, they are demanding but necessary

3. _____No strong opinion either way

33. Do you believe there is a need in the educational community for educators with group process skills and abilities?

CHECK ONE:
5 _____Definitely strong need

4 _____Probably some need

3 _____Probably not much need

2 _____Definitely no need

1 _____No opinion

34. Please rate the potential of GPS for meeting such a need:

CIRCLE ONE:

Excellent	Good	Fair	Poor	None
5	4	3	2	1

35. Would you recommend this workshop to a friend whose interests are like yours?

Yes recommend it highly /___/___/___/___/___/___/ Definitely not recommend
6 5 4 3 2 1

Appendix H:

GPS KNOWLEDGE TEST

GPS KNOWLEDGE TEST

Name_____ Site_____

Please do not write in this margin

I.D. Number /___/___/___/___/___/___/
1 2 3 4 5 6

Trainer_____, _____, _____

Site_____

Date_____

Instructions

We have designed this test to help us assess to what degree participants have learned the major ideas and skills presented in the GPS Instructional System. It is intended to evaluate the system, NOT YOU. Your responses to this test will be completely confidential.

Each question has a group of responses from which to choose your answer. Please indicate the response which you think best answers the question by either circling the number next to the response (as in Question 1-3) or marking the number for the correct response in the space provided next to the question (as in Questions 4-14).

You will notice beneath each question number there is another number which is underlined, e.g., under Question 1 is an underlined twenty-five, "25." Disregard these underlined numbers; they are there for NWREL's data analysis process.

---

1. When writing a force field, the line down the center of page represents: (Choose one)
25

   1. The way things are now.
   2. A way to keep your lists of forces separated.
   3. The goal that you wish to achieve.

2. When rank ordering forces in a force field for importance, "importance" means: (Choose one)
26

   1. How difficult it would be to change the force.
   2. How much movement there would be toward the goal if the force were changed.

Please do not write in this margin

3. The degree of concern you feel towards the force in terms of bringing about change.

3. When rating a force for clarity, "clarity" means (Choose one)

1. How positive you feel about the way this force is working.

2. How much objective data you have about the way this force is working.

3. How specific you have been in describing how you believe this force is working.

The four guidelines for writing a problem statement are based on four questions. For items 4-14, write 1 in the space provided if the question represents a guideline for writing a problem statement, or 2 if it is NOT appropriate for writing a problem statement. (1 = appropriate, 2 = not appropriate).

4. ___Who is affected?
28

5. ___Exactly what is wrong?
29

6. ___How did it become a problem?
30

7. ___How did you discover it?
31

8. ___Who is causing it?
32

9. ___What kind of problem is it?
33

10. ___Who should solve it?
34

11. ___How can it be solved?
35

12. ___How many goals are there?
36

13. ___What is the goal for improvement?
37

Please do not write in this margin

14. ___How will you measure change?
38

15. Indicate which of the following definitions is the BEST
39 definition of the term "hidden agenda." (Choose one)

1. A goal divergent from the group's goal.

2. Unstated items that influence group process.

3. Individual expectations that may be at variance with group tasks.

4. Initiation of a different topic while the group is discussing something else.

5. A goal someone wants to accomplish but does not state openly.

16. Paraphrasing is: (Choose one)
40

1. Quoting as nearly as possible the person who just spoke.

2. Interpreting the meaning of the person who just spoke.

3. Repeating in your own words the person who just spoke.

17. Feedback, in Interpersonal Communications is defined as
41 occurring when one person: (Choose one)

1. Describes the behavior of another.

2. Interprets the meaning of the other's behavior to him.

3. Shares his reaction to the behavior of another.

137

Appendix I:

ITEM-TOTAL CORRELATIONS,
GPS KNOWLEDGE TEST

Table A

Correlations Between Original Total Scores and Retained Items and New Total Scores and Retained Items, *GPS* Knowledge Test

Question Number	Item-Total Correlations	
	Original Scores (17 Items)	New Scores (15 Items)
1	.30215	.474
2	.08975	.2214
3	.14826	.334
4	.30779	.3782
5	.26913	.4761
6	.45176	.5524
7	.44865	.5298
8	.32074	.4114
9	.24096	.411
10	.3000	.4649
11	.37021	.5372
12	.39215	.4984
13	.33698	.4825
14	.32320	.4888
16	.20024	.3801

Appendix J:

INFORMATION ABOUT THE
CLIMATE INVENTORY

Student Activities Questionnaire

The Student Activities Questionnaire was constructed for the evaluation of an ESEA Title III project, Project IMPLODE, which was hypothesized to impact upon classroom climate. It was designed to emphasize the impact of the classroom process rather than its input to the educational system. That is, to determine the traits or abilities of the students. A description of the item generation and piloting procedures is presented in "The Measurement of Academic Climate in Elementary Schools" (Ellison, Callner, Fox and Taylor, 1973). The questionnaire contains sixty multiple-choice items and eight scales. Five of the eight scales have been used for the ITCP evaluation work. One scale of the Student Activities Questionnaire was dropped because it was designed as an implementation measure for Project IMPLODE. Hence, it was not expected to be relevant to *RUPS*, *INF* or *GPS* training. Two additional scales (Career Development and Independent Development) were judged to be of low relevance to the instructional systems developed by the ITCP. The scales which were used included:

Enjoyment of School: A measure of students' enjoyment of class activities and school work

Reinforcement of Self-Concept: A measure of the amount of positive feedback received by students, either through personal contact or structured class activities

Classroom Participation: A measure of student participation in class activities--frequency of class discussions, number of students who typically participate and opportunities for participation

Democratic Classroom Control: A measure of the amount of student input into classroom decision making, planning of individual activities and enforcement of rules

Individualization of Instruction: A measure of the extent that students perceive their teachers as sensitive to their own individual needs, progress and goals

Published psychometric data for the Student Activities Questionnaire consists of scale intercorrelations, intraclass correlation coefficient for each item and additional construct validity evidence in the form of treatment and comparison group differences.

With a sample of 654 fifth and sixth grade students, scale intercorrelations of all 8 of the SAQ scales ranged from .14 to a .49, except for the multiple talent teaching and career development scales which contained some common items. (These two scales were not selected for the evaluation of ITCP systems.) Of the five scales selected for use, the interscale correlations ranged from .14 to .42. The mean interscale correlation for the five selected scales was .26 as opposed to the mean interscale correlation of .35 for the full set of 8 scales on the Student Activities Questionnaire. This indicated greater scale independence among the five scales used than among all eight of the scales. In other words, the more redundant scales were not used.

Item reliability information in the form of intraclass correlation coefficients is available on all of the questionnaire items. Of the intraclass correlations, 33 were significant at the .01 level, 8 were significant at the .05 level, and 18 were nonsignificant. Of the 5 scales selected, 15 intraclass Rs were significant at the .01 level, 5 were significant at the .05 level, and 9 were nonsignificant. The items selected appeared to be neither more nor less reliable than the complete set of 60 Student Activities Questionnaire items.

Additional construct validity evidence available for the Student Activities Questionnaire is that mean comparisons between the experimental and control schools in the Project IMPLODE evaluation resulted in significant differences in the expected direction in all scales except individualization of instruction.

Student Attitude and Activity Survey (SAAS)

The SAAS was developed as a part of a Utah ESEA, Title III Project, the Utah System Approach to Individualized Learning (U-SAIL) (Nelson, 1973). It was developed to assess outcomes of an affective nature as well as student perceptions of certain process considerations. Many of the scales of the SAAS were developed to conceptually parallel the concepts measured with the Student Activities Questionnaire. There are two forms of the SAAS, a Primary Form appropriate for Grades 2 through 4, and an Intermediate Form intended for use with Grades 5 and 6. There are 17 scales included in the SAAS. Many of them, however, were developed as measures of implementation for the U-SAIL project and were not appropriate for evaluation of the three instructional systems.

The scales which were used include general climate, reinforcement of self-concept, general school sentiment, use of process approach, and participation in individualized learning strategies. All of these scales came from the Intermediate Form of the SAAS.

Published reliability information on the SAAS is limited to communalities obtained in a factor analysis of the SAAS variables. The reported communalities range from .71 through .77. There was, however, no reported reliability estimate for the use of process approach variable.

My Class Inventory (MCI)

The MCI was developed to conceptually parallel the Learning Environment Inventory for elementary level school children. The complete MCI includes 45 items in 5 scales: satisfaction, friction, competitiveness, difficulty and cohesiveness. (The difficulty scale

is not being used in the ITCP evaluation work.) The scale reliabilities of the MCI ranged from .54 through .77, based upon an analysis of data from a sample of 655 subjects. There was no validity information reported in the manual for the MCI (Anderson, 1973), for it was still in development at the time it was selected for use in the evaluation of the ITCP training system.

Student Behavior Description Questionnaire (SBDQ)

The SBDQ was developed to assess the interpersonal needs of high school and junior high school students (Croft, 1966). Although the complete SBDQ taps interpersonal variables in terms of relationships with parents, friends and teachers, only the three scales measuring relationship with teacher factors were used in the evaluation of the three instructional systems of the ITCP. Student perceptions of relationships with parents and friends are not likely linked to the training offered in *RUPS, GPS* or *INF*.

The SBDQ was developed primarily through factor analytic technique. Thus, the scales are relatively honogenous and independent.

REFERENCES

Anderson, G. J. *The Assessment of Learning Environments: A Manual for the Learning Environment Inventory and the My Class Inventory.* Halifax, Nova Scotia, Canada: Atlantic Institute of Education, 1973.

Croft, D. B. "Student Behavior Description Questionnaire." Las Cruces: Claude C. Dove Learning Center, New Mexico State University, 1966.

Ellison, R. L., A. Callner, D. G. Fox and C. W. Taylor. "The Measurement of Academic Climate in Elementary Schools." Paper presented at the American Psychological Association Convention, Montreal, 1973. Salt Lake City: University of Utah, 1973. (mimeo)

Nelson, D. E. "Construct Validity, Reliability and Selected Correlates of the Student Attitude and Activity Survey." Salt Lake City: University of Utah, System Approach to Individualized Learning, 1973. (unpublished draft)

Appendix K:

CLIMATE INVENTORIES AND
ADMINISTRATION INSTRUCTIONS

November 28, 1974

Dear_____,

_____, a teacher at your school is participating in a workshop on interpersonal and group processes next fall. The workshop is sponsored by the Northwest Regional Educational Laboratory (NWREL) in Portland, Oregon. As part of the evaluation of the workshop, NWREL is administering a 30 minute climate questionnaire to the students in this teacher's class both this spring and next winter. _____ has indicated to us that you will administer the questionnaire for us. Because we are asking children about climate, it is very important that the teacher *not be in the room* when they answer the questionnaire; therefore, if you cannot administer the questionnaire during the next several days, please call me (COLLECT) and I will make arrangements for NWREL staff to administer it.

Two forms of a climate questionnaire are included for this class. *Each child answers only one questionnaire.* The questionnaires are alternated so every other student will receive the same form. There is a separate answer sheet for the questionnaire. Please make sure that the children use #2 pencils on the answer sheet.

When administering the questionnaire, please read the directions on the first page to the students and have them read them with you. When the students mark their answer to the second example, check that they have correctly marked the answer sheet at question 80. The children should be allowed to ask questions at any time--please answer any questions about procedures, meanings of words, etc. (If several children do not understand a word, a note to us would be helpful.)

After the students finish the questionnaire, please collect all questionnaires and answer sheets and return them to me in the enclosed envelope. Please do not show the teacher the answer sheets, although the teacher may look over the tests, if desired.

Thank you very much for your cooperation. If you have any problems or questions, please call.

Sincerely,

Suzanne B. Hiscox,
Senior Evaluator

SBH:s
Encls.

147

INSTRUCTIONS FOR CLIMATE QUESTIONNAIRE ADMINISTRATION
(Fall 1974)

Enclosed are copies of the Climate Questionnaire and answer sheets that are to be used as part of an evaluation workshop for two instructional systems from the Northwest Regional Educational Laboratory. Because the questionnaire asks about classroom environment, it is important that the teacher not be in the room while students are answering the questions.

Two forms of the Climate Questionnaire are included for this class. Each child answers only one questionnaire. The questionnaires are alternated so every other student will receive the same form. There is a separate answer sheet for the questionnaire. Please make sure that the children use #2 pencils on the answer sheet that is enclosed.

On the identification portion of the answer sheet, the students should give the information for (1) school, (2) instructor, (3) grade, and (4) test form. The form of the questionnaire (A or B) is given on the front page of each questionnaire booklet. Please make sure that students give complete information to these questions. Without it, the questionnaires cannot be used. It is not necessary for students to blacken the letter boxes on the right-hand portion of the answer sheet. You may save some time and trouble by omitting those sections.

When administering the questionnaire, read the directions on the first page to the students and have the students read them with you. When the students mark their answer to the second example, check that they have correctly marked the answer sheet at question 80. The children should be allowed to ask questions at any time--please answer any questions about procedures, meanings of words, etc. (If several children do not understand a word, a note to us would be helpful.)

After the students finish the questionnaire, please collect all questionnaires and answer sheets and return them to NWREL in the enclosed envelope. Please do not show the teacher the answer sheets, although the teacher may look over the tests.

Thank you very much for your cooperation. If you have any problems or questions, please call Suzanne B. Hiscox or Dean H. Nafziger collect at (503) 224-3650.

Note: When tests were delivered, evaluators emphasized each point in the letter orally. They also pointed out that the sample item should be filled in box #80 instead of #1.

CLIMATE QUESTIONNAIRE

Directions

The purpose of the questions in this booklet is to find out what your class is like. This is not a "test." Your teacher will not see your answers and you do not have to put your name on the answer sheet.

There are two kinds of statements in this booklet. Examples of each kind are printed below.

1. Do you live in Washington?

   1. Yes 2. No

To answer this question, first decide if your answer is Yes or No. Then, look at your answer sheet (the blue and white paper) and find question 1. With your pencil darken column one of question 1, if your answer is Yes.

An example of your answer would be:

	1	2	3	4	5
1.	▮	▯	▯	▯	▯

Another statement might be:

80. Teachers are happy.

   1. Not very often 3. Often
   2. Sometimes 4. Most of the time

First, decide how often you think teachers are happy. Now, find question 80 on the answer sheet and mark the column for your answer. If you thought teachers were sometimes happy, your answer would look like this:

	1	2	3	4	5
80.	▯	▮	▯	▯	▯

If you want to change an answer, be sure to erase your first answer and darken the column for your real answer.

Work as quickly as you can. Your counselor will tell you when to stop.

PLEASE TRY TO GIVE YOUR HONEST FEELINGS ABOUT YOUR CLASS.

1. The pupils enjoy their school work in my class.

   1. Yes 2. No

2. Children are always fighting with each other.

   1. Yes 2. No

3. The same people always do the best work in our class.

   1. Yes 2. No

4. My best friends are in my class.

   1. Yes 2. No

5. Some of the children in our class are mean.

   1. Yes 2. No

6. Most pupils are pleased with the class.

   1. Yes 2. No

7. Children often race to see who can finish first.

   1. Yes 2. No

8. Many children in the class play together after school.

   1. Yes 2. No

9. Some pupils don't like the class.

   1. Yes 2. No

10. Most children want their work to be better than their friend's work.

    1. Yes 2. No

11. Many children in our class like to fight.

    1. Yes 2. No

12. In my class everybody is my friend.

    1. Yes 2. No

13. Most of the children in my class enjoy school.

    1. Yes 2. No

14. Some people in my class are not my friends.

    1. Yes 2. No

15. Some pupils don't like other pupils.

1. Yes 2. No

16. Some pupils feel bad when they do not do as well as the others.

1. Yes 2. No

17. In my class I like to work with others.

1. Yes 2. No

18. Most children say the class is fun.

1. Yes 2. No

19. Children have secrets with other children in my class.

1. Yes 2. No

20. Most children don't care who finishes first.

1. Yes 2. No

21. Some children don't like other children.

1. Yes 2. No

22. Some pupils are not happy in class.

1. Yes 2. No

23. All of the children know each other well.

1. Yes 2. No

24. Some pupils always try to do their work better than the others.

1. Yes 2. No

25. Children seem to like the class.

1. Yes 2. No

26. Certain pupils always want to have their own way.

1. Yes 2. No

27. All pupils in my class are close friends.

1. Yes 2. No

28. In our class some pupils always want to do best.

1. Yes 2. No

29. Some of the pupils don't like the class.

1. Yes 2. No

30. Children in our class fight a lot.

1. Yes 2. No

31. All of the pupils in my class like one another.

1. Yes 2. No

32. Some pupils always do better than the rest of the class.

1. Yes 2. No

33. Certain pupils don't like what other pupils do.

1. Yes 2. No

34. A few children in my class want to be first all of the time.

1. Yes 2. No

35. The class is fun.

1. Yes 2. No

36. Children in our class like each other as friends.

1. Yes 2. No

37. How often do you have class discussion where many students have something to say?

1. Haven't done that yet
2. Not very often
3. About once a week
4. 2 or 3 times a week
5. About once a day or more

38. How often do you have class activities where many students take turns speaking?

1. More than once a day
2. Once a day
3. 2 or 3 times a week
4. About once a week
5. Not very often

39. In general, how are problems usually solved in your classroom?

1. Our teacher solves the problems alone
2. The teacher and the students work together

40. How often do other students in your class tell you that you have done a good job?

1. Not very often
2. About once a week
3. About 2 or 3 time a week
4. Once a day or more

41. How often do the students in your class talk to the teacher about how much time they should spend on an activity?

1. More than once a day
2. About once a day
3. 2 or 3 times a week
4. Once a week
5. Not very often

42. Do you ever want to continue to do your work during recess or lunch?

1. No, never
2. Almost never
3. About once a week, or less
4. Sometimes during the week
5. Almost every day

43. Do you ever work on something that other students in your class are not working on?

1. No, usually we work on the same thing
2. Sometimes, about once a week or less
3. Fairly often, 2 or 3 times a week

44. Does your class have discussions about how the students should act?

1. Yes
2. Not very often
3. No, generally the teacher tells us

45. How often does your teacher encourage you to try a difficult task?

1. Almost never
2. Sometimes, once a week or less
3. Fairly often, 2 or 3 times a week
4. About once a day
5. 2 or 3 times a day

46. How often do you talk to a teacher by yourself about your schoolwork?

1. 2 or 3 times a day
2. About once a day
3. About once a week
4. Almost never

47. How often are your excited about going to school in the morning?

1. Almost never
2. Once in a while during the school year
3. About once a week
4. Almost every day

48. Do you think your teacher knows what kinds of activities you like the most?

1. Not very well
2. I don't know
3. Yes

49. Does your class have activities where many students get called on?

1. No, haven't done that yet
2. Not very often
3. About once a week
4. Yes, about once a day or more

50. How often does your teacher permit a lot of talking and activities in your classroom?

1. A number of times a day
2. About once a day
3. The classroom is usually quiet

51. In the classroom, the teacher usually calls on:

1. The same group of students
2. Almost all the students

52. Do you have activities where the teacher has you tell someone else about something?

1. No, haven't done that yet
2. Not very often
3. About once a week
4. Yes, 2 or 3 times a week or more

53. How often can you speak out in a classroom discussion when you want to?

1. Almost never
2. Not very often
3. Sometimes
4. Fairly often
5. Always

54. How often does your teacher tell you about something you have done well?

1. Almost never
2. Sometimes, once a week or less
3. Fairly often, 2 or 3 times a week
4. About once a day
5. 2 or 3 times a day

55. How often does your teacher let students decide how an activity or project should be done?

1. Almost never
2. Sometimes
3. Most of the time

56. How often do you spend <u>less</u> time on some activities than other students do?

1. Fairly often, 2 or 3 times a week
2. Sometimes, about once a week or less
3. Almost never

57. How often do you spend <u>more</u> time on some activities than other students do?

1. Fairly often, 2 or 3 times a week
2. Sometimes, about once a week or less
3. Almost never

58. How much do you like what you do at school?

1. I don't like it
2. I like it a little
3. I like it
4. I really like it

59. How often do you tell your parents about something good that happened in school?

1. Very seldom
2. Sometimes, about once or twice a week
3. Almost every day

60. How often do you get excited about what is happening in class?

1. Almost never
2. Not very often, less than once a week
3. Sometimes, about once or twice a week
4. Almost every day

61. Have you ever wanted to stay after school to finish up something if you could?

1. Yes, once a week or more
2. Sometimes
3. No, almost never

62. Who decides what the class will do?

1. The teacher usually decides by herself what the class will do
2. We often plan with the teacher what we will do

63. Does your teacher know what is easy and what is hard for you?

1. No, not very well
2. Sometimes
3. Yes, knows very well

64. How do you usually feel when your teacher talks to you about your school work?

1. Encouraged
2. Don't know
3. A little discouraged

65. Are you proud of the things you do in school?

1. Very proud
2. Proud of some things, not proud of others
3. Not very proud

CLIMATE QUESTIONNAIRE

Directions

The purpose of the questions in this booklet is to find out what your class is like. This is not a "test." Your teacher will not see your answers and you do not have to put your name on the answer sheet.

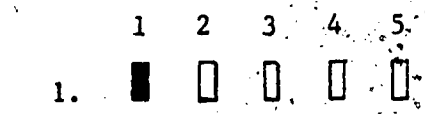
There are two kinds of statements in this booklet. Examples of each kind are printed below.

1. Do you live in Washington?

   1. Yes 2. No

To answer this question, first decide if your answer is Yes or No. Then, look at your answer sheet (the blue and white paper) and find question 1. With your pencil darken column one of question 1, if your answer is Yes.

An example of your answer would be:

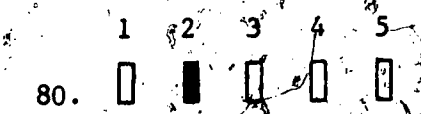


Another statement might be:

80. Teachers are happy.

   1. Not very often 3. Often
   2. Sometimes 4. Most of the time

First, decide how often you think teachers are happy. Now, find question 80 on the answer sheet and mark the column for your answer. If you thought teachers were sometimes happy, your answer would look like this:



If you want to change an answer, be sure to erase your first answer and darken the column for your real answer.

Work as quickly as you can. Your counselor will tell you when to stop.

PLEASE TRY TO GIVE YOUR HONEST FEELINGS ABOUT YOUR CLASS.

1. Does your teacher decide all of the work you do each day?

   1. Yes 2. No

2. Do you usually feel good about your work after talking with your teacher?

   1. Yes 2. No

3. Do you ever go back to your room early to work during lunch?

   1. Yes 2. No

4. Does your teacher often ask questions which make you think hard?

   1. Yes 2. No

5. Do you like to come to school?

   1. Yes 2. No

6. Do you feel that your teacher likes you?

   1. Yes 2. No

7. Do you ever spend time in school talking about why things are the way they are?

   1. Yes 2. No

8. When you have something to say to other children, do you say it?

   1. Yes 2. No

9. Do you sometimes think of your school as a jail?

   1. Yes 2. No

10. Is school a happy place for you to be?

    1. Yes 2. No

11. Do you ever tell your parents about good things that happen at school?

    1. Yes 2. No

12. Does your school have too many rules?

    1. Yes 2. No

13. Do you stay after school and help the teacher?

    1. Yes 2. No

14. In the morning, do you feel like going to school?

1. Yes 2. No

15. Does your class ever talk about the good and bad sides of something?

1. Yes 2. No

16. Does your teacher let you know when you have done your work well?

1. Yes 2. No

17. Do you (sometimes) feel bad after talking with your teacher about your school work?

1. Yes 2. No

18. Do you ever tell your parents about bad things that happen at school?

1. Yes 2. No

19. Does your teacher sometimes make you feel bad?

1. Yes 2. No

20. In school, have you ever put things in groups according to the ways they are alike and different?

1. Yes 2. No

21. In the morning, do you often feel like staying home and not like going to school?

1. Yes 2. No

22. Do you choose your own work very often in school?

1. Yes 2. No

23. Does your teacher want you to speak up in class?

1. Yes 2. No

24. Are you scared to go to the office at school?

1. Yes 2. No

25. When you finish one job--do you sometimes choose what job you will do next?

1. Yes 2. No

26. Does your teacher always tell you what to do in school?

1. Yes 2. No

27. Do you get a headache when you think about school?

1. Yes 2. No

28. Are you afraid to tell your teacher when you don't know what you are supposed to do?

1. Yes 2. No

29. Do you wish you were in a different class at school?

1. Yes 2. No

30. Would you rather stay home than come to school?

1. Yes 2. No

31. Do you feel/get sick very often when you are at school?

1. Yes 2. No

32. I like talking with my teachers.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

33. Teachers make fun of what the boys and girls say.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

34. Teachers are easy to get along with.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

35. Teachers are very good friends of mine.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

36. Teachers get mad at boys and girls.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

37. Teachers are nice to the boys and girls.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

38. Teachers know a lot.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

39. Teachers are too busy.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

40. Teachers do special things for boys and girls.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

41. Teachers listen carefully to the kids' questions.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

42. Teachers make fun of the boys and girls when they make mistakes.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

43. Teachers help the boys and girls think clearly about class work.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

44. Teachers don't let boys and girls finish what they are saying.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

45. Teachers help the boys and girls with any problems they may have.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

46. Teachers know what they are talking about.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

47. Teachers are kind and cheerful.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

48. Teachers try very hard to teach boys and girls something.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

49. Teachers try to tell boys and girls what to do.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

50. Teachers tell boys and girls about new things they find.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

51. Teachers speak in a way boys and girls can't talk back to them.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

52. Teachers tell funny stories to boys and girls in class.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

53. Teachers tell why they question students.

1. Not very often
2. Sometimes
3. Often
4. Most of the time

The management plan for the Improving Teaching Competencies Program (see *Resource Allocation and Management Plans*, 1974) divides the work flow for the development of an instructional system into five phases: planning, pilot, interim, field test and outcome. Each phase consists of certain development, evaluation and field relations activities that culminate in a milestone report.

The range of activities associated with developing an instructional system is summarized in Diagram I. These activities are divided into five major categories: needs, objectives, product development, testing and implementation. Diagram I also partitions these activities among seven fuctional areas including management, development, field relations, dissemination, formative evaluation, internal summative evaluation and external summative evaluation. The matrix is not necessarily prescriptive nor are the evaluation relationships among each part strictly linear.

The specific activities engaged in during the development of an instructional system differ according to the phase under consideration, the unique needs of the specific product or change support process being developed and, occasionally, due to style preferences among work unit teams. For more specific and detailed statements, reference should be made to the development and evaluation plans and documents for each work unit.

Evaluation differs according to each phase of the development. During the initial phases, evaluation focuses on formative issues and provides information primarily for system developers. During the latter phases, the emphasis is on summative evaluation which provides information

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemi	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
NEEDS Theoretical/Value Empirical Field Desire/Readiness Expert Review	Approves a documented need statement as: 1. Compatible with Program and value position 2. A feasible priority for the Program to undertake. Approves the feasibility and appropriateness of approaches to data gathering determined necessary from field of potential users and from experts, except for external summative assessment of needs. Approves any iterations of needs statement.	Generates rationale statement including theoretical content and strategies, value and social problem. Collaborates with evaluators on product review, literature review and justification. Initiates reassessment of need when appropriate.	Arranges for data collection from the field. This would include following procedures for identifying sample populations, arranging for data collection from identified samples and collecting the data as well as delivering the data for processing, analysis and interpretation. Works with formative evaluators on a needs assessment to determine field demands for development of product.	Initiates needs assessment with regard to dissemination activities. Determines dissemination performance requirements and constraints. Performs mission analysis, functional analysis, task analysis and method/means analysis for dissemination of product.	Develops procedures for and collects information concerning the need. This should include such factors as an indication of the number of people affected, the social significance of the need, the absence of substitutes, the urgency of the matter, the possibility of multiplicity affects. Need statements may be derived from such sources as the learner, the society or the subject matter.	Arranges for any external summative evaluation of the need statement.	Evaluates the adequacy of the need statement.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
OBJECTIVES Purpose Behavioral Outcome Objectives Behavioral Instrumental Objectives	Approves statements of instructional system's purpose and behavioral objectives at each stage during planning, product development and evaluation as iterated. These statements are considered in relation to their appropriateness to Program purpose, values and feasibility within Program resources. Approves appropriateness of expert reviewers and review procedures, except for external summative reviews.	Generates general goals and refines objectives of instructional system; to be completed by iterative process. Collaborates and concurs with evaluation to operationalize and classify objectives. Revises statements of objectives when appropriate on the basis of testing and inputs from field relations and formative and summative evaluation.	Reviews product objectives. Provides feedback to developers and evaluators concerning potential target groups for whom the objectives are relevant.	Generates dissemination objectives in collaboration with developers and evaluators.	Initiates the operationalization of product objectives for measurement purposes. (Determines relevant domains of variables from objectives.) Classifies objectives into categories as appropriate. One possible categorization scheme might be: 1. Instructional objectives (trainee behavior) 2. Instrumental objectives (trainee behavior) 3. Outcome objectives or indicators (trainee objectives) 4. Impact objectives or indicators (evidence that changes in trainee behavior made any differences in a secondary target group) 5. Implementation objectives (trainer behavior) Other factors to be considered are the prerequisite competencies or experiences of the learner and social and psychological characteristics of the learner. Arranges for external review of objectives. Provides feedback to developers.	Arranges for any external summative evaluation of the objectives. Provides feedback to formative evaluators concerning the degree to which the statements of objectives serve to delimit the selection or development of instrumentation (technique items, scoring keys, empirical base for constructs implied).	Evaluates the objectives.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
PRODUCT Design Specifications Content Instructional Design Materials Expert Review Instructional System Reports	Approves design specifications as appropriate for purpose, validity, feasibility, those which are prespecified and those which are emergent. Approves selection and iterations of content, instructional design and materials as consistent with design specifications and evaluations at each stage of development. Approves appropriateness of expert reviewers and expert review procedures except for external summative assessment. Approves reports of planning and progress on creation and iterations of the instructional system.	Responsible for generation and revision, as a result of testing, of content, materials, instructional processes, participant processes, workshop climate specifications, participant prerequisites, workshop specifications and trainer qualifications. Oversees editing needs in collaboration with editor. Contributes to identification and review of potentially competitive systems.	Initiates and arranges for marketing surveys to ascertain the likely reachable market.	Generates the strategy for dissemination. This would include identifying the role of the regional network, publishers, training cadres, colleges and universities, state departments of education and school districts. Determines promotional material for different audiences and potential distribution. Projects potential target audiences.	Provides for feedback concerning the degree to which content fits specifications; or if content specifications are not made explicit, then formative evaluation provides for feedback on the apparent content domain (may require expert review). The same function as described above for content specifications is appropriate for materials specifications and strategies specifications. Formative evaluation obtains and feeds back cost information partitioned into the following categories: 1. Development only costs 2. Product costs 3. Delivery costs exclusive of product costs 4. Maintenance costs Arranges for external review of product in regard to goals, content, strategies, disseminability and cost/benefit potentials for developers.	Arranges for any external summative evaluation of content, materials and strategies.	Evaluates the content, materials and strategies.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
TESTING Evaluation Designs Instrumentation Criteria Short-Term Effects Long-Term Effects Critical Comparisons Expert Review Test Reports	Approves appropriateness and feasibility of evaluation designs and instrumentation criteria for short- and long-term effects throughout formative evaluation. Critiques the appropriateness and adequacy of evaluation designs and instrumentation criteria for internal summative evaluation and advises on feasibility. Approves Program claims for use in critical comparisons. Provides recommendations of possible comparisons. Approves reviewers selected for substantive appropriateness except for external summative evaluation. Approves appropriateness of review procedures. Approved adequacy and validity of formative test reports and critiques appropriateness of internal summative test reports. Determines that arrangements are completed for the necessary forms, clearance procedures and protection of human subjects procedures.	Provides evaluators with formative evaluation needs. Provides inputs to summative evaluation. Participates and observes in field trial during early stages of development; later stages, observes. Helps develop instrumentation criteria for evaluative system including trainee outcomes, secondary outcomes, costs installation and critical competitors. Concurs with evaluators on formative evaluation designs. Inputs and critiques internal summative designs.	Reviews evaluation design. Provides feedback concerning feasibility of design. Identifies subjects and arranges appropriate site conditions for testing products during all stages of development. Provides competent installers and trainers for formative and internal summative evaluation. Identifies potential sites for external summative evaluation. Identifies pool of competent trainers and qualified participants, when appropriate, for external summative evaluation.	Disseminates results of testing to various appropriate audiences.	Selects and/or develops instrumentation for formative use. This would include instrumentation for capturing responses made during the process of instruction and responses made to end of workshop criterion tests or measures. Develops designs and instrumentation to assess immediate workshop effects. Possible areas in which effects may be examined include: 1. Trainee knowledge 2. Trainee attitudes a. About self b. About other people or things 3. Trainee behavior (skills, etc.) Develops designs and instrumentation to assess long-term effects when this information is needed by development staff to assist product development. Conducts the designed studies. Provides inputs to the file on critical competitors.	Reviews and approves formative instrumentation for summative use. Selects or develops instrumentation for summative study. Instrumentation would be developed for the following: 1. Workshop outcomes 2. Long-range trainee effects 3. Impact 4. Other variables which can be identified as important control variables or have been demonstrated to interact with the treatment to affect outcomes Initiates and collaborates with formative evaluator to design instrument development and validation procedures to be used for both formative and summative work. Designs and conducts summative studies for assessing workshop effects under field conditions. Develops designs and instrumentation to assess long-term effects. Collaborates with formative evaluators when early interaction is needed. Designs would include provision for assessing retention, transfer and application. Conducts the designed studies. Arranges for the external summative evaluation with respect to possible critical competitors. Maintains a file on critical competitors identified by NAME.	Evaluates instrumentation. Replicates evaluation studies conducted to assess immediate workshop effects. Replicates the evaluation studies conducted to assess long-range effects. Identifies any additional critical competitors which may have been recently generated or had been overlooked by the Program. Makes judgments on the relative merits of the product and the various critical competitors.

Column headings should be read as functions (not roles or persons). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

Diagram I

PRODUCT DEVELOPMENT IN IMPROVING TEACHING COMPETENCIES PROGRAM

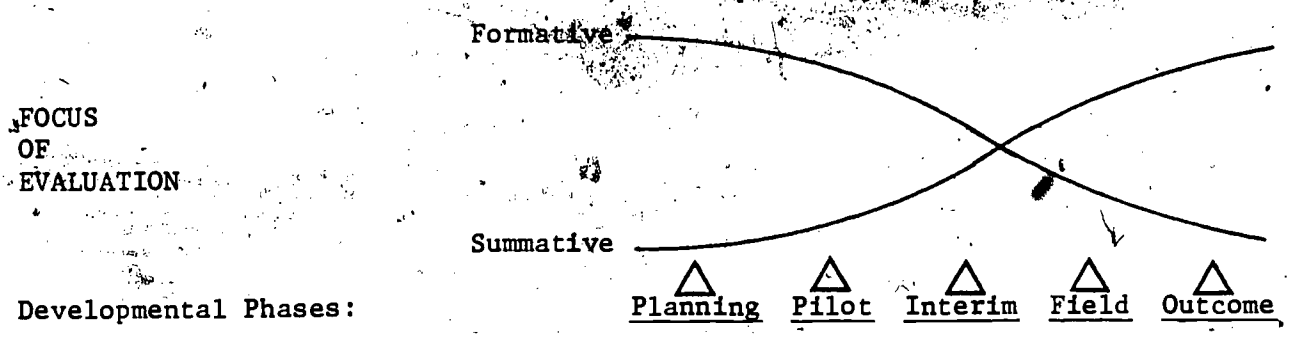
	Program Management	Development	Field Relations	Dissemination	Formative Evaluation	Internal Summative Evaluation	External Summative Evaluation
IMPLEMENTATION Conditions for Use Installation Steps Alternative Diffusion/ Dissemination Strategies Product Reports/Sales Literature	Approves procedures and materials for implementing use of instructional system as congruent with Program purpose and values, evaluation data, and logical conceptions regarding user conditions and steps for installation. Approves Program strategies to support diffusion and dissemination including sales literature as appropriate to purpose and values of the Program and as consistent with perceptions and evaluations gained during development. Approves and recommends product readiness for publication.		Generates dissemination issues. Provides feedback concerning problems and constraints for developers, evaluators and program managers. Arranges for installation sites. Provides trainers when needed. Provides information for evaluators and developers concerning necessary installation procedures. Provides training for installers and trainers for formative and internal summative evaluation tests.	Provides a dissemination plan which includes: 1. Arranging for training of dissemination managers and senior trainers 2. Preparing regional network, cadres, colleges, universities, state departments and school districts to deliver products 3. Providing training for installation managers 4. Developing alternative diffusion/ dissemination strategies 5. Arranging for any market research 6. Collaborating with publishers in identifying different types of dissemination/sales personnel and conducting sales training meetings Works collaboratively with evaluators in evaluating the Program's dissemination strategies.	Works collaboratively with dissemination to develop procedures for and collects information concerning the Program's diffusion/dissemination strategies. Develops procedures for and collects information concerning the marketing and sales of Program's products. Helps identify alternative diffusion/dissemination/ marketing strategies. Arranges for any external review of strategies.	Arranges for any external evaluation of diffusion/dissemination strategy.	Evaluates the diffusion/dissemination strategy.

Column headings should be read as functions (not roles or person). Headings in Column 1 denote five major classes of activities. No particular sequence or temporal relationship is necessarily implied. Entries should not be read as prescriptive for any particular work unit. Again, no particular sequence or temporal relationship is necessarily implied.

and judgments for potential users of the system. This shift in emphasis is illustrated in Figure 1.

Figure 1

Evaluation Emphasis in the Developmental Phases



The following paragraphs describe in general terms the ways development and evaluation activities are organized for each phase of product development.

Planning Phase. In this phase, several key activities provide the focus for effort. The initial conception of the proposed instructional system is described along with its intended objectives. A need for the proposed system is documented and evidence provided that adequate conceptualizations and instructional strateiges exist or can be developed feasibly for the proposed training package. Initial development, evaluatuion and dissemination plans are produced, as are timelines, staffing needs and budgets.

Pilot Phase. In this phase, a prototype of the instructional system is developed and tried out on a small group of users from the target group. Objectives of the system and entry conditions for participants are clarified. Program evaluators provide formative evaluation information to assist developers with revisions. The information includes observer

and trainer assessments of participant involvement in the activities, measurements of participant satisfaction with the content, strategies and utility of the system. The workability of the activities, the logic of the content and the quality of the teaching aids and materials are also assessed at this phase by the user groups. Description and preliminary assessment of trainee outcomes are initiated.

The collection of information regarding the marketability and costs of the instructional system commences during the pilot phase as does the documentation of the developers' claims regarding the intents of the system in comparison to existing alternatives.

Interim Phase. During this phase, the instructional system goes through one or more cycles of revision and a nearly finished product is completed. By the end of this phase, the appropriateness of objectives has been determined, statements of objectives finalized and instrumentation to measure these selected or developed. For instructional systems requiring a workshop format, specifications are determined for desirable workshop conditions and qualifications for effective trainers.

The major focus of the evaluation activities for this phase is on confirmation of the system's ability to produce specified short-term outcomes and to test the workshop conditions, trainer qualifications and dissemination feasibility. This may be accomplished partially through conducting a "criterion workshop" designed to resemble closely the field conditions. The basic decision served by evaluation is whether the instructional system is ready for internal summative evaluation and adequate for comprehensive field and outcome testing.

Field Test Phase. In this phase, minor revisions are made on the instructional system and a product close to finished form is expected to exist. Also, in this phase, an internal summative evaluation will

focus on assessment of short-term outcomes of the instructional system. Specifically, this means finding answers to questions regarding knowledge, awareness and attitudinal growth, and participant performance change that can be expected as a result of active participation in the system's training design under field conditions with typical trainees, trainers and workshop settings. Variables related to problems of installation and dissemination may also be examined at this point.

Outcome Phase. During this phase, which may occur simultaneously with the previous phase, the instructional system is finished and internal summative evaluation will assess the system's ability to produce, not only specified short-term outcomes in terms of participant satisfaction, knowledge, awareness or attitudinal gain and performance change, but also transfer, retention and impact upon secondary audiences such as students and/or peers. At this point evaluation plans are made for external summative evaluation studies such as critical comparisons between the outcomes of the instructional system being evaluated and outcomes produced by other relevant treatment efforts. External summative validations of the product are also completed in this stage.