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ABSTRACT

The findings of the first year of a 2-year study of Teacher Corps graduates are reported in this document. The goal of the first year of the study was to identify and analyze those combinations of intern background characteristics and Teacher Corps program characteristics that are related to desired teaching skills and attitudes of interns at the end of their training. Data were collected at 20 sixth-cycle projects that prepared elementary school teachers. Data about the training program at each site were obtained from university professors and deans, project staff, local education agency superintendents, school principals and teachers, community persons and interns through questionnaires and interviews. Data about intern characteristics after training were gathered through classroom observations, questionnaires, intern activity logs, and interviews with interns. It was found that important trends related to positive exit factors were, without exception, program factors; that is, none of the background experiences or characteristics (excluding ethnic background) had an impact on the intern's exit characteristics. Only three exit characteristics could be predicted from program factors with an acceptable level of accuracy. In another aspect of the study it was found that undergraduate programs compare favorably with graduate Teacher Corps programs and that they are, in fact, doing better than graduate programs. (HMD)

PACIFIC T & TA CORPORATION

A STUDY OF TEACHER TRAINING
AT TWENTY TEACHER CORPS PROJECTS

David D. Marsh

Presented at the Teacher Corps Conference in Washington, D. C.
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A. Overview

I am reporting the findings of the first year of a two year study of Teacher Corps graduates. The goal of the first year of the study was to identify and analyze those combinations of intern background characteristics and Teacher Corps program characteristics that are related to desired teaching skills and attitudes of interns at the end of their training. The second year of the study, which is Phase II, is currently being carried out.

The first year of the study identified Teacher Corps intern background characteristics (e.g., ethnic group, previous experience working with children, language ability) and Teacher Corps program characteristics that were closely associated with desired intern exit characteristics. By intern "exit characteristics" is meant the teaching skills, attitudes and other abilities that interns have as they leave the training program. In studying specific teaching skills, the focus was on interaction patterns between intern and pupils in classrooms, lesson planning skills and methods, organization of class, degree of autonomy given the child, and usage of materials and other resources as well as an intern's contact with parents and his/her perceived importance in bringing about change in the school. The attitudes and abilities studied were those that the Teacher Corps projects themselves believe will facilitate the learning and growth of minority-group and low-income children. This second year of the study is designed to compare 100 first-year teachers who were Teacher Corps interns with other teachers, in terms of the ability of these teachers to help elementary school children learn and grow. Pupils of all teachers in the second year of study were given an achievement test in reading and an attitude test, measuring self-esteem, in the Fall and Spring of the current school year. In addition, classroom observation will be carried out to assess both teacher behavior and pupil behavior. The basic purposes of the second year are:

1. To assess the effectiveness of Teacher Corps graduates in working with low-income/minority group children.

2. To assess patterns of relationship between teacher background, teacher education program, teacher behavior and pupil learning and growth variables.

The second year of the study will be completed next September.

B. The Nature of a Teacher Corps Project

The Teacher Corps program operates through projects that are established in communities throughout the country. Typically, a proposal to establish a Teacher Corps project is prepared jointly by an Institution of Higher Education (IHE), one or several local school districts (LEAs), and a local community or cluster of communities. In some cases, more than one IHE may be involved. The grant typically is in two parts: a grant covering the intern's instructional costs, which goes to the IHE, and a grant covering intern and team leaders' salaries, which goes to the local school district.

The interns' training occupies approximately two years' time and is built around the four Teacher Corps strategies: (1) competency-based teacher training; (2) community involvement; (3) team teaching; and (4) portal schools.[1] The teacher Corps teams, composed of interns and team leaders (from five to eight interns for each team leader) each work in a school, spending approximately 60 percent of the school-week time there. They also take courses or seminars and spend a substantial portion of their time in community-based education activities. While the four strategies outlined above, and the general guidelines are given to all Teacher Corps projects, individual projects are often somewhat different from one another in their interpretation of the guidelines. The specific goals differ from project to project, as do the training methods and anticipated outcomes.

Teacher Corps programs as a whole differ from typical teacher training programs in several ways. First, a Teacher Corps intern

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[1] A portal school is defined as a regular public school that serves as an entry point for new and retrained personnel and new processes and products and as an exit point for new and retrained personnel and for tested processes and products.

spends 80 percent of each day in training and classroom participation throughout the program. The university courses are often taught at or near the intern's designated school, giving teacher training a much closer relationship to the reality of the school. A cooperative team (a team leader and about six interns) carries out the instruction of pupils and the team leader supervises the interns in the school setting. Through this team structure and in other ways, interns receive a high level of counseling and support in their personal development. In addition, trainees spend 20 percent of their time working in the target community in an effort to understand better and relate to the broader needs of the children they serve. These general training goals, together with the implementation of prototype competency-based teacher education programs, makes the Teacher Corps training somewhat unique.

C. The Methodological Approach of the Study

Data were collected at 20 Sixth-Cycle Teacher Corps projects. The 20 projects represent all Sixth-Cycle projects that prepared elementary school teachers. Data about the training program at each site were obtained by interview and questionnaire. Training program information was obtained from eleven role groups including university professors and deans, project staff, LEA superintendants, school principals and teachers, community persons and interns.

Data about the intern exit characteristics were obtained from a 50 percent stratified random sample of interns. To compensate for intern attrition, an additional 10 percent of the interns were included in the sample, totalling 60 percent of the interns.

Data about the exit characteristics of interns were gathered in several ways. Each intern was observed three times in a teaching situation by a person trained in the use of our classroom observation instruments. The bulk of our observation data came from a classroom

observation guide developed by Stanford Research Institute for a large study of project follow-through. Training in the use of this guide was conducted by Stanford Research Institute and lasted seven days. An inter-rater reliability of .77 was achieved among our observers.

To complement the perspective provided by classroom observation, each intern completed a log of his/her professional activities over a week's time. An interview with the intern about activities in the log gave us an insight into how the intern prepared lessons, diagnosed pupil needs and evaluated pupil performance. Additional information was gathered from interns and their team leader by means of several questionnaires.

Let me now explain how the variables used in this study were identified. A set of program-variable categories was developed early in the Fall of 1972 by the project staff. Four perspectives for thinking about the impact of a Teacher Corps program on intern exit characteristics were used in identifying these program variable categories. These perspectives were:

- Aspects of a training program that probably relate to the development of certain teacher skills or attitudes.
- Negative factors impinging on the success of the training program, thus inhibiting the development of certain skills or attitudes.
- Alternatives to the training program per se that are plausible explanations of the development of teacher skills or attitudes during the two-year life of the training program; and
- Descriptions of important "contexts" surrounding the operation of the project. These would include administrative hierarchies and demographic characteristics of the community, local school district and institutions of higher education.

Each of the perspectives suggested research questions which, in turn, suggested important program variables to be studied. A preliminary site visit in the fall of 1972 was used to determine whether the

identified variables were the best possible selection. The variables were organized under 14 general headings as presented in Figure 1.

I. General Characteristics of the Project Site

II. Characteristics of Cooperating Institution of Higher Education

III. Characteristics of the Cooperating School Districts

IV. Training Staff Characteristics

V. Recruitment and Selection of Interns

VI. Structure and Content of Experiences for Which Interns Receive Academic Credit

VII. Implementation of Competency-Based Teacher Education in the Instructional Program

VIII. Degree of Personalization

IX. Practicum Experiences of Interns

X. School Setting in Which the Intern Works

XI. Community Dynamic

XII. Decision-making and Evaluative Mechanisms Within the Project

XIII. Programmatic Integration of the Project

XIV. Project Stability, External Linkages, and the Political Climate

Figure 1. The Fourteen Categories of Program Variables

Development of the instruments to assess exit variables began with a study of the training goals common across the 20 Teacher Corps projects. A list of these goals was developed, based on information from the Fall data collection and from other interviews and documents. These goals formed the basis for the development of exit variables.

A brief summary of the training goals is presented in Figure 2.

- Teacher Corps interns emphasize involvement in the school and the community, using the broad resources of school and community in teaching and gaining the support and involvement of parents in the school.
- Interns are encouraged to use cooperative patterns of decision-making, both as members of teaching teams and as teachers involving pupils in learning decisions.
- Interns are encouraged to develop curriculum materials and content that are realistic and relevant to minority-group children.
- Interns are encouraged to develop high-quality affective relations with pupils, developing rapport, using appropriate body contact, and other means of communicating.
- Interns are encouraged to use competency-based instructional techniques. (The definition of "competency-based instruction" is given on page 3.)
- Interns are given experience in inner-city school environments and are expected to gain an understanding of inner-city problems and a competence to deal with these problems.

Figure 2. Training Goals Common to Teacher Corps Projects in the Study

Moreover, it is interesting to look at the 19 significant factors in terms of which program categories they represent. The intern selection process (Category 5) did not have a significant impact on the exit factors. This is surprising, because a number of different and carefully studied techniques were used in selecting interns. Some programs stressed academic ability, while others focused on interns'

PF 1.5	Team Leader/Intern Ratio
PF 2.1	Percent of Minority Group Professors in School of Education
PF 2.4	Project's Perception of Extent of Goal Similarity and Cooperation with School of Education
PF 4.2	Percent of Chicano Team Leaders
PF 4.9	Intern Learned Most from Project Director
PF 6.1	Extent of Course Revision for Teacher Corps Training
PF 8.2	Intern Feels He Can Be Self-Directed
PF 9.1	Similarity of Views Between Team Leader and Cooperating Teacher Regarding; Goals of Teacher Corps, Curriculum Development and Supervision
PF 9.5	Amount of Clinical Supervision Given to Intern
PF11.1	Extent of Public School Staff Support of the Intern's Involvement in the Community Component
PF11.3	Extent of University Involvement in Community Component
PF11.4	Hours Per Week and Diversity of Community Component
PF13.2	Extent to Which Goals are Known and Shared by Project Staff
PF13.3	Extent of University Involvement in Community Component
PF13.4	University Professor's Knowledge of Overall Instruction Given Interns
PF14.1	Extent of Discontinuity of Project Staffing
PF14.2	Extent of Cooperative Decision-Making at Project as Seen by Principal
PF14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in DSE Role
PF14.5	Extent of Cooperative Decision-Making as Seen by Project Staff

Figure 3. List of Significant Program Factors

For each of the 14 program variable categories and seven exit variable categories a factor analysis was performed following data collection. The factor analysis helped to reduce the number of variables being studied while at the same time retain a logical identify for each factor. For example, all program data concerning "the extent that the program was personalized for interns" was factor-analyzed. The result was four factors each having to do with the degree of personalization of the program.

Following factor analysis, 75 program factors remained across all 14 program factor categories. To further reduce the number of program factors used in the final data analysis, a canonical correlation analysis was conducted. The canonical correlation analysis identified linear combinations of background, program and exit factors. There work ten linear combinations found that correlated at the .50 level or above and only program or background variables that were part of these combinations were included in the final data analysis.

D. Analytic Findings

Question 1: Are there any important trends in the program or background factors that are most associated with exit factors?

This question focuses on the results of the canonical correlation analysis and asks: What are the important trends in the program or background factors that were included in any linear combination in a canonical correlation? Nineteen factors loaded on one or several of the linear combinations. Many of the 19 factors loaded highly on several combinations which suggests that the same 19 factors are related to a variety of exit skills and attitudes.

The 19 factors came in interesting patterns as portrayed in Figure 3. First, all of the factors were program factors. That is, none of the background factors were highly related to the exit factors. This is very important, because it reveals that none of the background experiences or characteristics (excluding ethnic background) had an impact on the intern's exit characteristics; all of the impact came from the intern's program experience.

background experiences, ethnic and cultural experiences, and personality. We would expect some of these factors to have a profound impact on the Teacher Corps graduates, but no correlations are seen to suggest that the methods and criteria used in selection have a significant effect.

The use of competencies in teacher training has been suggested as one of the important features of some Teacher Corps programs. Here, again, this category of factors (Category 7) showed no correlation with exit variables. This may suggest that the use of competencies is not as useful as was once thought in preparing teachers, or that the use of competencies had not evolved to a level where they were effectively used. It is important to note that other aspects of a competency-based program such as the degree of personalization or the programmatic integration of the various facets of the training were found to be important.

The lack of correlation of factors in the evaluation category is less surprising, although it should be noted. Where project evaluation is a strong component of a project, one would expect that the project staff would see the project's strengths and weaknesses and make improvements and changes where they appeared to be necessary, but these changes may not have an impact on the intern because they would come too late to affect his learning experience. It may also be that so few resources were devoted to evaluation that differences in evaluation were not substantially profound.

Three categories of factors were found to have several important correlations. Let us review these three categories. The first relates to the intern's involvement in the community component (Category 11). Three factors in this category were found to be significant. This is important because Teacher Corps projects place great stress on the community component and on the need for the intern to spend a sizeable amount of time working in the community. Because the intern is encouraged to make this an important part of his learning and working activity, it is rewarding to see that these activities have an impact on the intern's exit characteristics.

The category dealing with the programmatic continuity within the project (Category 13) is also important in terms of intern exit factors. In this category are factors that show the extent of cooperation and goal-sharing among those who are working with the project. We see here that it is, indeed, important that there be continuity within a project. This continuity is achieved when the goals are known and shared by project staff and when the academic instruction is followed up on in the school setting. We saw earlier that factors in this category had a strong correlation with other important program factors, such as the feeling of self-direction and acceptance; we see now that the extent of goal sharing, and follow up of academic instruction in the school setting have important bearings on the intern's success as a teacher. The third category that correlated highly is concerned with the stability and decision-making process of the project--that is, the continuity of staffing, the extent of cooperative decision-making, and the frequency of changes in the schools and school districts and in the school of education (Category 14).

What is important to note here is that, rather than skill-based factors, such as the use of competencies or project context characteristics, such as characteristics of the school or the school district, the factors that were most correlated with exit factors were those that related to more personalized matters--intra-project cooperation, community work, and project cohesiveness, plus a few factors from other categories. In other words, the characteristics of the project itself, rather than external conditions, seem to have the strongest impact on the exit characteristics. What is important is the cohesiveness, personalization, and integration of the project.

Question 2: What is the strength of relationship between background and program factors as related to individual exit characteristics?

In this section we discuss the results of multiple linear regressions done on 22 specially-selected intern exit characteristics. The aim of this work was to identify the number and name of program factors that could predict each of the exit characteristics at a high degree of accuracy. The results of the analysis are listed in Table 1.

Only three exit characteristics could be predicted from program factors at an acceptable level of accuracy. These three are related to the intern's perceptions of the causes of poverty and reading failure for pupils. None of the other exit characteristics could be predicted in this way.

The variable "intern's perception of poverty" relates to how an intern explains why some people are poor. He or she might attribute poverty primarily to individualistic reasons such as lack of effort or luck. On the other hand, he or she might attribute poverty to structured factors such as low wages paid in industry and reasons like this. The instrument was developed by Joseph Feagin at the University of Texas.

In a similar way, the intern is asked to rate whether he or she agrees with each of a list of possible explanations for why some children have difficulty reading. Some explanations point to the teacher as the source of difficulty, other explanations point to the pupil or to the pupil's environment outside school. This attitude measure is a teacher locus of control measure developed by Dr. James Vasquez for an evaluation of the National Right to Read Program.

Table 1. Summary of Results of Background and Program Regressions on Selected Intern Exit Characteristics

Exit Characteristics		No. of background or Program Factors That Loaded on These Exit Factors	Percent of the Variance Accounted for
1.1	Intern utilizes school and community resources	16	24%
1.2	Intern's perception of importance of bringing about change in school	10	9%
1.3	Intern initiates contact with parents: telephone call	14	17%
1.4	Intern initiates contact with parents: home visits	15	20%
2.1	Degree that instructional choices are given to pupils	15	18%
2.2	Introduction of culturally relevant curriculum materials (team leader)	11	14%
3.1	Introduction of relevant new curriculum	18	23%
4.1	Child initiating/intern responding classroom interaction	11	11%
4.2	Intern accepts and uses student ideas	12	12%
4.3	Teacher asks open-ended questions, attends to response and praises child	17	30%
4.5	Intern gives acknowledgement/child responding	13	18%
4.6	Children can explore room and select work group but without teacher-child interaction	14	23%
4.7	Overall ability to relate to and communicate with pupils (team leader)	11	17%
5.1	Effective pupil diagnosis, lesson planning and informal authority (as seen by team leader)	9	23%
5.2	Diversity of instructional modes used in classroom	14	26%
5.3	Corrective feedback	13	20%
5.4	Effective pupil diagnosis and lesson planning (from interview with intern)	12	7%
5.5	Extent that informal authority structure is used (intern report)	15	20%
7.1	Intern feels competent to deal with problems of schools serving low-income/minority group children	14	15%
7.2	Intern perceives reading failure as due to student and environment	20	100%
7.3	Interns perceive poverty as due to individual or fate	21	100%
7.4	Intern perceives reading failure as due to teacher and poverty as due to structural problems in the society	19	99%

Program factors that are related to these exit factors were then examined. There were only a few program factors that had easily definable substantive relationship with any of the three exit factors.

Exit factor 7.4 pertains to the way that interns perceive reading failure and poverty. Interns who see reading failure as a teacher problem rather than a pupil or environmental problem and who see poverty as a structural problem in society rather than the fault of the individual have been in Teacher Corps programs that have common features. Four of the six program features describe the minority group and low-income focus of the project and its context. These factors are:

- PR4.2, Percent of Chicano Team Leaders
- PR2.1, Percent of Minority Group Professors in School of Education
- PR10.7, Percent of Public School Pupils that Qualify for Title III Funds
- PR10.6, Percent of Black Staff in Public School

We note that this exit factor relates to only one program factor pertaining to the characteristics of the Teacher Corps staff and this is the percentage of Chicano team leaders on the project. Two of the program factors in the staff characteristics category were aggregate attitude scores on exactly the same measures used for the exit variable under discussion. We conclude that the attitude of interns is more related to the general minority group and low-income focus of the project than it is to specific attitudes of the instructional staff serving interns. The other two program factors that were highly related to this exit factor pertained to the programmatic integration of the project. These factors are the extent to which the goals are known and shared by project staff and the extent of university involvement in the community component.

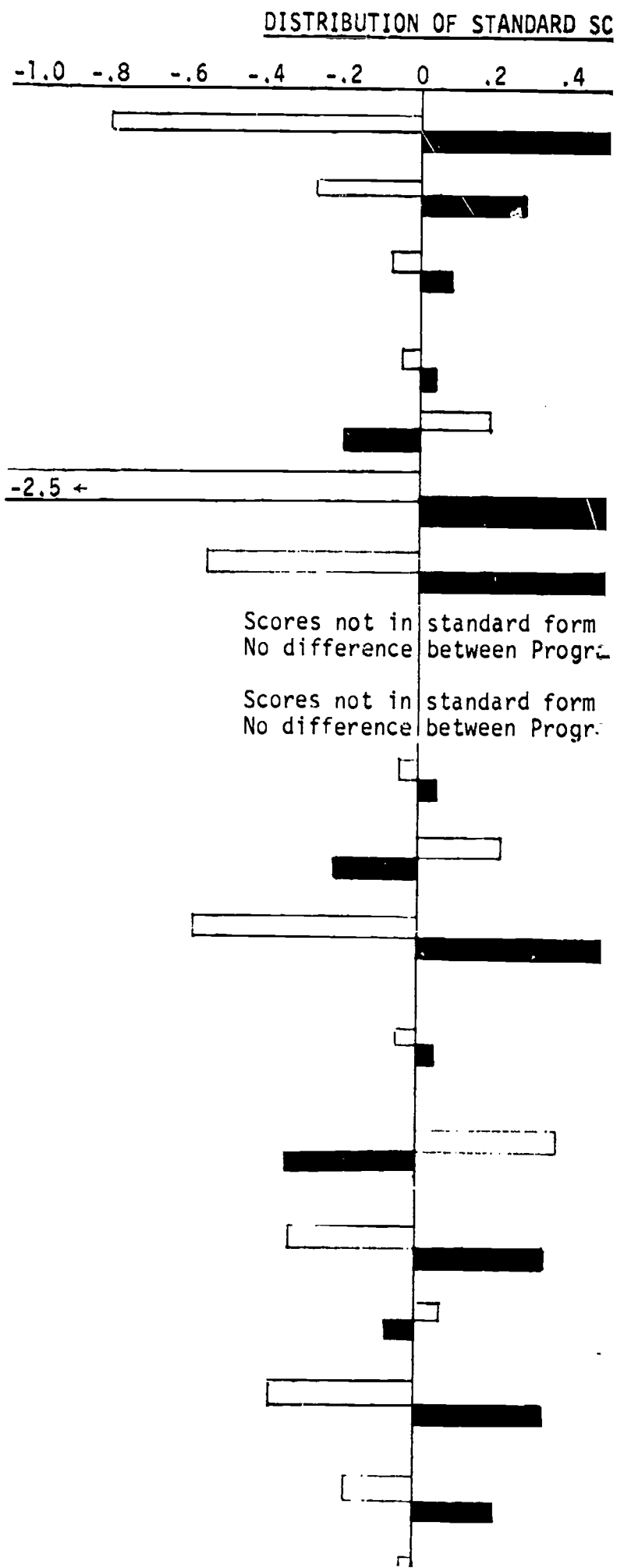
Question 3: Do graduate and undergraduate projects differ on any of the background or program factors most associated with differences in exit characteristics?

Some Teacher Corps projects are undergraduate projects; others are graduate projects. This question focuses on whether undergraduate

projects are significantly different from graduate projects on the program variables most closely associated with exit skills and attitudes of interns. Yet, because the results just presented show that the relationships between program and exit variables aren't especially strong, one should be hesitant to claim that the program variables to be discussed are criteria for designing programs that produce interns with desired teaching skills and attitudes. Instead, these program features suggest ways that undergraduate and graduate programs differ on variables that are somewhat related to exit skills and attitudes. The distribution of differences between undergraduate and graduate programs are illustrated in Table 2 and Table 3.

Table 2. Comparison of Graduate and Undergraduate Programs on Important Program Variables

VARIABLE REFERENCE NUMBER	VARIABLE NAME
PR1.5	Team Leader/Intern Ratio
PR2.1	Percent of Minority Group Professors in School of Education
PR2.4	Projects Perception of Extent of Goal Similarity and Cooperation with School of Education
PR4.2	Percent of Chicano Team Leaders
PR4.6	Proportion of T.C. Credits Taught by White Instructors
PR4.7	Years Team Leader Taught Low-income Children
PR4.9	Intern Learned Most From Project Director
PR4.11	Staff Perceives Reading Failure as Due to Teacher
PR4.13	Staff Explains Poverty as Structural Problem in Society
PR6.1	Extent of Course Revision for Teacher Corps Training
PR8.2	Intern Feels He Can Be Self Directed
PR9.1	Similarity of Views Between Team Leader and Cooperating Teacher Regarding Goals of Teacher Corps, Curriculum Development and Supervision
PR9.5	Amount of Clinical Supervision Given to Intern
PR9.6	Intern Operates as Independent Teacher with Supervisory Support from Cooperating Teacher and Use of Video Tape Feedback in Field Setting
PR10.6	Percent of Black Staff in Public School
PR10.7	Percent of Pupils in Title I Program at School
PR11.1	Extent of Public School Staff Support of the Intern's Involvement in the Community Component
PR11.3	Extent of University Involvement in Community Component
PR11.4	Hours Per Week and Diversity of Community



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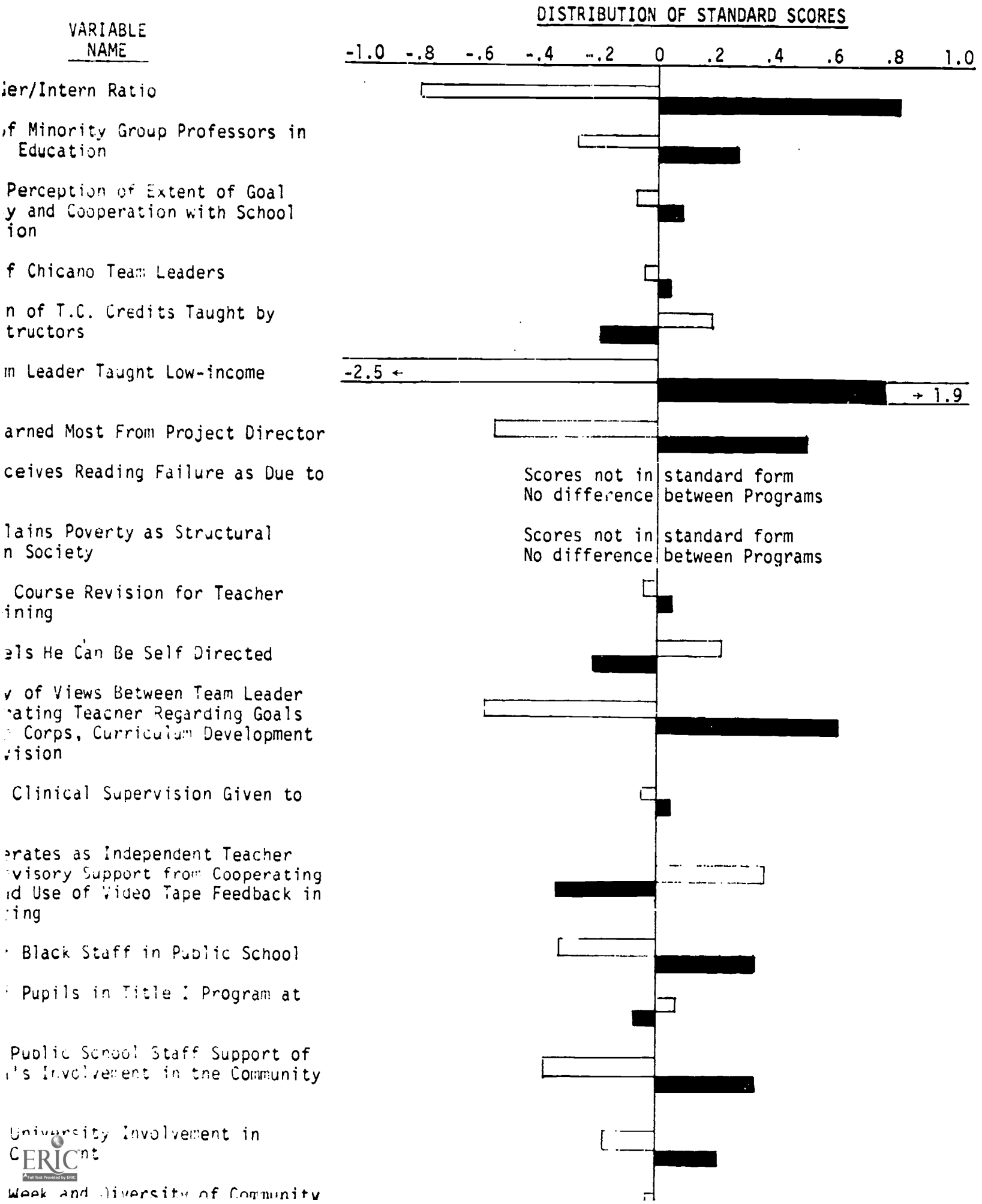

	Problem in Society
PR6.1	Extent of Course Revision for Teacher Corps Training
PR8.2	Intern Feels He Can Be Self Directed
PR9.1	Similarity of Views Between Team Leader and Cooperating Teacher Regarding Goals of Teacher Corps, Curriculum Development and Supervision
PR9.5	Amount of Clinical Supervision Given to Intern
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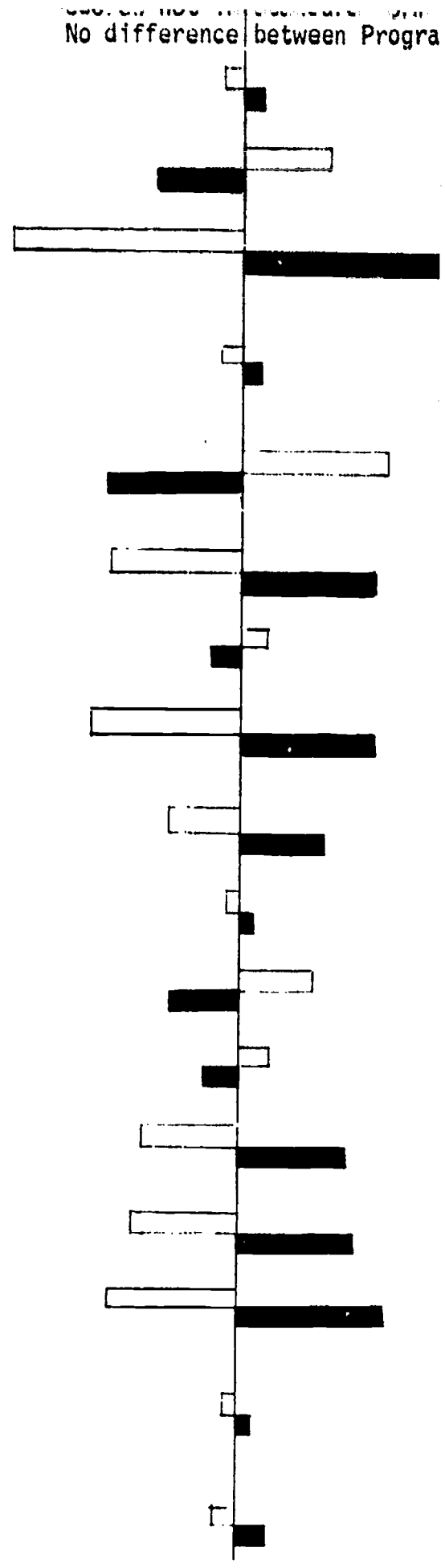
PR11.4	Hours Per Week and Diversity of Community Component
PR13.2	Extent to Which Goals are Known and Shared by Project Staff
PR13.3	Follow-up of Academic Instruction in School Setting
PR13.4	University Professor's Knowledge of Overall Instruction Given Intern's
PR14.1	Extent of Discontinuity of Project Staffing
PR14.2	Extent of Cooperative Decision-Making at Project as Seen by Principal
PR14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in USE Role
PR14.5	Extent of Cooperative Decision-Making as Seen by Project Staff



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= Undergraduate

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Cooperative Decision-Making
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= Graduate

= Undergraduate

Table 3. Comparison of Standard Deviations of Graduate vs. Undergraduate Programs with Regard to Important Program Variables

Occurrence Greater than 30% by Chance	Occurrence Less than 30% by Chance	Occurrence Less than 20% by Chance	Occurrence Less than 10% by Chance
2.1	9.6	4.9	1.5
2.4	10.6	9.1	4.7
4.2	11.1		
4.6	14.2		
4.11**			
4.13**			
6.1			
8.2			
9.5			
10.7			
11.3			
11.4			
13.2			
13.3			
13.4			
14.1			
14.4			
14.5			
Total Number in Category: 18	4	2	2

*Note: For our purposes here, we will not be discussing factors which fall into this category.

As is shown in the table, there are several instances in which differences are quite marked. It seems worthy to note some of the most significant of those differences.

Team Leaders

The scores indicate that there is a better team leader-to-intern ratio in undergraduate projects than in graduate projects (1.5). It is likely that this occurred because undergraduate students, being younger, need more supervision. If this is the case, however, the added supervision is not of a clinical supervision nature, as undergraduate and graduate programs do not differ on the amount of clinical supervision given to the interns (9.5).

In undergraduate programs, team leaders have had more years of teaching experience in low-income/minority schools (4.7). Team leaders at undergraduate projects are generally working on masters degrees, while graduate team leaders already have masters degrees. The latter would be the more "academic" of the two groups, while undergraduate team leaders would have come more recently from direct teaching experiences with low-income/minority children.

Despite the large difference exhibited between undergraduate and graduate programs in this particular instance, it may not be a critical one. Undergraduate and graduate team leaders did not differ in their perceptions concerning causes for reading failure (4.11), and of the causes of poverty (4.13). The differences between the two groups of team leaders may appear in other ways, however, for example, in teaching methods and techniques, in use of innovative approaches, team structure, or relationships with members of team and staff.

No important difference was indicated in the percentage of chicano team leaders in the graduate and undergraduate programs (4.2). This is a surprising finding. It would seem that undergraduate projects would have a higher percentage of chicano team leaders for several reasons: first, because of the likelihood that chicano team leaders would have had more teaching experience in low-income/minority schools; and secondly, because Chicano interns were concentrated in undergraduate programs.

Academic Instruction

Undergraduate programs tend to have more minority group professors than do graduate programs (2.1), and graduate programs tend to have more of the interns' credits taught by white staff (4.6). Considering that undergraduate interns take many more credits outside the school of education, one would think that undergraduates would have the greater percentage of credits taught by white instructors.

Undergraduate interns are not only taught by more minority professors than interns at graduate programs, but are also working in public schools which have a higher percentage of black staff (10.6). Undergraduate and graduate team leaders may not differ by ethnic group but the other staff to which interns are exposed do differ in ethnic group characteristics in undergraduate and graduate programs.

There is no substantial difference between the graduate and undergraduate programs in the extent of course revision (6.1). This is both an unexpected and interesting finding. It would seem that graduate projects had considerably more flexibility to revise Teacher Corps curriculum. Graduate programs have fewer required courses and presumably more mature students, so that it might be easier to institute more innovative courses.

Intern Independence

Where the differences between graduate and undergraduate programs do appear is in the independence of intern operation. Graduate interns tend to feel they can be self-directed in all aspects of the training program including interpretation of the intern's teaching role. The graduate interns tend to operate as independent teachers in the public school setting (9.6). The fact that the graduate intern feels self-directed suggests that the training program operates differently on this level, yet there is no difference in the amount of course revision, whether it be in content area, new teaching methods, grading procedures, implementation of modules or ethnic focus. However, it can be seen by the factor loading for factor 8.2 that the intern's sense of being self-directed was

more highly related with program flexibility than with extent of course revision (6.1).

It is not clear how much or what type of help the graduate intern is receiving in the public school setting. As indicated by PR9.5 it is likely the graduate intern receives very little help. Although assistance of some kind is suggested by PR9.6 it seems possible that the graduate intern considers himself independent because he is for the most part unaided; i.e. left on his own.

Given the greater intern independence in graduate programs, it is surprising that graduate and undergraduate projects don't differ on the amount of follow-up of academic instruction done in the school setting (13.3).

While undergraduate interns are not working independently, they do work in an environment where team leaders and cooperating teachers have a similarity of views regarding goals, curriculum development, and supervision (9.1), which is a positive environment.

It may be that graduate interns are more independent because team leaders lack a similarity of views and because of such dissonance, the intern is left alone. This difference cannot be attributed to any difference between the public schools out of which the interns of graduate and undergraduate programs operate, because the schools are essentially the same. The public schools have a similar percentage of low-income pupils, and although undergraduate projects are in districts where the schools have a greater percentage of black staff, this would not be an explanation for the difference.

It is more likely that the difference comes because the team leaders in undergraduate projects have had more low-income/minority group teaching experience (4.7) and want to share their knowledge with the interns, and they may feel the need to do more supervision because of this knowledge. As seen by the principal, undergraduate projects also involve school staff in cooperative decision-making (14.2). This involvement is likely to be an incentive for staff to be more involved in intern supervision and for the intern to act and perceive himself a part of a team effort.

Finally, it is highly probable that graduate interns are more independent because they are different as persons although this difference is not a function of differences in age or experience with children.

Cooperative Decision-Making

The extent of cooperative decision-making at the project as seen by the principal (14.2) differs from the perceptions held by the project staff (14.5). There may be an objective difference between the two views or it may simply be a perceptual difference. There was a tendency for principals at undergraduate projects to see more cooperative decision-making occurring than do principals at graduate projects (14.2).

Community Component

Both the university involvement and the public school staff's support of the community component are higher at undergraduate programs. There is no difference, however, in the number of hours per week and diversity of the community component (11.4) at graduate and undergraduate programs.

The extent of public school staff support is an interesting issue. Public school support is greater in undergraduate projects even though districts are similar in terms of percentage of low-income pupils. A finding of the study not previously reported in this paper is that public school support did vary inversely with the size of the district, which in turn relates closely with percentage of low-income pupils.

The greater public school staff support may be a function of:

(a) The difference in graduate and undergraduate team leaders (4.7);

(b) The difference in cooperating teacher involvement (14.2);

(c) The difference in public school staff (10.6);

(d) The difference in cooperating teacher and team leader views (9.1);

(e) Or some combination of these.

In general, although some of the differences are very small, 18 of the 23 program factors studied show that undergraduate projects do things as well, if not better, than graduate projects. One might have

expected graduate projects to be uniformly better. They may be seen to have an advantage in terms of flexibility of the project in that they have less required courses. They also have more mature students as interns. If undergraduate projects were only doing as well as graduate projects it would be surprising. Yet, in fact, they are found to be doing better.