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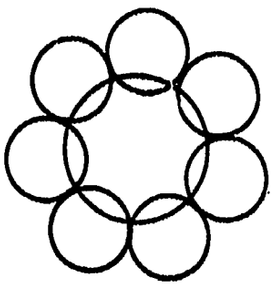
ABSTRACT

This study was undertaken by the participating school systems and the University of Maryland to systematically examine the 14 teacher education centers which have been in operation since the mid-1960's. The questions investigated were the following: (a) In what preparatory experiences are student teachers engaged? (b) Do experienced teachers provide and review experiences for student teachers based on competencies acquired in inservice instruction? (c) What is the variation observed in available inservice content and sources of information among experienced teachers? (d) Who holds conferences with student teachers? (e) Does the perceived process of supervisory encounters vary between providers and recipients? (f) What are the differences in levels of concerns for pupils, teacher role, and work situation among various education personnel? Some differences between centers and noncenters were found, raising the questions of what effects the differences have on the career of a professional. The document is divided into six chapters. The first describes the study, and the following discuss preservice experience provided, inservice patterns, supervisory patterns, and levels of professional concerns. The last chapter consists of a summary, suggestions, and reflections. A reader response letter is included, together with a sample letter to participants and a sample survey. (PB)



THE SEVEN SCHOOL SYSTEM AND UNIVERSITY OF MARYLAND

TEACHER EDUCATION CENTER SELF STUDY:

A PRELIMINARY REPORT OF, AND TO, THE PARTNERS

UNIVERSITY OF MARYLAND
COLLEGE PARK
COLLEGE OF EDUCATION
OFFICE OF LABORATORY EXPERIENCES

JANUARY, 1975

To:

Further Studies and Students of Teaching,

Who Actively Inquire into Practice.

J.P.R.

H.H.W. Jr.

Errata for
TEACHER EDUCATION CENTER SELF STUDY

Page	Line	
i	15	beginning
iv	13	conferencing process
6	26	mode.
7	5	mean
8	2	responding
11	15	all $p<.05$
11	27	3>5,7
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24	3	coefficients
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56	38	370-390.

Appendix B should be read page 60, 63, 61 and 62.

Do accept our regrets.

PREFACE

The pioneering effort of the College of Education and the several school systems in the state of Maryland in establishing teacher education centers won the critical acclaim and national recognition of the American Association of Colleges of Teacher Education in 1968. Since that time teacher education centers have assumed more varied and extensive responsibility in the total preparation of student teachers; have provided a variety of inservice training experiences for the regular teaching staff of the centers; promoted many opportunities for curriculum development and experimentation; and provided a setting for expanding and diversifying field research.

Although most of the University professional staff involved with the centers felt that the centers were exciting places for training, program development, and research, a systematic and comprehensive assessment effort was necessary to evaluate actual productivity and effectiveness. With the active cooperation of the school systems, the University conducted such an assessment. The results of this study are reported in this document.

From the standpoint of the University, centers have fulfilled and exceeded their promise. In the future, new strategies and arrangements for the preservice training of students will be developed involving comprehensive field-based programs beinning in the freshman year with increasing portions of the actual instruction in professional programs moving from the campus to the centers. I envision the possibility that the faculty of the centers will not only be able to add continuously to their professional skills and understandings, but ultimately will be able to complete significant portions, if not entire University graduate degree programs under center auspices. In the not too distant future, the University professor and center faculty member will constitute working teams to examine and develop new and more responsive curriculum designs. Together, broad areas of educational research will be more widely and effectively undertaken through the concerted efforts of such University/center teams.

In all of this, the teacher education centers will truly become centers for renewal for faculty and students of both the University and the public school system. The concepts inherent in the philosophy and operation of the centers have done and will do much to enhance the vitality and meaning of our profession and our role as professional educators.

George J. Funaro, Provost
Division of Human and Community Resources
University of Maryland, College Park

The teacher education center program, sponsored jointly by the University of Maryland and participating local education systems, represents a positive step forward in a cooperative effort to improve both the preservice and inservice education of teachers. Student teachers participating in a center program have the opportunity to obtain a broader experience than do those in a more traditional program. Through working with more than one cooperating teacher, they have more than one model to observe. Through seminars held with the center coordinator they are able to exchange ideas with other student teachers and to better relate theory and the classroom experience.

Though there is a continual need to evaluate and improve the teacher education center program, evidenced by this jointly executed self study, it has proven its value to both the student teacher program and to the participating schools. By providing broader and better preservice programs for

students, the school systems obtain beginning teachers better prepared to assume their role in the instructional process. Consultants made available through the center program provide schools with the on-going assistance relating to curricular needs. An additional benefit to both the public schools and the University has been the development of a closer working relationship between the two. This should lead to the strengthening of both.

Needless to say, the teacher education program calls for leaders in both institutions who recognize that the interests of both the University and the public school system are best served through such cooperative efforts and that such programs must meet identified needs of both participants. Such has been the case in the past and must continue in the future to assure the success the program deserves.

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CHAPTER I

DESCRIBING THE STUDY

This partner-initiated inquiry into teacher education center practices began at a time when both the participating school systems and the University of Maryland were pleased with this field activity. Positive attitude toward the center concept among the school systems of the regions is reflected in the continuing requests for more centers from areas presently without access to these services. The increased number of inservice activities cooperatively planned by school system personnel and university faculty together with the growing use of the centers for research and development activity give further evidence of positive response toward the centers.

Definition of a Teacher Education Center: Centers, as defined by the seven collaborating school systems and the University of Maryland, College Park (UMCP), are shared, school-college arrangements for furthering the continuous professional development of educational personnel. The center structure provides for increased involvement of school personnel in preservice preparation and greater university participation in inservice efforts. A full time staff member, who is a joint appointee of a school system and the College of Education, coordinates activities in the field and is charged with meshing the available material and personnel resources of the two institutions for maximal benefit of each center site. Centers vary in membership from two to four school constituents and some units may also have classroom and/or departmental satellites.

Origin of the Study: The impetus for this center study came from the partners themselves, who seek to improve their delivery of services in an era calling for greater attention to the utilization of resources. While the school partners continue to have some need for highly skilled new recruits, they increasingly face significantly expanded staff development needs as personnel stabilization becomes more and more apparent. The university, as a knowledge producer and disseminator, is also subject to the same demographic shifts and must be ever careful in its expenditure of resources in order that its basic societal mission may go forward. In this context, it should be clear at the outset that the center study is an internally motivated, sponsor-initiated accountability effort. It was undertaken out of a mutual desire to take a systematic look at the fourteen teacher education centers, which have been in existence since the mid 1960's. This self-scrutiny is predicated upon a shared desire to know in some detail what happens in the centers and to the people, who receive center services. This study represents an exercise of jointly, self-imposed, professional responsibility rather than the currently common, externally mandated requirement by public sources that educators confront in many other states.

Organizing Rationale for the First Phase of the Study: Prior to engaging in the initial phase of the center study, the sponsors explored a variety of possibilities for starting the process of evaluating the centers.* Several different emphsses and interests concerning process and product outcomes, evidenced by pupils and/or teachers, were high on some partners' information seeking agenda. Some were most interested in classroom interaction, some wished to concentrate on pupil gains, while others focused on levels of professionalism and other attitudes. However, before addressing such varied

*The counsel and recommendations rendered with the preliminary planning by Barak Rosenshine and James Raths of the University of Illinois, Urbana, are still valued and hereby gratefully acknowledged.

questions, we first agreed to collect some preliminary, general observations about the specifics of the center experience to be compared with the noncenter experience. This meant gathering a common base of information for all the partners at the start and postponing the differing priorities of different systems, and/or centers, for a subsequent phase.

It was decided that the first phase of the investigation would be to ascertain whether there are differences between centers and noncenters. As full and comprehensive a look at field activities as possible was called for by all the partners. Therefore, the initial stage of the study consists of a systematic inquiry into preparatory training experiences, utilization of resources, supervisory practices and professional concerns. The data concerning training practices, instructional experiences. supervisory behaviors and levels of professional concerns span both cognitive and affective dimensions. There was involvement and feedback from all the affected groups: pre-student teachers, student teachers, cooperating/supervising teachers, university supervisors, principals, center coordinators as well as a noncenter sample for the first five aforementioned groups. The questions for the initial phase of the investigation are concerned with reliably observable external behaviors as well as those less easily assessable internal behaviors associated with attitudes and judgments.

Study Questions: The following are the six questions asked and investigated during the first phase of the teacher education center self study:

1. In what preparatory experiences are student teachers engaged?
2. Do experienced teachers provide and review experiences for student teachers based on competencies acquired in inservice instruction?
3. What is the variation observed in available inservice content and sources of information among experienced teachers?
4. Who holds conferences with student teachers?
5. Does the perceived process of supervisory encounters vary between providers and recipients?
6. What are the differences in levels of concerns for pupils, teacher role and work situation among various educational personnel?

Each of the six questions as well as the data gathered to answer each question focused upon whether there are differences between center and noncenter program components.

Study Limitations and Benefits: This initial phase of the inquiry into center practice is conceived as formative evaluation. The purpose of the study is to provide systematically gathered feedback to sponsors concerning program progress and potential areas for adjustment. This preliminary report is intended for internal consumption to enable the range of affected personnel to review and to rethink center activities in light of current information and presently perceived institutional priorities. The study may have external utility by pointing a way in which other school-college partnerships, or inter-agency efforts, can undertake to inquire into their shared practices. Such program probing is seen as beneficial to specific sponsors and more widely to the educational community at large, where due to the increase in center programs similar questions of evaluation may arise.

This study does not claim to answer questions of ultimate worth concerning the centers. Worth is a matter of judgment not data. The results of this phase of the study are intended to provide a set

of observations, upon which to base answers to the questions posed as well as providing a data pool for future research. This is an attempt to see whether differences actually obtain, which logically precedes any formal procedures seeking to identify the sources of observed variation. This detailed description of the center treatment informs the partners about the nature of the practices found in the centers and apprises all concerned of some of the alternative procedures that are being utilized in these field settings. Such an observation pool also provides a data base upon which to make curricular and instructional decisions and to conduct further studies.

Design of the Study: During Spring 1973 early preservice students, student teachers, cooperating/supervising teachers, center coordinators, principals and university supervisors were surveyed about their perceptions of available pre and inservice instructional experiences including supervisory practices and more personal, internal professional concerns. The study utilized "self-report" instruments to identify differences in experiences, resources, supervisory behaviors found between centers and noncenters, levels of schooling and, where possible, among school systems and individual center sites. Although self-report data are ordinarily suspect, it is held here that these program inventory questions possess relatively low emotionality. Therefore, the responses received are likely to be reliable and accurate. In addition, matched responses from different audiences also serve to enhance response credibility.

All student teachers assigned to elementary and secondary level centers as well as two groups of randomly selected noncenter student teachers were asked to complete one of three instruments: (a) the experiences profile, (b) the supervisory profile and (c) the teachers' concerns checklist. The experiences instrument focused on both preservice and inservice practices which include the utilization of personnel and material resources. (See Appendix B) Items for the experiences profile were contributed by members of each of the school systems with teacher education centers as well as by students and faculty at the University of Maryland, College Park. The total collection of contributed items was collapsed and organized into a locally developed instrument by Dr. Henry H. Walbesser, Jr. The supervisory profile is derived from the early 1960's work of Dr. Daniel Solomon,* now on the staff of the Montgomery County (Maryland) Public Schools. The teachers' concerns checklist represents some of the current efforts of Dr. Frances Fuller and her colleagues at the Research and Development Center in Teacher Education at the University of Texas, Austin.

The study solicited information from eleven separate audiences: early preservice students in and out of centers, student teachers in and out of centers, cooperating/supervising teachers in and out of centers, university supervisors working in and out of centers, principals of schools in and out of centers, and center coordinators. Figure One summarizes the matching of populations with the three self study measures. All students, cooperating teachers and supervisors also responded to a basic observation, teaching and related preparatory options measure. Random assignment of instrument to subjects was used. Each respondent received one instrument with a maximum of one hour administration time. The survey occurred during the first week of May 1973 and resulted in 1226 returns from the 1312 participants. This constitutes a 93% return rate. However, data from 21 center and 26 noncenter

*Daniel Solomon, William Bezdek and Larry Rosenberg "Dimensions of Teacher Behavior," The Journal of Experimental Education 33 (No. 1): 23-40, Fall 1964, "Teacher Behavior and Student Learning" Journal of Education Psychology, 55 (No. 1): 23-1964, and Teaching Styles and Learning, Chicago: Center for the Study of Liberal Education for Adults, 1963, pp 28-44.

SELF STUDY MEASURES

Audience	Experiences Profile	Fuller Professional Concerns Profile	Solomon, Bezdek, Rosenberg Supervisory Profile
Student Teachers in Center	One-third of available audience	One-third of available audience	One-third of available audience
Student Teachers not in Centers	Sample of comparable size to the center student teachers	Sample of comparable size to the center student teachers	Sample of comparable size to the center student teachers
Cooperating Teachers in Centers	Cooperating teachers of sampled center student teachers	Cooperating teachers of sampled center student teachers	Cooperating teachers of sampled center student teachers
Cooperating Teachers Not in Centers	Cooperating teachers sampled noncenter student teachers	Cooperating teachers of sampled noncenter student teachers	Cooperating teachers of sampled noncenter student teachers
University Supervisors in Secondary Centers	University supervisors of sampled center student teachers	University supervisors of sampled center student teachers	University supervisors of sampled center student teachers
University Supervisors Not in Centers	University supervisors of sampled noncenter student teachers	University supervisors of sampled noncenter student teachers	University supervisors of sampled noncenter student teachers
Center Coordinators	Inservice Information All coordinators	All coordinators	All coordinators
Principals in Centers	Inservice Information All in center schools	All in center schools	
Principals Not in Centers	Inservice Information	All with student teachers in sample	
Early Preservice Students in Centers	Half of available audience	Half of available audience	
Early Preservice Students Not in Centers	Half of available audience	Half of available audience	

FIGURE ONE

Instrument Administration Scheme

cooperating teachers were lost in the process of readying the responses for electronic data processing, which lowers the overall return rate to 89% and accounts for certain missing cells in the experiences tables.

Organization of the Report: Throughout the report data summaries and discussion of findings are presented with attention to observed differences. Where commonalities obtain these are indicated subsequent to the observed differences. An exceedingly large number of potential comparisons are involved in this study. It is possible to marshall the data for the eleven groups sorted by the four analytical categories: (1) center-noncenter, (2) elementary and secondary level, both of which were relatively simple as well as (3) the fourteen centers and (4) seven school systems, which become most complex and frequently only partially possible due to smallness of cell size. In these days of information overload and in the interest of both reader and researcher sanity, for the most part only those findings are presented which exhibit statistically significant differences.

The report begins by reflecting upon the observation, teaching and related preparatory options, and preservice instructional experiences clusters.* These findings and narrative provide answers to the first question. The succeeding chapters focus on inservice instructional clusters, general supervisory practices, conferencing behavior and levels of professional concern. These findings and narrative provide answers to questions two through six. In this report findings and interpretation are interwoven by topical focus rather than being presented separately.

Those readers who wish direct access to the unanalyzed data will find it possible to pursue items of particular interest. Tabulated frequencies of responses and currently completed data analyses are available, upon request, by querying OLE*DATAFILE at the UMCP Computer Center.

This study was undertaken with the goal of deriving a systematic and detailed description of center practice to serve as a basis for mutually designed and desired program adjustment. Beyond this local purpose, the investigation meets the call from the educational community for the establishment of data banks accessible to other workers seeking to compare results, or to engage in secondary analyses. Therefore, an additional accomplishment of the study is the availability of this information base for others interested in empirical findings in teacher education.

*The authors wish to acknowledge the support of the University of Maryland Computer Science Center for assistance in the data processing.

CHAPTER II

PRESERVICE EXPERIENCES PROVIDED

Findings Associated with Question One - In What Preparatory Experiences are Student Teachers Engaged?

This chapter partitions the preservice preparatory components into two dimensions called (1) training practices, further subdivided into observation, teaching and related preparatory options and (2) instructional experiences consisting of instructional strategies, diagnosis and testing, materials preparation and classroom control. Additionally, the instructional experiences dimension has both content and process aspects, which will be discussed separately. The two preservice components are analyzed by four comparisons based on settings: (1) center-noncenter environments and (2) elementary-secondary levels and as much as possible by (3) school system locations and (4) individual center sites.

A summary table is presented at the conclusion of the training practices dimension on page 17, which details the statistically significant distinguishing individual variables by the four different comparisons This might also be referred to for a preliminary overview. The instructional experiences dimension is summarized in tabular format on page 21, and page 22 with respect to distinctive content and process characteristics, respectively, that are apparent by setting. Finally, there is a further comparison of the claimed instructional experiences by four pairs: center student teachers and cooperating teachers, center and noncenter student teachers, all student teachers and all early students and center and noncenter early students, presented on page 23.

The first section in this chapter starts by comparing the training practices found in centers and noncenters and by level of schooling. It continues to contrast the findings by school systems and to sort as many of the 14 individual center units as was technically possible on this preparatory dimension and finally to compare responses of different audience groups. The second section, starting on page 18 addresses specific instructional experiences content and process. It also follows the same pattern of featuring differences followed by commonalities. Again, the data are sorted by the same four settings: center and noncenter, level, school system, and individual center site.

SECTION ONE: DIFFERENCES IN OBSERVATION, TEACHING AND RELATED PREPARATORY OPTIONS

In the observational opportunities set there are seven possible comparisons concerned with this mode.* As shown in Table One, four of these: number of classes, different teachers, student teachers and schools observed are statistically significantly higher in the centers than in noncenters as reported by respective groups of student teachers.

TABLE ONE

Significant Differences in Observation, Teaching and Related Options by Items and Audience

Question: What differences are there between the observation, teaching and related preparation options of center and noncenter student teachers?

Item	Means Reported by Center Student Teachers N=313	Means Reported by Noncenter Student Teachers N=94
OBSERVATION		
Classes Observed	5.437	4.716*
Teachers Observed	4.910	4.228*
Different Student Teachers Observed	1.560	.837**

(Table One Continued on page 7)

*The entire set of observation teaching and related preparation items are presented in Table Nine on page 17.

Table One, continued

Item	Means Reported by Center Student Teachers N=313	Means Reported by Noncenter Student Teachers N=94
OBSERVATION		
Schools Observed	3.045	1.765**
TEACHING		
Schools Taught	1.761	1.310**
Teachers Under Whom Taught	1.953	1.677**
RELATED PREPARATION		
Assigned Mailbox	1.860	1.947**
Voice in Selection	1.809	1.968**
Seminars Attended	5.084	3.105**
Choice of Situation	1.290	1.890**

* $p < .05$
** $p < .01$

There are six items focused on teaching opportunities, of these two: number of schools in which teaching occurred and number of teachers under whom teaching occurred, are statistically significant.

However, among a group of ancillary preparation options, consisting of five items, four of these differentiate the center student teachers from the noncenter group. These items were scored dichotomously, therefore the lower means signifies higher positive responses. Apparently, the center population receives a greater benefit in number of seminars attended, voice in selection of cooperating teacher, choice of student teaching situation and availability of own mailbox as compared with the noncenter students. This means that of twenty-one observation, teaching and related items ten are significantly different ($p < .05$) indicating the availability of higher center options than obtain in noncenters. The majority of these differences are also confirmed by the reports of cooperating teachers and supervisors, as will be reported below.

The observation, participation and related preparatory options aspect of the professional program appears significantly different in the center environment. The two settings are distinguishable on a majority of the items. All differences observed indicate that the center environment provides more training opportunities, that is, it presents a fuller, or richer, array of alternatives than obtains in the noncenter setting.

Similarities in Findings Concerning Observation, Teaching and Ancillary Preparation Options:

Fewer than half the observation, teaching and related preparation options appear to be similar regardless of source or location. Whether students, teachers or supervisors are the sources, or whether the reports originate from center or noncenter locations, only a minority of the various professional preparatory options are alike. In the observation set: number of subjects, ability levels, and grade levels observed are equally accessible to all candidates.

However, the majority of the teaching opportunities are similarly available to both center and noncenter trainees. The number of subjects, hours taught, weekly solo teaching and ability levels taught are part of the field component regardless of setting. In addition, age, sex, introduced as staff and decision to be a teacher are similarly distributed across the center and noncenter audiences, as shown in Table Two. For readers' information we report mean or percent for items. The statistical

tests used were analysis of variance or chi square where appropriate.

TABLE TWO

Similarities in Observation, Teaching and Related Options by Items and Audience

Question: What are the common experiences in observation, teaching and related preparation options of both center and noncenter student teachers:

Item	Means or Percent Reported by Center Student Teachers N=313	Means or Percent Reported by Noncenter Student Teachers N=94
Subjects Observed[2]	4.752	4.920
Grade Levels Observed[2]	3.837	3.500
Ability Levels Observed[1]		
High	72.9%	62.8%
Middle	92.8%	91.5%
Low	69.5%	68.1%
Ability Levels Taught[1]		
High	64.8%	61.7%
Middle	89.7%	90.4%
Low	66.4%	60.6%
Subjects Taught[2]	4.114	3.904
Average Hours Taught/Day[2]	4.768	4.989
Solo Teaching/Week[2]	10.832	11.319
Timing of Teaching Decision[2]	3.035	3.117
Introduced as Staff[1]		
Yes	28.4%	39.4%
No	71.6%	60.6%
Age[1]		
23 or less	75.4%	68.1%
23 to 29	19.0%	21.3%
29 or more	5.6%	10.6%
Sex[1]		
Female	76.6%	77.7%
Male	23.4%	22.3%

1 = Chi square analysis used where assumptions of analysis of variance could not be met. Percent responging "yes" reported.
2 = Analysis of variance with mean reported.

When the observation, teaching and related preparation dimension is looked at from the vantage point of level of schooling a somewhat different pattern is observed. As can be seen from Table Three there are five observational items that significantly differentiate elementary exposure from the secondary level. All of these: subjects, teachers, student teachers, schools and grade levels observed favor the elementary program. Similarly, four teaching variables: number of schools taught, teachers under whom taught, subjects and average hours taught are significantly greater on the elementary level. However, the ancillary options do not exhibit as strong a level differentiation as do the observation and teaching items. Here, only two of five possible activities distinguish the two levels: introduction as staff and seminars attended. Again, the elementary exposure significantly exceeds the secondary options.

TABLE THREE

Differences in Observations, Teaching and Related Options by Items and Levels

Question: What are the unique experiences in observation, teaching and related preparatory options of elementary and secondary student teachers?

Item	Means or Percent Reported by Elementary Student Teachers	Means or Percent Reported by Secondary Student Teachers
Subjects Observed[1]		
One	5.5%	26.6%**
2 to 4	13.3%	58.2%**
5 or more	81.2%	15.2%**
Teachers Observed[2]	5.21	4.20**
Student Teachers Observed[1]		
None	37.1%	48.7%*
3 or more	28.2%	10.%*
Grade Levels Observed[2]	4.00	3.49**
Schools Observed[1]		
1 to 3	69.2%	86.6%**
4 or more	30.8%	13.4%**
Schools Taught[1]		
2 to 3	72.2%	21.4%**
4 or more	27.8%	78.6%**
Subjects Taught[1]		
One	3.7%	23.6%*
2 to 4	19.1%	68.8%**
5 or more	77.4%	7.6%*
Taught Under One Teacher[1]	36.3%	54.4%**
Timing Teaching Decision[1]		
Elementary school	26.1%	8.3%*
Ability Levels Taught[1]		
Low	69.3%	59.6%*
Average Hours Taught/Day[2]	5.16	4.48**
Introduced as Staff[1]	40.5%	21.9%**
Seminars Attended[1]		
1 to 2	17.9%	52.8%**
3 or more	64.1%	31.7%**
Sex[1]		
Female	87.2%[3]	67.1%
Male	12.8%	32.9%

1 = Chi square analysis

2 = Analysis of variance

3 = Difference between female and male elementary is significant at .01

*p < .05
**p < .01

TABLE FOUR

Similarities in Observation, Teaching and Related Options by Items and Audience

Question: What are the common experiences in observation, teaching and related preparation of both elementary and secondary student teachers?

Item	Elementary	Secondary
Situation Choice[1]	57.8%	66.4%
Classes Observed[2]	4.95	5.44
Student Teachers Observed[1]		
1 to 2	34.7%	40.7%
Ability Levels Observed[1]		
High	29.8%	27.8%
Middle	5.0%	10.1%
Low	28.4%	36.1%
Teachers Taught Under[1]		
2 to 3	55.3%	41.1%
4 or more	8.4%	4.4%
Timing Teaching Decision[1]		
Junior high school	8.3%	14.7%
Senior high school	27.1%	28.8%
College	34.9%	39.1%
Other	3.7%	9.5%
Solo Teaching/Week[2]	10.90	10.79
Voice on Selection[1]	17.4%	14.6%
Age		
Less than 23	76.1%	69.0%
23 to 29	16.5%	24.4%
29 and over	7.3%	7.6%
Sex		
Female	87.2%	67.1%
Male	12.8%	32.9%

1 = Chi square analysis for percents used.

2 = Analysis of variance for means used.

As can be observed from the table above, commonality between the elementary and secondary practices obtains for only three observation and two teaching items. At the same time, three - of a total of five - related preparation options are equally accessible to student teachers regardless of level. However, less than half of the total training practices exposure is similarly available to candidates on the two levels.

The various reports of the preparatory training experience come from different geographic locations. Seven school systems contribute the setting from which the reports originate. From this vantage point it is possible to ask two questions: (1) Which training items appear to differentiate which two, or more, of the seven school systems? and (2) Are there readily observable school system patterns? Table Five summarizes the items that significantly differentiate among the seven systems or where this was not possible, the five systems with the largest number of participants.

Only two observational variables pertaining to subjects and grade levels appear in the seven system analysis while schools observed is found to be significant in the five system comparison. However, three

of the teaching items: schools, subject and teachers under whom taught appear to be significant in the complete set. In the related options area situation choice is significantly higher as reported by two systems contrasted with each other and with a third system. Three variables: mailbox assigned, voice in selection and attended seminars significantly differentiate four members of the five school system set. However, the majority of the observation, teaching and related options are indistinguishable by school system. Furthermore, it can be seen that no readily distinguishing pattern is available for either the five, or seven, school systems set. The most that can be said is that there are some recurring contrasts among the systems that go in the same direction. Systems 5, 6 and 7 do appear to differ among themselves more than once but no more than three times. It is not possible to derive the existence of a school system related pattern from these isolated contrasts. The absence of school system patterns fails to lend support to claims of unique system emphases in the observation, teaching and related options aspect of preservice training practices.

TABLE FIVE

Significant Differences in Observation, Teaching and Other Preparatory Options by Variables and School Systems

Question: What differences obtain among the seven school systems or among the five largest systems?

	Seven System Means or Percent							Significant Post Hoc Comparisons
	System 1	System 2	System 3	System 4	System 5	System 6	System 7	
Variable	N=18	N=9	N=17	N=7	N=87	N=144	N=132	All p =<.05 Bonferroni
Situation Choice[1]								
Yes	68.8%	85.7%	75.0%	100.0%	85.9%	57.7%	43.4%	System 5>6,7 System 6>7
Subjects Observed[2]	3.28	7.22	5.94	8.57	4.78	4.48	4.80	System 4>1,5,6,7 System 2>1
Grade Levels Observed[1]								
3	11.1%	11.1%	47.1%	85.7%	72.1%	32.1%	41.7%	System 5>1,6,7 System 7>6
Schools Taught[1]								
1 to 3	11.1%	88.9%	88.2%	100.0%	67.1%	46.7%	41.0%	System 3>1,6,7 System 5>1,7
Subjects Taught[2]	2.83	5.67	5.24	6.57	4.12	3.92	3.97	System 7>1
Teachers Taught Under[1]								
4 or more	77.8%	22.2%	52.9%	100.0%	31.0%	58.3%	52.7%	System 1>3,5,6,7 System 2<5,6,7 System 3>5,6,7 System 4>6,7,1,2 System 5>6
	Five System Percent							
Schools Observed								
3	0.0%		5.9%		58.8%	18.8%	9.9%	System 5>1,3,6,7
Mailbox Assigned	0.0%		5.9%		16.1%	1.4%	25.2%	System 5>6, System 7>6
Voice in Selection								
Yes	0.0%		11.8%		27.9%	9.7%	14.5%	System 5>6
Seminars Attended								
None	43.8%		7.7%		3.8%	9.9%	25.2%	System 7>5
3 or more	12.5%		69.2%		49.4%	62.0%	38.7%	System 6>1,7

1 = Chi square analysis for percents used.

2 = Analysis of variance for means used.

As can be seen from Table Five no single school system significantly outperforms all remaining others on any of the observation, teaching or related preparatory options. Nor is there a consistently low performer in the set. In fact, there is scarcely a general pattern to be observed. Focusing on the significant post hoc comparisons reveals a single system (#5) which is distinguishable on seven variables: choice, schools and grade levels observed, schools taught, teachers taught under, mailbox assigned and voice in selection with respect to at least one, and no more than four other systems. Only on a single variable: numbers of schools observed, does system #5 exceed all four other systems available for that analysis. System #7 is recognizably different on three vaiables: grade levels and subjects observed, and mailbox assigned in comparison with one of three other school systems. System #6 differs on three variables: choice, teachers taught under and seminars attended for at least one and no more than two other systems. System #4 significantly exceeds systems 1,5,6 and 7 both for subjects taught and teachers taught under, and the latter, for system #2 as well. System #3 is greater on schools taught and teachers taught under, in comparison with at least three, but no more than four, other systems, which twice include systems 6 and 7. System #1 exceeds systems 3,5,6 and 7 for a single variable, teachers taught under. Apparently, system #2 does not exceed any other system with respect to any of these training practices. No single system is distinguishable for a majority of the variables from the majority of the systems.

There appears to be some distinguishable preparatory emphasis, or uniqueness, among the seven systems, made apparent with respect to systems 4 and 5. That there is no clear, overriding potential system effect can be observed also by looking verically down the school system column in Table Nine (page 17) and then horizontally by variables in an attempt to locate particularly recognizable system features. It is apparent that no variable distinguishes significantly solely on the school system analyses.

When the training practices are reviewed by analysing responses of the 14 center, or 12 center, groups no clearer patterns are evident. (See Table Six, page 13). However, the individual center contrasts are clustered in the observation portion of the preservice training practices. All but one of the seven observational options appear to distinguish at least two, or more, of the centers. Only three of the teaching options: schools, hours and teachers differentiated among eleven of the fourteen sites. Among the ancillary options there was only a single contrast for choice of situation between two center locations.

The absence of unique center emphases is made evident in Table Six. Again, as with the school system analysis, there is no individual center setting that consistently tops, or comes last on, the list of either fourteen, or twelve centers, or that distinguishes on a majority of the variables from the majority of the centers. It is in the portion of the table, where the significant post hoc comparisons are presented that some individual center differences are most readily apparent. It should be noted that of the nine variables, which actually distinguish pairs of centers, only three: teachers, and subjects observed, and schools taught include individual contrasts in which at least one site exceeds more than half of the remaining set. These sites are centers 1,8,10 and 11. While center 10 exceeds at least one other, but no more than nine centers, for up to six variables, it is important to observe that it is exceeded by two other centers on two of the very same variables: student teachers observed and teachers taught under. Additionally, center 10 is exceeded, on schools taught, by five other center sites. It is worth noting, however, that center 8 is also significantly distinguishable on three

TABLE SIX

Significant Differences in Observation, Teaching and Other Preparatory Options by Variables and Individual Center Sites

Question: What differences obtain among the fourteen centers or among the twelve largest cen

Variable:	Fourteen Center Means or Percent										
Center:	(1) N=16	(2) N=9	(3) N=17	(4) N=7	(5) N=35	(6) N=24	(7) N=13	(8) N=28	(9) N=35	(10) N=23	(1 N=
Teachers Observed [m]	4.31	3.67	5.06	8.14	4.18	5.61	4.15	6.18	4.66	8.24	5
Student Teachers Observed 3 or more	6.3%	11.1%	50.0%	71.4%	17.6%	45.8%	0.0%	33.3%	6.1%	69.6%	10
Grade Levels Observed 3 or more	12.5%	11.1%	47.1%	85.7%	67.6%	77.3%	23.1%	57.1%	39.4%	95.7%	20
Schools Observed 3	0.0%	0.0%	5.9%	0.0%	15.2%	13.9%	7.7%	85.7%	12.5%	91.3%	14
Schools Taught 3	87.5%	11.1%	11.8%	0.0%	63.6%	21.7%	15.4%	14.3%	71.9%	8.7%	8
Introduced as Staff	2.2%	2.2%	3.4%	0.0%	11.2%	9.0%	10.1%	15.7%	5.6%	11.2%	1
Hours Taught/ Day [m]	6.27	9.88	8.53	18.80	8.76	10.09	11.58	6.92	9.00	14.45	1
Choice	4.8%	2.6%	5.2%	2.6%	13.9%	5.7%	4.3%	0.1%	10.4%	8.7%	

	Twelve Center Means or Percent								
Classes Observed [m]	1.75	1.76	1.79	1.74	1.54	1.69	1.79	1.95	
Subjects Observed [m]	1.93	1.76	1.69	2.46	2.69	2.79	1.89	2.83	
Teachers Taught Under 4 or more	75.0%	52.9%	48.6%	37.5%	15.4%	25.0%	54.3%	13.0%	7

m = Means are given for the variable.

ation, Teaching and Other
d Individual Center Sites

or among the twelve largest centers?

or Percent									Signi
(7) 13	(8) N=28	(9) N=35	(10) N=23	(11) N=30	(12) N=27	(13) N=30	(14) N=27		
.15	6.18	4.66	8.24	5.18	5.27	3.21	3.07	Center 4>13,14	Center
.0%	33.3%	6.1%	69.6%	10.3%	11.5%	7.1%	3.7%	Center 14>10	
.1%	57.1%	39.4%	95.7%	20.7%	65.4%	17.2%	22.2%	Center 5>1,11,13	Center
.7%	85.7%	12.5%	91.3%	14.8%	48.1%	10.7%	7.4%	Center 8>1,3,5,6,7,9,11,13,14	Center
.4%	14.3%	71.9%	8.7%	82.1%	18.5%	70.4%	22.2%	Center 1>3,6,7,8,10,12,14 Center 5>8,10	Cent
.1%	15.7%	5.6%	11.2%	10.1%	5.6%	7.9%	5.6%	no significant post hoc	
.58	6.92	9.00	14.45	11.21	11.85	13.07	10.23	no significant post hoc	
.3%	0.1%	10.4%	8.7%	9.69%	5.7%	10.0%	7.4%	Center 5>12	
Means or Percent									
.54	1.69	1.79	1.95	1.72	1.77	1.64	1.31	Center 10>14	
.69	2.79	1.89	2.83	2.00	2.63	1.70	2.85	Center 3>9 Center 6>5,13 Center 8>9	Center
.4%	25.0%	54.3%	13.0%	76.7%	66.7%	46.7%	40.7%	Center 10>1	Center

Significant Post Hoc Comparisons All $p < .05$ (Bonferroni)	
Center 8>13,14	Center 10>1,2,5,7,9,13,14
	Center 10>9,11,12,13
Center 6>1,11,12,13,14	Center 10>1,11,12,13,14
14 Center 12>3	Center 10>1,3,5,6,7,9,11,13,14

Center 5>8,10 Center 9>3,8,10,12,14 Center 11>3,6,7,8,10,12,14 Center 13>3,8,10,12

nificant post hoc

nificant post hoc

Center 8>9 Center 10>1,5,9,11,13 Center 14>1,5,9,11,13 Center 5,13<3,7,8,12

Center 11>7,8,10

of the same variables as center 10 and that both of these centers represent elementary level settings of school system #5 that appears most readily distinguishable on the previously detailed school system contrasts.

Despite these suggestive observations, there does not appear to be a clearly discernible, distinctive training practice emphasis evident in any one center that is not paralleled to some degree, and in kind, by other center situations. What this means in practical terms is that it is not at present possible to say, for example that if one wishes to maximize number of classes observed one would choose center 10. One might just as well choose any one of centers 1-13 from which 10 does not differ significantly. The present findings do suggest only that if one wishes to maximize this training exposure one would not choose center 14 over center 10. Furthermore, the data presently assembled do not allow choice of centers 1-9 or 13 over center 14 from which they are also statistically indistinguishable. All we can conclude for practical purposes is that there is more similarity among the centers than uniquely available training exposure in observation, teaching and related preparatory options.

Differences in Perceptions of Training Practices by Groups:

It is also possible to contrast the reports of students concerning observation, teaching and related preparation, with those of their cooperating teachers and university supervisors in both the center and noncenter environments. Table Seven presents the results of the two-way comparisons while Table Eight includes the items on which three-way contrasts were obtained.

TABLE SEVEN

Significant Differences in Observation, Teaching and Other Preparatory Options by Variables, Groups and Environments

Question: What are differences in views of student and cooperating teachers in centers and noncenters?

Variable	Center Percent Reporting "Yes"	
	Student Teachers	Cooperating Teachers
Situation Choice	76.9%	85.5%*
Introduced as Staff	28.4%	36.7%*
Timing of Teaching Decision Post college	5.4%	13.0%*
Seminars Attended - None	11.5%	5.3%*
Ability Levels Observed Low	69.5%	61.2%*
Ability Levels Taught Low	66.4%	54.1%*
	Noncenter Percent Reporting "Yes"	
	Student Teachers	Cooperating Teachers
Ability Levels Observed High	62.8%	79.9%*

* p<.05

All chi square analyses

In the centers there are ten items that statistically significantly differentiate the reports of center student teachers from those of their cooperating teachers, while three items differentiate students and supervisors, as made apparent in Tables Seven and Eight.

TABLE EIGHT

Significant Differences in Observation, Teaching and Other Preparatory Options by Variables, Groups and Environments

Question: What different views exist among student, cooperating teachers and supervisors in centers and noncenters?

	Center Means or Percent				Post Hoc Comparison		
	Student Teachers	Cooperating Teachers	University Supervisor	Overall Significance	ST-CT	ST-US	CT-US
Subjects Observed[2]	4.75	4.53	2.24	***	=	>	>
Teachers Observed[1]							
one	7.5%	19.0%	14.3%	***	<	=	=
2 to 3	33.3%	31.0%	42.9%		=	<	=
4 or more	59.2%	50.0%	42.9%		>	=	=
Grade Levels Observed[1]							
3 or less	53.7%	68.4%	41.2%	***	<	=	>
4 or more	46.3%	31.6%	58.8%		>	=	<
Subjects Taught[1]							
3 or less	43.2%	53.1%	90.0%	***	=	=	<
4 to 6	41.9%	40.7%	10.0%		=	=	=
7 to 9	14.8%	6.1%	0.0%		>	>	=
Teachers Taught Under[2]	1.95	2.33	2.05	**	<	=	=
	Noncenter Means						
Subjects Observed[2]	2.37	2.40	1.42	***	=	>	>
Teachers Observed[2]	2.37	2.16	1.66	***	=	>	>
Subjects Taught[2]	3.90	4.37	2.37	***	=	>	>
Solo Teaching[2]	11.32	9.37	14.75	*	=	=	<
Voice[2]							
Yes	1.97	1.95	1.76	***	=	<	<

* p<.05
** p<.01
*** p<.001

1 = chi square analysis
2 = analysis of variance

>greater than or <less than indicate value direction following the order of the column heading.
=does not differ

In the noncenter group there are six contrasts that statistically significantly distinguish the audiences. However, in the noncenter set there is only one item, concerned with ability levels observed, that differentiates student and cooperating teachers. Not only do the center student teachers differ from their mentors but they vary in magnitude and direction and by items. Apparently, students in noncenters perceive significantly less exposure to high ability pupils than do their cooperating teachers. In the centers there is disagreement between cooperating teachers and university supervisors on three items as can be seen in Table Eight. At the same time, the cooperating teachers are significantly higher than the supervisors in the noncenters on three items: average number of subjects and teachers observed and subjects taught. Again, in the noncenters in comparison with supervisors, students report higher on three of these items; subjects and teachers observed and subjects taught. On the same three items: average number of teachers and subjects observed and taught, noncenter students and cooperating teachers both exceed the university supervisor.

In the centers there is a total of 11 reported disparities out of potentially 63 while in the noncenters 6 differences were observed. In the centers, students reported some lower, and some higher frequencies in observation and teaching than their cooperating teachers or supervisors. In the noncenters students exceeded their supervisors' reports on all statistically significantly different observation and

teaching items. The cooperating teachers exceeded the supervisors also; and the students together with their mentors report significantly higher opportunities in contrast with the supervisors. In the non-center set those in the field report that there is more occurring than is indicated by the campus-based visitors. In summary, there are, more people, more discrepancies and more mixed perceptions in the centers than in the noncenter situations where there are about half as many statistically significant contrasts all differing in the same direction.

Interestingly among the 13 items that are reported differently (see both Tables Seven and Eight) there is noticeable overlap. Ability levels observed appears to distinguish both the center and non-center students and their cooperating teachers. Similarly, teachers observed, subjects observed and taught are discrepant across the two settings.

On the whole, more differences in views are apparent in the center setting contributed by the dissimilar perceptions of students and their cooperating teachers. Two of the six items exhibiting this difference are readily interpretable. The center cooperating teachers are reporting on choice of teaching situation for themselves and appear to have more of this option than do students. Also, timing of teaching decision is obviously likely to be later for cooperating teachers than for students who are now completing their undergraduate programs. If the small cohort of over 29 year old noncenter student teachers is remembered (See Table Two, page 8) it is understandable why this difference would not also characterize the noncenter group. Introduction as staff and seminars attended are items pertaining to the preservice aspect of the program that the centers have as their charge. Consequently it is possible to comprehend comparative overreporting in this area. In the same vein, noncenter cooperating teachers may overreport exposure of trainees to high ability pupils as a mark of program quality. It should be noted that areas of discrepant reporting are puzzles for future inquiry rather than tests of respondent credibility.

The center student teachers overreporting observation and teaching of low ability pupils may signal an awareness on the part of trainees that this is an important option to utilize and therefore laying claims to its achievement. Again, the discrepancies among students, cooperating teachers and supervisors in the centers with respect to number of grade levels observed and different teachers taught under can be seen as program enhancement overreporting by two audiences. Students know they are expected to avail themselves of the opportunity to observe different grade levels and thus they claim this. Concurrently, the cooperating teachers are especially aware in the centers of the desirability of exposure to a variety of models and thus they overreport this opportunity.

In the noncenters cooperating teachers and supervisors disagree on the amount of time students spend teaching on their own. In addition, students and cooperating teachers perceive significantly less voice in selection of person to work with than do the supervisors, who do, in fact, exercise this option fairly frequently. In the centers the cooperating teachers and university supervisor appear to agree more with one another than in the noncenters where every single variable is discrepant. Greater consonance in views of cooperating teachers and supervisors, possibly based on mutually derived program expectancies gained over time, appears to characterize the center environment.

If the results of Table One and Three are considered along with Tables Seven and Eight it appears that on fourteen variables student responses are confirmed by cooperating teacher or supervisor reports. There are only four variables which distinguish significantly between groups that do not confirm the student reports used in all the earlier comparisons. This still means that the vast majority of center

and noncenter student reports are corroborated by the responses of others. However, number of teachers observed, introduced as staff, teachers taught under and seminars attended are variables where responses need to be viewed with some extra tentativeness. It is possible to speculate about why discrepancies would be manifest for these particular items particularly in the center environment. Here, there is a more concentrated training effort in progress, more students present, making visible the commitment to a richer and more varied training emphasis and an inservice effort supporting continuous staff development. As an added consequence, awareness of what the program is expected to be is higher in the centers and is a possible explanation for the discrepancy with respect to these particular items signalling the existence of the program. A summary of the training practices results are presented in Table Nine.

TABLE NINE

Training Practices Summary:
Observation, Teaching and Related Preparatory Options
by Variable and Setting Indicating Statistically
Significant Differences

Variable	Setting			
	Center/Noncenter[1]	Elementary/Secondary[1]	School System[2]	Individual Center[2]
Situation Choice	>		*	*
Classes Observed	>			*
Subjects Observed		>	*	*
Teachers Observed	>	>		*
Student Teachers Observed[o]	>	>		*
Grade Levels Observed		>	*	*
Schools Observed[o]	>	>	*	*
Ability Levels Observed				
Schools Taught[o]	>	<		*
Subjects Taught[o]		>	*	
Hours Taught/Day		>		
Solo Teaching/Week				*
Ability Levels Taught - low		>		
Taught Under one Teacher	>	<		*
Voice in Selection	>		*	
Mailbox Assigned	>		*	
Introduced as Staff		>	*	
Seminars Attended	>	>	*	
Timing Teaching Decision - elementary		>		
Age				
Sex (% female over male)		>		

o Comparison based on highest category.

1 Whenever a statistically significant result was observed > always shows the greater value direction as indicated by the order in the column heading.

2 Whenever a statistically significant difference was observed an * is used.

SECTION TWO: PATTERNS OF PRESERVICE INSTRUCTIONAL EXPERIENCES

The instructional experiences portion of preservice preparation has both content and process dimensions. The content comprises four skill areas concerned with instructional strategies, diagnosis and testing, preparation of materials and classroom control. These four dimensions of the preservice experiences are derived from 31 items in the survey and are presented in Table Ten. The process categories include the complete observation and review cycle as well as the partial ones composed of reviewed only, observed only, student solo and no response.

The majority of the instructional experiences items elicit responses indicating that the specific training had been encountered by more than half of the student teachers independent of environment. (See Table Ten) However, students in the centers claim a significantly greater average number of experiences than noncenter student teachers. The experiences mean for the center students is 18.504 while the noncenter is 16.032 ($p<.02$). Both groups are exposed to more than half of the 31 items but the center audience is the clear gainer on preservice exposure.

TABLE TEN

Percentage of Audience Reporting Experience by Item

Question: Is there variety (in claimed) preservice instructional experiences by location and preparatory stage?

Item	Center Student Teacher N=[illegible]	Center Coop. Teacher N=99	Center Student Teacher N=127	Noncenter Student Teacher N=31	All Student Teachers N=158	Early Students N=113
Test Administration, Grading and Interpretation	78.5	74.7	78.0	80.6	78.5	23.9
Standardized Test Administration	33.6	31.3	33.9	29.0	32.9	8.8
Discovery - Inquiry Lesson	64.5	73.7	64.6	64.5	64.6	24.8
Individualized Instruction	75.7	80.8	77.2	54.8	72.8	51.3
Unit Introduction, Closure Lesson	90.7	81.8	90.6	90.3	90.5	40.7
Higher Order Questioning	52.3	46.5	50.4	38.7	48.1	9.7
Microteaching Lesson	43.9	46.5	44.9	29.0	41.8	9.7
Parent Conference	37.4	35.4	40.2	45.2	41.8	.9
Field Trip Planned and Supervised	42.1	41.4	43.3	12.9	37.3	12.4
Small Group Instruction	84.1	90.9	85.8	74.2	83.5	53.1
Classroom Test Administration	58.9	71.7	59.1	54.8	58.2	8.0
Immediate and Delayed Feedback	59.8	63.6	58.3	54.8	57.6	16.8
Wait Time	42.1	29.3	40.9	35.5	39.9	7.1
Pupil Participation in Classroom Routines	72.9	75.8	72.4	67.7	71.5	15.9
Direct Student Attending Behaviors	74.8	68.7	72.4	61.3	70.3	30.1
Reduction of Task Complexity	59.8	59.6	61.4	51.6	59.5	23.9
Reduction of Crowding or Noise	92.5	83.8	93.7	87.1	92.4	35.4
Restructure Seating Pattern	60.7	57.6	61.4	71.0	63.3	9.7

(Table Ten continued on page 19)

Table Ten, continued

Item	Center Student Teacher N=107	Center Coop. Teacher N=99	Center Student Teacher N=127	Noncenter Student Teacher N=31	All Student Teachers N=158	Early Students N=113
Special Verbal Warning	87.9	81.8	87.4	93.5	88.6	41.6
Viaual Prompting	74.8	74.7	74.8	67.7	73.4	27.4
Diagnose Individual Learning Problem	11.2	46.5	10.2	19.4	12.0	23.9
Construct a Learning Station	48.6	50.5	41.2	41.9	49.4	17.7
Construct Lesson for Given Behavioral Objectives	68.2	81.8	72.4	48.1	69.6	34.5
Test Construction	83.2	68.7	82.7	67.7	79.7	11.5
Conatruct Behavioral Objectives	79.4	75.8	79.5	67.7	77.2	25.7
Construct Nonbehavioral Objectives	93.5	41.4	91.3	74.2	88.0	15.9
Create Laboratory, Simulation Exercise	61.7	33.3	59.8	48.4	57.6	13.3
Create a Slide, Filmstrip or Slide-Tape	37.4	28.3	37.0	32.3	36.1	7.1
Interpret Standardized Test	29.0	21.2	30.7	19.4	28.5	8.0
Interaction Analysis	28.0	24.2	29.9	6.5	15.3	12.4
Select a Standardized Test	15.0	9.1	15.0	9.7	13.9	0.0

Furthermore, on both the instructional strategies and material preparation skills, centers provide significantly greater options than do the noncenters. As can be seen below, the center means do not differ from the noncenter ones on either diagnosis and testing or classroom control techniques. The presence of significant differences in two areas and the similarity in two others is a useful finding for program planners. It might be possible to devote effort to bring noncenter experiences on par with center emphases in instructional strategies and materials production. More readily accessible is targeting joint institutional effort to increase options in the diagnosis and testing and classroom management areas in the centers.

TABLE ELEVEN

Claimed Preservice Instructional Experiences
by Variable Clusters and Audiences

Question: Do student teachers encounter different number and kinds of experiences in centers?

	Means for Experiences Reported by Center Student Teachers	Means for Experiences Reported by Noncenter Student Teachers
Total Number of Experiences	18.504	16.032*
Instructional Strategies	5.961	5.000*
Diagnosis and Testing	3.394	2.871
Materials Preparation	3.913	3.226**
Control Strategies	5.236	4.936

* $p < .02$
** $p < .01$

When student teacher reports of experiences are compared by individual center location or school system no significant differences are obtained. This further suggests that the responsibility for the observed differences is indeed a function of the center setting. As a matter of practical guidance, furthermore, it appears that students' often articulated preferences for particular sites and/or systems

may not lead to access to the fullest range of instructional competencies.

The comparisons of the array and type of experiences by level yields only a single significant contrast. Instructional strategies obtain significantly more, mean = 6.3, on the elementary than on the secondary level, mean = 5.1 ($p<.01$).

Student Teacher and Early Preservice Group Patterns

All student teachers significantly exceed all early preservice students on number of experiences. Furthermore, all student teachers significantly exceed the early group on instructional strategies, materials preparation, diagnosis and testing and control strategies.

Student teachers in centers exceed pre-student teachers on number of experiences, instructional strategies, materials preparation, diagnosis and testing, and control strategies as indicated in Table Twelve. Student teachers in noncenters exceed pre-student teachers on total number of items and on all four experience dimensions.

TABLE TWELVE

Claimed Preservice Instructional Experiences by Variable Clusters and Audiences

	Means for Experiences Reported by Center Student Teachers	Means for Experiences Reported by Center Early Students
Total Number of Experiences	18.5	7.3**
Instructional Strategies	5.9	2.5**
Diagnosis and Testing	3.3	.92**
Materials Preparation	3.9	1.6**
Control Strategies	5.2	2.1**

TABLE THIRTEEN

	Means for Experiences Reported by Noncenter Student Teachers	Means for Experiences Reported by Noncenter Early Students
Total Number of Experiences	16.0	5.4**
Instructional Strategies	5.0	2.0**
Diagnosis and Testing	3.9	.97**
Materials Preparation	3.2	.76**
Control Strategies	4.9	1.6**

TABLE FOURTEEN

	Means for Experiences Reported by Center Early Students	Means for Experiences Reported by Noncenter Early Students
Total Number of Experiences	7.3	5.4**
Instructional Strategies	2.5	2.0*
Diagnosis and Testing	.92	.97
Materials Preparation	1.6	.76*
Control Strategies	2.1	1.6

*p<.05
**p<.01

It can be seen from the above tables that the early students in centers differ significantly from those in the noncenters on precisely the same dimensions: total number of experiences, strategies and materials preparation as the center student teachers differ from their noncenter counterparts. This tends to suggest the presence of a center effect made evident by the two populations on the two levels of professional preparation.

At the same time, all student teachers in contrast with the early group have significantly more control experiences. Similarly, center student teachers differ from center early preservice group in this area as well. In addition, noncenter student teachers and early candidates are also distinguishable on the control dimension. All of these findings are summarized in Table Fifteen below.

TABLE FIFTEEN

Statistically Significant Instructional Experiences Variable Clusters by Random Samples of Audience Groups

Audience and Group	Number of Experiences	Strategies	Materials Preparation	Diagnosis Testing	Classroom Control
Elementary/Secondary Student Teachers		>[1]			
Center/Noncenter Student Teachers	>	>	>		
Center/Noncenter Early Students	>	>	>		
Center Student Teachers/ Early Students	>	>	>	>	>
Noncenter Student Teachers/ Early Students	>	>	>	>	>
Elementary/Secondary Student Teachers		>			

1 = Whenever a statistically significant result was observed > always shows the greater value direction as indicated by the order in the audience and group heading.

Therefore, it appears that there are two sets of influences operating. The first is a general center effect that amounts to a richer environment in the sense of an overall magnitude of experiences and a larger number of experiences of a particular sort: instructional strategies and materials preparation. The second is a student teacher effect, which is also distinguishable from the early preservice in all settings in overall magnitude of experiences and the additional diagnosis and testing and control strategies components. There is programmatic logic inherent in the differential expectations for student teacher functioning in contrast with the early participants to explain this finding. There is a further program implication for sponsors in the similarity observed with respect to the control and diagnosis and testing dimensions. This clearly emerges as an area for concerted training effort in both center and noncenter settings. To untangle the relative contributions of center and role remains an area for further and subsequent inquiry.

Training Process Patterns

We turn now to the training process dimensions of the thirty-one instructional experiences, which were grouped earlier in the four categories of instructional strategies, diagnosis and testing, preparation of materials and classroom control. The previous discussion, on pages 18 - 21 concerned the content differences observed and noted both an over-all significance between centers and noncenters and significant differences on two of the categories. The focus now shifts to the training process dimensions of these thirty-one experiences. Training process has been defined as the complete observed and reviewed cycle, observed only, reviewed only and student alone. (These four process

categories summarize all the claimed column headings in the instructional experiences portion of the sample student teacher instrument included in Appendix B.)

It appears from Table Sixteen that center student teachers experience significantly more "reviewed only" and less "observed only" than noncenter student teachers. The two groups report similarly with respect to being on their own and having the complete observed and reviewed cycle. The responses of the center student and cooperating teachers differ precisely on those training dimensions, where the students agree and conversely they are alike just where the students conflict. Not surprisingly, the students report significantly more being on their own than do the cooperating teachers. At the same time, the center cooperating teachers by comparison with the student teachers over report the extent of the complete training cycle. When the center student teachers are contrasted with the center early experience students it appears that the student teachers receive significantly more benefit of the complete cycle than do the early preservice candidates. However, on the other three training process dimensions the center based student teachers and early experience students appear to be indistinguishable. This points to the essential similarity between the kind-albeit not the extent-of training program provided to all candidates in the centers.

TABLE SIXTEEN

Claimed Preservice Training Process Dimensions

Question: Is there significant variation in claimed preservice training process dimensions by location and preparatory stage?

	Percent of Total Number of Experiences Claimed				
	Student Only	Observed Only	Reviewed Only	Observed and Reviewed	Total Number of Experiences
Center Student (127)	17.6%	29.3%*	4.6%*	48.5%	2350
Noncenter Student (48)	15.2%	37.3%	1.2%	46.3%	499
Center Student (127)	17.6%*	29.3%	4.6%	48.5%*	2350
Center Cooperating Teacher (99)	7.9%	31.6%	3.7%	56.8%	1694
Center Student (127)	17.6%	29.3%	4.6%	48.5%*	2350
Center Pre (48)	24.1%	32.6%	7.9%	35.4%	353
Center Student (127)	17.6%	29.3%	4.6%	48.5%*	2350
Noncenter Pre (65)	37.0%*	40.2%*	6.8%	16.0%	338
Center Pre (48)	24.1%	32.6%	7.9%	35.4%*	353
Noncenter Pre (65)	37.0%*	40.2%	6.8%	16.0%	338
Noncenter Student (31)	15.2%	37.3%	1.2%	46.3%	499
Noncenter Pre (65)	37.0%	40.2%	6.8%*	16.0%*	338
All Student Center and Noncenter (158)	17.2%	30.7%	4.0%	48.1%	2849
All Pre Center and Noncenter (113)	35.5%*	25.5%	8.6%	30.3%*	591

* = significant $p<.01$

The center program appears more alike despite the differentiation between the stages of professional training than are the early preservice programs in the two environments. There are two significant contrasts on the early experience level and both favor the centers. The center students report being on their own significantly less and more frequently being the receivers of the complete training cycle. While the above contrasts differentiate the center and noncenter early experience candidates, only a single training process dimension separates the center student teachers from the early candidates. This suggests the presence of a center training process mode independent of trainee level. The presence

of three significant contrasts between center student teachers and noncenter early experience students also underscores this finding. Again, the complete cycle comes out in favor of the centers while the noncenters claim more "student alone"and "observed only." Additional role differences are made apparent in the noncenter student teacher and early candidate comparison. Here, the early group is significantly more on its own, receives review only and has less access to the complete cycle. It is as if the training process obtained in the noncenters was reserved for the student teachers and the early candidates were left untended with the single exception of an occasional observation.

The comparison of all student teachers and early experience students in the two environments also results in two significant contrasts. Here, again, the student teachers are the beneficiaries of the complete training cycle, and are "alone" less than are the early experience candidates.

TABLE SEVENTEEN

Statistically Significant Instructional Variable Clusters by Random Samples of Audience Groups

Audience and Group	Observed and Reviewed	Reviewed Only	Observed Only	Student Alone
Center Student/ Cooperating Teachers	<			>
Center/Noncenter Student Teachers		>	<	
Center and Noncenter Student Teachers/Early Students	>			<
Center/Noncenter Early Students	>			<
Center Student Teachers/ Early Students	>			
Noncenter Student Teachers/ Early Students	>	<		<
Center Students/ Noncenter Early Students	>		<	<

As indicated on the above experiences process summary table, observation and review are primarily student teacher oriented. However, centers also provide more of this complete cycle to the early candidates than obtains for this group in the noncenter situation. Another related, apparent trend is the predominance of the "student alone" category for all early students except for those in the centers. It is worth noting also that student teachers and cooperating teachers in centers report this instructional experience process differently. The students perceive themselves more alone and the teachers see themselves as providing more complete observation and review cycles than is apparent to the recipients.

Extent and Kind of Instructional Emphasis by Preparatory Stages

Another interesting question in professional preparation is whether there is differentiation or specialized induction accompanying the assumption of different roles. Specialization has two aspects: extent and kind of instruction, or training emphasis. It needs to be recalled that Table Ten, page 18, lists the individual items clustered in the four instructional experiences dimensions. All items claimed to have received a portion or the entire observation and review cycle are included. It can be observed that the extent of reported disparity is greatest between student teachers and the early candidates. The over-all range of experiences starts at 12% for the student teachers and climbs to 92% while the early candidates begin at 0% and culminate at 53%. That there is a difference in degree of

training emphasis still leaves open the question about the kind of instruction provided for these two groups at different stages of professional preparation. When the rank order correlations are computed for these two groups it appears that there is significant association (all four coefficients are significant from zero) between what is provided for pre-student teachers and student teachers.

TABLE EIGHTEEN

Rank Order Correlations of Experiences Claimed

Center Student Teachers and Cooperating Teachers	.80
Center Student Teachers and Noncenter Student Teachers	.94
All Student Teachers and all Pre-Student Teachers	.71
Center Pre and Noncenter Pre-Student Teachers	.81

It appears that there is essentially one preparatory program operating for all preservice candidates in both center and noncenter situations. The instructional content and process emphases in student teaching seem well established and when other preservice candidates are present they also receive the benefit of essentially the same set of training experiences albeit to a lesser degree. This is particularly apparent in the instructional process dimension obtaining in the centers. (See Table Sixteen) Although the frequency of specific clusters of instructional experiences is significantly lower for the early group, the training process in the centers only distinguishes them significantly on the complete observed and reviewed cycle. It is as if the centers "know" the process and will deliver it similarly to the preservice candidates regardless of stage of preparation. When the center and noncenter early candidates are compared, the contrast clearly favors the centers, which provide significantly more complete cycles and less "student alone" for this group.

The rank order correlation of the thirty-one items for the early group and the student teachers is .71 which again underscores the similarity between the training provided to all preservice candidates. The comparison of the early group in the center and noncenter locations also yield a correlation of .81. It appears that there is some discrepancy between student teachers and early preservice student students although the kinds of experiences that are most frequently available - albeit not to the degree they are available - tend to be quite alike. This essentially similar experiences profile for the early preservice students and student teachers raises the question of appropriate differentiation within the field component of the preservice program and deserves sponsor attention.

SUMMARY

This chapter addressed two dimensions of preservice preparation: training practices and instructional experiences. The training practices included three components: observation, teaching and related preparatory options and the instructional experiences comprised both content and process with respect to total number of experiences, instructional strategies, diagnosis and testing, materials preparation and classroom control.

The basic question for this chapter, and for the study, is whether there are significant differences between the center and noncenter settings on these eight components. It has been shown that statistically significant differences do obtain for five of these components as reported by student teachers. Specifically, in the observation, teaching and related preparation the centers provide a significantly greater variety of options than is available in the noncenters. The overall magnitude of the center instructional experiences exceeds that found in the noncenters and both instructional

strategies and materials preparation are more frequent in the center setting. In the process mode, the complete observation and review cycle obtains significantly more in the centers than in the non-center situations. The centers seem to have richer environments in training practices and provide a greater number and variety of instructional experiences of essentially the same kind for both student teachers and early preservice students.

With respect to significant differences among school systems or centers, neither the training practices nor the instructional experiences dimensions indicate the existence of unique patterns among the individual system or center sites. However, the entire training practices dimension as well as the experiences reported with instructional strategies do differentiate in favor of the elementary preparation over that available on the secondary level.

CHAPTER III

INSERVICE PATTERNS

Relationship Between Inservice Experienced and Preservice Delivered:

An important question concerning inservice experiences is whether receiving instruction is associated with giving. For this study, this question becomes to what degree do cooperating teachers transmit knowledge acquired from various sources to student teachers. It can be seen from Table Nineteen that for the only ten possible identical items, on which cooperating teachers reported both inservice receiving and preservice providing data, 60% of the items differed significantly. $X_0^2(.01)$

INSERVICE OBSERVATIONS

TABLE NINETEEN

Identical Pre and Inservice Experiences as Reported by 98 Cooperating/Supervising Teachers in Centers

Question: Is receiving inservice associated with giving preservice instruction?

Items	Percent of Student Teachers Receiving	Percent of Cooperating Teachers Receiving
Small Group Instruction	90	47**
Individualization	80	64**
Construct Behavioral Objectives	76	70
Discovery-Inquiry	74	46**
Test Construction	69	36**
Feedback	64	38**
Higher Order Questions	47	46
Microteaching	46	51
Wait Time	29	25
Verbal Interaction Analysis	25	53**

** x_0^2 (.01)

Apparently cooperating teachers do, in part, provide and review experiences for student teachers based on competencies acquired in inservice instruction. In addition, teachers report significantly more available experiences for student teachers than were provided to them such as: discovery-inquiry, feedback, individualization of instruction, small group instruction and test construction. There is only one item: verbal interaction analysis on which 52% of the cooperating teachers report receiving inservice training but only 25% of the students having this preparatory experience. In sum, student teachers were gainers on nine of the ten identical items. They received the indirect benefits of cooperating teacher inservice instruction on the nonsignificant items: higher order questions, microteaching, wait time and behavioral objectives were able to have experiences that their cooperating teachers lacked on five items which differentiated significantly.

It appears, therefore, that available inservice content to cooperating teachers is only one source in providing training experiences for novices. More than what is received appears to be transmitted for half the experiences. Only with respect to verbal interaction analysis is there significant loss in transmission. This pattern appears also for the elementary and secondary groups as well. (See Table Twenty and Twenty-one.)

TABLE TWENTY

Identical Pre and Inservice Experiences as Reported by 49 Elementary Cooperating Teachers in Centers

Question: Is receiving associated with giving on the elementary level?

Items	Percent of Elementary Student Teachers Receiving	Percent of Elementary Cooperating Teachers Receiving
Small Group Instruction	96	51**
Individualization	82	67
Discovery-Inquiry	73	48**
Construct Behavioral Objectives	71	65
Feedback	69	38**
Test Construction	59	34**
Higher Order Questions	51	50
Microteaching	42	46
Wait Time	26	23
Verbal Interaction Analysis	26	46**

**X^2_o (.01)

TABLE TWENTY-ONE

Identical Pre and Inservice Experiences as Reported by 49 Secondary Cooperating Teachers in Centers

Question: Is receiving associated with giving on the secondary level?

Items	Percent of Secondary Student Teachers Receiving	Percent of Secondary Cooperating Teachers Receiving
Small Group Instruction	84	42**
Individualization	78	60
Construct Behavioral Objectives	82	71
Discovery-Inquiry	76	47**
Feedback	60*	39*
Test Construction	80	38**
Higher Order Questions	43	43
Microteaching	52	56
Wait Time	33	29
Verbal Interaction Analysis	24	60**

*X^2_o (.05)
**X^2_o (.01)

The elementary reports differentiated only on half the ten items. Apparently, individualization is similarly accessible on the elementary levels to both experienced and beginning personnel. However, the remaining items: small group instruction, discovery-inquiry, feedback and test construction all indicate significantly more transmission than what is provided cooperating teachers. Overall, and on the elementary and secondary levels, there is significant attrition with respect to transmission of verbal interation analysis. The items differentiating the programs delivered and received are identical

on the two levels. However, 80% of the secondary students in contrast with 59% of the elementary trainees receive test construction experience, while there is more small group instruction and feedback practice on the elementary level. Both the significantly greater emphasis on instructional and testing items and the lesser attention to interaction observed throughout may be attributable to a perception held by teachers about what novices need to practice in contrast with those who design inservice programs. An alternate explanation is that as a consequence of their on campus training students arrive with both an interest in, and skill for, engaging in particular instructional behaviors, which they put to work independent of what has been provided to, or via, their cooperating teachers. This discontinuity deserves further probing as do the variety of sources and alternate modes that inservice personnel utilize in their personal quest for professional growth.

The responses of center and noncenter instructional leaders concerning the exposure of their entire staffs reveal interesting contrasts of magnitude and rank order of training emphasis. (See Table Twenty-Two) There are seven items which favor the centers in amount of exposure reported by the instructional leaders in these two environments. They are: small group instruction, strategies for inquiry, taxonomy of objectives, team teaching, video taping, interaction analysis and wait time. Furthermore, the university is perceived as the source of instruction significantly more in the centers than in the noncenters for a majority of the inservice experiences. The school system is reported as providing essentially the same level of inservice exposure in both situations with the exception of a single item: videotaping which is reported significantly more from this source in the noncenter setting. In the centers only for two items: human relations and team teaching do the relative frequencies of school sources exceed those from the campus (and neither of these has statistical significance). However, in the noncenter environment fourteen of the items exhibit higher relative frequencies by the school as the source rather than the campus. This is hardly surprising, in fact, it confirms the existing agreements of the partners for the university's assumption of inservice responsibilities in the centers while in the noncenters the school system continues to execute this charge. Self study as a source of inservice appears to be evenly balanced in the center and noncenter environments. The noncenters significantly exceed the centers on discovery-inquiry while the centers outdo the noncenters on videotaping being provided through self study.

The range of inservice exposure distinguishes the two environments also. The center responses span a low of 27.9% on wait time to a high of 83.7% on classroom control while the noncenters only range from 10.2% to 75.5% for the same items. It becomes useful to contrast the rank order of the remaining nineteen items as well. The rank order correlation of the inservice activities is .80, which suggests considerable similarity of content exposure - albeit differences in sources of instruction. It is worth noting that videotaping, individualization, small group instruction and interaction analysis rank significantly higher in the centers than in the noncenters. These items constitute what is here termed the center inservice training emphasis.

The common inservice activities across the two environments, which do not distinguish on any of the contrasts contain: criterion referenced test, higher order questioning, feedback, individualization, use of space, lecture, nondirective communication and test construction. These eight staff development exposure options appear alike in both center and noncenter settings and are perceived as emanating from similar sources according to principals.

TABLE TWENTY-TWO

Percentages of Instructional Leaders in Centers Compared to Instructional Leaders in Noncenters Reporting Inservice Instruction Received by Their Staff Displayed by Topic and Selected Source of Instruction

Question: What are most frequent inservice experiences?

SOURCE OF INSTRUCTION

Topic	TOTAL RESPONSE N=43 Center	TOTAL RESPONSE N=49 Non Center	UNIV. OF MARYLAND Center	UNIV. OF MARYLAND Non Center	SCHOOL SYSTEM Center	SCHOOL SYSTEM Non Center	CENTER COORD. Center	CENTER COORD. Non Center	SELF STUDY Center	SELF STUDY Non Center
Classroom Control Strategies	83.7	75.5	34.9	14.3*	16.3	28.6	25.6		32.6	44.9
Construct Behavioral Objectives	79.1	73.5	37.2	14.3*	30.2	38.8	20.9		23.3	40.8
Construct Criterion Referenced Test	44.2	38.8	9.3	10.2	11.6	8.2	9.3		23.3	20.4
Diagnostic Procedures	76.7	65.3	41.9	10.2**	27.9	36.7	16.3		32.6	36.7
Discovery-Inquiry	65.1	59.2	23.3	6.1*	20.9	24.5	18.6		16.3	34.7*
Higher Order Question	53.5	46.9	23.3	10.2	11.6	20.4	16.3		23.3	20.4
Human Relations Skills	81.4	67.3	37.2	16.3*	46.5	49.0	16.3		37.2	36.7
Feedback	53.5	34.7	14.0	4.1	11.6	4.1	18.6		18.6	24.5
Individualization	79.1	65.3	27.9	12.2	18.6	30.6	20.9		41.9	38.8
Instructional Uses of Available Physical Space	53.5	49.9	14.0	4.1	7.0	16.3	9.3		23.3	20.4
Lecture	30.2	30.6	11.6	8.2	2.3	4.1	4.7		7.0	8.2
Microteaching	58.1	40.8	30.2	4.1**	9.3	20.4	32.6		14.0	16.3
Nondirective Communication Strategies	41.9	30.6	16.3	6.1	4.7	12.2	11.6		16.3	14.3
Small Group Instruction	76.7	40.8**	30.2	6.1**	16.3	16.3	23.3		32.6	24.5
Strategies for Inquiry	53.5	32.7*	20.9	6.1*	9.3	6.1	16.3		18.6	16.3
Taxonomy of Educational Objectives	51.2	30.6*	16.3	10.2	11.6	8.2	9.3		14.0	10.2
Team Teaching	72.1	40.8**	16.3	8.2	20.9	18.4	14.0		39.5	22.4
Test Construction	51.2	32.7	7.0	4.1	.0	8.2	2.3		25.6	18.4
Use of Video Tape Recorder and Playback Equipment	72.1	36.7**	23.3	6.1*	2.3	20.4**	30.2		32.6	14.3*
Verbal Interaction Analysis	53.5	26.5**	27.9	8.2*	9.3	14.3	18.6		11.6	8.2
Wait Time	27.9	10.2*	11.6	.0*	4.7	.0	7.0		11.6	8.2

Not Appropriate

* Significant Difference (a = .05)
** Significant Difference (a = .01)

When the responses of center instructional leaders and cooperating/supervising teachers are compared additional patterns emerge. (See Table Twenty-Three) It appears that instructional leaders significantly overreport all sources: campus, school and coordinators in contrast with the teachers. In effect they claim more delivery than is reported as occurring by the staff. At the same time they underreport teacher self study as a source of instruction for three items. For nineteen of the twenty-one variables teachers claim self study as the most frequent source and the university as the preeminent inservice agent for the other two variables: microteaching and interaction analysis. However, the principals cite the campus as the foremost source of professional growth on eight items, self study for seven variables and coordinators for a single item: microteaching. When the responses of instructional leaders are contrasted by level: elementary and secondary, no significant differences can be observed.

However, contrasting the responses of elementary and secondary cooperating teachers does yield five statistically significant contrast on four variables. (Table Twenty-four) It appears that lecture and criterion referenced test are primarily secondary level emphases while classroom control and videotaping are preeminently elementary training concerns. With respect to the sources of instruction both the university and the coordinator are claimed significantly more by the elementary teachers while the secondary personnel report self study as their chief instructional source. It should be noted that the school system does not distinguish the two groups on any of the twenty-one variables and is therefore omitted from the table in the interest of eliminating visual clutter.

As one focuses on relative item frequencies across the inservice sources another program related questions surfaces. To wit, does there appear to be reported differentiation in inservice emphasis by each source? Or, does everybody follow a trend and address the same thing? One way to view this distinctive inservice emphasis issue is to set a 10% difference among the three sources: center coordinator, school system and the university as an indicator. Tallying the items with a 10% differential by instructional leaders and cooperating teachers results in the following:

Number of Items Differing 10% or More by Source

	Center Coordinator	School System	University	Total
IL	2	1	11	14
CT	2	5	10	17

Multiplying the three sources by the 21 instructional skills yields 63 potential three-way comparisons. Although the cooperating teacher perceived differentiation is somewhat greater than that reported by instructional leaders, neither group identified the majority of items as distinct for any one source. There is some specialization with respect to microteaching and verbal interaction analysis by coordinators and an emphasis on behavioral objectives and human relations through school system inservice. But there is no clearly apparent functional or programmatic uniqueness among the inservice sources. There is rather an overlap of current interests independent of source. No single source can be identified readily as the bearer of specialized knowledge. This presents an area for future policy and program deliveration for center sponsors.

TABLE TWENTY-THREE

Percentages of Instructional Leaders in Centers Reporting Inservice Instruction Received by Their Staff Compared to Percentages of Cooperating Teachers in Centers Reporting Inservice Instruction Received Displayed by Topic and Source of Instruction

Question: What are most frequent inservice experiences?

SOURCE OF INSTRUCTION

Topic	TOTAL RESPONSE		UNIV. OF MARYLAND		SCHOOL SYSTEM		CENTER COORD.		SELF STUDY	
	IL (92)	CT (98)	IL	CT	IL	CT	IL	CT	IL	CT
Classroom Control Strategies	83.7	84.7	34.9	22.4	16.3	14.3	25.6	7.1**	32.6	61.2**
Construct Behavioral Objectives	79.1	83.7	37.2	26.5	30.2	20.4	20.9	6.1**	23.3	31.6
Construct Criterion Referenced Test	44.2	50.0	9.3	7.1	11.6	5.1	9.3	3.1	23.3	19.4
Diagnostic Procedures	76.7	78.6	41.9	17.3**	27.9	15.3	16.3	6.1	32.6	35.7
Discovery-Inquiry	65.1	65.3	23.3	11.2	20.9	12.2	18.6	3.1**	16.3	29.6
Higher Order Question	53.5	64.3	23.3	20.4	11.6	9.2	16.3	8.2	23.3	31.6
Human Relation Skills	81.4	78.6	37.2	17.3*	46.5	25.5*	16.3	4.1*	37.2	48.0
Feedback	53.5	60.2	14.0	14.3	11.6	11.2	18.6	7.1*	18.6	34.7
Individualization	79.1	80.6	27.9	15.3	18.6	17.3	20.9	4.1**	41.9	39.8
Instructional Uses of Available Physical Space	53.5	67.3	14.0	4.1*	7.0	9.2	9.3	3.1	23.3	39.8
Lecture	30.2	51.0*	11.6	7.1	2.3	5.1	4.7	6.1	7.0	31.6**
Microteaching	58.1	62.2	30.2	24.5	9.3	6.1	32.6	16.3	14.0	23.5
Nondirective Communication Strategies	41.9	56.1	16.3	16.3	4.7	6.1	11.6	5.1	16.3	30.6
Small Group Instruction	76.7	77.0	30.2	14.3*	16.3	12.2	23.3	2.0**	32.6	51.0
Strategies for Inquiry	53.5	61.2	20.9	12.2	9.3	8.2	16.3	5.1*	18.6	30.6
Taxonomy of Educational Objectives	51.2	64.3	16.3	16.3	11.6	9.2	9.3	5.0	14.0	24.5
Team Teaching	72.1	70.4	16.3	9.2	20.9	10.2	14.0	8.2	39.5	51.0
Test Construction	51.2	66.3	7.0	9.2	.0	7.1	2.3	4.1	25.6	33.7
Use of Video Tape Recorder and Playback Equipment	72.1	79.6	23.3	24.5	2.3	5.1	30.2	20.4	32.6	25.5
Verbal Interaction Analysis	53.5	60.2	27.9	25.5	9.3	6.1	18.6	15.3	11.6	18.4
Wait Time	27.9	35.7	11.6	8.2	4.7	4.1	7.0	6.1	11.6	16.3

* Significant Difference (a = .05)
** Significant Difference (a = .01)

IL = Instructional Leaders
CT = Cooperating Teachers

TABLE TWENTY-FOUR

Percent of Elementary Cooperating Teachers in Centers Reporting Inservice Instruction Received Compared to Secondary Cooperating Teachers in Centers by Four Topics and Three Sources of Instruction

	Topic			
	Classroom Control	Construct Criterion Referenced Test	Lecture	Video-taping
Respondents				
Elementary Teachers N=52	89.8	38.8*	38.8*	81.6
Secondary Teachers N=46	79.6	61.2*	63.3*	77.6
University of Maryland				
Elementary Teachers	36.7	6.1	6.1	30.6
Secondary Teachers	8.2	8.2	8.2	18.4
Center Coordinators				
Elementary Teachers	14.3**	2.0	10.2	32.7**
Secondary Teachers	0.0**	4.1	2.0	8.2**
Self Study				
Elementary Teachers	57.1	16.3	18.4*	22.4
Secondary Teachers	65.3	22.4	44.9*	28.6

* $p<.05$
** $p<.01$

SUMMARY

In the inservice available, as in the preservice exposure, the centers provide a richer environment in which more sources provide significantly more instruction on specific instructional approaches. Both what is transmitted through inservice and what is available through other means is made accessible to trainees. On the whole cooperating teachers on the elementary and secondary levels provide similar exposure for student teachers. While there are a few differences in inservice content according to level of schooling the majority of the exposure provided appears not to distinguish between the elementary and secondary personnel. Nor does there appear to be a recognizable, distinct, content emphasis by various inservice sources. However, for the majority of the inservice experiences the university is perceived as the source of instruction significantly more in the centers than in the noncenters.

CHAPTER IV

SUPERVISORY PATTERNS

Findings Associated with Question Four - Who Holds Conferences with Student Teachers? and Question Five - Does the Perceived Quality of Supervisory Encounters Vary Between Providers and Recipients?

SECTION ONE: CONFERENCING AVAILABLE

The frequency and percentage of different conference sources reported by random samples of student teachers assigned to center and noncenter settings are reported in Table Twenty-five. Most student teachers in centers report conferences with one of four sources: cooperating teacher only; center coordinator only; cooperating teacher and center coordinator only; and cooperating teacher, center coordinator, and university supervisor. A nonsignificant chi square (X_o^2) is observed with the frequencies of these four categories of personnel being found equally often as conference sources. Whether these are the principal patterns of conferencing one might expect in a teacher education center setting is an open question. It is of some interest though, to observe that the center coordinator acting alone does assume the role of one of the four principal conference sources for student teachers.

Two sources account for most of the noncenter student teacher conferences; cooperating teacher only and cooperating teacher together with university supervisor. A nonsignificant X_o^2 is observed with these two categories. Whether this is the expected pattern in a noncenter setting is another open question.

A variety of queries arises from these data. One rather natural question is whether the presence of a supervisory conference conducted by any professional, or combination of professionals, is independent of student teaching assignment in a center or noncenter. Table Twenty-six shows the 2 by 2 contingency table and computed X_o^2 value used to answer this question. The 0.72 value is not significant. The data support the null hypothesis that presence of a supervisory conference is independent of student teaching assignment setting. Hence, the reported pattern of the presence, or absence, of a conference is alike in the centers and noncenters.

TABLE TWENTY-FIVE

Number of Different Conference Sources Reported by Random Samples of Student Teachers in Centers and Noncenters

Source	Center (N=96) Frequency	Center (N=96) in %	Noncenter (N=20) Frequency	Noncenter (N=20) in %
Cooperating Teacher Only	20	21	15	52
Center Coordinator Only	17	18	n.a.	n.a.
University Supervisor Only	3	3	0	0
Cooperating Teacher, Center Coordinator and University Supervisor	15	16	1	3
Cooperating Teacher and Center Coordinator Only	22	23	n.a.	n.a.
Cooperating Teacher and University Supervisor Only	7	7	12	41
University Supervisor and Center Coordinator Only	7	7	n.a.	n.a.
No Conference Leader	5	5	1	3

n.a. = not appropriate since no coordinators are assigned

TABLE TWENTY-SIX

2 by 2 Contingency Table of Presence of a Conference By Student Teaching Assignment

	Student Teaching Assignment		
	Center	Noncenter	Total
Conference	91 (90)	28 (27)	117
No Conference	5 (6)	1 (2)	8
Total	96	29	125

$X_o^2 = .72$

Next one asks the question whether the pattern within the center or noncenter reveals any additional insights into who conducts conferences. The nonsignificant X_o^2 reported in Table Twenty-seven supports the hypothesis that the number of personnel involved in the supervisory conferences is independent of student teaching assignment. Therefore, the pattern of reported use of one, or more than one, professional, in a conference is alike in the center and noncenter settings.

TABLE TWENTY-SEVEN

2 By 2 Contingency Table of Number of Personnel Involved in a Conference By Student Teaching Assignment

	Student Teaching Assignment		
Number of Personnel in Conferences	Center	Noncenter	Total
One	40 (43)	15 (12)	55
More than One	51 (48)	11 (14)	62
Total	91	26	117

$X_o^2 = 1.78$

The next question of interest is whether there are differences in the patterns of who conducts the supervisory conference within each setting. Consider the center data first. The professional with the greatest amount of contact time with student teachers is, of course, the cooperating teacher. In this sense, the frequency of conferences reported with the cooperating teacher could be treated as the standard against which to compare each of the other sources. Table Twenty-eight reports the observed X_o^2 values for each of the six pairs. The decision of significance is based on the Bonferroni adjusted tables created by Dayton and Schafer.* The critical value of 6.96 is based upon 6 tests at the .05 level with 1 degree of freedom. The only significant X_o^2 was observed in the comparison of cooperating teacher and university supervisor. The pattern of observed frequencies for the cooperating teacher with other personnel differ only by chance with this one exception. University supervisors do not conference as often as any of the other school-based personnel when compared with the cooperating

*C. Mitchell Dayton and William D. Shafer "Extended Tables of t and Chi-Square for Bonferroni Test with Unequal Error Allocation," Journal of Statistical Association, March 1973, vol. 68, no. 341, pp. 78-83.

teacher as a standard. One explanation for this one significant X_o^2 is that those already present on a continuing basis and readily available for conferences have significantly more opportunities for engaging in such supervisory activity than the campus-based personnel, whose presence and participation occurs by special arrangement. In addition, it may also be that supervisors usually conference together with other personnel such as the cooperating teacher.

TABLE TWENTY-EIGHT

Conference Source Comparisons for Student Teachers in Centers

	X_o^2	Decision
Cooperating Teacher - Center Coordinator	.24	n.s.
Cooperating Teacher - University Supervisor	12.56	sig.
Cooperating Teacher - Center Coordinator and Cooperating Teacher	.1	n.s.
Cooperating Teacher - Cooperating Teacher and University Supervisor	6.26	n.s.
Cooperating Teacher - Center Coordinator and University Supervisor	6.26	n.s.
Cooperating Teacher - Center Coordinator, University Supervisor, and Cooperating Teacher	.72	n.s.

n.s. = not significant
sig. = significant with $p<.05$

A similar strategy was employed in examining the noncenter conference source data. Table Twenty-nine reports these findings. Again, the university supervisor appears with significantly smaller conferencing frequency when compared with the cooperating teacher. The nonsignificant comparison of cooperating teacher against cooperating teacher and university supervisor continues to support the conjecture that supervisors do not conference alone, but conference together with another professional.

TABLE TWENTY-NINE

Conference Sources for Student Teachers in Noncenters

Conference Source Pairs	X_o^2	Decision
Cooperating Teacher-University Supervisor	15	sig.
Cooperating Teacher-University Supervisor and Cooperating Teacher	.34	n.s.

n.s. = not significant
sig. = significant with $p<.05$

Is elementary-secondary level independent of the number of personnel who conference with a student teacher? Table Thirty shows a nonsignificant X_o^2 value. Consequently, for center student teachers, the pattern of conference frequencies with one, or more than one, professional is the same for elementary and secondary level assignments.

Table Thirty-one shows the data for noncenter student teachers related to the same question of number of personnel involved by level. Again, the result is nonsignificant. Hence the pattern of number of professionals involved in conferences by elementary and secondary levels is nonsignificant and does not differ for centers and noncenters.

TABLE THIRTY

2 By 2 Contingency Table of Number of Personnel Involved in a Conference By Elementary and Secondary Level Within Centers

	Level		
	Elementary	Secondary	
Number of Personnel in Conferences			
One	23 (22)	17 (18)	40
More than One	26 (27)	25 (24)	51
	49	42	91

$X_o^2 = 0.19$

TABLE THIRTY-ONE

2 By 2 Contingency Table of Number of Personnel Involved in a Conference By Elementary and Secondary Level Within Noncenters

	Level		
	Elementary	Secondary	
Number of Personnel in Conferences			
One	8 (9)	7 (6)	15
More than One	9 (8)	4 (5)	13
	17	11	28

$X_o^2 = .61$

The relative frequency of conferences conducted by one or more professionals does not differ for elementary and secondary levels. But, does the previous pattern for paired comparisons with the cooperating teacher also characterize the elementary level apart from the secondary level? Table Thirty-two summarizes the paired comparisons for the elementary center data. No significant X_o^2 are observed. All paired comparisons with the cooperating teacher frequency are chance differences.

TABLE THIRTY-TWO

Conference Source Comparisons for Student Teachers in Elementary Center Assignments

Conference Source Pairs	X_o^2	Decision
Cooperating Teacher - Center Coordinator	.12	n.s.
Cooperating Teacher - University Supervisor	3.6	n.s.
Cooperating Teacher - Center Coordinator and Cooperating Teacher	3.2	n.s.
Cooperating Teacher - University Supervisor and Cooperating Teacher	3.6	n.s.
Cooperating Teacher - Center Coordinator and University Supervisor	1.34	n.s.
Cooperating Teacher - Center Coordinator, University Supervisor, and Cooperating Teacher	2.28	n.s.

Table Thirty-three reports the finding for those student teachers with secondary center assignments. One significant difference is observed with the cooperating teacher and university supervisor comparison. Again, this result may be explained in terms of university supervisors choosing to conference with the student teacher and another professional rather than working alone.

TABLE THIRTY-THREE

Conference Source Comparisons for Student Teachers in Secondary Center Assignments

Conference Source Pairs	X^2_o	Decision
Cooperating Teacher - Center Coordinator	4	n.s.
Cooperating Teacher - University Supervisor	9.3	sig.
Cooperating Teacher - Center Coordinator and Cooperating Teacher	2.88	n.s.
Cooperating Teacher - University Supervisor and Cooperating Teacher	2.88	n.s.
Cooperating Teacher - Center Coordinator and University Supervisor	5.4	n.s.
Cooperating Teacher - Center Coordinator, and University Supervisor, and Cooperating Teacher	0	n.s.

Summary

Four conference sources account for 81% of all supervisory conferences conducted in the teacher education centers. These four sources are the cooperating teacher, acting alone; the center coordinator, acting alone; the cooperating teacher and center coordinator, acting together; and the cooperating teacher, center coordinator, and university supervisor, acting together. The observed frequencies of the four categories are not significantly different.

Part of the role of the center coordinator does emerge from these data. The center coordinator acting alone as a supervisory conference leader is one of the four largest conference sources. Coordinators also clearly participate as conference sources with two or more partners. This specially designated member of both the University and the school system is one of the active sources of supervisory conferences.

The pattern of presence or absence of supervisory conferences is alike for centers and noncenters. Supervisory conferences occur no more frequently in centers. When supervisory conferences do occur, the pattern of using one professional, or a combination of professionals, to conduct supervisory conferences is alike in centers and noncenters. The use of combinations of personnel to conduct supervisory conferences is no more likely in the center setting.

The pattern of presence or absence of supervisory conferences is alike for elementary and secondary school level assignments. Supervisory conferences occur no more frequently at the elementary level than at the secondary level. When supervisory conferences do occur, the pattern of using one professional or a combination of professionals to conduct supervisory conferences is alike at the elementary and secondary levels. The use of combinations of personnel to conduct supervisory conferences is no more likely at the elementary level than at the secondary level.

When patterns of personnel involved in conferencing are examined, the only significant difference observed is in the cooperating teacher - university supervisor comparison. The university supervisor conferencing frequency is significantly smaller. This result appeared for both centers and noncenters as well as on the secondary level. Therefore, the composition of personnel involved in supervisory conferences are very much alike for student teaching assignment and student teaching level.

SECTION TWO: CONFERENCING PROCESS

In addition to the observed frequency and participation pattern in conferencing, this component of teacher preparation has a process dimension as well. There has been an attempt to probe not just the observed pattern of conferencing but the perceived impact of supervisory behavior as well. This study assumes that supervision is a form of teaching and particularly that teaching fosters reflective activity.

The instrument used for eliciting supervisory experiences data was based on Solomon's work developed for classifying teacher encounters.* In these studies the questionnaire was concurrently validated by college student gains in academic achievement. The center study utilized an abridged and adapted form of the instrument. A random sample of center and noncenter student teachers, cooperating teachers, center coordinators and university supervisors also participated in responding to this portion of the survev.

Five factors or conferencing dimensions were obtained and are identified in Table Thirty-four. Subscores were computed from the items within each factor. It should be noted that the student teachers are reflecting their perceptions of the conference leader(s), while the remaining samples are reporting upon their own supervisory behaviors.

The findings from comparisons among student teacher and cooperating teacher, centers, elementary and secondary level, as well as school systems suggest that these various populations perceive the conferencing dimensions alike. A significant difference emerges on factor four, participation-nonparticipation, with respect to the elementary-secondary levels. A significant difference is observed for student teachers and for cooperating teachers on this dimension. In both instances, the greater means are observed for the secondary level samples. Having unsolicited comments of students serve as conference material, engagement in conference leader - student teacher discussion on general problems and pursuit of new and unexpected events appears to be more frequent on the secondary level accordi ; to both conference providers and recipients. Such participation suggests that there is a seeming unpredictability characteristic of the conference process in contrast with those on the elementary level. Furthermore, for the cooperating teacher group only, factor two, task and person attentive versus ignoring, also shows the secondary exceeding the elementary personnel. Demonstration and practice in use of analysis, asking questions about subject matter, changes in presentation, expression of opinion and encouragement of dramatization appear to be more frequent in secondary conferences than in elementary ones according to the cooperating teachers.

One explanation for these findings may be contained in the nature of the items constituting the factors. It may simply be that such activities are more common in conferencing at the secondary level with the multiplicity and diversity of courses. It is also possible that secondary conferences are more attentive and participatory than elementary ones by virtue of the more unpredictable adolescent environment in which candidates function. More autonomous, independent behavior and greater content emphasis, characteristic of secondary school settings in general, appear to be felt in the supervisory conference situation as well.

In further summary, although the frequency of conference contacts does not differ by level, the quality of conferencing with respect to participation and attentiveness is distinguishable by level of schooling. However, those engaged in direct contact through supervisory encounters perceive conferences similarly.

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*Solomon et al, op. cit.

TABLE THIRTY-FOUR

SUPERVISORY PROCESS MEASURE

Item	Loading	Description
Factor One: Student - Teacher and Content Centered		
29	.72389	Listens to students attentively
27	.69806	Expresses approval of students' work
26	.63930	Clear and understandable
30	.61262	Treats students as equals
31	.55418	Well organized presentations
32	.53717	Students gain important principles
20	.49715	Ends discussions prematurely
25	.46623	Depersonalized criticism
22	.46562	Demonstrates use of methods of analysis
14	.44723	Questions about students' individual experiences
21	.40912	Encouragement of students' contributions
11	.36343	Protecting behavior
16	.32117	Posed general problems as discussion topics
Factor Two: Person and Task Attentive - Ignoring		
23	.57046	Students practice use of methods of analysis
15	.55052	Asked questions about subject matter
22	.55048	Demonstrates use of methods and analysis
28	.52927	Make changes in presentation of material
19	.46267	Continuation of incomplete discussions
17	.45949	Expressed opinion about material
24	.45001	Encouragement of students dramatization of concepts and problems
13	.38458	Looked for student reaction
20	.34789	Ends discussion prematurely
18	.33558	Used work of student as bases for discussion
16	.32287	Posed general problems as discussion topics
Factor Three: Permissiveness - Control		
3	.59820	Amount of teacher lecture
10	.55263	Semester shift from discussion to lecture
7	.47548	Within conference lecture sequence
12	.32343	Limit discussion to relevant topics
Factor Four: Participatory - Nonparticipatory		
4	.62075	Students' unsolicited comments
5	.48151	Teacher-student discussions
6	.37233	Shift between lecture and discussion
1	.36049	Followed up new and unexpected topics
16	.35427	Posed general problems as discussion topics
Factor Five: Discussion - Lecture		
9	.75342	Semester shift from mostly lecture to discussion
8	.49501	From fairly open discussion to lecture

CHAPTER V

LEVELS OF PROFESSIONAL CONCERNS

Findings Associated with Question Six: What are the Differences in the Levels of Concerns for Pupils, Teacher Role and Work Situation among Various Educational Personnel?

Frances Fuller of the University of Texas has hypothesized that teachers progress through developmental stages as they become part of the profession.* Initially utilizing open-ended responses and subsequently, using a structured 56 item Likert-type check list, she and her colleagues have identified three professional concerns factors.** The first of these is concern for students, (impact), the second is concern for role of the teacher (self) and the third is concern for situation (task).

The Maryland study utilized the Fuller instrument, the same factor analytical procedures, but included a wider range of professional personnel than had been involved in the Texas sample. The Maryland population, (N=447), ranged from early preservice students to principals and included student teachers, cooperating teachers, university supervisors and center coordinators as well. Despite the wider role functions in the sample, the solutions, especially on the first two factors, were extremely close to the Texas findings with 92% of the items on factor 1 and 89% on factor 2 being the same. In addition, 74% of the items on factor 3 were clustered similarly as well. This factor has been renamed "work situation" to fit the particular constellation of items obtained. Table Thirty-five lists the item, loading and description for each of the three factors of the "concerns" measure.

TABLE THIRTY-FIVE

CONCERNS MEASURE

Factor One - Concern for Students

Item	Loading	Description
47 (46)	.72683	Guiding students toward intellectual and emotional growth
24 (23)	.70801	Diagnosing student learning problems Diagnosing student teaching problems
22 (21)	.70331	Meeting the needs of different kinds of students Meeting the needs of different kinds of student teachers
53 (52)	.70261	Whether each student is getting what he needs
33 (32)	.67618	Whether students can apply what they learn Whether student teachers can apply what they learn
55 (54)	.66945	Recognizing the social and emotional needs of students Recognizing the social and emotional needs of student teachers
32 (31)	.65330	Adapting myself to the needs of different students Adapting to the needs of different students Adapting myself to the needs of different student teachers
30 (29)	.60916	Challenging unmotivated students Challenging unmotivated student teachers

* Frances F. Fuller "Concerns of Teachers: A Developmental Conceptualization" American Educational Research Journal, VI (March 1969), pp. 209-226.

** The current instrument with 50 items and the most recent conceptualization is Gary D. Borich and Frances F. Fuller Teacher Concerns Checklist: An Instrument for Measuring Concerns for Self, Task, and Impact. Research and Development Center for Teacher Education, The University of Texas at Austin, 1974. The Texas concerns labels are given in parentheses above.

Table Thirty-five, continued

Item	Loading	Description
52 (51)	.60413	Helping students to value learning
7	.60263	Increasing students' feelings of accomplishment Increasing student teachers' feelings of accomplishment
36 (35)	.58958	Instilling worthwhile concepts and values
39 (38)	.56987	The psychological climate of the school
38 (37)	.51982	Student health and nutrition problems that affect learning Pupil health and nutrition problems that affect learning
10	.50690	Motivating students to study Motivating student teachers
11	.49781	Working productively with other teachers Working productively with other principals
28	.49516	Insuring that students grasp subject matter fundamentals Insuring that student teachers grasp subject matter fundamentals
50 (49)	.48562	Slow progress of certain students Slow progress of certain student teachers
8	.44921	The nature and quality of instructional materials
41 (40)	.44897	Assessing and reporting student progress Assessing and reporting student teacher progress
20	.43591	The wide range of student achievement The wide range of pupil achievement
5	.42496	Whether students are learning what they should Whether student teachers are learning what they should
23	.42020	Being fair and impartial
56 (55)	.37355	Wide diversity of student ethnic and socioeconomic backgrounds The wide diversity of ethnic and socioeconomic backgrounds among pupils
44 (43)	.35390	Teaching required content to students of varied background Teaching required content to student teachers of varied background
42 (41)	.35041	Chronic absence and dropping out of students Chronic absence and dropping out of student teachers
3	.33284	Selecting and teaching content well
Factor Two - Concern for Role		
6	.67984	Whether the students really like me or not Whether the student teachers really like me or not
37 (36)	.67253	How students feel about me How student teachers feel about me
21	.63093	Doing well when a supervisor is present Doing well when a central office representative is present
51 (50)	.62298	My ability to present ideas to the class My ability to present ideas to the faculty My ability to present ideas
25 (24)	.59117	Getting a favorable evaluation of my teaching Getting a favorable evaluation of my administration Getting a favorable evaluation of my work
48	.57743	Being accepted and respected by professional persons Being accepted and respected by professional persons at the University
46 (45)	.54095	Feeling more adequate as a teacher Feeling more adequate as a principal Feeling more adequat as an educator

Table Thirty-five, continued

Item	Loading	Description
17	.53186	Maintaining the appropriate degree of class control Maintaining the appropriate degree of control in my building Maintaining the appropriate degree of pupil control
54 (53)	.50832	Increasing my proficiency in content
18	.48751	Acceptance as a friend by students Acceptance as a friend by student teachers
3	.41369	Selecting and teaching content well
9	.40731	Where I stand as a teacher Where I stand as an instructional leader Where I stand as an educator
40 (39)	.40576	Clarifying the limits of my authority and responsibility
49	.39465	Adequately presenting all of the required material Adequately presenting all of the curriculum
23 (22)	.38464	Being fair and impartial
26 (25)	.37169	Being asked personal questions by my students
43 (42)	.36614	Lack of academic freedom
16	.31562	Becoming too personally involved with students Becoming too personally involved with student teachers
Factor Three - Concern for Work Situation		
13	.55161	Rapid rate of curriculum and instructional change
19	.49112	Understanding the principal's policies Understanding the central office policies Understanding school policies
27 (26)	.45728	Too many noninstructional duties
12	.44031	Lack of instructional materials
34 (33)	.43518	Understanding the philosophy of the school Understanding the philosophy of the school system
45 (44)	.43421	Student use of drugs Student teacher use of drugs
26 (25)	.41641	Being asked personal questions by my students Being asked personal questions by student teachers
14	.40023	Feeling under pressure too much of the time
42 (41)	.39326	Chronic absence and dropping out of students Chronic absence and dropping out of student teachers
31 (30)	.38967	The values and attitudes of the current generation
29 (28)	.38840	Working with too many students each day
16	.37459	Becoming too personally involved with students Becoming too personally involved with student teachers
43 (42)	.35347	Lack of academic freedom
2	.34776	Standards and regulations set for teachers Standards and regulations set for administrators Standards and regulations set for professional staff

Table Thirty-five, continued

Item	Loading	Description
17	.34117	Maintaining the appropriate degree of class control Maintaining the appropriate degree of control in my building Maintaining the appropriate degree of pupil control
15	.33352	Frustrated by the routine and inflexibility of the situation
40 (39)	.32958	Clarifying the limits of my authority and responsibility
20	.31437	The wide range of student achievement The wide range of pupil achievement
46 (45)	.31776	Feeling more adequate as a teacher Feeling more adequate as a principal Feeling more adequate as an educator

Definition of the Concerns Measures

Four scores were computed from the concerns measure; a total score, and a score for each of the three factors. The four measures were first examined independent of location for each of the following populations: student teacher, cooperating teacher, university supervisor, instructional leader, center coordinator, and early preservice student.

Data Analysis Strategy

A two part data analysis strategy was planned. The first strategy was to analyze the data for all groups combined into a total score. The total score analysis is followed by an analysis of the center data, then the noncenter data, then the elementary level, and finally the secondary level.

For each significant F observed in any of the five data analyses of part one, two planned orthogonal contrasts are conducted: one simple and one complex. The simple contrast is student teacher versus cooperating teacher. This might be characterized as a comparison of the two groups most directly involved in day to day classroom instruction. The planned complex contrast was student teacher and cooperating teacher versus university supervisor, instructional leader and center coordinator. These might be characterized as the direct classroom teacher groups compared with those somewhat removed from direct classroom responsibility. It was further decided to conduct post hoc comparisons on other category pairs using the Scheffe procedure.*

Part two compares center and noncenter, elementary and secondary, school systems, and centers within each of the populations sampled including student teachers, cooperating teachers, university supervisors, instructional leaders, center coordinators, and early preservice students. Again, the same four "Concerns" measures were analyzed.

Part One Data

Table Thirty-six summarizes the findings for the four "Concerns" measures following the above plan outlined as the part one data analysis.

Student Teacher-Cooperating Teacher Contrast: For all samples the student teacher - cooperating teacher planned contrast exhibits a marked pattern of significant results indicating higher scores for the student teacher on factor two - concern for role. One possible explanation for these

*Henry Scheffe The Analysis of Variance, New York: Wiley, 1959 and C. Dayton Mitchell, The Design of Educational Experiments, New York: McGraw-Hill, Inc., 1970, p.48.

results is that student teachers are simply more conscious of role as teacher which they are beginning to assume than are experienced teachers such as cooperating teachers.

TABLE THIRTY-SIX

AN ANALYSIS OF THE FOUR MEASURES ON THE CONCERNS INSTRUMENT FOR THE TOTAL SAMPLE, STUDENT TEACHING ASSIGNMENT, AND INSTRUCTIONAL LEVEL

Sample	Measure-Concerns	F Overall	ST - CT Contrast	ST + CT - US + IL + CC Contrast	Scheffe Post Hoc Comparisons
Total Sample	Total Score	S	S>	S>	CC<PRE
	Factor One	S	NS	S>	US<CT,IL,PRE,ST
	Factor Two	S	S>	S>	CC<US,ST,PRE IL<ST,PRE
	Factor Three				CC<ST, PRE,US
Center	Total Score	S	S>	S>	CC<PRE
	Factor One	S	NS	S>	----------
	Factor Two	S	S>	S>	CC<PRE
	Factor Three	S	S>	S>	CC<ST,PRE CC,CT,IL<PRE
Noncenter	Total Score	NS	NS	NS	----------
	Factor One	NS	NS	S>	
	Factor Two	S	S>	NS	IL<US,ST,PRE IL,CT<ST,PRE
	Factor Three	S	NS	NS	----------
Elementary	Total Score	S	S>	S>	CC<PRE
	Factor One	S	NS	S>	US<PRE,ST
	Factor Two	S	S>	S>	CC<ST,PRE
	Factor Three	S	S>	S>	CC<ST CC,IL,CT<PRE
Secondary	Total Score	S	S>	NS	----------
	Factor One	NS	NS	NS	----------
	Factor Two	S	S>	S>	CC<PRE,ST
	Factor Three	S	S>	NS	----------
System	Total Score	S	-----	-----	----------
	Factor One	NS	-----	-----	----------
	Factor Two	S	-----	-----	----------
	Factor Three	S	-----	-----	System 3>System 5

S = Statistically significant
NS= Not statistically significant

Abbreviations:
CC = center coordinator
CT = cooperating teacher
IL = instructional leader
PRE= early preservice student
ST = student teacher
US = university supervisor

> indicates value direction according to order in column heading or groups in post hoc comparison

For the same contrast and for all samples, a nonsignificant result is reported for factor one - concerns for students. This result might be explained by observing that both student teacher and cooperating teacher are immediately involved with students and hence one would expect them to have equivalent levels of concern for students.

Again for the same contrast, but with the exception of the noncenter sample, the student teacher scores are significantly higher than the cooperating teacher on the factor three measure - concern for work situation as well as for the total score on the concerns measure. The factor three finding might be explained by observing that student teachers are more concerned with trying to comprehend the rules and regulations of the work situation than are cooperating teachers who are knowledgeable about the work environment. The significant findings on factors two and three could very well account for the significant total score result.

In addition, the five school systems with the largest number of survey participants exhibit significant overall differences on factors two, three and total. However, only factor three, work situation, distinguishes any pair of systems and interestingly finds the urban setting indicating higher concern in this area than is shown by one of the suburban systems.

Complex Contrast

The total population shows a significant result for each of the three factor measures and the total "Concerns" measure with the student teacher and cooperating teacher concerns pooling being higher. The elementary and center samples show the same results and in the same direction. These findings suggest that greater concern for these specified aspects of teaching: student, teacher role, work situation and overall is likely to be shown by those closest to direct classroom contact. Individual group contrasts tend to support this closeness conjecture with student teachers, cooperating teachers and the early preservice students reporting significant post hoc results over the other personnel.

TABLE THIRTY-SEVEN

AN ANALYSIS OF THE FOUR MEASURES OF THE CONCERNS INSTRUMENT FOR CENTER-NONCENTER, ELEMENTARY-SECONDARY, SCHOOL SYSTEMS, AND CENTERS BY EACH POPULATION SAMPLED

COMPARISONS	POPULATIONS									
	Student Teachers		Cooperating Teachers		University Supervisors	Instructional Leaders		Center Coordinators	Preservice Students	
Elementary - Secondary	S>	NS	S>	NS		NS	S>		NS	NS
	NS	NS	NS	NS		NS	NS		NS	NS
Center - Noncenter	NS	NS	NS	NS		NS	NS		NS	NS
	NS	NS	NS	NS		NS	NS		NS	NS
Systems	NS	NS	NS	NS		NS	S			
	NS	NS	NS	NS		S	S			
Post hoc Scheffe						Fac. 2, 5<6,7 Fac. 3, 5<6 Total 5<6,7				
Centers	NS	NS	S	S					NS	NS
	NS	NS	S	S					NS	NS
			no post hoc significant findings							

* Factor 1 Factor 3 / Factor 2 Total

Placement of factor score results in the table follows the pattern indicated in the box. Where the greater than sign, >, is used it indicates direction according to the order of the category label.

Part Two Data

Table Thirty-seven summarizes the findings for the four "Concerns" measures following the plan outlined as the part two data analysis.

Center - Noncenter Data Analysis

No significant differences emerge for the center-noncenter comparison category within any of the populations for which the test is possible.

Elementary - Secondary Data Analysis

The most readily interpreted finding above is the statistically significant, higher concern for students registered by all elementary student teachers and elementary cooperating teachers in

comparison with trainees and teachers on the secondary level. This becomes an interesting finding in light of the greater student orientation of the elementary school in contrast with the secondary school, noted generally. Whether greater student centeredness comes from the school level, or whether the personnel attracted to elementary school bring greater pupil concern with them can be examined in light of the available data.

It is worth noting that the elementary and secondary early preservice students do not differ statistically significantly on level of student concerns. Furthermore, nor do the instructional leader personnel evidence significance on this dimension. That neither the early preservice students nor the instructional leaders exhibit statistically significant differences in level of pupil concern casts doubt on the notion that this focus is a personal orientation of those, who select and continue to work on the elementary level. The findings in this investigation suggest quite differently that pupil focus is altered in some way and at some point, during the period of the professional training program rather than being an established pre-professional, or merely becoming a subsequent, orientation of the candidates. Since the three audiences are representative samples of their respective populations, sex differences between elementary and secondary personnel are similarly distributed and cannot account for the significantly greater pupil concern of the elementary trainees in student teaching nor of the elementary teachers. The fact that experienced personnel are distinguishable by level may imply that pupil centeredness is a function of school level. This is a useful finding because it points to potential sources and times for change in attempting to increase secondary trainees' student concerns.

It needs to be noted that instructional leaders are distinguishable by level on factor 3, work situation. Given the item content of this factor and current reports of secondary schools, it is hardly surprising to find secondary leader concerns exceeding those manifest on the elementary level.

Systems Data Analysis

In a comparison of the three school systems with the largest number of Maryland students, one has appeared significantly lower than the others on factors two and three as well as the total measure; as reported by the instructional leaders in system 5. Further examination of these differences and their possible causes needs to be included in recommended future works with particular attention to potential relationship between concerns and extent, type and duration of pupil contact.

Center Data Analysis

Significant differences among centers appear only for the cooperating teacher category. All four "Concerns" measures are significant. The post hoc procedure however, was unable to isolate the source of these differences.

Summary

The developmental hypothesis, suggesting concern for situation growing with length of professional service, currently advanced by Fuller* is only partially supported by the results of this version of the "Concerns" measure. The present findings confirm the greater concern with role,

*"Becoming a Teacher" in 1975 Yearbook of the National Society for the Study of Education (edited by David C. Ryans), in press.

or self survival, evidenced by novices and the similarity of their pupil concerns to that shown by experienced teachers. However, it is worth noting that our student teachers, who were reporting about the identical setting as their cooperating teachers, evidenced significantly greater situational concern as well. (See Table Thirty-six)

Why should cooperating teachers evidence significantly lower work situation concerns than student teachers in Maryland while inservice teachers exceed students in the Texas sample? It is possible to puzzle over what might distinguish cooperating teachers from inservice personnel in general. Could those serving as cooperating teachers anywhere have different mastery of situation from their peers and consequently be perceived and assigned as more appropriate models by those who select cooperating teachers? Or might the presence of another "adult" reduce the built-in situational frustration? In either event, having a more satisfactory link between teacher and environment could mean lower concern about situation.

All student teachers are significantly more concerned with work situation than are cooperating teachers. Furthermore, students exceed cooperating teacher level of concerns on both elementary and secondary levels, in centers and in school systems. When those closer to direct instruction, student and cooperating teachers, are pooled and compared with those less directly associated, center coordinator, instructional leaders and supervisors, the directly involved exceed the others overall, in centers and on the elementary level. However, in the secondary level and noncenter set, personnel appear similarly concerned about work situation.

It is possible to conceive of work situation concern as an interaction of environmental frustration and role function. In general, the closer to direct delivery of instruction the higher the concern. However, there are indications of environmental influences operating as well. Secondary instructional leaders exceed the elementary principals revealing greater hardship and frustration felt on the secondary level. Again, in system 6 where accountability procedures have been in operation, environmental stress is also manifest via principals. Finally, system 3 indicates the presence of environmental stress manifest by all personnel in this urban setting in contrast with suburban location.

Work Situation Concern as Function of Role and Environment

Role Influences:

1) Novice > Experienced

2) Close > Less directly involved

Environmental Influences:

1) Level
   Secondary Instructional Leaders >Elementary Instructional Leaders

2) System
   IL 6 >IL5 System Stress manifest via principals
   System 3 >5 System Stress manifest via all personnel

Therefore work situation concern maybe conceptualized as a function of both role and environment. There are two role influences: novice over experience! and those directly involved in instructional delivery over those less directly involved. Where exceptions to these significant trends are observed they are mediated by environmental influences comprised of level and system effects which are seen

to interact with the observed role functions.

In summarizing all these concerns' results, it appears that the closer the individual is to direct classroom involvement, the higher the general level of concerns, with student teachers and cooperating teachers showing significantly greater concern scores. In this cross-sectional study, the early preservice candidates evidence higher role and situation concerns than do the student teachers. In addition, there is the presence of a level effect with respect to pupil concerns. Elementary student and cooperating teachers compared with those on the secondary level, exhibit significantly higher student concerns. These data do, in part, respond to Fuller's call for identifying specific trainee subgroup concerns evident in particular situations and stages. There are some suggestive findings about which program stages and/or environments are associated with what levels of concern for particular groups of pre and inservice personnel.

CHAPTER VI

SUMMARY, SUGGESTIONS AND REFLECTIONS

This study represents systematic, rather than impressionistic inquiry into the precise characteristics of what the center and noncenter program, or treatment, contain. In the first section of this chapter the six study questions are restated and answered directly accompanied by an overall summary of findings. The next section poses possibilities and recommendations for subsequent phases of the study. The last section is frankly speculative and questions the adequacy of the current models serving as bases for teacher education programs and by implication for their assessment.

SECTION ONE: SUMMARY

The basic question underlying the study is whether there are observable differences between centers and noncenters and if so, what distinguishes these two arrangements? There are observable differences between the centers and noncenters of quite specific sort. Both on the pre and inservice levels there appears to be more program, greater number and variety of exposures to training practices and instructional experiences in centers than in noncenters.

The responses below to the original six questions of the study give a more detailed description of findings.

Question 1. In what preparatory experiences are student teachers engaged?

Centers provide a significantly greater variety of options than are available in the noncenters in observation, teaching and related preparation. The overall magnitude of the center instructional experiences exceeds that found in the noncenters. Both instructional strategies and materials preparation are more frequent in the center setting. The complete observation and review cycle occurs significantly more often in the centers than in the noncenter situation.

Question 2. Do experienced teachers provide and review experiences for student teachers based on competencies acquired in inservice instruction?

Inservice instruction does serve as a basis for the experiences cooperating teachers provide for student teachers. The findings further suggest that available inservice content is only one of several sources that cooperating teachers draw on in providing training experiences for novices.

Question 3. What is the variation observed in available inservice content and sources of information among experienced teachers?

Center cooperating teachers have more inservice content and sources of instruction available than noncenter personnel. The number of competencies acquired by experienced teachers through inservice training and transmitted to student teachers is significantly greater in the centers than in the noncenter situations. The University is identified as the source of competencies acquired through inservice instruction significantly more often in center than in noncenter situations.

Question 4. Who holds conferences with student teachers?

Four conference sources, whose magnitude of appearance is not significantly different, account for almost all of the supervisory conferences conducted in the centers. These four sources are the cooperating teacher, acting alone; the center coordinator, acting alone; the cooperating teacher and center coordinator, acting together; and the cooperating teacher, center coordinator and university supervisor acting together. The pattern of presence or absence of supervisory conferences is alike for center and noncenter situations.

Question 5. Does the perceived process of supervisory encounters vary between providers and recipients?

The process of supervisory conferences is perceived similarly by providers and recipients and does not differentiate between center and noncenter settings. The only differences obtained signify discrepant findings between elementary and secondary levels.

Question 6. What are the differences in levels of concerns for pupils, teacher role and work situation among various educational personnel?

There are significant differences in levels of concern by various educational personnel. Generally, those close to direct instructional involvement, student teachers and pre-student teachers, evidence the highest concerns in contrast with one, or more, groups: principals, coordinators and university supervisors. Concern for role of teacher and work situation distinguished groups most often. However, elementary students and cooperating teachers exceed their secondary colleagues on level of pupil concern.

The design of this study is influenced by the goal free evaluation notion advanced by Scriven.* He suggests that knowledge of objectives, however specific and/or behaviorally stated, is of lesser importance - and might even be a source of distraction for evaluation - than what actually occurs in a particular program under review.

This has been the initial phase of a comprehensive and systematic attempt to identify what is happening in the centers independent of what center advocates and/or adversaries may prefer to perceive as occurring. The potential inherent in the centers for future field-based programs was clearly excluded from this investigation. It is, of course, hoped that by surveying the on-going practices of the centers and by utilizing the findings for shared discussion and joint school college decision-making, the potential of the centers might be realized most fully.

In this study the professional induction experience is reflected through a variety of specific training options, supervisory behaviors and levels of concerns. The analysis of the data consists of comparisons between center and noncenter settings, elementary and secondary levels and where frequencies permitted by school systems and individual center locations.

Most supervisory and concerns components tend to be the same regardless of situation, level, school system or individual center site. However, a majority of the experiences items do distinguish among various audiences, and there is also significantly observable difference in observation, teaching and related preparation and inservice options available. Where statistically significant differences obtain these favor the centers with respect to extent of preservice experience clusters, observation, and related options, inservice involvement and utilization of complete observation and review cycles. Where centers differ from noncenters, they tend to have more of everything, be it program components, or divergence between matched reporting groups. That is, not only do the centers have more program and more participants, but more mixed perceptions about what the program is, as well.

There are two conceptually linked areas of disagreement. The first comprises the observation, teaching and related preparatory options and the second consists of the instructional experiences clusters. There is some disparity between student teachers and cooperating teachers, independent of

*Michael Scriven "Goal-Free Evaluation" Communication to Evaluators, 2A, National Institute of Education, Berkeley, California, Fall 1971, pp. 1-6.

setting, concerning observation, teaching and related preparatory opportunities. Center and noncenter student teachers compared with cooperating teachers reveal essentially the same pattern and a similarly mild disagreement. At the same time the observation, teaching and related preparation dimension elicits far more difference between center student teachers and cooperating teachers. This is the reverse of the experiences profile pattern in which generational disparities were observed on half the process categories. (See Table Seventeen) Furthermore, when both content and process dimensions were included there was a 36% discrepancy between the overall rankings of the center students and cooperating teachers. It appears that the experiences content and/or process disparities are generational while the observation, teaching and related preparatory dimension is situational.

In this area for further sponsor inquiry, it is hypothesized that situational divergences would be comparatively more accessible for purposes of program adjustment than generational disparities. That is, with relatively little effort, the specifics of observation, teaching and related options might be expanded in the centers and/or the noncenters might be brought up to par with the centers on those items on which they are currently outperformed. Those experience variables that differentiate audiences across location and/or situation, which appear to be generational discrepancies, seem less likely to be altered through focused attention or even concerted effort.

There were also some differences between elementary and secondary level analyses but these were fewer than obtained in the contrasts between center and noncenter settings. It should be noted that the teaching portion of the training practices dimension clearly favored the elementary program and could serve as a guide to adjustments in secondary preparation. However, school systems and individual centers did not differ significantly either in training or experiences provided to yield clearly identifiable patterns.

These findings leave several areas for serious discussion among program sponsors. It is possible to conceive of further probes in at least two areas: locating potential sources that might account for specific program differences and discovering the subsequent impact of center participation. To wit, what are performance expectancies for graduates of a somewhat richer, more varied program with greater number of professional options and wider exposure to practice?

With respect to the ongoing activity, it is worth asking whether the program sponsors wish to address the increasing need for staff development activities jointly and to provide unique, or interchangeable, roles for each partner? Serious thought might be given to a concentrated, differentiated inservice thrust, recognizing all the special characteristics of adult learners and the increasingly stable teacher population for curricular and instructional planning. In the same vein, can the current conception of student teaching serve as a vehicle for professional renewal of the majority, rather than minority, of school staff? Furthermore, does non-differentiation, lack of specialization, noted in both the early preservice and student teaching comparison and in sources of inservice instruction fit sponsor intentions?

SECTION TWO: POSSIBILITIES AND RECOMMENDATIONS

Having found some differences between the centers and noncenters, one outstanding question is what difference these observed differences make in the career of a professional. The next phase of the center study aims to move toward identifying the instructional career and behavior of the center

program. The intent is to progress from instructional involvement to instructional behavior to related pupil behavior. Subsequent to establishing connections between teacher and pupil behaviors it becomes possible to proceed to pupil outcomes.

We found a richer, more varied, more instructional strategies and more materials based preparation in the centers both for the pre and the inservice groups. An obvious next question is whether given richer, more varied repertoires, the trainees and the experienced personnel actually have a chance to employ what they are now presumed to know how to do. Having established the presence of differences in instructional training, a next question is whether the obtained differences are also accompanied by observable differences in instructional behavior. A variety of observational studies are anticipated to seek answers to this question.

As an overall sequence, we recommend moving from Phase I, systematic description of treatment to Phase II general follow-up of both pre and inservice "products" to Phase III, observational studies of trainees and pupils, Phase IV, internal attitudes of personnel and V, pupil outcomes. Additional, smaller scale studies further probing the already available data from Phase I are especially desirable as well. Clearly the phases outlined above are only partially sequential. That is, it is quite possible, given personnel and material resources, to concurrently conduct Phases II, III and IV.

Both for purposes of illustration and as an actual proposal for Phase II we outline four questions that might guide the follow-up activity. It should be noted that the nonexistence of either unique system or center patterns is a practical boon for such a follow-up. Since the differences observed are center associated rather than tied to specific systems or sites, it is possible to generate randomly selected groups of both pre and inservice products, who might actually be located and whose participation may be solicited in such further investigation.

The proposed four phase follow-up moves from the external vantage point: the actions and/or perceptions of others, such as personnel officers and principals, through externally observable behavior, to internal attitudes of personnel and the ultimate, internal outcome of schooling, change in pupil attitudes and achievement. Therefore, these projected phases consciously continue to link the outside and the inside, that is, the behaviorist and humanist domains.

Possible Phase II Questions

1. What is the difference in observed teacher and/or pupil behavior and performance where significantly richer array of inservice activities have been reported?
2. What differences in hiring, selection and promotion of center and noncenter trainees obtain?
3. Does principal assessment of center and noncenter graduates differ?
4. Does pupil assessment of graduates of center and noncenter programs differ?

It needs to be noted that these four questions focus on graduates and inservice personnel mostly from an external vantage point. Figure Two outlines other possible outcome measures, levels of outcomes and audiences of which these two groups are a part. Additionally, the chart visually represents Phases II through V and differentiates three levels of outcome measures: immediate, intermediate and ultimate. These levels are, in turn, keyed to both external and internal types of outcome measures.

Summary of Possibilities for Comparative, Longitudinal Assessment of Center and Noncenter Products by Types and Levels of Outcome Measures

	Types of Outcome Measures		Levels of Outcomes
Audiences	External	Internal	
Pre-student teachers	Enrollment/withdrawal		Immediate (1)
	Observed student teacher and pupil performance	Trainee satisfaction in student teaching	Intermediate(2)
Student teachers	Observed teacher and pupil performance		Intermediate(2)
		Pupil attitudes and achievement	Ultimate (3)
Graduates	Hiring, retention, promotion Principal and pupil assessment		Immediate (1)
	Observed teacher and pupil performance	Teacher and pupil satisfaction	Intermediate(2)
		Pupil attitudes and achievement	Ultimate (3)
Inservice personnel	Observed teacher, trainee and pupil performance	Teacher and pupil satisfaction	Intermediate(2)
		Pupil attitudes and achievement	Ultimate (3)

FIGURE TWO

Question 1 above is predicated upon some intriguing - albeit far from perfectly established - connections between instructional variety and pupil gain.* There appears to be sufficiently demonstrated association between variability in instructional techniques, materials and activities and cognitive pupil gain to render this a promising area for inquiry.** In light of the significantly greater variety of instructional strategies and materials noted in the center treatment it is worth asking whether this greater variety provided in the continuous preparation program of both pre and inservice personnel is transmitted in some recognizable form into classroom behavior and transformed into pupil gain. That is how do pupils, the ultimate clients, receive the benefit of a richer, fuller, more varied continuous teacher preparation program? The cooperating teachers exposed to a greater variety of instructional experiences might transmit these both to the novices and to their own pupils as well. Consequently, these pupils might be possible target groups for tracing such effects. Another prospect for transmission is, of course, the new entrant to the profession.

Pursuit of this possible connection between training program effects and ultimate pupil gain is a long range and long shot activity in light of the work of Coleman,*** Mosteller and Moynihan****

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* Heath, Robert W. and Nielson, Mark A. "The Research Basis for Performance - Based Teacher Education" Review of Educational Research, v. 44, no. 4, Fall 1974, pp. 463-484.

** Rosenshine, Barak and Furst, Norma "Research on Teacher Performance Criteria" in Smith, B.O. Research in Teacher Education, Englewood Cliffs, New Jersey, Prentice-Hall 1971., pp. 37-72. Rosenshine, Barak Teaching Behaviors and Student Achievement, International Association for the Evaluation of Educational Achievement, IEA Studies, No. 1, National Foundation for Educational Research in England and Wales, 1971, pp. 137-147.

*** Equality of Educational Opportunity, Washington, D.C. U.S. Office of Education, 1966.

**** On Equality of Educational Opportunity, New York: Random House, 1972.

and Averch et al* indicating the currently small, measureable pupil outcomes attributable solely to schooling. That is, the potential contribution of teacher preparation to pupil gain faces great odds at the start due to the extreme smallness of any school effects associated with pupil gain. Nonetheless, it is worth considering and attempting to investigate whether the pupils of teachers benefitting from center programs are distinguishable on presently used measures from the achievement of pupils of those personnel, who have not had such exposure. Given the paucity of measureable schooling effects, such a study would be undertaken with a genuine, not merely formally stated, null hypothesis.

Besides conceiving product studies it would be useful to attempt to untangle the potential sources of center effects. The presently perceived, center effects may be attributable to several interactive phenomena. It is possible that center differences are due to concerted deliberate effort of center personnel. Which combination of personnel is central needs to be probed: coordinators' systematic interaction with cooperating teachers, principal and coordinator planned staff development activities, self selection of professional growth options by inservice personnel and availability of print and nonprint instructional materials are all potential contributors to the fuller, more complete center treatment observed.

It is also worth considering whether the observed differences in center options are the result of participation in teacher preparation over time. Although the random sample of noncenters did include long-term participants in teacher preparation, it remains for a follow-up study to separate the reports according to length of participation in sponsoring preservice candidates. In addition to attributing the observed differences to concerted effort, they may also be caused by the concentration of candidates all seeking to learn entry level skills for teaching. The concentration hypothesis is predicated upon the notion of speedier and greater diffusion of training practice where more candidates are present as potential beneficiaries. Verification of this conjecture is possible only for the center sample where contrasts between the high and low enrollment groups can be pursued.

There are several other small scale studies that may be performed utilizing the data already collected. In addition, there are other investigations that would carry further the findings of Phase I. The questions below start with those for which the data are at hand and conclude with those where additional information needs to be gathered.

Additional Questions concerned with Identifying Sources and/or Impact of Treatment Differences:

1. Are different areas of specialization differentially associated with training practices, instructional content and process, levels of concerns and/or supervisory practices?
2. What is the relative contribution of level and center influences on available training practices and magnitude and kind of instructional experiences?
3. How does the training program utilization differ between early and late decision-makers?
4. Are there recognizable patterns in the utilization of training practices by those exhibiting high, medium and low levels of concern for pupil, role and work situation?
5. Do center graduates and/or inservice participants differ in pursuit of further study with respect to content or sources, when compared with noncenter peers?

*How Effective is Schooling? Santa Monica, California: Rand Corporation, 1971.

6. What is the relationship between the extent, type and duration of pupil contact and level of concerns?
7. What piece of the elementary program accounts for the significantly higher pupil orientation observed?
8. Why are secondary supervisory conferences significantly more participatory than elementary ones?
9. Is there higher awareness of training procedures to be utilized in the induction of novices in the centers?

As noted earlier, a distinction needs to be made in the continuing phases of the center study between those concerned with potential impact on pupils, educational personnel and program and those which attempt to identify possible sources for the observed differences. It might be recalled that to date this study provides specific information: a detailed, systematic description of the center treatment but can make no claims about which of several center components might be responsible for which portion of the observed differences.

This distinction is both theoretically and practically - albeit not statistically - significant. Identifying specific center components, or inputs, that are associated with particular outcomes would allow experimental, or at least quasi-experimental alteration of the factors presumed to have specific effects. Additionally, at times of shrinking resources such as the present, it would then be possible to concentrate personnel energy and material support on those areas, or inputs, being responsible for the observed program differences. Eventually, the connection between program inputs, mediated by treatment, and impact might then be grounded more firmly. That is, attention to possible sources of observed program differences is linked to the concern with what is the impact of those differences. Where do the obtained differences come from and what difference do the differences make, is another way of stating the relationship between the two areas of source and impact.

SECTION THREE: REFLECTIONS

The joint institutional support for, and participation in, inquiry into practice has been heartening. Nonetheless, there have been inevitable frustrations in the course of this self study. Technical problems, data processing delays, human fears concerning findings and their utilization, and suspicions about motives for the inquiry were part of the context in which this study was accomplished. But, the greatest hardship of all remains an intellectual one. Quite simply there is almost no theoretical foundation on which to base a specialized investigation into teaching. Grand, or grounded theories of instruction remain largely to be discovered. As a consequence this study is essentially atheoretical, albeit empirical, and guided by some tentative models of teaching. It is worth noting that nearly all the questions posed by school and campus personnel concerning the center setting had a common core.

The implicit model underlying most of the questions in this study, derived from sponsor assumptions, is the expanding repertoire of apprenticeship. Conceiving of teaching initially and beyond as skill acquisition and opportunities for practice has advantages. Not only are the skills describable but they are readily quantifiable and thus allow for verification of the model.

But, the study is somewhat more eclectic than such a single model of teaching would imply. It draws on two other models as well. In contrast with the apprentice framework there is the far

less easily verifiable Deweyian reflective conceptualization which guides the work of Daniel Solomon. Posing the indicators and instances of reflectiveness in professional development led to the supervisory conference as the most readily identifiable locus for reflectiveness. With the rather sparse data at hand and with the wisdom of hindsight, this source may not have been the best for verifying the existence of the reflectiveness model.

The third model underlying the study is the notion of teaching as becoming, frequently associated with Arthur Combs. The developmental stages conceptualization of Frances Fuller, representing this framework, was explored extensively and some suggestive results with partial disconfirmation of the model have been presented.

Having verified the existence of a rather recognizably richer, fuller, more varied training setting in the centers but little difference among systems or individual center sites does allow program sponsors to ponder the worth of the underlying apprentice model as well as the general similarity among the units. It is now possible more explicitly to return to other models of teaching: the reflective as well as the becoming, and perhaps others as well, and actively plan programs and assessments consonant with the model's primary emphases.

In selecting assessment and inquiry strategies the choice is often perceived as being between carefully controlled, small scale, single variable focused experimental investigations and more naturalistic, holistic, descriptive, field survey methods. Both approaches seek to build theory which will predict behavior and thereby guide practice. In our view conceiving of potential research strategies as a range of options along a continuum from philosophical speculation to consistency analysis* to historically, anthropologically and sociologically derived field methods** to observational approaches*** to quasi-experimental or experimental designs**** and beyond is the most responsive approach. Although alignment with a methodological party is not a requirement for inquiry in teacher education, starting with a conceptual model of teaching is helpful for initial focus and definition. While we concur with conventional wisdom which suggests that the selection of research methodologies is determined by the nature of the problem investigated we would add that the available expertise and the preferences of human subjects and investigators for particular research strategies need to be included as well.

What we call for is a greater variety of techniques addressing a range of concerns in teaching from the specific to the general in a systematically interrelated fashion. We humbly remind ourselves that the long-sought theoretical underpinning of teaching is only partially visible at present. While its patterns and regularities may be exceedingly complex it remains for us to devise strategies that render it more readily comprehensible, transferable and capable of improvement.

Toward this end we view moving back and forth across several conceptual models utilizing a range of research techniques in an orderly fashion as a promising alternative to despair, or to single-minded

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* Robert E. Stake and Terry Denny "Needed Concepts and Techniques for Utilizing More Fully the Potential of Evaluation" in Educational Evaluation: New Roles, New Means, 68th Yearbook of the National Society for the Study of Education, Part II, Chicago, U. of C. Press, 1969, pp. 370-390.

** Frank W. Lutz and Margaret A. Ramsey "The Use of Anthropological Field Methods in Education," Educational Researcher, vol. 3, no. 10, November 1974, pp. 5-9.

*** Donald Medley and Harold Mitzel "Measuring Classroom Behavior by Systematic Observation" Handbook of Research on Teaching, ed. N.L. Gage, Chicago: Rand McNally, 1963, pp. 247-328.

**** Donald T. Campbell and Julian C. Stanley "Experimental and Quasi-Experimental Designs for Research on Teaching in Gage," Ibid.

conceptual and/or methodological fixation. We do not simply call for any kind of inquiry but rather for an array of investigations that are linked either conceptually and/or methodologically. A contemporary version of the early agricultural revolutionary three-field rotation plan is the essence of the notion.

For purposes of illustration we reduce the range of methodologies proposed to two: naturalistic and experimental and the models to three: apprentice, reflective and becoming. Therefore, the systematic progression strategy proposed here moves back and forth, horizontally, vertically and diagonally over the cells in Figure Three. This represents an attempt to seek connections between

	Conceptual Models of Teaching		
Inquiry Modes	Apprentice	Reflective	Becoming
Naturalistic			
Experimental			

FIGURE THREE

the multiple and overlapping roles of teaching that may most productively be illuminated by each method. By allying what are often seen as competing views and techniques we acknowledge that teaching has many purposes, many outcomes and many values. These complexities, inherent in any educational program assessment, may be faced most fully if the range of available research techniques are concurrently and/or sequentially brought to bear on at least tentatively bounded conceptual areas. Both for maximal theoretical and practical pay-off we propose this systematic progression strategy to guide successive phases of the center study and other investigations as well.

READER RESPONSE SHEET

1. Now that you have read this report, what questions do you have?

2. If you had free access to any piece of knowledge in teacher education what next question would you want to have answered?

Signature

Please complete and return this sheet to Dr. Judith Ruchkin, Office of Laboratory Experiences, University of Maryland, College Park, Md. 20742

Appendix A

UNIVERSITY OF MARYLAND
COLLEGE OF EDUCATION
COLLEGE PARK 20742

OFFICE OF LABORATORY EXPERIENCES

May 1, 1973

Dear Participant:

The school systems that accept and help to train student teachers together with the College of Education have undertaken a self study of student teaching. Improvement of student teaching is the objective of the self study. In order to improve the program, it is first necessary to find out what the current program is. But it turns out, as you probably already know, there are many different programs all called student teaching.

We are asking you to tell us about the professional experiences which made up your student teaching. Since there are many different programs, there is a great variety in the kinds of experiences each student teacher has. This survey is a composite of all the experiences, or at least as many as we could identify, found in one or more student teaching programs. You probably did not do many of the things listed. Don't be surprised if you don't check even one item on some pages. Please be assured that your responses will be kept confidential. In fact, the questionnaire collection scheme will not permit identification of any individual. When you have completed the survey, kindly place it in the return envelope provided, seal and deliver to the person collecting them in your building.

You have the first hand knowledge we need. Please help by sharing your experiences and concerns with us.

Thanks!

Sincerely yours,

Judith P. Ruchkin
Associate Director and
Study Coordinator

JPR:dg

Appendix B

STUDENT TEACHER SURVEY

This survey is soliciting information about the range of professional experiences that students encounter during their student teaching. As you will note, we would like to find out approximately when and by whom the information or experience was provided. Please respond to the questions in terms of your student teaching experience.

I. General Information

A. Female_____Male_____

B. Age_____

C. Grade point average (as best you remember it to the nearest hundredth)_____.

D. Student teaching was conducted in a Teacher Education Center_____Noncenter_____setting.

E. Student teaching was conducted at the elementary_____, middle_____, or secondary_____level(s).

F. I am a major in the Department of Dance_____, Early Childhood-Elementary Education_____, Industrial Education_____, Music_____, Physical Education_____, Secondary Education_____, Special Education _____, Other (please specify)_____.

G. My choice for a student teaching assignment was in a Center_____Noncenter_____setting.

H. My parents' occupations: Mother_____, Father_____.

I. My parents' education: Mother_____; Father_____.

J. Number of different classes I observed during student teaching:_____.

K. Number of different subject areas I observed during student teaching:_____.

L. Number of different teachers I observed during student teaching:_____.

M. Number of different student teachers I observed during student teaching:_____.

N. Number of different grade levels I observed during student teaching:_____.

O. Number of different schools in which I observed during student teaching:_____.

P. Number of different schools in which I taught during student teaching:_____.

Q. I was_____was not_____assigned a mail box separate from my cooperating teacher.

R. I was_____was not_____introduced as a member of the teaching staff during a P.T.A. meeting.

S. Subjects I taught during student teaching were:_____.

T. For the most active week in which I taught, the average number of hours of class instruction I taught per day was_____hours.

U. During the most active week in which I taught, the number of class hours I taught during the week without my cooperating teacher or other teacher being present was_____hours.

V. I had_____did not have_____a voice in selecting my cooperating teacher.

W. The total number of teachers under whom I taught during student teaching was:_____.

X. I observed high_____,average_____, low_____ability classes.

Y. I taught high_____, average_____, low_____ability classes.

Z. I decided to become a teacher when I was in elementary school_____, junior high school_____, senior high school_____, college_____, other (please specify)_____.

AA. Which student teaching seminars did you attend during this semester?_____

BB. After graduation my career plan is to:_____

CC. Area of specialization or concentration:_____

DD. The three most exciting books I read recently are:_____

_____and_____.

Instructional Experiences	Approximately When was the Performance and by Whom was it Observed								Approximately When was the Performance Reviewed and by Whom							
	Myself Unobserved	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinato.	School Principal	School System Supervisor	University Supervisor	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor
Procedures for Directing Student Attending (Looking-Listening) Behaviors																
Reduction of the Complexity of a Learning Task or Social Situation																
Reduction of the Level of Crowding or Noise																
Restructure Seating Pattern																
Special Verbal Warning																
Visual Prompting																
Other Important Experiences (please specify)																

III. Other Professional Experiences

Please check only those experiences you have engaged in during student teaching. If you tried the experience and no one observed you, place a check in the "Myself" column with the approximate date(s) you tried them. If someone did observe your effort, please identify the date(s) on which the observation(s) occurred, and the individual who observed you. If someone reviewed your effort and provided analysis, please identify the approximate date(s) on which the review(s) occurred and the individual(s) who provided feedback on your effort. If you engaged in an experience several times please provide the approximate dates of the most recent performance, observation and/or review. More than one person may have observed the same experience and more than one person may have reviewed the same experience. Please check all individuals listed in the column headings.

Professional Experiences	Approximately When was the Experience and by Whom was it Observed								Approximate Date(s) when Reviewed and by Whom							
	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Principal	University Supervisor
Construct a Diagnosis of an Individual Learning Problem																
Construct a Learning Station																
Construct a Lesson for Given Behavioral Objective																
Construct a Test																
Construct Behavioral Objectives																
Construct Nonbehavioral Objectives																

Professional Experiences	Approximately When was the Experience and by Whom was it Observed								Approximate Date(s) when Reviewed and by Whom							
	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Principal	University Supervisor
Create a Laboratory or Simulation Exercise																
Create a Slide, Filmstrip, or Slide Tape Sequence																
Interpret Results on a Standardized Test																
Perform an Interaction Analysis																
Select a Standardized Test for Administration																
Other Important Experiences, (please specify)																

IV. Curriculum Materials Used

Name the author, title and/or publisher of the textbooks and other commercially available curriculum materials from which you taught, where the materials were made available to you, who recommended you use the materials, and the approximate date(s) of their class use by you. Print materials are meant to include all printed items that are used for instruction: textbooks, maps, pamphlets, booklets and so on.

Print and Non-print Curriculum Materials that I Used	Location Where Materials Were Made Available						Individual Who Recommended Their Use								Date(s) When Used
	Classroom	School Media Center	Center Media Center	Central School System Media Center	College of Education Curric. Lab.	University, other than Curric. Lab.	Myself	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor	

II. Classroom Instructional Experiences

Please check only those experiences you have engaged in during student teaching. If you tried the experience and no one observed you, place a check in the "Myself" column with the approximate date(s) you tried them. If someone did observe your effort, please identify the date(s) on which the observation(s) occurred, and the individual who observed you. If someone reviewed your effort and provided analysis, please identify the approximate date(s) on which the review(s) occurred and the individual(s) who provided feedback on your effort. If you engaged in an experience several times please provide the approximate dates of the most recent performance, observation and/or review. More than one person may have observed the same experience and more than one person may have reviewed the same experience. Please check all individuals listed in the column headings.

Instructional Experiences	Approximately When was the Performance and by Whom was it Observed								Approximately When was the Performance Reviewed and by Whom							
	Myself Unobserved	Cooperating Teacher	Other Student Teacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor	Myself	Cooperating Teacher	Other Student -eacher	Other Teacher	Center Coordinator	School Principal	School System Supervisor	University Supervisor
A. Instructional Strategies:																
Administration, Grading and Interpretation of a Test																
Administration of a Standardized Test																
Discovery - Inquiry Lesson																
Individualized Instruction Lesson																
Lesson for Introduction to, or Closure of, a Unit																
Lesson with Higher Order Questioning Techniques																
Microteaching Lesson																
Parent Conference																
Plan and Supervise a Field Trip																
Small Group Instruction Lesson																
Test Administration of Teacher or Student made Test																
Various Immediate and Delayed Feedback Procedures in Lesson																
Wait time or Delayed Answering Lesson																
B. Classroom Control Strategies:																
Establishes Class Routines Jointly with Students																