

AN EXPERIMENTAL STUDY OF THE EFFECT OF SEMINARS
ON ATTITUDES OF ELEMENTARY STUDENT
TEACHERS TOWARD PUPIL CONTROL

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PREFACE

This study is concerned with comparing two contrasting theoretical models of curriculum development in a teacher education course. The primary objectives were to establish a humanistic orientation toward pupil control on the part of student teachers and to attempt to maintain this ideology throughout the student teaching experience.

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Over the last seventy-five years the study of curriculum has occurred in two rather distinct positions of psychological thinking, the behaviorists and the humanists. In the realm of curriculum theory this split significantly affected the direction of teacher education programs in the university setting. The emphasis in the behaviorist position is concerned with a product oriented approach. That is, students listen to lectures, practice their skills in the field, and are evaluated according to pre-established criteria. However, the principles of this approach are brought into question by the proponents of humanistic psychology or the "third force movement." They conceive of learning as cooperative interaction and experience between students and teachers. Thus, the central problem of this study was to contrast two instructional approaches that reflect these two theoretical positions regarding curriculum development in a teacher education course.

The purposes in using these two approaches were twofold. One objective was to establish a humanistic orientation toward pupil control on the part of student teachers. The second was to endeavor to maintain a humanistic attitude on the part of the student teachers throughout the student teaching experience.

Curriculum theory from the behavioristic model is generally patterned

after the principles of scientific management established by Taylor (1947). His approach to scientific management was that mankind could be programmed to be efficient machines. This concept of man-as-machine enabled Taylor and his associates to demonstrate that productivity could be improved with maximal efficiency at minimal cost.

These scientific principles were first applied to education by Bobbitt (1918) in his book The Curriculum. He saw curriculum planning as assessing the needs of society, formulating those needs into objectives, ordering them sequentially in terms of structure and difficulty, and, finally, teaching children the pre-determined content (Eisner, 1979).

Molnar and Zahorik (1977) in Curriculum Theory state that the principles of scientific management applied to education

. . . meant that the student was to be treated as raw material to be processed and transmitted into a product . . .

If schools were to become as efficient and effective as factories, waste in the curriculum needed to be eliminated. Just as jobs were analyzed in industry to discover their essential features, various life activities were analyzed so that they could be taught more efficiently in schools. This process resulted in the identification of numerous discrete skills and other learnings, and the emergence of specific detailed objectives as the first and most important decision in curriculum development (p. 2).

This scientific view of curriculum planning through a rational, systematic approach is exemplified in Tyler's (1949) Basic Principles of Curriculum and Instruction. The crux of his position is identified in his four questions for curriculum planning. They are known by most students of education and according to Tyler are fundamental and ". . . must be answered in developing any curriculum and plan of instruction" (p. 1). These four questions are:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?

3. How can these educational experiences be effectively organized?

4. How can we determine whether these purposes are being attained?

Several attempts have been made to modify and make more specific the Tyler model but none has really changed its substance (Taba, 1962; Goodlad, 1958; Herrick, 1950). His view remains dominant today.

This scientific movement in the field of education is in direct conflict with the more humanistic ideas that are embodied in Dewey's experimentalism and the progressive education movement. The desirable ends of this movement are the realization of human potential and social reconstruction (Macdonald, Wolfson, and Zaret, 1973). In their book Curriculum Development, Gilchrist and Roberts (1974, p. 2) suggested that inherent in the mechanistic approach to curriculum development and educational programming were its ". . . discontinuity, fragmentedness, and its separateness of parts and functions." They stated that:

. . . Perhaps it's less important for students that the right decisions be made than that they have the experience of helping to make the decisions that shape their school experience.

Perhaps we have been mistaken in believing that the human learner could be part of an institutional machine. We have assumed that a mechanistic organization could produce well-educated graduates much as a mechanistic factory produces cars. Can a living being be shaped from without like a machine part is shaped (p.2)?

Clearly, these two arguments are centered on ends and means, or, that is to say, on the relative importance of content and process. Dewey (1916) stated that the aims of education, or ends, should be determined by the individual and emerge from the free growth of that person's experience. In other words, ". . . ends or objectives are outcomes of activity that give meaning to and redirect future activity" (Molnar and Zahorik, 1977, p. 4). In contrast, "Tyler stressed ends before means and a linear relationship between ends and means" (Molnar and Zahorik, 1977, p. 4).

Those tending toward the mechanistic, ends-means point of view believe that there is a body of content that students should learn. They also feel that the sequential organization of this content is the best assurance that it will be learned. Parker and Rubin (1966, p. 1) identified content as the ". . . compendium of information which comprises the learning material for a particular course or a given grade." When primary emphasis is placed on content, the implication is that the learner is placed in a passive role, submitting to the higher authority and decisions passed down to him.

However, when the focus of the curriculum is the learner, process is stressed. Parker and Rubin (1966, p. 1) again defined process as the ". . . cluster of diverse procedures which surround the acquisition and utilization of knowledge." Berman (1968) identified several skills or processes as being the orientation of the school curriculum. The skills included perceiving, deciding, valuing, knowing, and communicating. This type of curriculum is viewed as dynamic, emerging, and unfolding. The person who can engage in these processes Berman has chosen to call "process oriented."

According to Dobson and Dobson (1979, p. 52) the content centered curriculum is ". . . based on the notion that human beings are the sum total of their experiences--passive victims of their environment." Conversely, the process centered curriculum is ". . . committed to the notion that human beings are active, goal-seeking organisms eager to profit from encounters with the environment."

Basically, the present study compared these two divergent views of acquiring and utilizing knowledge. The importance of the content and process as the base for curriculum models was exemplified in two different seminars for student teachers. Classroom control was the focus of these two seminars.

Purpose of the Study

Our education today is largely mistake-centered. Our children are exposed to a sequence of discouraging experiences, both at home and at school. Everyone points out what they did wrong as well as what they could do wrong. We deprive our children of the only experience which can really promote their growth and development--the experience of utilizing their own strength (Dreikurs and Cassel, 1972, p. 25).

One of the objectives of schools has been to equip students with the positive attitudes necessary for making the world a better place to live. Therefore, it would seem that educators should strive to make the school a positive model of that better world. Logically, it is the teacher who will create the atmosphere of allowing children to develop into the kinds of persons who can combine the liberties of living with the responsibilities of life.

Willower and Jones (1963) and Hoy and Rees (1977) demonstrated that as teachers experience public school teaching they become more custodial. Hoy (1967) also maintained that attitudes of student teachers tend to become more custodial and less humanistic during their student teaching. He proposed that this change was due to the socialization process of the more custodial schools. In the teacher education program, little has been done to attempt to maintain a humanistic ideology throughout the student teaching experience. Knowledge in this area could advance the realization of humane education as a goal of education.

The purpose of this study was to attempt to establish and maintain a humanistic orientation held by student teachers toward pupil control throughout the student teaching experience. This attempt was made by determining the effectiveness of three different seminars. One seminar was process oriented, one was content oriented, and the third was the traditional student teacher seminar. The stability of student teacher attitudes

toward pupil control before and during student teaching was examined in each of the three groups. The differences in attitudes among the three groups, as a possible result of the seminars, were also examined.

The following questions were considered:

1. Will the student teachers' humanistic orientation toward pupil control be maintained during the student teaching experience? If so, can the maintenance be attributed to their involvement in different seminars?

2. Are there any significant differences in the three groups' attitudes toward pupil control that can be attributed to their involvement in different seminars?

Hypothesis

This study proposed to test the following null hypothesis:

H_0 : There are no significant differences between means of any of the three treatment groups on any of the three measures.

I	Ia	Ib	Ic
II	IIa	IIb	IIc
III	IIIa	IIIb	IIIc
	Pre-test a	Post-test b	Post-test c

Group I was the process centered seminar.

Group II was the content oriented seminar.

Group III was the traditional seminar.

"a" was a pre-test given at the beginning of each seminar.

"b" was a post-test given at the conclusion of each seminar.

"c" was a post-test given at the end of student teaching.

The research hypothesis was stated in the following formula:

$$IIIc > Ia = IIa = IIIa > IIb > Ib = Ic = IIb = IIc.$$

IIIc was the traditional group after student teaching.

Ia, IIa, and IIIa were the groups before treatment.

IIb was the traditional group after the eight weeks of treatment.

Ib and IIb were the process centered and content centered groups, respectively, after treatment in which gains toward a humanistic attitude were expected.

Ic and IIc were the process centered and content centered groups, respectively, at the conclusion of student teaching in which maintenance of gains was anticipated.

Definitions

In order to test the hypothesis of this study, definitions for the major variables were necessary. The following definitions were given:

Group Process Seminar: The approach used in this seminar was a positive, non-censoring, non-directed experience in which student teachers could explore their ideas together. The content of the seminar was not pre-determined, but evolved as a result of the current needs, interests, and concerns of the students within the framework of the elementary school program. The role of the leader was one of facilitator and supporter.

Content Centered Seminar: The strategy used in this seminar was a direct approach in which particular methods, suggestions, and ideas were shared with student teachers regarding classroom control. The seminar focused on didactic instruction, modeling, and simulation of theoretical premises and methods of classroom control. It also included concrete, practical applications of the theory. The student teachers were given written

assignments to complete during student teaching. The reports were read and evaluated by the instructor.

Traditional Student Teacher Seminar: This was a one-hour-a-week meeting coordinated by an Oklahoma State University staff member. It was designed to orient student teachers to the educational profession regarding such subjects as job interviews, teacher certification, professional teacher organizations, and other topics of interest that were suggested by the student teachers. This seminar was used as a base for comparing the results of the other two seminars. It was also utilized to control for the Hawthorne effect.

Humanistic Attitude: Students are perceived in ". . . psychological and sociological terms rather than moralistic terms" (Willower, Eidell and Hoy, 1973, p. 5). Learning is viewed as active participation rather than passive receiving of facts. Close personal teacher/child relationships are established. They allow for open communication and increased student self-control rather than teacher-imposed control (Hoy, 1967).

Custodial Attitude: Students are seen as being in dire need of a highly controlled environment. The teacher's primary role is to maintain order with punishment as the necessary form of control. The students are thought of in terms of appearance, behavior, and socio-economic status and viewed as irresponsible and undisciplined. Therefore, teachers with this ideology feel that school should be an autocratic type of organization and students should accept the authority of the teachers without question (Willower, Eidell, and Hoy, 1973).

Pupil Control Ideology: Beliefs or attitudes of teachers with respect to classroom control are measured on a continuum ranging from humanism at one extreme to custodialism at the other.

Assumptions

For the purpose of this study, the following assumptions were posited:

1. A major goal of the public schools is for the students to learn self-discipline to the extent that they can interact appropriately with others.
2. Student teachers should have a repertoire of acceptable and appropriate alternative teacher behaviors for dealing with pupil behavioral problems.
3. The classroom climate that is conducive for optimal student learning is preferred.
4. The attitudes of teachers concerning pupil control affect the manner in which a teacher interacts with students.
5. Randomization of the subjects to the various groups yielded comparable groups for study.
6. The treatments of Groups I and II were enough different from the treatment of Group III to yield significant differences in the three groups.
7. The pupil control ideology of student teachers can be adequately measured on a pencil and paper instrument.
8. The students accurately gave their personal opinions on Hoy's Pupil Control Ideology Form on all three measures.

Limitations

This study was limited in that all elementary student teachers were not included in the study. Students in the ONSITE program, an alternative plan in elementary education, were eliminated from the study. The early childhood education students and the students majoring in special education were also not involved. Therefore, the sample is only representative of the students in the Oklahoma State University elementary block program.

A limitation existed because of the communication among the three groups. The activities and content of each particular seminar were discussed informally among the different groups.

Another limitation was sampling in time in that the study only consisted of one semester rather than several. Therefore, the results could only be generalized to the particular group of students enrolled in that one semester.

A final limitation in this study was that all three measures were secured from administration of the one form of the Pupil Control Ideology Form instrument (Willower, Eidell, and Hoy, 1973). An interactive effect of testing could have operated in the derived scores.

CHAPTER II

BACKGROUND INFORMATION

Introduction

Three instructional strategies were compared in terms of their ability to maintain student teachers' humanistic orientation toward classroom control. One of the strategies was termed a content approach. Another was referred to as a process approach. The third strategy was the traditional seminar that is held every semester for elementary student teachers. This seminar served as a control group.

The material in this chapter is divided into three sections. Section one consists of a review of the literature in three areas: (1) the need for humanistic education, (2) the attitudes of student teachers related to classroom control, and (3) the various kinds of seminars conducted for student teachers. The second section describes the purposes and results of the pilot study. The third section is concerned with the implications of the review of the literature as well as the pilot study in deriving the research hypothesis.

Need for Humanistic Education

Blume (1971) in "Humanizing Teacher Education" defined humanistic education as

. . . including more than the acquisition of a few more facts and a faster reading rate. It must be the instrument through which people release the tremendous creative

potential that was born into all of us . . . We must also help our young to develop compassion, concern for others, faith in themselves, the ability to think critically, the ability to love, the ability to cooperate with others, the ability to maintain health, and above all, the ability to remain open to other people and new experiences (p. 411).

The very core of our calling as educators is a belief that all persons have the ability to learn and develop and that, regardless of our job description, our role is to facilitate that development. Randolph (1978, p. 602) stated that ". . . schools should be places that nurture human potential in humane environments." Combs (1978) wrote:

If education is to meet the current and future needs of our society, humanistic objectives and humanist thought must operate at the very heart of every school and classroom in the nation (p. 299).

The goals of a humanistically oriented educational system as determined by Combs (1978, p. 300) are ". . . the development of intelligent behavior, the production of self propelled, autonomous, creative, problem solving, humane, and caring citizens." Of course, these have always been goals of our educational system but generally the more easily measured skills and subject matter have been the major foci of our schools. Dobson and Dobson (1976, p. 4) stated that the purpose of the humane elementary school is to ". . . provide an atmosphere that allows each child to reach toward his unlimited potential to love, to create, to learn, and to grow."

Rogers (1977, p. 74) maintained that the implications underpinning a humanistically oriented school environment are clear: ". . . the student retains his power and control over himself; he shares in the responsible choices and decisions; the facilitator provides the climate for these aims."

Combs (1962) proposed that teachers cannot provide a humanistic environment until they first are aware of their own humanness. That is, ". . . in the process of their own becoming, each teacher should strive

to discover and accept his very best possible self and his own individual teaching style" (p. 114).

The purpose of this study was to attempt to continue throughout the student teaching experience the student teachers' humanistic ideology toward pupil control. It seemed logical that, in turn, the ideology and/or beliefs of the student teachers would influence their own classroom behavior. This was supported by the research of Harvey, Prather, White, and Hoffmeister (1978). The more humanistic teachers were less rule oriented and less upset and punitive toward rule violations. They also were more inclined to offer explanations for the few necessary rules.

Similarly, Beattie and Olley (1977) acknowledged that the teacher is the primary determinant of classroom climate. They discussed the relevance of teacher influence during times of non-instructional activities and illustrated that teachers in an open or humane climate have a wide range of behaviors that exhibit warmth and indirectness.

Dawson (1977) discussed the relationship between elementary teachers' attitudes and behavior. He wrote, "The basic life beliefs and educational beliefs that a teacher adheres to will be reflected in the classroom" (p. 150). Silberman (1969) also examined whether teacher attitudes toward their students were reflected in the classroom behavior of the teachers. He determined that ". . . teachers' attitudes are generally revealed in their actions in spite of many forces operating to contain their expression" (p. 406).

Dobson and Dobson (1979, p. 12) claimed that ". . .there is a direct relationship between personal beliefs held by the teacher and teacher practices;" "The manner in which one behaves and the choices one makes reflect one's basic attitudes, beliefs, and values" (p. 13); "Different beliefs reflect and demand different behaviors" (p. 13).

Dobson, Goldenberg, and Elsom (1972) attempted to determine if pupil control ideology affected the verbal behavior, among other things, of the classroom teacher. They found that ". . . humanistic teachers utilized a significantly greater number of verbal behaviors categorized as accepting and developing student ideas" (p. 79).

In the same vein, Combs (1978, p. 558) claimed that "Good teaching is a product of teacher beliefs or perceptions." He wrote in an earlier document (1962):

Whatever we do in teaching depends upon what we think people are like. The goals we seek, the things we do, the judgments we make, even the experiments we are willing to try are determined by our beliefs about the nature of man and his capabilities. It has always been so (p. 1).

Clearly, then, institutions of higher learning should concern themselves with this beliefs-behavior relation. Rogers (1969) in Freedom to Learn recognized the importance of the affective factors in teacher education. Combs (1962), as well, recognized that teacher attitudes should be of special interest to educators in that optimum conditions for pupil growth are provided by a humane classroom environment, while a custodial classroom environment interferes with optimal growth and many times results in a negative self concept. Hoy and Appleberry (1969, p. 14) concurred when they wrote: ". . . schools with a humanistic pupil control orientation appear to be significantly more effective than those with a custodial orientation." It appears, therefore, that a teacher's orientation toward pupil control does seem to affect selected teacher behaviors in the classroom.

Teachers are perhaps then the most important key to a successful classroom. Their attitudes have been shown to also affect pupil behavior and learning and classroom climate. Polardy (1969), as well as Rosenthal (1968), presented evidence that the attitudes of teachers influence the achieve-

ment of their students. Teachers who expect students to achieve at a particular level generally have students fulfill those expectations.

Harvey, et. al. (1968) reported in their study that teacher belief systems affect their students' learning and performance. They found that the less dictatorial and less punitive teachers were significantly related to the more preferable performance of their students; that is, the students were more cooperative, involved in classroom activities, and were higher in achievement.

It can be concluded from these studies that teacher attitudes do in fact influence pupil behavior, pupil learning, school climate, and school effectiveness, as well as the teacher's own classroom behavior. It follows that since these attitudes are imperative to success in teaching in the elementary schools ". . .educators need to determine the extent to which opportunities exist in preservice training for preparing secure, sensitive, perceptive teachers who are trained in human relations" (Dobson, Hawkins, Bowman, 1971, p. 159).

Attitudes Toward Pupil Control

General Attitudes

Classroom management is a topic of prime interest in many areas of society. In the 1979 Gallup Poll the public again mentioned the lack of discipline in the public schools as the number one problem (Gallup, 1979), p. 34). Approximately one person in four named discipline as the most important problem faced by the public schools (Gallup, 1979).

Ornstein (1970) stated that eighty per cent of the teacher's time in urban schools may be devoted to discipline. He claimed that discipline is a ". . . necessary function of teaching and continuously reinforced by treating it as part of the teaching process" (p. 150).

Miller and Miller (1971) concluded that administrators at all levels placed classroom management and discipline and knowledge of subject matter in a teacher's special field as the most important professional competencies for a successful classroom teacher. Thus, their approval and support in these areas are considered necessary to most student teachers.

Willower and Jones (1963) noted in the discussion of their study that according to school personnel the highest priority of all school functions and goals was the maintenance of discipline. In fact, pupil control was the integrative concept that unified the faculty and administration. They noted:

Because public schools have no control over the selection of clientele nor do the clientele have any alternative but to participate, it is not surprising that control is a dominant theme--even to the displacement of instructional goals (p. 109).

In order to effectively teach in the elementary schools, it seems imperative that teachers possess knowledge in the area of developmental behavior. This has generally been accomplished through course content and observation of child behavior. The purpose is to aid teachers in understanding child behavior. However, Cappa (1970) claimed:

Since the professional literature lists the lack of discipline and classroom control to be the leading reason for teacher failure, perhaps teacher training institutions need to examine this problem (p. 149).

Clarizo (1976) also maintained that classroom management is essential to good teaching. In his book Toward Positive Classroom Discipline he wrote this about effective discipline:

Classroom management is based more on mood than on rational intervention with the result that discipline becomes a hit-and-miss proposition. Disciplinary strategies are learned through trial and error and are applied in a similar fashion. This state of affairs is not surprising, since effective discipline typically demands continual watchfulness, consistency, and persistence.

On many occasions this requires more energy than we feel we

can spare. The simple truth, of course, is that haphazard management practices, although seemingly more economical and less energy consuming, are actually more costly in the long run (p. 8).

Student Teacher Attitudes Toward Pupil Control

Armstrong (1976) claimed that many student teachers failed to realize that their own public school experience probably was not a "typical" school experience in that their values and attitudes were not a reflection of the entire student body. He claimed in his article that:

College students interested in careers in teaching tend to be people who earned reasonably good grades in high school, enjoyed warm relationships with teachers and administrators, and identified closely with social and athletic activities of the school. Thus, the student teacher is shocked and dismayed to find that, 'kids are really different from when I went to school,' (p. 1).

Armstrong was referring to high school student teaching, but it is felt that a generalization could be made to elementary student teachers when he wrote:

The necessity for the student teacher to adjust to the real social world of the high school rather than to a cozy image of what the high school ought to be like calls for a repertoire of classroom management skills for which the student teacher may never have anticipated the need (p. 2).

Cappa (1970) surveyed student teachers with respect to their reactions to their student teaching experience. He found the major concern most frequently mentioned was classroom discipline. A later survey of experienced teachers revealed that close to eighty per cent felt that they had not received adequate instruction on classroom control and discipline. Many of them suggested a course in this area, plus observations and demonstrations of good disciplinary techniques, would improve understanding of classroom control.

Coates and Thoreson (1976) corroborated the findings of the research-

ers that stated that anxieties reported by beginning teachers centered around their ability to maintain discipline in the classroom. Karmos and Jacko (1977) stated that student teachers are more preoccupied with their own selves during student teaching. They are concerned with one's ". . . adequacy and survival as a teacher, about class control, about being liked by pupils . . ." (p. 51).

The perceptions of student teachers to pupil misbehavior and the responses and the subsequent form of disciplinary action performed by the student teachers were studied by Chiu (1979). Many of the student teachers viewed discipline in terms of punishment, such as corporal punishment, scolding, deprivation of free time, excess work, or detention. In fact, eighty per cent of the misbehaviors were received with punishment or threat of punishment. However, those instances in which the student teachers felt that their dealing with the behavior problem was effective proved to be those times in which the student teachers employed approval. Approval was defined as administering smiles, praise, or an interesting task for an appropriate behavior. He supported the idea that student teachers must be offered alternative approaches to student misbehavior.

Several studies have dealt with changes in student teachers' attitudes toward pupils that are attributed to the student teaching experience. Price (1961) hypothesized that student teachers reflect the attitudes and teaching practices of their cooperating teachers. His research endorsed this hypothesis in that he found that student teachers' attitudes were altered in the direction of those held by their cooperating teachers.

Dutton (1962) wrote that student teachers scored more negatively toward children after student teaching than before student teaching. Noteworthy in this finding was that the change was also in the direction of the attitudes held by the cooperating teacher.

Corrigan and Griswold (1963) concluded that student teachers maintained their principles of teaching to the extent that they were congruent with those of the cooperating teachers and schools. If the student teachers observed the violation of one of the teaching principles, they then tended to question the validity of the principle. This supports the conclusion of Price (1961) that cooperating teachers must exhibit the accepted characteristics of effective teaching. McAuley (1960) found that, generally, the teaching practices and relationships with children of the cooperating teachers were more influential on the methodologies of the student teachers than were the college methods courses.

MacDonald and Zaret (1971) seriously questioned the traditional models of teacher education when they found that their student teachers became less concerned with pupil freedom and more concerned with establishing a stable, orderly classroom. Wilbur and Gooding (1977) also cast doubt on the adequacy of student teaching in that most student teachers at the conclusion of student teaching became more restrictive, controlling, and self-concealing than they were prior to the experience.

Salzillo and Van Fleet (1977) stated that, as these studies have demonstrated, rather than opening up new ways of utilizing student teachers' "emergent value orientations" in the classroom, the student teaching experience causes them to regress to the traditional patterns. They presented the following claim:

Teacher education institutions are, at least partially, defeating their own purposes when student teaching is allowed to become simply an exercise in adapting new personnel into the old patterns . . . and thus mitigating any possibility of his becoming a healthy change agent (p. 28).

In conclusion, it can be said that student teachers generally have a limited repertoire of alternatives for dealing with classroom situations.

Knowledge and discussion of what practicing teachers actually

do should enable them to adopt procedures which are practical and yet consistent with the current philosophy of education which emphasizes the importance of classroom climate (Beattie and Olley, 1977, p. 184).

Hoy and Appleberry (1969, p. 15) also stated that "More research is necessary for exploring various strategies for changing the climate of schools."

To summarize from the foregoing review of the literature, the following statements can be made:

1. Many educators feel that a humanistically based education is of paramount importance in our rapidly changing society (Blume, 1971; Randolph; 1978; Combs, 1978).
2. Student teachers need a greater repertoire of ways of dealing with classroom control in a humanistic manner (MacDonald and Zaret, 1971; Wilbur and Gooding, 1977; Salzillo and Van Fleet, 1977; et. al.).

Seminars

The purpose of this study was to employ two curricular approaches (process versus content) as the intervening treatment. The effectiveness of these treatments as to the effect they had on the attitudes of student teachers concerning pupil control was studied. Therefore, the following review of the literature deals with the different types and results of seminars for student teachers.

Wesley (1971, pp. 348 - 349) offered several suggestions for a student teacher seminar relating to classroom control:

1. Discipline should be recognized as a topic of utmost importance.
2. The instructors should have considerable classroom experience.
3. A variety of materials and techniques should be employed by the instructor of the seminar such as ". . . micro-teaching and video taping,

developing an up-to-date bibliography and film list and employing case studies and role playing" (p. 348).

4. The students should observe how particular situations were handled in the classroom by the cooperating teacher as well as offer alternative suggestions. This would provide excellent content for the seminar. Wesley concluded by claiming that acquiring the techniques of constructive classroom control should not be left to chance or to the trial and error process.

Process Oriented Seminars

The elementary program at the University of Florida consists of three parts: the seminar that is the heart of the program, the panel in charge of the professional courses, and the field experience. Blume (1971) wrote that the purpose of the seminar was for discussing

. . . everything which comes to the mind of the students and their leader relative to education. More specifically, the purpose is the discovery of the personal meaning of the information and experiences which the students are encountering in the other aspects of the program (p. 414).

Blume claimed that these student teacher seminars contributed to the humanistic orientation of the student teachers.

Corrigan and Griswold (1963) measured student teacher attitudes before and following a discussion seminar concerning principles in guiding learning opportunities. These opportunities were (1) the recognition and utilization of the learner's purposes, (2) the engagement in problem solving by the learner, and (3) the development of generalizations which are applicable in a variety of life situations by the learner. The student teachers who were involved in the seminar with their supervisors for the purpose of modifying attitudes changed in a positive direction. Corrigan and Griswold reported:

Most of them perceived the seminar as the place in the program

where they had the opportunity to clarify further the concepts that they were developing through their direct experiences (p. 94).

Dilley (1953, p. 193) reported that group processing ". . . has a definite place in the elementary education program and is one effective technique for helping student teachers gain insight into those common problems." He mentioned three facts that can be discovered in this type of approach:

1. Other people face similar problems.
2. There is no absolute prescription as to the one best way to teach.
3. From others, the student can receive suggestions and techniques which have provided some measure of success.

Dilley's seminar was held for two hours a week for the entire semester. It was based primarily on the needs and problems of each particular group. He found that group discussions aided student teachers in almost every common problem perceived by student teachers. It was especially helpful in meeting the discipline problem as well as understanding the behavior of children. He stated, however, that the problem of suggesting how an institution could implement such a program for its student teachers who taught a great distance from the campus would require further research.

Bowman (1970) also conducted process seminars concurrently with the student teaching experience. He concluded that significant differences were seen in those student teachers' attitudes toward pupil control who had been involved in an interaction seminar. These students were generally more humanistically oriented than those students not involved in the process seminar.

Jones (1978) stated that for a successful human relations laboratory, immediate experience is required in order to have active interest. "Good discussion requires shared direct experience with the real world . . .

Schools tend to operate as if everyone's experience but one's own is important" (p. 20). In teacher education, topics should relate to experiences ". . . which students have had and are having outside the classroom and which can be discussed in the classroom" (p. 20).

Shumsky and Murray (1961) stated

When student teachers freely open up and discuss their perceptions and experiences with discipline, the discussion tends to be charged with fear and anxiety. The cause of this particular emotional response does not have to do with methodology or logic; it stems from a much deeper level. It involves what the participants feel is a major threat to their self-concept. The student teacher is fully aware that when the class is not responding or is unruly, his feelings of adequacy as a teacher and a person are damaged. He feels hurt, depressed, and antagonistic . . . It is important in working with student teachers to help them explore their attitudes and expectations with regard to discipline and to help them understand the impact of disciplinary incidents on their behavior (p. 453).

Fuller (1969) stated that elementary education majors expressed most concern with discipline and with being liked by their students both preceding and following student teaching. Studies have consistently demonstrated that student teachers are most concerned with class control, their own adequacy, and their university supervisors. They are not generally concerned with methodologies of instruction or evaluation of pupil learning or most topics included in education courses. Therefore, Fuller conducted a seminar that consisted of two hours each week for the purpose of group counseling sessions. The students were encouraged to discuss anything of interest or of concern to them. Fuller concluded that some changes were observed in the process seminars; namely, that late in student teaching student teachers were expressing more concern about pupils. He stated that it was possible that during the seminar the more verbal student teachers might have engaged others into discussion regarding concerns of their pupils.

Winett (1976) wrote that inservice courses for teachers that ". . .

emphasized understanding feelings, self appraisal and honesty in relationships, ideas consistent with the human potential movement, and positive teacher student interaction . . ." have indicated that teachers ". . . can quickly grasp and readily apply . . . these principles" (p. 30).

Content Oriented Seminars

On the basis of the research, the process seminar must be more than eight hours in order to be exceptionally successful (Dilley, 1953); whereas, direct instruction in classroom management could be said to be successful in eight hours or less. Drawbaugh and Schaefer (1977) conducted an inservice content seminar of six consecutive hours for experienced vocational teachers. The objectives were to:

1. Update inservice teachers and administrators in selected vocational schools on student behavior.
2. Offer positive approaches and suggestions for reducing and dealing with student discipline problems.
3. Develop an awareness among professional staff of the need for increased humanization in the schools and especially in the classroom.
4. Initiate a planned program of activities designed to help vocational teachers and administrators and faculty of the university.

The evaluation at the end of the seminar revealed that the teachers did not learn a great deal about student behavior (which could be an expected response by experienced teachers) but that they had developed a ". . . greater awareness for increased humanization in the schools" (p. 46).

Vander Kolk (1975) employed the Carkhuff Model (Carkhuff, Berenson, and Pierce, 1976) to enhance experienced teachers' ability to relate with their students. He stated that when ". . . the program is specific in terms

of building skills, and is carried out in a systematic manner, the results are significant and meaningful" (p. 254). It must be mentioned that this training was for experienced teachers and that they met for two hours once a week for ten weeks, which totaled twenty hours.

Training of experienced teachers in the use of contingency management has proven quite successful in changing the behavior of teachers as well as the behavior of students. Thompson, Brassell, Persons, Tucker, and Rollins (1974) conducted a seminar of two one-and-one-half hour sessions of instruction followed by supervision in a classroom using contingency management techniques. The emphasis in this approach was upon ". . . reducing failures and increasing success by ignoring inappropriate behaviors rather than punishing them and by systematically reinforcing appropriate behavior with teacher praise and a token reinforcement system" (p. 20). The results of their study revealed that the teachers mastered the details of a contingency management program and were able to develop new modes of behavior in dealing with children.

Another content centered seminar for student teachers was Baker's Multi-Cultural Seminar (1973). This seminar was approximately twelve hours (attendance for four days in a daily three hour period of lectures, films, and discussions.) She also had included four days of observations in settings where the student teachers would be doing their student teaching. She found that the perception of ethnic groups held by student teachers was altered significantly at the .05 level between the pre-and post-testing. She stated,

. . .perceptions can be altered through training. It is, therefore, appropriate and necessary for teacher training institutions to assume this responsibility . . . A workshop approach is not adequate if it is to be the only source of training. It can, however, serve as introductory, supplementary, or enrichment instruction (p. 307).

It can be concluded that both process and content seminars can make significant differences in the humanistic attitudes and skills of student teachers. However, no studies were found in which seminars closely matched those used in this experiment. Although some studies dealt with the effectiveness of group process seminars, none dealt with direct instruction to student teachers relating to the topic of classroom management. Based on the exigent need for student teachers to have some type of interaction relative to pupil control, either a group process seminar or direct instruction might prove advantageous. It was felt that expectations in the areas of pupil control, discipline, and philosophy of behavior could be examined by prospective teachers in these seminars and thus result in their maintaining a more humanistic ideology.

From this review of the literature, it was seen that the matter of classroom management is of vital concern to administrators, teachers, students, and society at large. Several studies indicated that it is one of the major causes of anxiety for student teachers. It became clear from reviewing the literature that many experts propound the need for teacher education institutions to take note of this anxiety and to provide student teachers alternative ways of dealing with classroom management.

It was also obvious that student teachers at the termination of their student teaching experience have a more custodial and authoritarian view of pupil control. Yet, humanistic education is one of the major goals of education. Again, teacher education institutions must take note of this fact in order to make the student teaching experience enhance student teachers' views of the humanness of children.

The Pilot Study

To develop a sound research design a pilot study is generally essential to provide additional knowledge. The pilot study aids in the analysis of data and the experimental design, as well as in determining the appropriateness of the instrument. Thus, a pilot study was performed during the spring semester of 1979 prior to the actual experiment. Forty-eight elementary student teachers at Oklahoma State University provided the subjects for the pilot study. These student teachers were randomly assigned to one of the three experimental groups; that is, the content oriented group, the process oriented group, and the traditional seminar group. Hoy's Pupil Control Ideology Form was administered three different times to the subjects: before the treatment to establish group equivalency, after the treatment to determine if the subjects had become more humanistic due to the effect of the treatment, and the third after student teaching to determine if the student teachers had maintained their humanistic ideology throughout the student teaching experience.

Advantages of a Pilot Study

According to Borg (1963, p. 185) there are several reasons a pilot study is advantageous:

1. It permits a preliminary testing of the hypotheses that leads to testing more precise hypotheses in the main study.
2. It often provides the research worker with ideas, approaches, and clues not foreseen prior to the pilot study.
3. It permits a thorough check of the planned statistical and analytical procedures.
4. It greatly reduces the number of treatment errors because unforeseen problems revealed in the pilot study may be overcome in redesigning the main study.
5. The pilot study almost always provides enough data for the

research worker to make a sound decision on the advisability of going ahead with the main study.

Results of the Pilot Study

The pilot study was implemented in order to give trial to the design of this study and the analysis of the data. The means of the three groups of the pilot study are given in Figure 1. (The lower scores tend to be more humanistic than the higher scores.)

I	47.24	42.81	49.12
II	46.47	43.25	50.68
III	48.94	45.69	49.27
	Pre-test a	Post-test b	Post-test c

Figure 1. Pilot Study Means

After an examination of Figure 1, the following insights were inferred from this pilot study:

1. The randomized design yielded equivalent groups (that is, Ia = IIa = IIIa).
2. There was a trend toward greater humanism scores after eight weeks of treatment (that is, post-test b scores were all less than the pre-test a scores).
3. The eight one-hour weekly sessions were inadequate in maintaining greater humanism. The post-test c scores were significantly less humanistic at the .05 level of confidence.
4. The differences between pre-test a and post-test b scores of all

groups warranted the advisability of proceeding with the experimental study. It was postulated that with a continuing treatment during student teaching, significant differences might be obtained.

5. The findings of Hoy (1967) regarding greater custodialism after student teaching were confirmed.

6. A re-structuring of Group II, the content group, was also seen as necessary. This conclusion came not from the data but from general observation of the subjects. Discontinuity and fragmentation of the subject matter seemed to occur during the pilot study when the students met for one hour a week. Thus, they tended to regard the information as segmented and unrelated.

The Research Hypothesis

Jacobs (1968) found that in beginning education courses, student attitudes were rather rigid and formalized. As the student teachers progressed through the education courses, there was a trend toward ". . . more liberal and democratic points of view . . ." (p. 411). However, at the conclusion of the student teaching experience, they again changed to a more rigid and formal attitude.

This supported the findings of Hoy (1967) who maintained that at the conclusion of student teaching, student teachers' attitudes tended to be more custodial than humanistic. Student teachers through the socialization process learned that their ideals, attitudes, and values for teaching were in direct conflict with those of the "veteran teachers."

Student teachers generally experience a custodial pupil control orientation on the part of cooperative teachers (Willower, Eidell, and Hoy, 1973) and, therefore, become significantly more custodial in their ideology as they participate in student teaching (Hoy, 1967). Hoy and Rees

(1977, p. 24) also stated that student teachers are quite vulnerable to a ". . . bureaucratic socialization as they try to succeed and earn good grades." Hence, they conform to the organizational forces that emphasize authoritarian control of pupils even though this attitude is in conflict with their idealistic orientation.

The purpose of this study was to attempt to sustain the greater humanistic orientation, acquired during the treatment, throughout the student teaching experience. The research hypothesis was determined on the basis of (1) the results of the pilot study and (2) the review of the literature. The hypothesis as stated in Chapter I was:

$$IIIc > Ia = IIa = IIIa > IIb > Ib = Ic = IIb = IIc.$$

(Recall that Groups I, II, and III are the process, content, and traditional seminars, respectively; a, b, and c refer to the pre-test and two post-tests, respectively.)

I	Ia	Ib	Ic
II	IIa	IIb	IIc
III	IIIa	IIIb	IIIc
	Pre-test a	Post-test b	Post-test c

Figure 2. Design of the Study

$IIIc > Ia$. . . was due to the effect of student teaching without intervention.

$Ia = IIa = IIIa$ was expected from the random assignment of the subjects to the three treatment groups.

. . . IIIa > IIIb was the trend observed from the pilot study and the writings of Jacobs (1968) and Hoy (1967).

IIIb > Ib . . . was due to the effects of the experimental treatment.

Ib = Ic = IIb = IIc was a result of an absence of comparative information in the literature and the pilot study.

It was hypothesized that Group III, the traditional group, would follow the same trend as all other student teachers. That is, they would be rather custodial at the beginning of the education courses, more humanistic at the conclusion of the education courses, and then become significantly more custodial at the termination of student teaching (Jacobs, 1968; Hoy, 1967).

Groups I and II, the process and content groups, respectively, were also predicted to follow the same pattern as Group III with these exceptions: (1) due to the effect of the treatment, they would be significantly more humanistic than Group III at the end of the eight weeks of treatment; (2) at the end of student teaching, they would have maintained the humanistic attitude toward pupil control due to the intervention treatment during the student teaching experience.

It was not hypothesized that Group I would be more humanistic than Group II, or conversely, at any time during the experimental treatment. The rationale for this was that the time constraint prevented the process approach from being as strong a treatment as generally judged necessary to result in greater significant differences (Dilley, 1953).

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

This study sought to determine the differences in attitudes among groups of student teachers after participating in either a group process seminar (Group I), a lecture type seminar (Group II), or the traditional seminar generally held every semester for student teachers (Group III). The purpose of the first two seminars was to alleviate some of the fears of neophyte teachers regarding classroom control and also to attempt to maintain an orientation toward a humanistic classroom.

This chapter presents an overview of the experimental design with respect to the subjects involved in the experiment, the instrument utilized for data gathering, and the format of the seminars. The description of the analysis of the data is given in the latter part of the chapter.

Subjects

The subjects in this study were the thirty student teachers enrolled in the block sections of Curriculum and Instruction 4450--Observation and Teaching in the Elementary School. The experiment was conducted during the fall semester, 1979, at Oklahoma State University. The students were randomly assigned to three groups of ten students each. The groups were also randomly assigned to treatments. Kerlinger and Pedhazur (1973) state:

Potentially the most powerful form of control in research is to assign subjects randomly to experimental groups. Other things being equal, if random assignment has been used, one can assume that one's groups are equal in all possible characteristics. In a word, all variables except the one that forms the basis for the groups--different methods of changing attitudes--are controlled (p. 82).

Procedure

The semester in which the students are engaged in student teaching is unique in that it is divided into two eight-week blocks of time. Five of the method courses for teaching in the elementary schools are taught in the first eight weeks. The students also observe and participate in their respective elementary classrooms each Monday the first eight weeks of the semester. In addition, a student teacher seminar was established. The purpose of the seminar was to answer any questions the student teachers may have regarding the educational profession. The last eight weeks of the semester are devoted full time to student teaching.

The thirty student teachers were randomly assigned to one of three groups by using a table of random numbers (Bartz, 1976, p. 388). Ten student teachers were assigned to one experimental group (Group I), which was the group process seminar; ten were assigned to a second experimental group (Group II), which was the content seminar; and ten student teachers were assigned to the control group (Group III), which was the traditional student teacher seminar.

The student teacher seminar during the first eight weeks of the semester was employed for the experimental procedure. Groups I and II were led by a qualified leader who had a master's degree in guidance and counseling with several years of experience in public schools as a counselor.

Every student teacher completed the Pupil Control Ideology Form (Willower, et. al., 1973) three different times. The first time was during the orientation meeting of each group. The results were used to confirm group equivalence. At the conclusion of the eight-hour seminars they completed it again to determine any differences in student attitudes that could be attributed to the different seminars. At the end of the semester the student teachers again were given the Pupil Control Ideology Form to assess any attitude differences among the three groups.

Instrumentation

The Pupil Control Ideology Form was developed by Willower, Eidell, and Hoy in 1965. This inventory was designed to assess the attitudes held by teachers concerning pupil control which may range from humanistic to custodial. Subjects respond to the twenty Likert-like items that have five response categories: "strongly agree," "agree," "undecided," "disagree," and "strongly disagree." These responses are scored 5, 4, 3, 2, and 1, respectively, with the order reversed for items five and thirteen. The scores are totaled to provide a single test score that may range from twenty to one hundred with the higher scores tending to be more custodial.

The authors established reliability by calculating a split-half reliability coefficient using odd-even items. A Pearson product moment coefficient yielded a correlation of .91 on a sample of 170. A corrected coefficient of .95 resulted after applying the Spearman-Brown formula. More data were gathered on additional samples to verify the calculations. Using the same formulas, the Pearson product moment correlation coefficient was .83 and the Spearman-Brown corrected coefficient was .91.

The authors of the test checked the validity of the Pupil Control Ideology Form by requesting principals to identify a specified number of teachers whom they considered having custodial and humanistic viewpoints. The mean Pupil Control Ideology Form scores of these two groups of teachers were then compared by applying a one-tailed t test to the mean difference. A value of 2.639 in the expected direction was significant at the .01 level. Cross validation results on a new sample yielded a difference in mean Pupil Control Ideology scores which was significant at the .001 level.

The standard error of measurement on the Pupil Control Ideology Form, that is, the difference between the obtained score and the 'true' score of the student, was determined to be $\pm .9$. In other words, if a student teacher obtained a score of 48, his 'true' score would be $48 \pm .9$. This enables the reader to understand that the scores on the instrument are only estimates and can be considerably different from the individual's 'true' score.

The following instructions were read to the student teachers in each group upon being handed the Pupil Control Ideology Form:

On the following pages a number of statements about teaching are presented. Our purpose is to gather information regarding the actual attitudes of educators concerning these statements.

You will recognize that the statements are of such a nature that there are no correct or incorrect answers. We are interested only in your frank opinion of them. Your responses will remain confidential. Your cooperation is greatly appreciated.

Following are twenty statements about schools, teachers, and pupils. Please indicate your personal opinion about each statement by circling the appropriate response at the right of the statement.

The Pupil Control Ideology Form is given in Appendix A.

Thus, in summary, the basic design of the experiment is one of comparing the effects of three experimental treatments on the attitudes of student teachers. A pre-test was given to determine group equivalence; a post-test was given to determine differences in attitudes of the groups, if any, that could be attributed to any of the treatments; and a second post-test was administered to determine if the groups' attitudes toward pupil control had changed as a result of student teaching.

Format for the Experimental Groups

The purpose of this study was to determine if exposure to different types of seminars could reveal a significant difference in student attitudes toward pupil control at the end of the student teaching experience. The following paragraphs give a description of the format for these groups.

The Group Process Seminar

Group I was a non-directive, non-censoring, human relations experience. The group process seminar followed the same pattern which Dobson, Hawkins, and Bowman (1971, p. 160) used in their human relations laboratory experience:

1. The exposing (verbally and non-verbally) of an individual's ideas and feelings to other student teachers.
2. Receiving feedback (interaction with other group members)
3. The exploration of an individual's beliefs, attitudes, values, and resultant behaviors
4. The examination of teaching problems which caused student teachers to initiate and generate multiple alternatives for coping with pupil behavior
5. A supportive atmosphere without personal threat or leader authority

6. The leader(s) offered a supportive attitude of encouragement and acceptance but did not supply 'ready' answers to participants.

This process was intended to enable elementary school student teachers to be more ". . . sensitive and more aware of the feelings of others . . . in order that they may . . . be in a better position to work within groups of public school pupils in a humanistic fashion" (Bowman, 1970, p. 68).

The process seminar was held one hour a week for the first eight weeks of the semester. As was inferred from the pilot study, an intervention technique was also necessary during the student teaching experience itself in order to maintain the humanistic attitude of the student teachers toward pupil control. Therefore, two meetings were scheduled during the eight weeks of student teaching. The purpose of the meetings was to continue the approach of the group process seminar. That is, cooperative interaction among the student teachers regarding their feelings and concerns relevant to the student teaching experience occurred. The meetings were scheduled for two hours for each Friday of the third and seventh weeks of student teaching. They were held on the university campus.

This process oriented seminar began with no prescribed or definite structure. The responsibility for the content was left to the participants. The role of the facilitator was to help the students learn from their experience.

The facilitator reported that the student teachers initially seemed to feel very uncomfortable in such an unstructured environment. The few brave and more articulate students made the first halting comments. It soon became obvious to the less outspoken students that their participation

was going to be necessary to make a success of the seminar. The entire group seemed somewhat frustrated at the lack of direction and structure from the group leader.

The major topics of interest at first were those relating to the actual experience of student teaching; that is, what about grades, at what time should they arrive at their respective schools, what type of attire was appropriate. When these areas of concern were satisfactorily answered, the student teachers began to talk about their anxieties regarding their experience as student teachers. At first, they were related to how well they would get along with their cooperating teacher, college professors and university supervisor. When the students then began to visit their respective schools the one day of the week during the first eight weeks of the semester, their concern then turned to their own elementary students and classroom control.

Toward the end of the seminar, the students were beginning to share experiences, respond with their own feelings and reactions to other student teachers' experiences, and finally, to suggest solutions and ideas with one another. Group cohesiveness and interaction did not really begin to take place until this time.

Two times during student teaching, the student teachers returned to campus to continue with the process seminar. The students discussed topics directly related to their student teaching. They were very willing to give and take suggestions and comments from one another. These two sessions were considered successes even though some of the student teachers felt that they were called upon to expend extra effort not required of the other student teachers.

Thus, the group process seminar consisted of eight one-hour sessions

preceding the actual student teaching experience. Participation in four additional hours during the student teaching experience was also required of the student teachers.

The Content Seminar

Group II used as the major content Rudolf Dreikurs' book, Discipline Without Tears (1972). The purpose was to help student teachers become more concerned with understanding and working with children than with their own authority. The definition of discipline as perceived by Dreikurs is as follows:

Discipline is the fulcrum of education. Without discipline both teacher and pupil become unbalanced and very little learning takes place.

Today's discipline problems can be overcome if we turn from the obsolete autocratic method of demanding submission and accept a new order based on the principles of freedom and responsibility. Teachers should be neither permissive nor punitive. What you have to learn is how to become a match for your students, wise to their ways and capable of guiding them without letting them run wild or alternately stifling them.

The successful formula for guiding children in the classroom is based on the belief that democracy is not just a political ideal, but a way of life. This freedom is not license. It is a shared responsibility which must be taught (p. 19).

There were three objectives of the seminar. They were:

1. Learn how to identify the goal of a child's misbehavior and appropriate corrective procedures.
2. Learn how to identify appropriate logical consequences of selected misbehaviors.
3. Learn how to apply specific strategies to be utilized in dealing with discipline problems.

The students met with the instructor two consecutive Wednesday even-

ings for three hours. The first session involved introducing the students to the theory base and premises of Dreikurs' approach. The students learned to identify the different goals of children's misbehavior. (See Appendix B.) The instructor then had the students reading and discussing different case studies and the probable motivation of the behavior of their "case child." An assignment was given for them to observe in their respective classrooms on the following Monday for some inappropriate behavior on the part of a child. They were to try to discern the goals of the child as well as report on the classroom teacher's reaction to the child's misbehavior.

The second Wednesday evening, the instructor asked the student teachers to report on the assignments and discussion ensued. Some students volunteered to role play the incident they had observed and discussion revolved around the goal of the behavior and the teacher's response.

The instructor of the seminar then explained to the students Dreikurs' suggestions for correcting children's misbehavior. (See Appendix C.) The students practiced the approach of asking the four specific questions with the instructor giving feedback as to the proper way to ask the questions.

The student teachers were then given the weekly assignment for the eight weeks of student teaching. (See Appendix D.) When the student teachers sent the instructor the home work, the instructor immediately responded with written comments and returned them to the student teachers. Many of the student teachers expressed appreciation and requested further suggestions on their written work.

In summary, the content seminar consisted of two consecutive three-hour sessions of lecture, discussion, and role playing. It was followed

by required weekly reports of the students' attempts at employing this technique in the classroom. The format for this report is in Appendix D. It is important to note that the leader gave the students immediate feedback on their weekly reports.

The Traditional Seminar

Group III included all the information presented every semester to all student teachers. They met one hour a week for eight weeks with no follow-up treatment during the actual student teaching experience. The schedule for Group III is given in Appendix E.

Data Analysis

A posteriori or post-hoc tests refer to techniques to be used in situations in which the experimenter designs a study to determine the effect or non-effect of some treatment. If the treatment does have an effect, then techniques for data snooping have been developed for comparing all possible means. This is contrasted with a priori or planned comparisons. In the latter case, the experimenter has planned a specific hypothesis or set of hypotheses that the experiment is designed to test.

The purpose of the experiment was to determine if the means of the three treatment groups on the three measures were significantly different. Special interest in this study was the attempt to maintain lower scores (that is, more humanistic scores) during the student teaching period. According to Kirk (1968, p. 73), because the expected direction of the means was stated at the beginning of the experiment in the research hypothesis, the experiment qualified for a priori comparisons.

Kirk suggested that multiple comparisons among means do not require

an over-all test of significance. If the investigator has a planned set of specific ". . . comparisons for which statistical hypotheses have been advanced, he is not interested in answering the general question, 'Did anything happen in the experiment?' Rather his interest is in answering a limited number of specific questions from the data" (p. 73). Kirk recommended Dunn's Multiple Comparison Procedure. He wrote:

If an experimenter knows in advance that he is interested in making a relatively small number of nonorthogonal comparisons among means, Dunn's a priori procedure may be more powerful than the a posteriori procedures (p. 81).

This procedure consists of dividing the level of significance among the planned comparisons. Kirk indicated that as the number of multiple comparisons or independent comparisons increases, the probability of committing a Type I error increases; that is, the probability of rejecting one or more null hypotheses when in fact they are true increases. Thus,

This procedure of dividing alpha evenly among the C comparisons is appropriate if an experimenter considers the consequences of making a Type I error to be equally serious for all comparisons. If this is not true, an experimenter can allocate alpha unequally among the C comparisons in a manner reflecting his a priori concern for Type I and II errors . . . The experimenter can allocate alpha unequally among the comparisons any way he chooses as long as the sum of alpha . . . is equal to the value selected for the collection of comparisons (p. 80).

The assumptions underlying the use of Dunn's technique are the same as those for the t and F tests. According to Kerlinger (1964, pp. 258 - 260) these assumptions are:

1. Assumption of normality. The samples have been drawn from populations that are normally distributed. Lindquist (1953) recognized the difficulty of drawing subjects strictly at random from the real population. He wrote in his book Design and Analysis of Experiments in Psychology and Education about this difficulty:

The experimenter can nearly always at least randomize his experimental subjects with reference to the treatments. That is, by use of a table of random numbers he can leave it strictly to chance which subjects are to constitute each treatment group. Having done this, he may fairly contend that his experimental groups are all random samples from the same hypothetical parent population--a population which may be roughly defined as consisting of all individuals 'like those involved in the experiment' (p. 74).

2. Homogeneity of variance. The variance within the groups are statistically the same.

3. Continuity and equal intervals of measurement. The measures to be analyzed are continuous measures with equal intervals. The authors of the Pupil Control Ideology Form treated the data as interval data and failed to observe that it performed in any other way than interval data.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The central concern of this experimental study was to determine the effectiveness of two pedagogical approaches that were based upon contrasting philosophies. These approaches were a process seminar and a content seminar. The purpose of these seminars was to attempt to maintain the humanistic ideology of the student teachers throughout the eight weeks of student teaching.

A third seminar was utilized as an attempt to control for the Hawthorne effect; that is, subjects sometimes tend to change their behavior due to the novelty of a program rather than due to the actual treatment. Therefore, a control group was recommended. The traditional seminar was conducted for the placebo effect. It did not include any element of the other two seminars that was hypothesized to affect the attitudes of student teachers.

Thirty student teachers from Oklahoma State University took part in this study. They were each randomly assigned to one of the three experimental groups. All subjects were administered the Pupil Control Ideology Form three different times--first, as a pre-test at the beginning of the semester preceding any treatment; a second after eight weeks of treatment; and a third after the student teaching experience, eight weeks later. In other words, there were eight weeks between the first and second admini-

stration of the Pupil Control Ideology Form and eight weeks between the second and third. It can be diagrammed as follows:

O_1	X_1	O_2	X_2	O_3
a	Seminar	b	St. Tchg.	c

where X_n is used for experimental treatment and O_n for observation.

This chapter includes the research hypothesis and its several components of multiple comparisons. The analysis of the collected data included Dunn's Multiple Comparison and an analysis of variance followed by Tukey's post-hoc analysis.

The Research Hypothesis

The design of the study was diagrammed as follows in Figure 3.

I	Ia	Ib	Ic	(Process)
II	IIa	IIb	IIc	(Content)
III	IIIa	IIIb	IIIc	(Traditional)
	Pre-test	Post-test	Post-test	
	a	b	c	

Figure 3. Diagram of Research Hypothesis

The research hypothesis for this study was:

$$IIIc > Ia = IIa = IIIa > IIIb > Ib = Ic = IIb = IIC.$$

The investigator was interested in twelve planned comparisons. These comparisons and the alternative hypotheses derived from the research hypothesis are given below:

$$(1) \quad H_0 : Ia = IIa$$

$$H_1 : Ia \neq IIa$$

$$(2) \quad H_0 : IIa = IIIa$$

$$H_1 : IIa \neq IIIa$$

$$(3) \quad H_0 : Ia = IIIa$$

$$H_1 : Ia \neq IIIa$$

$$(4) \quad H_0 : Ib = Ic$$

$$H_1 : Ib \neq Ic$$

$$(5) \quad H_0 : IIb = IIc$$

$$H_1 : IIb \neq IIc$$

$$(6) \quad H_0 : Ic = IIb$$

$$H_1 : Ic \neq IIb$$

$$(7) \quad H_0 : Ic = IIc$$

$$H_1 : Ic \neq IIc$$

$$(8) \quad H_0 : Ib = IIb$$

$$H_1 : Ib \neq IIb$$

$$(9) \quad H_0 : Ib = IIc$$

$$H_1 : Ib \neq IIc$$

$$(10) \quad H_0 : IIIc = \frac{Ia + IIa + IIIa}{3}$$

$$H_1 : IIIc > \frac{Ia + IIa + IIIa}{3}$$

$$(11) \quad H_0 : \frac{Ia + IIa + IIIa}{3} = IIIb$$

$$H_1 : \frac{Ia + IIa + IIIa}{3} > IIIb$$

$$(12) \quad H_0 : IIIb = \frac{Ib + IIb + Ic + IIc}{4}$$

$$H_1 : IIIb > \frac{Ib + IIb + Ic + IIc}{4}$$

From the collected data, the mean scores were computed for each treatment group on each measure. The means were placed in the grid below (Figure 4) for comparison.

I	43.6	43.1	48.3
II	42.9	44.0	47.6
III	45.2	42.2	45.4
	a	b	c

Figure 4. The Obtained Mean Scores

Dunn's A Priori Comparison

The accumulated data were planned to be examined by Dunn's Multiple Comparison Procedure. In order for a difference to be considered significant according to Dunn, the difference must exceed the value obtained in the following formula (Kirk, 1969, p. 79):

$$d = t'^D_{a/2;C,v} \sqrt{MS_{\text{error}} \left[\frac{(C_j)^2}{n_j} + \frac{(C_{j'})^2}{n_{j'}} + \dots + \frac{(C_{j''})^2}{n_{j''}} \right]}$$

The entry $t'^D_{a/2;C,v}$ was obtained from the "Percentage Points of the Dunn Multiple Comparison Test" table (Kirk, 1969, p. 551), where $a/2$ was the established alpha divided by two when it was a one-tailed test (Kirk, 1968, p. 76), and a was the established alpha when a two-tailed test was necessary. C was equal to the number of comparisons that were made among k means, and v was equal to the degrees of freedom for the experimental

error. The terms C_j = the coefficient for the j^{th} mean, MS_{error} = the unbiased estimate of the population error variance, and n_j = the number of scores in the j^{th} treatment level.

The accumulated data revealed the following"

1. The .05 level of significance was adopted. Because the investigator felt the probability of making a Type I error was equally probable for all comparisons, alpha was divided evenly among them by the use of Dunn's Table D.16, (Kirk, 1969, p. 551).

2. An investigator could make $[k(k-1)]/2 = 36$ possible pairwise comparisons (Kirk, p. 79) where k = the number of means. However, this experimenter had planned to make only twelve instead of all thirty-six pairwise comparisons among means. Therefore, $C = 12$.

3. A design having repeated measures on the same subjects often results in a positive bias and consequently there is a greater tendency to reject the null hypothesis (Type I error) when it is, in fact, true. Thus, it was suggested that the smaller degrees of freedom in the error variance be utilized. In this study, the degrees of freedom of the mean squares error between groups was, of course, the smaller of the two error variances, and therefore, was used as the degrees of freedom. It was established to be 27.

4. Consequently, $t'_{D_{a/2;C,v}} = t'_{D_{.05/2;12,27}} = 3.09$.

5. In that the design of the experiment was not completely randomized and had repeated measures on the same subjects on three different measures, there were two types of variances. The kind of variance used was dependent on the planned comparison. That is, if the comparison was between subjects across treatments, the mean squares error within subjects was utilized. If the comparison was between subjects within trials,

the mean squares error between subjects was used. The MS_{error} within subjects was equal to 4.881; the MS_{error} between subjects was equal to 132.25. If the planned comparison was across groups or trials, pooling of the two error terms was necessary. This was a ratio of the MS_{error_b} and the degrees of freedom between ($132.25 / 27 = 4.89$).

6. The coefficient for each j^{th} mean was equal to ± 1 , and the number of scores in each treatment level was 10.

Therefore, for this data, the critical difference according to Dunn's test was:

$$d = 3.09 \sqrt{MS_{\text{error}} \left[\frac{(1)^2}{10} + \frac{(-1)^2}{10} \dots \frac{(1)^2}{10} \right]}$$

The nine means ranked from smallest to largest were listed in Table I, page 50. The differences between means of nine of the twelve planned comparisons were circled for the convenience of the reader (that is, $Ia - IIa = 0.7$, etc.). The differences between the means of hypotheses ten, eleven, and twelve could not be marked and, therefore, were placed at the bottom of the chart.

The research hypothesis as stated before was

$$IIIc > Ia = IIa = IIIa > IIb > Ib = Ic = IIc = IIc.$$

After the data collection, the hypothesis should have read as follows:

$$45.4 > \frac{43.6 + 42.9 + 45.2}{3} > 42.2 > \frac{43.1 + 48.3 + 44.0 + 47.6}{4}$$

A close inspection of the data revealed that some of the means were not in the predicted direction. Those pairwise comparisons were the following:

$$(1) IIIc \not> Ic \quad (45.4 \not> 48.3)$$

$$(2) IIIc \not> IIc \quad (45.4 \not> 47.6)$$

TABLE I
DIFFERENCES BETWEEN THE MEANS OF THE THREE TREATMENT LEVELS

	IIIb 42.2	IIa 42.9	Ib 43.1	Ia 43.6	IIb 44.0	IIIa 45.2	IIIc 45.4	IIC 47.6	Ic 48.3
IIIb = 42.2	---	0.7	0.9	1.4	1.8	3.0	3.2	5.4	6.1
IIa = 42.9	---	---	0.3	0.7	1.1	2.3	1.5	4.7	5.4
Ib = 43.1	---	---	---	0.5	0.9	2.1	2.3	4.5	5.2
Ia = 43.6	---	---	---	---	0.4	1.6	1.8	4.0	4.7
IIb = 44.0	---	---	---	---	---	1.2	1.4	3.6	4.3
IIIa = 45.2	---	---	---	---	---	---	0.2	2.4	3.1
IIIc = 45.4	---	---	---	---	---	---	---	2.2	2.9
IIC = 47.6	---	---	---	---	---	---	---	---	0.7
Ic = 48.3	---	---	---	---	---	---	---	---	---

The circled differences indicate the planned comparisons. Hypotheses ten, eleven, and twelve could not be charted on the table and, therefore, the differences are given below.

$$H_{10}: 45.4 - 43.9 = 1.5$$

$$H_{11}: 43.9 - 42.2 = 1.7$$

$$H_{12}: 42.2 - 45.75 = -3.55$$

That is, the traditional seminar mean score was not higher than the content and process seminar mean scores at the end of the student teaching as predicted.

$$(3) \text{ IIIb } \not> \text{ Ib } (42.2 \not> 43.1)$$

$$(4) \text{ IIIb } \not> \text{ IIb } (42.2 \not> 44.0)$$

The mean score at the end of the traditional seminar was lower (less custodial) than the mean scores at the end of the two experimental seminars.

$$(5) \text{ IIIb } \not> \text{ Ic } (42.2 \not> 48.3)$$

$$(6) \text{ IIIb } \not> \text{ IIc } (42.2 \not> 47.6)$$

In other words, at the end of the traditional seminar, the mean score was lower than the mean scores of the other two experimental groups at the end of student teaching.

$$(8) \frac{\text{Ia} + \text{IIa} + \text{IIIa}}{3} \not> \text{Ic, IIc, and IIb } (43.9 \not> 48.3, 44.0, \text{ and } 47.6)$$

The pre-test scores before the seminars were not greater (more custodial) than the post-test scores after student teaching.

Analysis of Variance

Because of the preceding contradictions of the predicted directions, an analysis to confirm the theory was fruitless. Therefore, the investigator determined to data snoop with a post-hoc analysis. The statistical technique was a 3 x 3 analysis of variance. This technique allows an experimenter to see if there are significant differences between two or more means. Since this study was a two factor mixed design with repeated measures on one factor (Bruning and Kintz, 1968, p. 54), a comparison of subjects in the different experimental groups and a comparison of groups across treatments were permitted. The assumptions that must be met for an F test to be valid are the same that were mentioned

in Chapter III, page 42, of this study (Kerlinger, 1964, pp. 258 - 260).

The analysis of variance is summarized in Table II, page 53, which shows the degrees of freedom for each sum of squares and the F values. According to the analysis of variance in Table II, "A" represents the three groups at each treatment level in which there was no significant difference, "B" represents the three trials within each group in which significant differences were found, and "AB" represents the interaction differences between group means and between groups and trials in which there were also significant differences.

A comparison of the between group error and within group error indicated that the variance of the population was not homogeneous, a direct violation of the homogeneity assumption underlying the F test. However, according to Kirk (1969, p. 60), the F test is robust in that it maintains its power in the face of a violation, particularly if the number of observations in each group is equal. It can, therefore, be assumed that the F distribution was relatively unaffected by the lack of homogeneity of variance.

Tests of Simple Main Effects

According to the analysis in Table II, Treatment B was significant and the interaction was significant. Whenever an interaction is significant, it means that ". . . one treatment behaves differently under different levels of the other treatment" (Kirk, 1968, p. 177). That is, treatment B or the PCI scores reacted differently under the various seminars. This was an indication to the investigator that interpretations of tests of main effects were of little interest. Tests of simple main effects were then considered.

TABLE II
ANALYSIS OF VARIANCE

Source	SS	df	MS	F
1. Between Subjects	3579.56	$np - 1 = 29$	123.433	
2. A (treatment groups)	8.86	$p - 1 = 2$	4.43	$2/3 = .033$
3. Subj w. groups (error term)	3570.7	$p(n - 1) = 27$	132.248	
4. Within Subjects	613.34	$np(q - 1) = 60$	10.222	
5. B (trials)	268.8	$q - 1 = 2$	134.4	$5/7 = 27.54^*$
6. AB	80.94	$(p - 1)(q - 1) = 4$	20.235	$6/7 = 4.145^*$
7. B x subj w.groups (error term)	263.6	$p(n - 1)(q - 1) = 54$	4.881	
8. Total	8385.8	$npq - 1 = 89$		

* $p < .05$

$n = 10$

$p = 3$ (levels of a_i)

$q = 3$ (levels of b_j)

Tests of simple main-effects shed further light on the interpretation of treatments A and B when the interaction is significant on factorial or mixed designs (Bruning and Kintz, 1968, p. 117). The simple main-effects tests also answer questions such as: "Is there a significant difference between a_1 and a_2 at level b_1 ; is there a significant difference between b_1 and b_2 at level a_1 ?"

The AB Summary Table (Figure 5) on page 55, where a_1 , a_2 , and a_3 represent Groups I, II, and III, respectively, and b_1 , b_2 , and b_3 represent pre-tests a, post-test b, and post-test c, respectively, illustrated the computational procedures for the simple main-effects tests. The results are summarized in Table IV, page 60.

On the basis of the simple main-effects tests, Table III, it can be concluded that the student teachers reacted differently on each administration of the test; that is, there were significant differences at levels a_1 , a_2 , and a_3 . The participants in the group process seminar experienced a greater change than any of the other two groups, the content seminar experienced a somewhat lesser change, and the traditional group changed the least of any of the three groups.

The F value between subjects was not significant and thus verified the assumption of random assignment. This was particularly important at level b_1 which was the pre-test before treatment.

(I)

	b_1	b_2	b_3	$\sum_i A$	$\frac{(\sum_i A)^2}{nq}$
	$n = 10$				
a_1	436	431	483	1350	60750.0
a_2	429	440	476	1345	60300.8
a_3	452	422	454	1348	60570.1
$\sum_i B$	1317	1293	1413		
$\frac{(\sum_i B)^2}{np}$	57816.3	57465.6	66552.3		

(II)

$$SS_A \text{ at } b_1 = \frac{(436)^2}{10} + \frac{(429)^2}{10} + \frac{(452)^2}{10} - \frac{(1317)^2}{30} = 27.80$$

$$SS_A \text{ at } b_2 = \frac{(431)^2}{10} + \frac{(440)^2}{10} + \frac{(422)^2}{10} - \frac{(1293)^2}{30} = 16.2$$

$$SS_A \text{ at } b_3 = \frac{(483)^2}{10} + \frac{(476)^2}{10} + \frac{(454)^2}{10} - \frac{(1413)^2}{30} = 45.8$$

(III)

$$SS_B \text{ at } a_1 = \frac{(436)^2}{10} + \frac{(431)^2}{10} + \frac{(483)^2}{10} - \frac{(1350)^2}{30} = 164.6$$

$$SS_B \text{ at } a_2 = \frac{(429)^2}{10} + \frac{(440)^2}{10} + \frac{(476)^2}{10} - \frac{(1345)^2}{30} = 120.867$$

$$SS_B \text{ at } a_3 = \frac{(450)^2}{10} + \frac{(422)^2}{10} + \frac{(454)^2}{10} - \frac{(1328)^2}{30} = 64.267$$

Figure 5. AB Summary Table

TABLE III
ANALYSIS OF VARIANCE TABLE FOR SIMPLE MAIN-EFFECTS

Source	SS	df	MS	F
1. Between subjects				
2. Between A at b_1	27.80	$p - 1 = 2$	13.9	$2/5 = .294$
3. Between A at b_2	16.2	$p - 1 = 2$	8.1	$3/5 = .171$
4. Between A at b_3	45.8	$p - 1 = 2$	22.9	$4/5 = .484$
5. Within cell	3833.73	$pq(n - 1) = 81$	47.34	
6. Within subjects				
7. Between B at a_1	164.6	$q - 1 = 2$	82.3	$7/11 = 16.86^*$
8. Between B at a_2	120.867	$q - 1 = 2$	60.434	$8/11 = 12.38^*$
9. Between B at a_3	64.267	$q - 1 = 2$	32.134	$8/11 = 6.583^*$
10. AB	80.94	$(p - 1)(q - 1) = 4$	20.235	$10/11 = 4.146^*$
11. B x subj w.groups	263.6	$p(n - 1)(q - 1) = 54$	4.881	
12. Total	4617.804	$npq - 1 = 89$		

* $p < .05$

Tukey's Post-Hoc Analysis

After a significant F was obtained a technique was then needed for making pairwise comparisons among means. Tukey's ratio was recommended when comparing only two means (Kirk, 1969, p. 268). The estimated critical value that must be exceeded by Tukey's value in order to be considered significant was computed by the following formula (Kirk, 1969, p. 269):

$$q'_{\alpha} = \frac{q_{(a)} MS_{\text{subj w. groups}} + q_{(b)} MS_{B \times \text{subj w.gr.}} (q - 1)}{MS_{\text{subj w.groups}} + q_{(b)} MS_{B \times \text{subj w.gr.}} (q - 1)}$$

where $q_{(a)} = 2.92$ which refers to the critical value of q for the degrees of freedom associated with $MS_{\text{subj w.groups}}$ and $q_{(b)} = 2.86$ which is the critical value of q for the degrees of freedom associated with the $MS_{B \times \text{subj w.groups}}$ (Kirk, 1969, p. 531, Table D.7).

$$q_{.05} = \frac{2.92 (132.248) + 2.86 (4.881) (3 - 1)}{132.248 + 4.881 (3-1)}$$

$$= 2.92.$$

The error term in Tukey's procedure for comparing the means of B is $MS_{B \times \text{subj w.groups}}$. The formula for comparing \bar{B}_1 with \bar{B}_2 at level α_1 is given below. All other comparisons for B are computed using the same procedure.

$$\begin{aligned} q &= \frac{C_j (\bar{AB}_{11}) + C_{j'} (\bar{AB}_{12})}{\sqrt{MS_{B \times \text{subj w.groups}}/n}} \\ &= \frac{1 (43.6) - 1 (43.1)}{\sqrt{4.881 / 10}} \\ &= .715. \end{aligned}$$

The error term for comparing the means of A is $MS_{w.cell}$. The formula given above is used. Therefore, for comparison of \bar{A}_1 with \bar{A}_2 at level b_1

$$q = \frac{1(43.6) - 1(42.9)}{\sqrt{47.34 / 10}}$$

$$= \frac{0.7}{2.17}$$

$$= .323.$$

Again, for the convenience of the reader, the following diagram is given in Figure 6:

	b_1	b_2	b_3
a_1	43.6 Ia	43.1 Ib	48.3 Ic
a_2	42.9 IIa	44.0 IIb	47.6 IIc
a_3	45.2 IIIa	42.2 IIIb	45.4 IIIc

Figure 6. The Experimental Mean Scores

Thus, according to Tukey's analysis, Ia is not significantly different from Ib and Ia is not significantly different from IIa. The results of the analysis are indicated in Table IV, page 59.

It can be seen that the students participating in the process seminar

TABLE IV
RESULTS OF TUKEY'S POST-HOC ANALYSIS

Comparisons	q	Comparisons	q
1. Ia and Ib	0.715	10. Ia and IIa	.323
2. Ia and Ic	6.72*	11. Ia and IIIa	.737
3. Ib and Ic	7.44*	12. IIa and IIIa	1.06
4. IIa and IIb	1.574	13. Ib and IIb	.414
5. IIa and IIc	6.723*	14. Ib and IIIb	.414
6. IIb and IIc	5.15*	15. IIb and IIIb	.829
7. IIIa and IIIb	4.29*	16. Ic and IIc	.323
8. IIIa and IIIc	0.286	17. Ic and IIIc	1.34
9. IIIb and IIIc	4.578*	18. IIc and IIIc	1.01

*p < .05

q ≥ 2.92

and the content seminar did not become more humanistic at the end of the seminar and the methods courses (Ia ~~+~~ Ib and IIa ~~+~~ IIb) as predicted by the experimenter and as supported by the research (Jacobs, 1968).

It was also concluded that the process seminar participants and the content oriented seminar participants became even less humanistic at the end of student teaching and, therefore, the seminars were not effective in either acquiring or maintaining a humanistic ideology.

In contrast, however, the traditional seminar group supported the research by becoming more humanistic after the methods courses. They then changed to a less humanistic ideology after student teaching.

Conclusions

To summarize, the following conclusions can be made:

1. Some of the predicted directions in the research hypothesis were contradicted by the obtained data, and, therefore, analysis of the data was futile. Inspection of these data indicated that confirmation of the theory was not possible by means of an a priori analysis.
2. A 3 x 3 analysis of variance was utilized to determine any significant differences in group means. Differences were found across treatments and in an interaction effect.
3. The tests for simple main-effects revealed that within each experimental group there were significant differences from one trial to another. The process oriented seminar participants reacted most differently, the content oriented seminar participants reacted somewhat less, and the control group reacted the least of the three groups.
4. Tukey's post-hoc analysis indicated that there were significant differences across trials in the following ways:
 - a. Both the process and content seminars contradicted the expec-

tations of the researcher. That is, it was hypothesized (page 31 of this work) that these two groups would be significantly more humanistic than Group III at the end of the eight weeks of treatment. However, it was concluded that the process seminar participants and the content oriented seminar participants did not change in their ideology as a result of the seminars (Ia = Ib and IIa = IIb). In contrast, the traditional seminar group followed the pattern as predicted by the researcher. That is, initially, they were somewhat rigid and conservative in their orientation toward pupil control but after the methods courses they exhibited a move toward humanism. Thus, the process and content seminars may have had a negative effect on the participants.

b. All three groups became significantly less humanistic at the end of the student teaching experience. Thus, the treatments had no effect at all in maintaining a humanistic ideology. Discussion and implications of these results are included in Chapter V.

CHAPTER V

SUMMARY, FINDINGS, DISCUSSION AND RECOMMENDATIONS

Introduction

This study was a comparison of the effect of three seminars on the attitudes of student teachers toward pupil control. One seminar was a process oriented approach, another was a content based approach, and the third was the traditional seminar that is conducted every semester. This third seminar was utilized as the control group and as a base line upon which to compare the effects of the other two seminars. The seminars were held preceding the eight weeks of student teaching.

A pilot study was conducted during the spring semester of 1979 at Oklahoma State University. The purpose of the pilot study was to give trial to the research design and data analysis. The major finding of the study was that the experimental treatments were not intensive enough to maintain student teachers' humanistic orientation during their student teaching. Generally, student teaching occurs in a more bureaucratic and custodial environment. Therefore, the experimenter extended the treatment to include an intervening treatment concurrently with the eight weeks of student teaching.

The experimental study took place during the fall semester of 1979 at Oklahoma State University. The thirty elementary education student teachers were randomly assigned to the three experimental groups. The instrument used was Hoy's Pupil Control Ideology Form. It was adminis-

tered three different times : (1) at the beginning of the semester before any treatment had begun, (2) at the end of eight weeks following the seminars to determine a move, if any, toward a greater humanistic ideology, and (3) at the end of the eight weeks of student teaching, which also included the additional intervening treatment, to determine maintenance of the humanistic ideology.

The major statistical technique that was originally planned was Dunn's Multiple Comparison Procedure, an a priori analysis used to compare the planned differences between treatment groups. Following the data collection, however, it was determined that the directions of the group means contradicted the direction of the planned hypothesis. Therefore, the researcher decided to do a 3 x 3 analysis of variance followed by Tukey's post-hoc analysis. On all statistical analyses, the .05 level of confidence was demanded for significance.

Findings and Discussion

After examining the results of the analysis of variance, it was concluded that there were significant differences among the three treatment levels. That is, it could be assumed that the student teachers in all three groups did not maintain their humanistic ideology throughout the student teaching experience. The finding of significant differences within the groups on the treatment measures was not surprising (although disappointing to the investigator) in that the student teaching experience again had its usual effect on the student teachers' orientation toward pupil control.

It was noted with interest that the control group was significantly

more humanistic after the seminar than they were before the seminar (IIIb < IIIa). In contrast, the process group did not change in their ideology, and the content group became less humanistic, although not significantly. This was contrary to Jacobs' (1968) research that maintained that student teachers became more humanistic after the methods courses. Only the control group supported his findings. Thus, it could be hypothesized that the seminars had an effect on the groups, but the effect was exactly the opposite what the investigator had intended.

An explanation worthy of consideration was that the content and process seminars, which were held directly prior to student teaching, may have raised the anxiety level of the student teachers to even greater heights. Since one of the major concerns of student teachers is classroom control, discussions of that subject may contribute to more anxiety. This could account for the higher scores of the two experimental groups in the present study. Thus, if feasible, the seminars may have a more positive impact if they are held concurrently with student teaching or possibly even after student teaching.

On second thought, however, the initial scores attained on the pre-test would make one question if the scores were indeed humanistic. Figure 7, page 65, contains the mean Pupil Control Ideology Form scores of Hoy's 1965 - 1966 Oklahoma State University students compared with the 1979 subjects in this study. Of course, these scores cannot be statistically analyzed, but it was interesting to ponder the reasons for the apparent higher custodial scores of the present study.

1965 - 1966	42.25	44.26	n = 130; p < .001
Spring, 1979	47.55	49.69	n = 48; N. S.
Fall, 1979	43.	47.1	n = 30; p < .05
	Before St. Tchg.	After St. Tchg.	

Figure 7. 1965 versus 1979 PCI Scores

Several plausible reasons for the lesser humanistic scores of 1979 are tenable. Could the difference be that our citizenry is more conservative today than fifteen years ago? Could the present scores be a response to the reported increase of violence in the schools? Could the "Back to the Basics Movement" be a curricular change that has affected the present student teachers' perception of pupil control?

It was also interesting to note the difference between the pre-test of the pilot study and the pre-test of the experimental study. The means are given below in Figure 8:

Group I	47.24	43.6	p < .01
Group II	46.47	42.9	p < .01
Group III	48.94	45.2	p < .05
	Pilot (Spring)	Experimental (Fall)	

Figure 8. Pilot Study and Experimental Study Pre-Test Scores

A two by three analysis of variance was run to determine if there were any significant differences between the means of the two groups. It was found

that the subjects in the experimental study were significantly more humanistic than the subjects in the pilot study.

Obviously, something had occurred in the two samples before they were ever involved in the experiment that was a determinant in their different attitudes. Demographic information was collected on the subjects of both the pilot study and the experimental study subjects. Table V, page 67, provides evidence that the more humanistic student teachers of the fall semester were somewhat older, had a higher per cent of married persons, had attended school longer, and had attended only Oklahoma State University. Perhaps, the older, married students, more than likely with children of their own, have acquired a humanistic orientation through their own outside-of-school experiences.

Recommendations

The relationship between teacher attitudes and teacher behavior continues to be one that should be of interest to teacher education institutions, supervisory personnel, and staff development personnel. Teachers-in-training must be involved in programs that incorporate methods of pupil control that are compatible with the human potential movement. Also, in that much of what is learned about teaching is ultimately learned in the context of the school organization, the most humanistic cooperating teachers available should be utilized to work with the student teachers.

The high attrition rate for first year teachers is often attributed to their inability to successfully cope with classroom management (Madsen, 1970). Those that do succeed look back at their first year with chagrin at the amount of time and energy expended in learning how to maintain class control. Therefore, teacher training institutions should attempt to help prospective teachers understand the relationship of their attitudes and be-

TABLE V
DEMOGRAPHIC INFORMATION OF SPRING AND FALL STUDENT TEACHERS

Source	Spring, 1979 (Pilot)	Fall, 1979 (Experimental)
\bar{X} age	24.2	25.3
Male	2	3
Female	46	27
Age Range	21.7 - 42.10	20.4 - 41.3
Married	19 (36%)	17 (59%)
Single	32 (60%)	12 (41%)
\bar{X} Semesters in School	9.5	10.5
Attended Other Univ.	30 (57%)	13 (45%)
Attended only OSU	23 (43%)	16 (55%)
PCI Score (Pre-test)	47.55	43.9
n	48	30

The fall semester participants were statistically more humanistic than the spring semester participants at an .05 level of confidence. They were also at least a year older, had 23% more married students, had attended school at least one more semester, and 12% more of them had attended only Oklahoma State University.

havior to that of their pupils. More attention must be given to the human part of the student teacher--more compassion, more mutual interest, and more interaction. This inter-personal human relations training and development must occur even if at the expense of the more traditional teacher education classes and methods.

However, the results of this study indicated that if indeed this interpersonal training is imperative and if student teachers need to be introduced to other methods of classroom control, the teacher education institutions must take into consideration the element of timing. The content seminar which focused on pupil control and the process seminar that also included classroom control were held directly prior to the student teaching experience. It was hypothesized that the seminars held concurrently with the methods courses would result in a more humanistic attitude on the part of the student teachers. The reverse held true. Only the control group became more humanistic at the end of the eight weeks of methods courses. Therefore, if the teacher education institution deems it necessary to discuss classroom control on a formal basis, according to this study, it should be conducted at some time other than just preceding student teaching.

Suggestions for Future Research

The results of this study indicated the following suggestions:

1. A similar study should allow more time for the process and content seminars. The time available for this study was insufficient to prove the effectiveness of the philosophically contrasting seminars.

2. A similar study should provide for the seminars to be conducted concurrently with the student teaching experience. In this way, the areas of discussion in the process seminar would be more related to the needs of the student teachers pertaining to classroom control. Also, the content

seminar would have more relevance to the student teachers as far as utilizing the methods and procedures that were recommended in the seminar.

3. A similar study should provide for the seminars to be conducted at the conclusion of student teaching in order to accommodate the need for less anxiety in the actual student teaching experience.

4. It would be interesting to administer the Pupil Control Ideology Form to these same teachers following their first year of teaching in a public school to compare the differences in attitudes of the three groups.

5. Research relating the developmental stages of student teachers (Fuller, 1969) to attitudes toward pupil control and their behavior in the classroom should prove valuable in developing teacher education programs which are oriented toward humanizing the elementary school.

6. The apparent difference in spring and fall student teachers relating to attitude might prove to be a fertile area for future investigation.

The very complex area of teacher attitudes and behaviors and the effects it has on pupil behavior surely holds many relationships to the kinds of learning experiences that take place daily in schools. Much work is needed to identify these variables and their relationships to each other. This research effort is necessary in determining the best and most efficacious way to enhance the humanistic potential in students majoring in elementary education.

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APPENDIXES

APPENDIX A

PUPIL CONTROL IDEOLOGY FORM

PUPIL CONTROL INVENTORY

INSTRUCTIONS: Following are twenty statements about schools, teachers, and pupils. Please indicate your personal opinion about each statement by circling the appropriate response at the right of each statement.

- | | | | | | |
|--|----|---|---|---|----|
| 1. It is desirable to require pupils to sit in assigned seats during assemblies. | SA | A | U | D | SD |
| 2. Pupils are usually not capable of solving their problems through logical reasoning. | SA | A | U | D | SD |
| 3. Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique. | SA | A | U | D | SD |
| 4. Beginning teachers are not likely to maintain strict enough control over their pupils. | SA | A | U | D | SD |
| 5. Teachers should consider revision of their teaching methods if these are criticized by their pupils. | SA | A | U | D | SD |
| 6. The best principals give unquestioning support to teachers in disciplining pupils. | SA | A | U | D | SD |
| 7. Pupils should not be permitted to contradict the statements of a teacher in class. | SA | A | U | D | SD |
| 8. It is justifiable to have pupils learn many facts about a subject even if they have no immediate application. | SA | A | U | D | SD |
| 9. Too much pupil time is spent on guidance and activities and too little on academic preparation. | SA | A | U | D | SD |
| 10. Being friendly with pupils often leads them to become too familiar. | SA | A | U | D | SD |
| 11. It is more important for pupils to learn to obey rules than that they make their own decisions. | SA | A | U | D | SD |
| 12. Student governments are a good "safety valve" but should not have much influence on school policy. | SA | A | U | D | SD |
| 13. Pupils can be trusted to work together without supervision. | SA | S | U | D | SD |

- | | |
|--|-------------|
| 14. If a pupil uses obscene or profane language in school, it must be considered a moral offense. | SA S U D SD |
| 15. If pupils are allowed to use the lavatory without getting permission, this privilege will be abused. | SA A U D SD |
| 16. A few pupils are just young hoodlums and should be treated accordingly. | SA A U D SD |
| 17. It is often necessary to remind pupils that their status in school differs from that of teachers. | SA A U D SD |
| 18. A pupil who destroys school material or property should be severely punished. | SA A U D SD |
| 19. Pupils cannot perceive the difference between democracy and anarchy in the classroom. | SA A U D SD |
| 20. Pupils often misbehave in order to make the teacher look bad. | SA A U D SD |

APPENDIX B

IDENTIFYING THE GOALS OF CHILDREN'S MISBEHAVIOR

IDENTIFYING THE GOALS OF CHILDREN'S MISBEHAVIOUR

INCREASED SOCIAL INTEREST ←		→ DIMINISHED SOCIAL INTEREST		GOALS	
USEFUL and SOCIALLY ACCEPTABLE BEHAVIOUR		USELESS and UNACCEPTABLE BEHAVIOUR			
Active Constructive	Passive Constructive	Active Destructive	Passive Destructive		
"success" cute remarks excellence for praise and recognition performing for attention stunts for attention being especially good being industrious being reliable (may seem to be "ideal" student, but goal is self-elevation, not co-operation)	"charm" excess pleasantness "model" child bright sayings exaggerated conscientiousness excess charm "Southern belle" (often are "teacher's pets")	"nuisance" the show off the clown walking question mark "enfant terrible" instability acts "tough" makes minor mischief	"laziness" bashfulness lack of ability instability lack of stamina fearfulness speech impediments untidiness self-indulgence frivolity anxiety eating difficulties performance difficulties	GOAL 1 ATTENTION GETTING Seeks proof of his approval or status (almost universal in preschool children) Will cease when reprimanded or given attention.	MINOR DISCOURAGEMENT ↑
<div><p>THE WELL ADJUSTED CHILD HAS MOST OF THESE QUALITIES</p><p>Respects rights of others. Is tolerant of others. Is interested in others. Co-operates with others. Encourages others. Is courageous. Has a true sense of own worth. Has a feeling of belonging. Has socially acceptable goals. Puts forth genuine effort. Willing to share rather than thinking "How much can I get?" "We" rather than "I"</p></div>				GOAL 2 POWER Similar to destructive attention getting, but more intense Reprimand intensifies misbehavior.	
				a "rebel" argues contradicts continues forbidden acts temper tantrums bad habits untruthfulness dawdling	"stubborn" laziness disobedience forgetting
"vicious" stealing bed-wetting violent and brutal (leader of juvenile delinquent gangs)	"violent passivity" sullen defiant	GOAL 4 DISPLAY OF INADEQUACY Assumes real or imagined deficiency to safeguard prestige.			
				"hopeless" stupidity (pseudo feeble minded) indolence ineptitude inferiority complex	

This chart describes the behaviours of discouraged children up to ten years of age.
Moving from Goals 4 to 3 (and so on) is a sign of improvement in the child's behaviour.

APPENDIX C

HOW TO CORRECT CHILDREN'S MISBEHAVIOR

HOW TO CORRECT CHILDRENS MISBEHAVIOUR

BY INTERPRETATION OF THE FOUR MISTAKEN GOALS

UP TO 10 YEARS OLD

CHILDS ACTION AND ATTITUDE	*TEACHERS REACTION	+ ASK THESE SPECIFIC QUESTIONS TO DIAGNOSE...	CORRECTIVE PROCEDURE
NUISANCE SHOW OFF CLOWN LAZY Puts others in his service, keeps teacher busy. Thinks "Only when people pay attention to me do I have a place"	FEELS ANNOYED GIVES SERVICE IS KEPT BUSY REMINDS OFTEN COAXES Thinks "He occupies too much of my time." "I wish he would not bother me."	GOAL 1 ATTENTION A "Could it be that you want me to notice you?" OR B "Could it be that you want me to do something special for you?"	NEVER GIVE ATTENTION WHEN CHILD DEMANDS IT Ignore the misbehaving child who is bidding for attention (Punishing, nagging, giving service, advising, is attention) Do not show annoyance. Be firm. Give lots of attention at any other time.
STUBBORN ARGUES WANTS TO BE THE BOSS TEMPER TANTRUMS TELLS LIES DISOBEDIENT DOES OPPOSITE TO INSTRUCTIONS DOES LITTLE OR NO WORK Says "If you don't let me do what I want you don't love me" Thinks "I only count if you do what I want"	FEELS DEFEATED TEACHERS LEADERSHIP IS THREATENED Thinks "He can't do this to me." "Who is running the class? He or I?" "He can't get away with this."	GOAL 2 POWER A "Could it be that you want to show me that you can do what you want and no one can stop you?" OR B "Could it be that you want to be boss?"	DON'T FIGHT—DON'T GIVE IN Recognise and admit that the child has power. Give power in situations where child can use power productively. Avoid power struggle. Extricate yourself from the conflict. Take your sails out of his wind. Ask for his aid. Respect child. Make agreement.
VICIOUS STEALS SULLEN DEFIANT Will hurt animals, peers and adults. Tries to hurt as he feels hurt by others. Kicks, bites, scratches. Sore loser. Potential delinquent. Thinks "My only hope is to get even with them."	FEELS DEEPLY HURT OUTRAGED DISLIKES CHILD RETALIATES (CONTINUAL CONFLICT) Thinks "How mean can he be?" "How can I get even with him?"	GOAL 3 REVENGE A "Could it be that you want to hurt me and the pupils in the class?" OR B "Could it be that you want to get even?"	NEVER SAY YOU ARE HURT Don't behave as though you are hurt. Apply natural consequences. (Punishment produces more rebellion) Do the unexpected. Persuade child that he is liked. Use group encouragement. Enlist one buddy. Try to convince him that he is liked.
FEELS HOPELESS 'STUPID' ACTIONS INFERIORITY COMPLEX GIVES UP TRIES TO BE LEFT ALONE RARELY PARTICIPATES Says "You can't do anything with me." Thinks "I don't want anyone to know how inadequate I am."	FEELS HELPLESS THROWS UP HANDS DOESN'T KNOW WHAT TO DO Thinks "I don't know what to do with him." "I give up." "I can't do anything with him."	GOAL 4 DISPLAY OF INADEQUACY A "Could it be that you want to be left alone?" OR B "Could it be that you feel stupid and don't want people to know?"	ENCOURAGE WHEN HE MAKES MISTAKES. Make him feel worthwhile. Praise him when he tries. Say "I do not give up with you." Avoid support of inferior feelings. Constructive approach. Get class co-operation with pupil helpers. Avoid discouragement yourself.

* TEACHERS REACTION MUST NOT BE EXPRESSED SINCE THE 'NATURAL' REACTION IN THESE CIRCUMSTANCES WILL ONLY REINFORCE THE CHILDS MISTAKEN GOAL, EXCEPT IN GOAL 2

+ ALL FOUR QUESTIONS MUST BE ASKED OF THE CHILD IN THIS ORDER, EVEN THOUGH THE GOAL MAY BE SUSPECTED. DO NOT CHANGE WORDING

APPENDIX D

WEEKLY ASSIGNMENT

NAME _____

DATE _____

GRADE TAUGHT _____

When we deal with a child, even the most difficult one,
we must have faith in him or her. Pessimism gains nothing;
optimism is the only way to improve and change behavior in
others. (Dreikurs and Cassel, 1974, p. 89)

INCIDENT _____

TEACHER'S NATURAL REACTION _____

PROBABLE STUDENT MOTIVATION _____

TEACHER CONFRONTATION TECHNIQUES _____

WHAT CAN YOU DO TO ENCOURAGE THE CHILD? STEP BY STEP, WHAT WILL YOU DO TO
TRY AND CHANGE THE CHILD'S BEHAVIOR? _____

APPENDIX E

TRADITIONAL SEMINAR SCHEDULE

Thursday Seminar Schedule

C&IED 4450

Spring, 1979

Location: CLB 217

Time: 12:30 - 1:20

January 18	Planning
January 25	TEACHER CERTIFICATION--Dr. Kenneth King, Associate Director of Teacher Education, will discuss the essential steps involved in becoming certified.
February 1	TEACHER PLACEMENT SERVICES--this office will discuss procedures for getting your credentials on file as well as alternatives to teaching.
February 8	Let's celebrate the Year of the Young Child.
February 15	TEACHER ORGANIZATION--Take a free ride and the consequences or pay your way and have a legitimate voice in your profession. Dr. Donald, Myers, Head of C&IED, will be speaking to this point.
February 22	CLASSROOM CONTROL--Mr. Ken Bays from Tulsa, Dr. Bill Childress of Cushing, and Dr. Allen Robson of Ponca City will give suggestions and information concerning interviews. MEET IN CASE STUDY C OF STUDENT UNION!
March 8	Meet with supervising teachers.
March 12	THE BIG DAY--first day of full time student teaching
May 7	CULMINATING STUDENT TEACHING SEMINAR--meet back on campus. More information will be coming.

APPENDIX F

RAW DATA OF PILOT STUDY

RAW DATA OF PILOT STUDY

Pre-Test a

Group I	Group II	Group III
40	39	44
43	39	44
43	41	44
44	42	45
44	42	45
45	43	46
45	45	46
45	46	48
45	46	49
46	47	49
50	49	51
51	50	53
51	51	54
52	53	54
55	54	55
57	57	56
$\bar{X} = 47,24$	$\bar{X} = 46,47$	$\bar{X} = 48,94$

Post-Test b

Group I

28
36
39
40
41
41
42
44
45
45
45
46
46
47
49
51

$$\bar{X} = 42,81$$

Group II

35
37
39
40
41
42
43
44
44
45
45
45
45
47
49
51

$$\bar{X} = 43,25$$

Group III

36
39
40
40
42
43
44
45
45
46
48
49
50
54
54
56

$$\bar{X} = 45,69$$

Post-Test c

Group I

34
42
43
46
46
47
48
48
49
52
53
54
54
55
57
58

$$\bar{X} = 49,12$$

Group II

37
40
43
44
46
50
51
51
53
53
53
54
56
59
68

$$\bar{X} = 50,68$$

Group III

38
38
43
44
45
47
49
49
50
51
51
52
54
57
58
62

$$\bar{X} = 49,27$$

APPENDIX G

RAW DATA OF EXPERIMENTAL STUDY

RAW DATA OF EXPERIMENTAL STUDY

Pre-Test a

Group I

31
36
41
41
42
47
47
48
48
55

$$\bar{X} = 43.60$$

Group II

33
34
39
43
44
44
46
46
47
53

$$\bar{X} = 42.9$$

Group III

36
36
36
40
42
47
48
52
52
63

$$\bar{X} = 45.2$$

Post-Test b

Group I

31
36
42
43
44
44
44
46
48
53

$$\bar{X} = 43.1$$

Group II

36
38
39
40
43
45
47
49
51
52

$$\bar{X} = 44.0$$

Group III

33
36
39
39
40
45
46
47
48
49

$$\bar{X} = 42.2$$

Post-Test c

Group I

36
43
46
46
47
48
49
49
59
60

$$\bar{X} = 48.3$$

Group II

33
33
45
46
49
50
53
54
55
58

$$\bar{X} = 47.6$$

Group III

38
39
39
43
43
44
48
52
53
55

$$\bar{X} = 45.4$$

APPENDIX H

HOY'S LETTER OF PERMISSION



GRADUATE SCHOOL OF EDUCATION • OFFICE OF THE ASSOCIATE DEAN
NEW BRUNSWICK • NEW JERSEY 08903 • 201/932-7626

January 5, 1979

Ms. Kathleen McCullough
904 N. West Street
Stillwater, OK 74074

Dear Ms. McCullough:

Thank you for your letter of December 27 requesting permission to use the PCI form. Please consider this letter written consent to use the PCI instrument in your research. The most recent bibliography relevant to PCI studies is contained in our research monograph, The School and Pupil Control, published by Penn State Press.

Best wishes in your research. Please send me a copy of the results when your study is completed.

Sincerely,

Wayne K. Hoy
Acting Associate Dean

lmk

VITA

Kathleen Louise McCullough

Candidate for the Degree of

Doctor of Education

Dissertation: AN EXPERIMENTAL STUDY OF THE EFFECT OF SEMINARS ON ATTITUDES
OF ELEMENTARY STUDENT TEACHERS TOWARD PUPIL CONTROL

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Lawton, Oklahoma, January 2, 1948, the daughter
of Mr. and Mrs. Lloyd F. McCullough.

Education: Graduated from Owasso High School, Owasso, Oklahoma, in
May, 1966; received the Bachelor of Science in Education degree
from Southwestern Oklahoma State University, Weatherford, Okla-
homa, in May, 1970; received the Master of Science degree in
Curriculum and Instruction with an emphasis in special education
from Oklahoma State University, Stillwater, Oklahoma, in July,
1975; enrolled in the doctoral program at Oklahoma State Univer-
sity, 1975 - 1980; and completed requirements for the Doctor of
Education degree in May, 1980.

Professional Experience: Employed as a special education teacher for
two years and as a regular classroom teacher for two years in the
public schools from 1970 - 1975; employed as a graduate associate
and as instructor of special education at Oklahoma State Univer-
sity from 1975 - 1977 in the Department of Applied Behavioral
Studies in Education; employed as a graduate associate in the De-
partment of Curriculum and Instruction in Education from 1977 -
1980 at Oklahoma State University.

Professional Organizations: Member of National Education Association;
Member of Phi Delta Kappa, OSU; Member of Association for Child-
hood Education International, OSU.