

PERSONALITY FACTORS OF STUDENT TEACHERS AND FACULTY
SUPERVISORS AS RELATED TO STUDENT TEACHERS'
PERCEPTIONS OF SUCCESS

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by

James Patrick Krecsy

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ABSTRACT

This study was concerned with the relationship between faculty supervisor-student teacher personality similarity and the student teacher's perceptions of success in student teaching supervision. Within the framework of supervision as teaching and within a generalized model of supervision, the study focused on three specific purposes. A first purpose involved the attempt to determine the presence of functional relationships between faculty supervisor-student teacher similarity along personality dimensions and the student teacher's perception of the success of the interpersonal relationship with the supervisor. A second purpose examined the possible functional relationships between faculty supervisor-student teacher similarity along dimensions of personality and the student teacher's perception of the success of his personal learning during the supervisory process with the supervisor. A final purpose concerned the determination of any existing relationship between the perceived success of the dyadic interpersonal relationship and the perceived success of student teacher learning.

The sixteen independent, or predictor, variables of this study were represented as the similarity, or difference, between faculty supervisors and their student teachers along each of the sixteen individual personality factors of Cattell's Sixteen Personality Factor Questionnaire. The two dependent, or criterion, variables were the perceived success of the dyadic interpersonal relationship and the perceived success of student teaching learning. An instrument having

a semantic differential format was employed to determine status on each success variable.

Data for the study were gathered from twelve faculty supervisors of Elementary Education students enrolled in the faculty of Education, The University of Manitoba, during the 1972-73 academic year. Of the 163 student teachers under the supervision of the twelve supervisors, 132 satisfactorily completed the instruments.

Analyses relevant to the first two purposes of the study involved the linear regression of each dependent variable on each of the independent variables which had been partitioned into low and high polarity groupings. The third purpose of the study involved the determination of the correlation between the two success variables and testing for significance.

The findings of the study may be summarized as follows:

1. Fifty-four of the sixty-four regression analyses undertaken were not significant. Among the ten remaining regressions, six were significant at a confidence level of eighty per cent and three were significant at a confidence level of ninety per cent.

2. The regression of perceived interpersonal relations success on low polarity Factor E, the submissive-assertive dimension, was significant at a confidence level of ninety-nine per cent.

3. Perceived dyadic interpersonal relationship success and perceived learning success were significantly associated.

Based on the findings related to the first two purposes of the study, it was suggested that perceived dyadic interpersonal relations

success and personal learning success during the supervision process cannot be effectively predicted from knowledge of supervisor-student teacher similarity or difference along dimensions of personality. However, knowledge of the student teacher's submissiveness relative to the assertive faculty supervisor appeared as a useful predictor of perceived dyadic interpersonal relationship success. The finding pertinent to the third purpose suggested that further examination of the relationship between the quality of dyadic interpersonal relations and the proclivity to learn during the supervision process is warranted.

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CHAPTER I

STATEMENT OF THE PROBLEM

I. INTRODUCTION

The student teaching or practicum experience component is generally viewed as the critical element of teacher education programmes (e.g., Lindsey, et al., 1969, p.vii; Combs, 1969, pp.33,104; Dussault, 1970, p.1; Medley, 1971; Mosher and Purpel, 1972, p.113ff.). The quality of that practicum experience may be influenced considerably by the quality of the supervision provided the student teacher.

Some researchers have sought to establish relationships between a variety of independent and dependent variables operative within the supervisory process of student teaching. The studies generally have focused upon relationships between cooperating teachers and student teachers and have chosen to ignore the college, university, or faculty supervisor as a source of data. Yet it may be argued that the college supervisor of student teaching is and should be in an ideal position to have a considerable beneficial impact upon the quality of the student teacher's practicum experience and professional growth (e.g., Berman and Ussery, 1966, p.1; Mertz, 1969, p.214ff.).

Much of the supervisor-student teacher interaction during the student teacher's practicum experience will likely occur during a pre- and/or post-lesson conference. Just as the teacher tends to develop a typically individualistic behavior pattern in executing his instructional duties, during the conference interaction the supervisor will tend to employ an idiosyncratic behavioral pattern which is

related to his personality configuration (e.g., Rogers, 1947, p.359; 1962, p.416). Simultaneously, the student teacher brings to the interaction certain individual personality traits, some of which may be at variance with the supervisor's. A number of investigators have sought to determine, within the framework of student teaching supervision, the potential consequences of variability in the individual personality characteristics of interacting dyad members for interpersonal compatibility.

The ultimate goals of the supervisory process are the development of the student teacher's instructional skill, his professional knowledge, and acceptable professional attitudes and behaviors. In his role, the supervisor attempts to promote the student teacher's achievement of these goals by transmitting substantive knowledge. The student teacher's success in learning and thus the productivity of the student teacher-supervisor relationship may be affected by the quality of the interpersonal relationship existing between the dyad members of this supervisory process (e.g., Vigilante, 1966, p.645). That quality may be partially determined by the personal properties of the interacting individuals (e.g., Newcomb, 1961, p.6ff.; 1959, p.384-422).

Educators have periodically suggested that a more rational, systematic approach to replace the generally-random methods of assigning student teachers to supervisors must be determined in order to maximize the achievement of goals in the supervisory process of student teaching. The concern of the present study was to determine some possible relationships between student teacher - college supervisor

similarities in personality characteristics and the student teacher's perceived success of the dyadic interpersonal relationship and of his personal learning during the supervisory process. Personality may provide one possible basis for the productive assignment of student teachers to supervisors in teacher education programmes.

Past attempts to determine possible criteria for assigning student teachers have explored the feasibility of matching in terms of such variables as sex, demographic characteristics, educational attitudes, perceptions of student teaching, interpersonal relations orientation, and personality traits or disposition. Some evidence exists that similarities and differences along certain personality characteristics are related to measured success in student teaching (e.g., Hohman, 1972; Burk, 1969). However, findings regarding the utility of assignment in terms of personality characteristics have been variable, partially due, perhaps, to sampling and methodological differences amongst the studies. In view of the body of expert opinion which suggests the importance of personality compatibility in dyadic interactions and in view also of the limited number and variable findings of studies concerned with personality and success within the context of teacher education, a careful yet readily replicable exploration appeared warranted.

II. DEFINITION OF THE PROBLEM

The three basic concerns of this study may be posed at this time in interrogative form:

1) Is student teacher-supervisor similarity along dimensions of personality important in predicting the student teacher's perceived success of the student teacher-supervisor interpersonal relationship?

2) Is student teacher-supervisor similarity along dimensions of personality important in predicting the student teacher's perceived success in personal learning during the supervisory process?

3) Are the student teacher's perceived success of the interpersonal relationship with the supervisor and his perceived success in personal learning during the supervisory process associated?

Sixteen independent variables and two dependent variables were employed in the study. The independent variables were represented as the degree of similarity, or difference, between faculty supervisors and their student teachers as assessed along each of sixteen individual personality factors. The two dependent variables, both based upon the perceptions of the student teachers, were a) the success of the interpersonal relationship between the dyad members, and b) the success of student teacher learning during the supervisory process.

In view of the scarcity of the studies concerned with the general problem being examined here, this study may be considered exploratory in nature. The findings illuminate some existing relationships and generate further lines of inquiry and possible hypotheses for future examination.

III. SIGNIFICANCE OF THE PROBLEM

Most teacher education institutions schedule rather limited practicum experience for prospective teachers. To maximize the benefits of this brief experience for the student teachers there is

need for a particularly strong relationship between the student teacher and his supervisor. The success and productivity of the student teacher-supervisor relationship during this brief practicum experience may be some function of the similarity of the members along personal dimensions. The present study attempted to ascertain some possible bases in personality for matching a student teacher with a supervisor in order to enhance the dyadic interpersonal relationship and student teacher learning.

Significantly, the present study was basically exploratory in nature. The findings extend the presently limited knowledge regarding the feasibility of matching student teachers with supervisors along dimensions of personality and therefore have some implications for subsequent research and practice in teacher education institutions. Some agreement does exist that the assignment of student teachers to supervisors should consider the personality dispositions of dyad members since personality differences may be a fertile source of interpersonal conflict negatively affecting productivity (e.g., Chaltas, 1965, p.313; Moskowitz, 1966, p.98; Hohman, 1972, p.376). The few relevant studies available have tended to relate dyadic differences in personality characteristics, type, or disposition to student teacher success (e.g., Burk, 1969), to the student teacher's assessment of the cooperating teacher's competencies (e.g., Davis, 1969), evaluation of the other dyad member (e.g., Lucasse, 1971), or student teacher performance or opinion of student teaching (e.g., Hill, 1969; Bell, 1972). The findings of these studies, however, have been highly variable.

While some writers have commented upon the need for more precise methods of assigning student teachers to supervisors, the concern with assignment has generally focused upon the relationship between the student teacher and cooperating teacher. This study was concerned not with the student teacher-cooperating teacher dyad but with the relationship between the college or faculty supervisor and the student teacher.

Unlike most similar studies this study employed dependent variables which were based upon the perceptions of the student teacher. The literature suggests (e.g., Dumas, 1969, p.276; Baird, 1971, p.563-A) that the student teacher's perception of his interpersonal relations with his supervisor and his perception of his own learning may have possible implications for the individual's concept of self as teacher and his subsequent teaching practice.

Finally, the current study was concerned with some possible predictors of perceived success rather than the determination of relationships between variables. The mere presence of strong relationships between variables was considered insufficient justification for concluding that matching may productively proceed along specifiable dimensions of personality. That conclusion may be more readily warranted if certain variables appear as rather strong predictors of either or both dependent variables.

IV. INSTRUMENTATION IN THE STUDY

Two instruments were employed to gather data for this study. One instrument was used to ascertain measures of the independent variables; the other instrument was used to determine each individual's

status with respect to the dependent variables. Each instrument is given brief consideration below.

Instrumentation for the Independent Variables

The sixteen independent variables employed in this study correspond with the sixteen personality factors identified in the personality instrument administered to faculty supervisors and student teachers. In operational terms the independent or predictor variables were represented as the degree of similarity, or difference, between faculty supervisors and their student teachers in terms of each of the sixteen personality factors.

The Sixteen Personality Factor Questionnaire, Form A, 1967-68 edition, (The Institute for Personality and Ability Testing, 1967; Cattell, et al., 1970) was employed in gathering personality data. This instrument, hereafter identified as the 16PF, purports to measure sixteen psychologically-meaningful and functionally-independent personality dimensions. The dimensions in their non-technical, bipolar form are listed below.

Factor A: Reserved	vs. Outgoing
Factor B: Less Intelligent	vs. More Intelligent
Factor C: Affected by Feelings	vs. Emotionally Stable
Factor E: Humble	vs. Assertive
Factor F: Sober	vs. Happy-go-lucky
Factor G: Expedient	vs. Conscientious
Factor H: Shy	vs. Venturesome
Factor I: Tough-minded	vs. Tender-minded
Factor L: Trusting	vs. Suspicious
Factor M: Practical	vs. Imaginative
Factor N: Forthright	vs. Shrewd
Factor O: Placid	vs. Apprehensive
Factor Q1: Conservative	vs. Experimenting
Factor Q2: Group-dependent	vs. Self-sufficient
Factor Q3: Casual	vs. Controlled
Factor Q4: Relaxed	vs. Tense

Instrumentation for the Dependent Variables

Both dependent variables in this study were based upon student teachers' perceptions of aspects of their relationship with their faculty supervisors. The dependent, or criterion, variables against which predictions were made were:

- a) the success of the interpersonal relationship between the faculty supervisor and student teacher, and
- b) the success of the student teacher's learning during the supervisory process.

The instruments employed in determining student teacher success were in the format of the Semantic Differential (Osgood, et al., 1957). Utilizing this approach, each of the success variables was judged by student teacher respondents in terms of twenty bipolar adjective pairs set forth on scales of seven intervals. The criteria employed in selecting the adjective pairs resulted in the final retention of twelve evaluative, three activity, two potency, and three unassigned adjective pairs.

V. DATA SOURCE AND METHODOLOGY

The Data Source

The data sources for this study were certain faculty supervisors and their student teachers who were enrolled in the Elementary Education programme at the Faculty of Education, the University of Manitoba, during the 1972-73 academic year.

The decision was arbitrarily made to request the voluntary participation for the study of those twenty faculty members who were responsible for the supervision of student teachers enrolled in the programme.

Twelve of the faculty supervisors both provided necessary data and encouraged the cooperation and participation of their student teachers in the study.

Since the study required the pairing of each student teacher with his faculty supervisor, the self-selected nature of the faculty supervisor sample necessarily reduced the available elementary level student teacher population by the number of student teachers supervised by non-participating faculty supervisors. With this limitation 163 student teachers were potentially available as sources of data.

Methodology

Student teacher scores on the independent variables were determined in this study by calculating the STEN (standard ten) score difference between each student teacher and his supervisor on each personality factor of the 16PF instrument. Student teacher responses to the scales employed to measure the dependent variables of interpersonal relationship success and learning success were submitted to factor analytic procedures to assist in determining which scale would be employed in providing a measure of the dependent variables. Thus, one of the most representative scales of the first extracted factor was subsequently used to determine the score for each of the two dependent variables.

Dyadic differences in STEN scores between student teachers and their supervisors were transformed in order to eliminate negative scores. With these scores and the appropriate scores on the dependent variables, regression analyses were undertaken to ascertain the

significance of the independent variables as predictors of the criterion, or dependent, variables.

Finally, the coefficient of correlation was employed to determine the presence and degree of any existing association between the dependent variables.

VI. LIMITATIONS OF THE STUDY

Intrinsic to most studies in education which are concerned with the complexities of human behavior and interaction is the limitation placed upon them by the difficulties of identifying and controlling variables. The student teacher's perceived success as determined in this study may be influenced by variables other than specific personality factors. As ex post facto research in which measures were taken at a single point in time, this study is limited insofar as no attempt was made to control other possible variables which may influence the prediction of the criterion variables.

A second limitation of the study concerns the sample employed. Only those student teachers enrolled in the Elementary Education programme at the University of Manitoba and their faculty supervisors were selected as data sources for the study. As well, the faculty supervisor sample was voluntary. The generalizability of findings is therefore correspondingly limited. This limitation notwithstanding, some useful conclusions and speculations were drawn from the findings of this exploratory study.

The third possible limitation ensues from the instrumentation. The 16PF consists of 187 items and takes between forty-five and sixty

minutes to complete. Since students were requested to complete the instrument at one sitting, some loss of discrimination may have resulted in responses to items in the last part of the instrument. Similarly, while the semantic differential instruments used to collect dependent variable data can be completed quickly, the repetitive adjective pair format may have resulted in some loss of response discrimination.

VII. ASSUMPTIONS OF THE STUDY

The assumptions inherent in this study concern the sample employed, the data collected, and the conceptual foundation.

Assumption 1. The faculty supervisor sample was self-selected from the population of student teacher supervisors in the Elementary Education Programme at the University of Manitoba. It was assumed that the voluntary supervisor group would not significantly differ from the non-participating group in terms of the success scores assigned to them by their student teachers. The assumption seems reasonable in view of the reasons given by eligible but non-participating supervisors for their non-participation. These reasons included: prior involvement in other projects; the wish not to impose a personal decision to participate upon busy student teachers; general skepticism about the validity of formal instruments, including personality tests; and apprehension that private data would inevitably be made public notwithstanding assurances.

Assumption 2. Based upon assurances of researcher discretion and respondents' anonymity given to both supervisors and student

teachers, it was assumed that responses to the instruments were complete, accurate, and uncontaminated by attempts to give so-called socially-desirable responses.

Assumption 3. It was assumed in this study that individual personality configurations are basically stable entities. Although the personality measure was taken subsequent to the completion of the student teaching experience, it was assumed that the personality characteristics would have been operative through the duration of the experience and not subject to any significant change by the experience.

Assumption 4. Since the conceptual foundation of the study relies upon a model of the teaching act, it is useful to define the nature of teaching. Thus, for the purpose of this study, teaching was viewed as those communicative acts, set of acts, or processes designed with the intent of facilitating the modification of an individual's behavior in some desired direction. On the basis of this definition it was assumed that a distinct parallel may be drawn amongst the interactions of teacher and pupils, supervisors and teachers, cooperating teachers and student teachers, and faculty supervisors and student teachers.

Assumption 5. It was assumed that faculty supervisor-student teacher interaction would predominantly occur during a conference which precedes and/or follows the supervisor's observation of the student teacher's classroom performance. Thus, it was upon this conference interaction that the student teacher would base his reactions to the interpersonal relations and learning variables of the study.

VIII. DEFINITIONS AND ABBREVIATIONS

Faculty Supervisor. The term 'faculty supervisor' may be employed interchangeably with college or university supervisor. The term refers to a member of a teacher education institution charged with the major responsibility for supervising the practicum experience of a number of students in training at the institution.

Student Teacher. In this study, the student teacher was an individual enrolled in the Elementary Education programme in the Faculty of Education, the University of Manitoba, during the 1972-73 academic year.

Supervisory Group. A supervisory group consisted of a faculty supervisor and those student teachers whose student teaching experience he has supervised.

Independent or Predictor Variables. In this study the predictor variables were directly derived from and correspond to the sixteen individual personality factors identified and measured by the 16PF instrument.

Dependent or Criterion Variables. The two dependent or criterion variables of this study were based upon the perceptions of student teachers. The first variable, abbreviated as IPR-S, is the success of the interpersonal relationship between the faculty supervisor and student teacher. The second variable, abbreviated LNG-S, was the perceived success of student teacher learning during the supervisory process with the faculty supervisor.

Supervisory Conference. For the purpose of this study the supervisory conference, which precedes and/or follows the supervisor's observation of the student teacher's classroom performance, was that component of the supervisory process during which the preponderance of supervisor-student teacher interaction likely occurred. The basic substantive content of the conference was the student teacher's instructional behavior.

IX. SUMMARY

The prospective teacher's practicum experience is an essential ingredient of most teacher training programmes. The supervision process, which involves the student teacher and college or faculty supervisor during this experience, has as its ultimate goal the student teacher's increased knowledge and skill in teaching. Some writers have suggested that learning success in the dyadic relationship may be related to the perceived success of the dyadic interpersonal relationship. In turn, both learning success and interpersonal relations success may be some function of the compatibility of the two members along personality dimensions. The concern of the present study, therefore, was to examine similarity along personality dimensions as potential predictors of the perceived success of the dyadic interpersonal relationship and of learning during the supervisory process.

X. ORGANIZATION OF THE STUDY

The major purposes of the study have been defined. Chapter II will entail an examination of the conceptual foundation for the study and a review of relevant literature. The review will emphasize those

research findings which relate the dimensions of personality to interpersonal relations and to success during the student teaching experience.

Chapter III will describe more fully the instrumentation, data sources, and methodological concerns of the investigation. Results of the various analyses undertaken will be presented in Chapter IV. The final chapter will summarize the major findings of the study, draw some conclusions, speculate upon the findings and other elements of the study, and indicate various implications of possible utility for subsequent research and practice.

CHAPTER II

THE CONCEPTUAL FOUNDATION AND REVIEW OF RELATED LITERATURE

I. THE CONCEPTUAL FOUNDATION

Introduction

Educational commentators have suggested that research in supervision and the education of pre-service teachers has been questionable in quality and imagination (e.g., Harris, 1963, p.129; 1966, p.86; Wilson, et al., 1969, p.40; Cyphert and Openshaw, 1964). The paucity of such research is no less pronounced in the field of student teaching supervision. If the student teaching experience is viewed as the critical component of teacher education programmes and if the quality of supervision is central to that experience (e.g., Fabiano, 1963, p.105; Whooley, 1970; Medley, 1971, p.157), then research should be promoted which has the capability of suggesting possible improvements for student teaching supervision, and thereby indirectly benefitting the quality of education provided youth.

In the virtually complete absence of applicable theory most current studies in the field of student teaching supervision must necessarily proceed as past studies have done by assuming relevant conceptual positions. For the present study a number of interrelated conceptualizations are pertinent. Thus, consideration is given in subsequent sections to the view of supervision as teaching within the teacher education context, to a generalized model of supervision based upon a model of teaching, and to the elaboration of individual

components of the model utilizing some elements from three associated conceptualizations of the supervisory process.

Supervision as Teaching in Teacher Education

Anderson (1967, p.20ff.) has developed a model of the dimensions of the teacher's role.

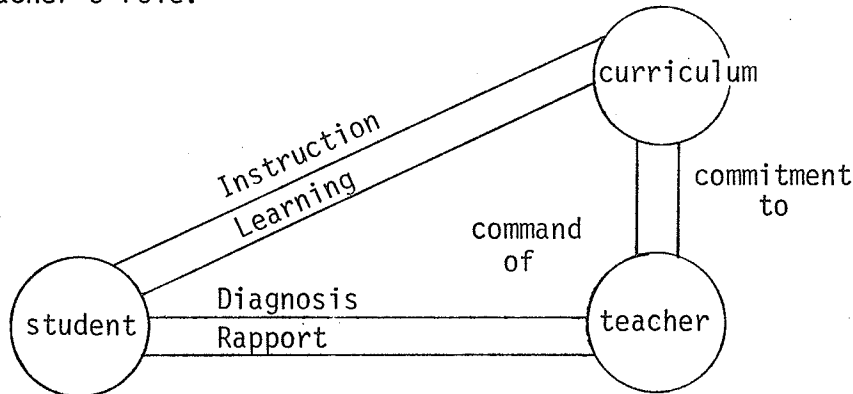


Figure 1

Dimensions of the Teacher's Role
(From Anderson, 1967, p.33)

Figure 1 suggests that the teacher must be able to diagnose the student's status with respect to his learning and must establish an effective working relationship with the student. He must also have a commitment toward and command of the curriculum. Much of the teacher-student interaction occurs as the teacher attempts to facilitate student learning of curriculum content through instruction.

The ultimate goal of the supervisor with respect to the teacher and his role is the improvement of this instruction (e.g., Sergiovanni and Starratt, 1971, p.3; Mosher and Purpel, 1972, p.2-3; Cogan, 1973, p.9). Such improvement may be facilitated by increasing the teacher's awareness of his performance and thereby his control of subsequent

performance. At the same time improvement may be further encouraged by offering instructional alternatives to present behaviors. In brief, increasing the teacher's awareness and control of his behavior and his acceptance and use of alternatives suggests that he is learning about himself in and for his role as teacher. Although learning by one individual in a dyadic relationship does not necessarily infer planned teaching by the other, the conceptualization of supervision itself as teaching within the context of teacher education is particularly appropriate. It is expected that the student teaching supervisor will in fact demonstrate many of the same behaviors of teaching during his interaction with the student teacher as a teacher would during his interaction with students.

This view of supervision as teaching is not uncommon (e.g., Dussault, 1970). Implicit in the work of Margaret Lindsey and her associates (1969), for example, is that supervisors of student teachers will demonstrate teaching behaviors during the supervisory process. Not only is the primary function of the student teacher supervisor to teach (p.28), but improvements in the function may be suggested by studies of the classroom behavior of teachers (p.41). Like teaching behavior, supervisory behavior can be subjected to study through the use of systematic observational and analytic approaches (p.42). In view of the importance of the conference and since conference effectiveness depends upon the supervisor's teaching behavior, it has been suggested that supervisory behavior undergo careful study (p.84).

Anderson, like others (e.g., Berman and Ussery, 1966, p.2; Clausen, 1964, p.112), conceives of supervision as deriving its theoretical foundation from a concept of teaching and therefore views the supervisor as a teacher. His theoretical model of the supervisor's role, which is analogous to and incorporates his model of the dimensions of the teacher's role, is presented in Figure 2.

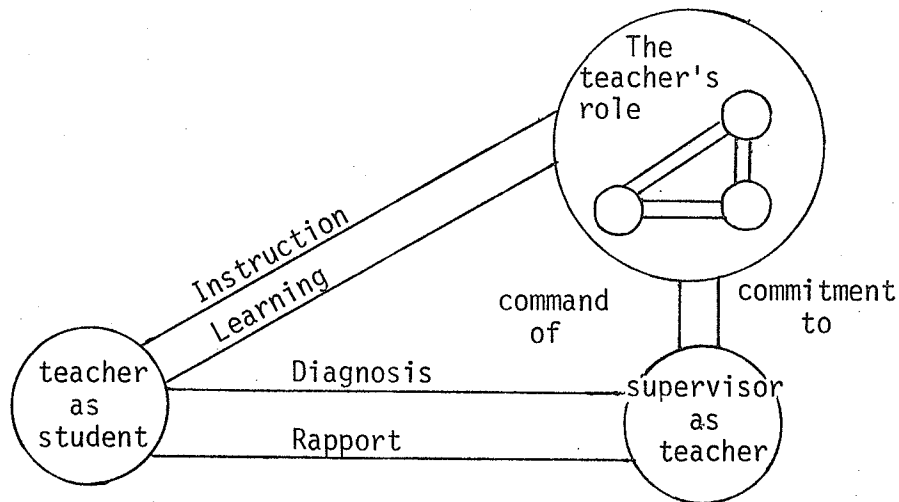


Figure 2

Dimensions of the Supervisor's Role
(From Anderson, 1967, p.36)

The dimensions of the supervisor's role, Figure 2, bear a clear similarity to those of the teacher's. The supervisor, as a teacher of teachers, must be able to diagnose teacher needs and skills and be able to establish an effective working relationship. He, like the teacher in his role, must have a commitment toward and command of the supervisory content, namely the various dimensions of the teacher's role and behavior. These dimensions provide the substantive content for the supervisor and teacher in the instruction-learning situation of

the supervisory process. Thus, the supervisor is an agent facilitating the teacher's efforts to improve and to expand his skills and behavioral repertoire. The supervisor must not only have the skills and knowledge of a highly effective teacher and be prepared to share these but he must also have the special leadership ability necessary to influence teacher behavior in desirable directions (e.g., Shaplin, 1961, p.54).

The Generalized Model of Supervision

Anderson's model of the dimensions of the teacher's role incorporates an instruction or teaching dimension. Glaser has presented a basic model of teaching which identifies four specific components of the instructional dimension (DeCecco, 1968, p.11ff.).

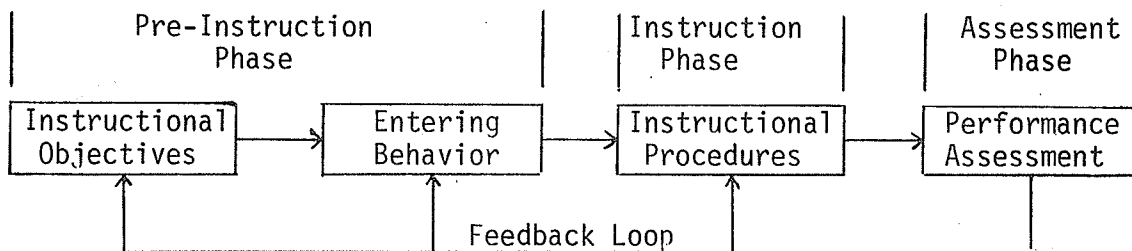


Figure 3

A Basic Model of Teaching: Glaser
(From De Cecco, 1968, p.12)

The purpose of the instructional objectives component of the Glaser model of teaching, Figure 3, is to communicate the major focus of the instructional process and the intended attainment of the learner as a consequence of the instruction. The formulation of appropriate

instructional objectives and the ultimate achievement of those objectives is partially dependent upon the identification of students' entering behaviors. The entering behavior component requires that the teacher be cognizant of the students' previous levels of attainment, their current motivational states, and their relative intellectual capabilities. The third component of the basic teaching model, instructional procedures, concerns the organization and management of the instructional process and the appropriate selection and use of pedagogical skills and strategies to facilitate student achievement of the instructional objectives. Performance assessment involves the planned use of testing and observational procedures by the teacher in order to ascertain a student's level of achievement with respect to the objectives. The final element of the basic model of teaching provides for information derived from the performance assessment element to be fed back to each component. The information provided may be used in the formulation of subsequent objectives, should increase knowledge of students' entering behavior, and may have implications for the use of subsequent instructional procedures. If the performance assessment is actually formative within the instructional component, modifications in procedures may be made within that component.

With only minor modifications Glaser's conceptualization of the teaching process may serve as the basis for a generalized model of supervision, presented in Figure 4.

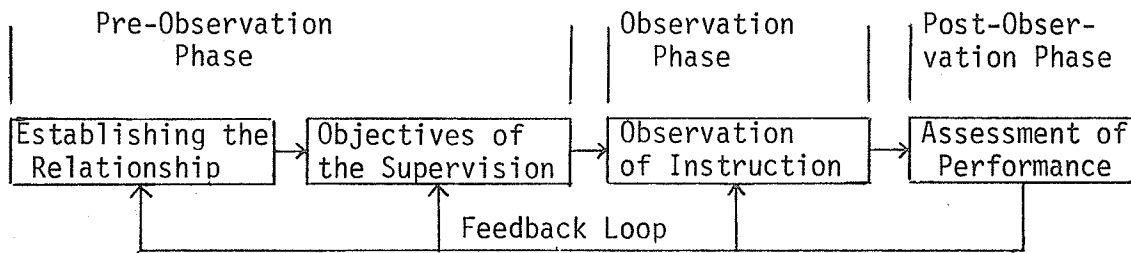


Figure 4

A Generalized Model of Supervision

The first component of the generalized model, establishing the relationship, is approximately parallel to the entering behavior, or second, component of the basic teaching model. While it is not initially critical that the supervisor have fore-knowledge of the teacher's previous level of performance or his intellectual capabilities, knowledge of the teacher's motivational state and attitude toward supervision may be helpful in establishing an adequate interpersonal climate for subsequent steps of the process. In general, the first component is concerned with building an interpersonal relationship which will enhance prospects for success during the supervision process.

The second component, objectives of the supervision, and the first component are operationally interdependent during the pre-observation phase of the supervision interaction. Setting the objectives of supervision permits the supervisor and teacher to share views about the process in general and, more particularly, to arrive at some agreements regarding the supervisor's role and focus during

the subsequent phases of the supervision cycle. The adequacy of such agreements depends upon the supervisor having a thorough understanding of the teacher's instructional objectives and procedures for the lesson and the methods of performance assessment which the teacher intends to employ.

The observation of instruction element of the generalized model of supervision involves the supervisor in the observation of the teacher's planned instruction. During this stage appropriate observable performance data reflecting teacher and/or student behaviors will be collected, as per prior agreements, for presentation to the teacher during the next phase.

The performance assessment component has two subcomponents. First, the supervisor will generally analyze privately the data collected and, on the basis of prior agreements and his assessment of the instructional performance and its effects, will develop a strategy for managing the supervisory conference. Secondly, the supervisor will attempt to implement the developed strategy in conference with the teacher. Collected data will be presented and jointly examined. Specific aspects of the lesson as reflected in the data may be discussed and diagnosed, effects of the lesson on students may be considered, and potential alternative behaviors may be proposed. Facilitated by the supervisor's behavior in conference the teacher will likely assess his own performance.

As with the basic model of teaching, a continuous evaluation or feedback loop is represented. The supervisor at all stages will tend to assess his own and the teacher's performance and modify his own

behavior as necessary in order to facilitate the goals of the supervision process. He will, therefore, assess the effects of his interpersonal interaction with the teacher, the adequacy of the objectives of the supervision and, if desirable, suggest others, and also judge the adequacy and appropriateness of the data collected during observation. Based on the interaction and content of the assessment of performance stage the supervisor may set personal goals for subsequent sessions. One further outcome of this stage may be the tentative establishment of areas of instructional concern which will provide focus for later supervisor-teacher interaction.

Three Models of the Supervision Process

Preliminary to a more detailed examination of certain of the components of the generalized model of supervision, brief consideration will be given to three models of the supervision process which will be used to elaborate those components.

The process of supervision has been viewed as a cycle of apparently discrete steps which are operationally interdependent. Table I presents three conceptually-related models of the cycle as presented by Goldhammer (1969), Cogan (1973), and Hale and Spanjer (1970).

Examination of Table I reveals that each of the three models incorporates one or more pre-observation steps concerned with establishing the relationship and planning for instruction and/or supervision. Each also includes an observation phase during which the lesson is observed and instructional performance data is collected. As well, each of the three models presents one or more post-observation

TABLE I

MODELS OF THE SUPERVISION PROCESS

The Clinical Supervision Model: Goldhammer	The Clinical Supervision Model: Cogan ^b	The Systematic and Objective Analysis of Instruction Model: Hale and Spanjer ^c
<p>STAGE 1: Preobservation Conference - establish communication, promote relaxation; reduce anxieties; understand the teacher's instructional intentions and frame of reference, consider purpose of supervision.</p> <p>STAGE 2: Observation - observation of the instructional sequence accompanied by detailed, accurate comprehensive recording of verbal and non-verbal classroom behaviors.</p> <p>STAGE 3: Analysis and Strategy - analyze observational data and make it intelligible and manageable; plan the subsequent supervision conference by determining the important issues and goals based on the observational data and the teacher's intentions.</p>	<p>PHASE 1: Establishing the Teacher-Supervisor relationship - establish the clinical relationship and the sequence of supervision.</p> <p>PHASE 2: Planning with the Teacher - plan a lesson, series of lessons, or unit with the teacher; specify outcomes, possible instructional problems, teaching strategies and materials, feedback, and evaluation.</p> <p>PHASE 3: Planning the Strategy of Observation - supervisor to plan the objectives, processes, and arrangements for observing instruction and collecting data.</p> <p>PHASE 4: Observing Instruction - observation of the instruction accompanied by detailed, accurate, and comprehensive recording of verbal and non-verbal behaviors.</p>	<p>PHASE 1: Planning - set the stage for subsequent phases, exchange information; develop shared understanding of goals; establish a trust relationship; make explicit the plans for the lesson.</p> <p>PHASE 2: Observation - observation of the teacher's instruction accompanied by detailed, accurate, objective, comprehensive recording of verbal and non-verbal classroom behaviors.</p> <p>PHASE 3: Analysis - data are examined and organized into manageable form; patterns of recurring behaviors are identified; patterns are examined in the context of the data and in light of real, apparent, and/or hypothesized effects which have been or may be produced.</p>

TABLE I
(Continued)

The Clinical Supervision Model: Goldhammer	The Clinical Supervision Model: Cogan	The Systematic and Objective Analysis of Instruction Model: Hale and Spanjer
<p>STAGE 4: The Supervision Conference - discuss the observed instruction and plan subsequent instruction.</p> <p>STAGE 5: Post-conference Analysis - analyze and make necessary modifications in supervisory behavior.</p>	<p>PHASE 5: Analyzing the Teaching-Learning Process - teacher and supervisor, together or separately, analyze events of the lesson.</p> <p>PHASE 6: Planning Conference Strategy - supervisor develops a flexible strategy for conducting the conference.</p> <p>PHASE 7: The Conference - discuss the observed instruction.</p>	<p>PHASE 4: Strategy - decisions are made regarding the management of the conference; patterns of teaching behavior are selected for consideration during the conference; alternative teaching behaviors may be identified.</p> <p>PHASE 5: Conference - supervisor provides feedback regarding the teaching performance and its effects; desirable changes may be discussed; provision is made for repetition of the supervision cycle as needed.</p>
	<p>PHASE 8: Renewed Planning - analysis during the conference stops; planning for subsequent lessons begins.</p>	

TABLE I
(Continued)

a Robert Goldhammer, Clinical Supervision: Special Methods for the Supervision of Teachers (New York: Holt, Rinehart and Winston, Inc., 1969).

b Morris L. Cogan, Clinical Supervision (Boston: Houghton Mifflin Company, 1973).

c James R. Hale and R. Allan Spanjer, Systematic and Objective Analysis of Instruction: Training Manual (Portland, Ore.: Northwest Regional Educational Laboratory, 1970).

steps during which data are analyzed, the conference is planned, and the conference is conducted.

The present study was concerned, first, with the student teacher-faculty supervisor interpersonal relationship as perceived by the student teacher and, secondly, with the student teacher's perception of his learning success during the supervisory conference with his supervisor. Both perceptions, then, depend upon events occurring during the student teacher's interpersonal interaction with his supervisor. Subsequent development, therefore, will focus upon those three components of the generalized model of supervision during which direct teacher-supervisor interaction occurs.

Establishing the Relationship

The generalized model of supervision and each of the three conceptualizations of the supervisory process presented in Table I provide for supervisor-teacher interaction preliminary to the observation of a lesson. The initial purpose of this interaction is to establish sound interpersonal relationships and share understanding regarding the subsequent behavior of each individual.

Supervisors tend to be oriented toward one of two distinct behavioral positions during supervision (Cogan, 1973, p.50-51). The task-oriented supervisor is concerned primarily with outcomes and productivity as indicated by the changes he has facilitated in the teacher's classroom behavior. The person-oriented supervisor tends to utilize the excellence of the interpersonal climate as his criterion of supervisory success. In the Cogan conceptualization of clinical

supervision both behavioral orientations are required. Recognizing that the teacher has certain psychological needs which must be satisfied before he can attend to modifications in professional behavior, Cogan suggests that the supervisor should initially emphasize person-oriented behavior as he establishes a relationship with the teacher. Once the teacher feels interpersonally secure the supervisor can then integrate the two behavioral orientations and the supervisory process can proceed toward the goal of professional improvement.

Within the often emotionally-laden context of supervision the teacher's sense of interpersonal security may be enhanced by supervisory concern for the building of a trust relationship. The establishment of a trust and, ultimately, a growth-producing relationship may be facilitated by the supervisor's awareness of a number of factors. First, feelings should be dealt with openly and constructively as a means of clarifying and improving the interpersonal relationship (Hale and Spanjer, 1970, p.73ff.). The supervisor, for example, should demonstrate a sensitive concern for teacher anxieties regarding supervision and should attempt to identify and relieve such anxieties (Cogan, 1973, p.78ff.). Second, the supervisor should attempt to deal openly with those misunderstandings which will occasionally occur, often as a simple consequence of individual differences in experiences, in biography, or in personality (Hale and Spanjer, 1970, p.13ff.). Third, the supervisor should be sensitive to the congruence between his intentions and his actions and to the potential and apparent effects of these upon the teacher. Similarly,

he must be concerned for the interpersonal effect of his various responses to the teacher (Hale and Spanjer, 1970, p.13ff., p.84ff.). Fourth, the quality of the interpersonal interaction and the building of trust may be further enhanced if the supervisor can effectively utilize those communication skills which will enable him to understand others more fully and permit others to understand him (Hale and Spanjer, 1970, p.48ff.). And fifth, the supervisor should recognize the teacher's need to maintain and enlarge his personal integrity, he should be essentially nonjudgmental and nonmoralistic in his relationship with the teacher, and he should maintain a positive regard toward the teacher's views (Cogan, 1973, p.62).

As conceived by the generalized model of supervision, during the first phase of establishing the relationship it is desirable to develop a strong and positive teacher-supervisor interpersonal relationship. The importance of such a relationship has been noted by others (e.g., Mosher and Purpel, 1972, p.73-74). Rogers (1959, p.193) has suggested that his views regarding the therapeutic relationship should be applicable to all areas of human activity in which interpersonal relationships are involved. To promote significant learning the supervisor of student teaching must possess the same attitudinal qualities as the therapist (Rogers, 1967, p.43ff.). The supervisor, therefore, must be genuine in the relationship, must be warm and acceptant toward the student teacher, and must be sensitively aware of the student teacher's feelings and reactions. These attitudinal sets, moreover, must be perceived or experienced by the student teacher. In the view

of Rogers and others (e.g., Berman and Ussery, 1966; Vigilante, 1966, p.645; Macdonald, 1966, p.5), the quality and strength of the interpersonal interaction is a critical factor in the willingness of student teachers to consider substantive content for future action. If, therefore, he is to facilitate the student teacher's efforts in building an adequate classroom personality and in developing his repertoire of teaching behaviors, the supervisor must be concerned with the quality of the interpersonal interaction. It is during the first phase of the generalized model that this concern must be manifested for it is upon the quality of the interpersonal interaction that so much subsequently depends.

To the extent that the supervisor's interpersonal attitudes and the interpersonal relationship are perceived positively by the student teacher the likelihood of significant learning increases. Within the context of student teaching the student teacher's perception of a positive interpersonal relationship with the faculty supervisor and the perception of significant learning as a product of the supervisor's assistance should have a beneficial influence upon the student teacher's later performance as a teacher.

The Objectives of the Supervision

The first component of the generalized model of supervision, establishing the relationship, and the second component, the objectives of the supervision, are operationally linked during the pre-observation stage of the supervisory process. The quality of the interpersonal interaction may be affected not only by the consideration given

interpersonal processes but may be affected also by the substantive content considered during pre-observation. Setting the objectives of supervision initially requires that the supervisor and teacher share their understandings. First, the supervisor should clarify his professional commitment to supervision (Cogan, 1973, p.90ff.). Second, shared understanding and mutual decisions regarding the goals and operations of and strategies to be employed in the supervision process should be made (e.g., Goldhammer, 1969, p.60; Cogan, 1973, p.11; Hale and Spanjer, 1970, p.122). Third, there should be a clear and mutual understanding of respective roles and responsibilities throughout the supervisory process (Cogan, 1973, pp.93, 130-131), of ethical concerns, and also of the supervisory techniques to be employed (Cogan, 1973, p.88ff.).

As well as involving general considerations, setting the objectives of the supervision is specifically concerned with the shared understanding between supervisor and teacher regarding the lesson to be taught and observed. If the supervisor and teacher have not cooperatively planned the lesson, then the teacher must make explicit the instructional objectives of the lesson (e.g., Cogan, 1973, p.112ff.; Hale and Spanjer, 1970, pp.122, 177ff.), the instructional procedures that will be employed, and the means by which student achievement of lesson objectives will be determined (e.g., Goldhammer, 1969, p.58). Without such information the supervisor cannot meaningfully and completely fulfill his functions.

The supervision process may be viewed as a contractual arrangement in which there is a shared understanding and mutual agreement regarding the specific tasks of the supervisor during the cycle of supervision. Since the supervisor cannot adequately focus on all aspects of the teacher's instruction simultaneously and since the teacher is likely to have a hierarchy of instructional concerns, it is appropriate that an agreement be reached regarding that aspect of instruction and its effects upon which the supervisor will focus during observation of the lesson (e.g., Cogan, 1973, p.145ff.; Hale and Spanjer, 1970, pp.118, 124). Unless events of the lesson dictate otherwise, the content of the agreement will provide the primary focus for the post-observation conference.

As suggested, the first two components of the generalized model of supervision interact. During this pre-observation phase of the process, the supervisor can effectively, though implicitly, convey the integrity of his intentions in two ways. First, he can attempt to establish a sound interpersonal relationship through a concern for interpersonal processes. Secondly, he can attempt to achieve a state of shared understanding through a concern for and interest in substantive matters. The quality of subsequent interpersonal interaction and the growth of the teacher in the relationship is at least partially dependent upon the expression of such concerns during the developing phase of the relationship.

The Assessment of Performance

The three conceptualizations of the supervision process presented in Table I and the generalized model of supervision contained an

observation of instruction component. During this phase both verbal and non-verbal communication between the supervisor and teacher are minimized and the supervisor's behavior is generally neutral and non-participatory (e.g., Cogan, 1973, p.141). However, like the conceptualizations of Table I, the generalized model of supervision also incorporates a post-observation component which involves a number of activities, one of which is the crucial supervisor-teacher conference.

Following observation and preliminary to the conference, the supervisor undertakes to analyze collected data and to develop a conference strategy based on that analysis and the mutually-agreed objectives for the supervision. Implicit in strategy development is the supervisor's private assessment of teacher performance and its effects in the light of stated lesson objectives. However, the critical aspect of the post-observational assessment of performance component of the generalized model of supervision is the supervisor-teacher conference. The supervisor's role in this conference requires emphasis.

The supervisor may be accurately characterized as a teacher-colleague (Cogan, 1973, p.67) who facilitates the professional teacher's attempts to "gain new and more reliable knowledge about himself as a teacher" (p.72). Through interaction in the supervisory process his ultimate goal is to promote the teacher's increasing competence in continuing self-analysis, self-assessment, and self-supervision (e.g., Goldhammer, 1969, p.70; Cogan, 1973, p.94-95). Generally, the mutually-approved objectives of the supervision process can best be achieved if the supervisor, in his role, provides appropriate instruc-

tional performance data at suitable points during the conference, indicates patterns of teacher behaviors and critical classroom incidents, and notes the apparent effects of these upon students (Goldhammer, 1969, p.69ff.; Cogan, 1973, p.199; Hale and Spanjer, 1970, p.224). Through these data and the discussion that arises from them the supervisor attempts to facilitate the teacher's understanding of his own performance and its effects while at the same time promoting continued teacher self-analysis and self-assessment.

Just as the teacher attempts to assess his students' achievement of instructional objectives he should assess his own instructional performance and its effects in terms of the lesson objectives. The opportunity for such assessment is enhanced if the teacher is given realistic and authentic observation data by the supervisor. Such feedback can provide the teacher with a foundation for making explicit decisions regarding his classroom behavior, for determining solutions to possible problems manifested by his behavior, and for initiating plans for subsequent changes. The success of these activities, and ultimately the conference itself, is largely dependent upon whether the shared examination and discussion of the data provided accurately reflect the mutually-approved objectives for the cycle of supervision and the role and focus specified for the supervisor.

As conceived in the generalized model of supervision, the assessment of performance component, then, involves the objective, essentially non-judgmental presentation, explanation, and discussion of specific observational data gathered in accord with previous teacher-

supervisor agreement. The teacher, it is hoped, will learn something about his current teaching behavior which will facilitate desirable changes in subsequent instructional behavior. This feedback effect is implicit in the three conceptualizations of the supervisory process presented in Table I. In practice, the effectiveness of this content-oriented supervisor-teacher interaction may actually be judged by the manifestation of desirable modifications in the teacher's later instructional practice (Hale and Spanjer, 1970, p.229).

Summary

The dimensions of the teacher's and the supervisor's roles are analogous. Particularly within the context of teacher education the process of supervision may be viewed as a teaching-learning process and the supervisor may be viewed as fulfilling an instructional function. Glaser's basic model of teaching may serve therefore as a foundation for a generalized model of supervision consisting of four components.

The first component of the generalized model, establishing the relationship, and the second component, the objectives of the supervision, occur prior to the observation of instruction. As noted in other conceptualizations of the supervision process, during the initial stages of supervision it is important that a qualitatively strong and positive interpersonal relationship between teacher and supervisor be established. As well, it is important that supervisor and teacher share their understandings regarding supervision and mutually establish respective roles in and the objectives for the

supervision process. Following the observation component of the generalized model of supervision, the instructional data collected are shared, explained, and discussed during an assessment of performance component. Through the sharing of ideas and possible alternative modes of behavior, it is hoped that desirable modifications in teacher behavior may result. The implication of such modifications is that the teacher, in increasing his awareness of his instructional behaviors, has learned and made changes based on that learning. The probability of the occurrence of significant and rewarding learning, however, may be promoted or enhanced if a successful interpersonal relationship was originally established.

II. A REVIEW OF RELATED LITERATURE

Introduction

In view of the scarcity of quality research in the area of supervision (e.g., Harris, 1963, p. 129; Cyphert and Openshaw, 1964), the parallel features of the teacher's and supervisor's roles suggested by Anderson and others (e.g., Lindsay, et al., 1969) may be important. For if this similarity in role functions is valid, then certain research findings concerning teachers may have some application within the supervisory setting.

The following examination of literature relevant to this study is divided into four sections. Brief consideration will first be given to the directions taken in studies of teacher effectiveness or success. Secondly, some factors related to student teacher success will be reviewed. Thirdly, studies concerned with the determination

of possible criteria for assigning student teachers to supervisors will be considered. Last, consideration will be given to the personality characteristics of student teachers and supervisors, particularly as these relate to interpersonal relations and success in student teaching.

Teacher Effectiveness Studies

Considerable attention has been given to the study of teacher competence or effectiveness (e.g., Rabinowitz and Travers, 1953, p.212ff.; Gage, 1963; Biddle and Ellena, 1964). The research, however, has been hampered by problems in defining and measuring teacher effectiveness (e.g., Rabinowitz and Travers, 1953; Barr, et al., 1955). Of those variables which have been used as criteria of teacher competence, pupil growth or achievement has appeared as the most effective criterion (e.g., Cogan, 1956, p.316; Justiz, 1969, p.49; Gage, 1972, p.89; McNeill and Popham, 1973, p.218ff.; Rosenshine and Furst, 1973, p.154ff.).

Some teacher effectiveness research has focused upon the identification of the characteristics of the effective or successful teacher (e.g., Remmers, 1953, p.643ff.; Barr, et al., 1955; 1961, p.1-155; Ryans, 1960). The teacher characteristics approach has been taken because many educators concur that effective teachers are characterized by certain personal qualities and behaviors (e.g., Kerlinger, 1963, p.1; 1966, p.159). Precise identification of those traits and behaviors which are most crucial, however, has been elusive (e.g., Tyler, 1960; Peck, 1960, p.196).

Although the nature of the relationship remains unclear, teacher effectiveness has been viewed as a partial function of the teacher's personality (e.g., Barr, 1960, p.400; Gordon, 1964, p.1). Studies examining personality and teacher effectiveness present varying results, perhaps in part because of the difficulties of establishing appropriate success criteria (e.g., Ringness and Larson, n.d., p.282). Flournay (1971, p.483-A) and Ort (1964), for example, attempted without success to predict teacher effectiveness by utilizing various personality characteristics. However, Heil and Washburne (1962, p.349) concluded from their analyses that the predominant factor in determining student academic achievement was teacher personality. In his 1968 study, McLain assumed that teaching effectiveness was the product of many personality factors operating simultaneously in interpersonal interaction and that no single characteristic could differentiate effective from ineffective teachers. From this basis McLain was able to generate separate male and female specification equations indicating the relative importance of personality characteristics in differentiating teachers in terms of success.

In general the success or effectiveness criteria employed in differentiating teachers in the field have varied greatly. The success criteria employed with student teachers, however, have been somewhat more limited. Attention is now turned to the teacher education context.

Success in Student Teaching

Effectiveness or success in student teaching may be related to such factors as the quickness and adeptness with which the student can find new modes of behavior (e.g., Pfeiffer, 1964, p.19), to his

expressed acceptance of self (e.g., Foster, 1969), or to the quality of the interpersonal relations between the supervisor and student teacher (e.g., Steiner, 1970). Also, just as the personality interaction of teacher and student may affect teacher effectiveness (e.g., Lewis, 1960, p.1), the supervisor's effectiveness with the student teacher and the latter's behavior and success in student teaching may be affected by dyadic differences in their personalities (e.g., Ward, 1964, p.144-145).

Various personality and personality-related factors have been examined in relation to student teacher success (e.g., Kimmel, 1964; Henjum, 1966; Hatfield, 1961; Mattson, 1969; Laubacher, 1969; Errington, 1970; Johnson, 1971; Titze, 1971; Bell, 1972). Czajkowski (1968), for example, concluded that student teachers' level of confidence for teaching was positively related to their student teaching success as assessed by their cooperating teachers. However, the relationship of the student teacher's self-concept to student teaching success is not clear. Passmore (1970) found that success ratings made by the cooperating teachers of 108 elementary student teachers were related positively and significantly to three self-concept measures. Conversely, Laubacher (1969) found that the self-concepts of ninety student teachers, as measured by Bill's Index of Adjustment and Values, were not efficient predictors of student teaching success. In view of the possible relation between personality-related factors and the success of the student teaching experience, it has been suggested not only that such factors generally be given consideration in teacher education programmes (e.g., Heil, 1964, p.12ff.; Johnson, 1971) but also that

they be considered as a basis for assigning the student teacher to a supervisor.

The Assignment of Student Teachers

As a consequence of individual variations in terms of personality, belief, attitudes, and perceptions, individuals will tend to react differently to different situations and persons. In the context of teacher education differences between individuals may lead to conflict which hinders the prospective teacher's professional growth (e.g., Stratemeyer, 1964, p.153; Chaltas, 1965). Though little is known about the effect upon student teaching success of the student teacher-supervisor relationship, it has been assumed that such success may be some function of the compatibility of the two paired individuals (e.g., Hohman, 1972, p.376). Leslie (1969) has suggested that by matching individuals on some compatibility basis an atmosphere conducive to learning may be established with the result of a greater perceived success toward student teaching and a superior attitude toward teaching.

Assuming that student teacher-supervisor compatibility is an important factor in maximizing student teaching success and that matching dyad members in terms of compatibility is therefore desirable, the dimensions along which the individuals may be productively paired must be determined. It has been noted that matching along the dimensions of sex, attitudes, personality disposition and type, need dispositions, role expectations, interpersonal relations orientation, perceptions, self-concepts, or tendencies toward conflict may enhance the positive effects of the student teaching experience (e.g., Hohman, 1972; Chaltas,

1965, p.311ff.). A study completed at the University of Utah (Burnett, 1969; Leslie, 1969), however, revealed no clear superiority for any of the matching bases when cooperating teachers and secondary-level student teachers were matched along the dimensions of age, sex, urban-rural background, and/or personality characteristics and when student teacher performance was the dependent variable. Although matching in terms of personality variables did not appear promising, some within-group comparisons did indicate that matching, particularly along demographic variables, was theoretically advantageous.

Notwithstanding the result of the Utah study some agreement exists that the assignment of student teachers should consider personality compatibility. Chaltas (1965, p.313ff.) suggests that student teachers and supervisors should be matched in terms of personality disposition and orientation in order to eliminate a potential source of energy-dissipating conflict and to maximize the productivity of the student teaching experience. Such matching may be, in fact, one of the most important facets of teacher education programmes (Hohman, 1972, p.376).

Personality, Interpersonal Relations, and Student Teaching Success

Relatively few studies are available which explore the relationship between the degree of student teacher-supervisor personality match and either interpersonal relationships or the success of the student teacher's practicum experience. While the personal qualities of individuals have been viewed as crucial determinants of the quality of dyadic interpersonal interaction (e.g., Newcomb, 1961,

pp.6ff., p.43; Heider, 1958, p.94ff.; Byrne, et al., 1967, p.82ff.), and thus ultimately related to the student teacher's personal satisfaction with his student teaching experience (e.g., Steiner, 1970), these possible relationships have not been generally supported in the few studies available. There is, however, considerable variance in the findings of these studies, partially due perhaps to the diverse ways in which the variables have been defined and measured.

Attempts have been made to relate personality variables to the quality of dyadic interpersonal interaction. On the one hand, for example, Martin (1970) did not find that similarity in the personality profiles of teacher-semi-professional dyads significantly affected the quality of the interpersonal interaction. He suggested, however, that other personality dimensions than those employed and possible intervening variables be examined. In a similar study employing student teachers and their cooperating teachers as data sources McReynolds (1966) obtained interpersonal relations scores from dyads which were purposely grouped for personality similarity and for dissimilarity. The analysis revealed that satisfaction with the interpersonal relationship was not clearly related to any single personality factor or combination of factors.

Two other studies which have attempted to relate personality characteristics to the quality of interpersonal interaction have revealed slightly different results. Part of Corr's study (1972) examined the impact of certain personality characteristics upon the interpersonal relationship between student teachers and cooperating

teachers. Although no significant relationships between the variables were revealed, some differences in emotional stability were found between those student teacher-cooperating teacher dyads rated high in interpersonal interaction and those dyads rated low.

Southard (1966) investigated the relationship between teacher-supervisor compatibility and selected variables which could affect their interpersonal relationship. Analysis resulted in the rejection of the null hypothesis of no relationship between teacher-supervisor interpersonal relations compatibility and personality dogmatism. A curvilinear relationship was revealed between the two variables, suggesting that highly compatible dyads tended to be either very similar or very dissimilar in dogmatism level.

As the findings of the studies suggest, then, the relationship between the personality characteristics of two individuals and the quality of their interpersonal interaction is not clear. Moreover, the results of studies which relate personality variables to effectiveness or success in student teaching are also at variance.

Certain studies have revealed no significant relationships between personality and success variables in the student teaching context. Hill (1969), for example, sought to determine "the effect of selected student teaching assignments as they related to certain personality profiles of student teachers and supervising teachers" (p.1896-A). From the forty elementary-level student teachers and their supervising teachers personality profiles were obtained which provided the basis for matching individuals. Analysis revealed no

statistical support for the hypothesis that matching affected performance. A trend, however, toward higher performance scores for student teachers who were matched with their cooperating teachers was observed.

Using Cattell's 16PF instrument to measure the personality variables, Bell (1972) examined the relationship between student teacher and cooperating teacher personalities and student teachers' perceptions of their practicum experience. Although student teachers and cooperating teachers were significantly different along certain personality dimensions, no significant relationship was revealed between student teacher-cooperating teacher personality similarity and student teachers' perceptions of their student teaching experience. While no support was thus found for matching student teachers and cooperating teachers along personality factors on the basis of similarity in order to contribute to a better student teaching experience, it was also found that student teachers who differed from their cooperating teachers along the dimension of subduedness-independence had notably higher opinions of their experience.

In another study Hohman (1972) employed 119 elementary and secondary school student teacher-cooperating teacher dyads to examine the relationship between personality characteristics and the evaluation of the student teacher's performance. Utilizing composite personality scores, analyses revealed that there were significant differences in personality between cooperating teachers and their student teachers both when the high performance student teacher group was examined and when the non-high group was examined. When

personality variables were examined separately, high performance student teachers were significantly different from their supervisors on deference, order, dominance, and aggression; non-high performance individuals differed significantly from their supervisors on order, succorance, and aggression. Differences on deference and dominance for the high performance group and succorance for the low performance group therefore appear to bear the greatest relationship to student teachers' performance scores. Notwithstanding these results, Hohman concluded that in general personality variables do not affect student teaching evaluation.

In a related study, Lucasse (1971) examined the relationship of various aspects of the student teaching experience, including student teaching success, and student teacher-cooperating teacher similarity as determined from scores on the Myers-Briggs Type Indicator. Success in student teaching as measured by assigned mark or grade was not found to be related to personality differences; similarity on extraversion-introversion, however, was positively related to the learning relationship in the dyad.

Some other research findings differ notably from those cited. Davis (1969) found that discrepancies in personality type, as measured on the Myer-Briggs Type Indicator, were related to student teacher perceptions of cooperating teacher competence. As personality type differences increased, judged competence of the cooperating teacher decreased. The greater the difference between student teacher and cooperating teacher in terms of sensing-intuition, thinking-feeling,

or judgment-perception, the more negative were the students toward the competence of their cooperating teachers. In conclusion, Davis suggested that conflict could be reduced and professional growth promoted particularly if dyad members were matched along the thinking-feeling dimension.

In a study involving female student teacher-supervisor dyads, Burk (1969) utilized the personality factors of Cattell's 16PF instrument as independent variables. Two of the four null hypotheses proposed related personality to separate measures of student teacher success; both null hypotheses were rejected. Successful dyads combined student teachers who scored lower than their supervisors in self-sufficiency, in security, and independence and who were similar in dominance, anxiety, and superego.

Based on a study completed at the University of Wisconsin in 1964-65, Ringness (1966) indicated that supervisors of differing personalities may be highly variable in assessing student teachers. He suggested that student teachers be placed with supervisors having complementary personality characteristics.

III. SUMMARY AND HYPOTHESES

Summary

The role dimensionality of the supervisor of instruction and the teacher are similar. Particularly within the context of student teaching programmes the supervisor may demonstrate many of the same instructional behaviors as the classroom teacher. Supervision in

such a setting has been viewed as teaching and, insofar as the goal of supervision is instructional improvement and the behavioral modifications therein implied, learning may be considered a desirable outcome of the supervision process.

In the absence of an appropriate existing theory of supervision and in view of the similarity of some supervisory and teaching functions, Glaser's basic model of teaching may serve as the basis for a generalized model of supervision consisting of four main components. Three of the four components involve direct interaction of teacher and supervisor. Two of the components, establishing the relationship and the objectives of the supervision, constitute a pre-observation phase of instruction within the supervisory model. One component, assessment of performance, is post-observational. The generalized model of supervision has been elaborated with contributions from three conceptually-similar models of the supervision process. Emphasis has been placed upon those components during which supervisor-teacher interaction occurs and during which the teaching-learning potential of the process may be operative. The probability that learning will occur, however, may be enhanced by a qualitatively strong and positive teacher-supervisor interpersonal relationship. The compatibility of the two interacting individuals along certain dimensions, such as personality, may be related to both the quality and productivity of the relationship.

The success both of the interpersonal relationship and the student teacher's learning as a consequence of interaction during the

the supervisory process may be some function of student teacher-supervisor compatibility. Many studies have focused upon teacher and student teacher effectiveness or success; some have examined possible bases for assigning student teachers to supervisors; a very few studies have been concerned with supervisor-supervisee personality similarity and measures of supervisee success. The over-all results of the studies provide little guidance for the formulation of specific hypotheses.

The Hypotheses

The general aim of the present study was to ascertain the relationship between faculty supervisor-student teacher similarity along personality dimensions and two measures of success. The three general questions posed in the opening chapter may now be expressed as null statements:

Hypothesis I. The degree of student teacher-supervisor similarity along dimensions of personality is not important in predicting the student teacher's perceived success of the student teacher-supervisor interpersonal relationship.

Hypothesis II. The degree of student teacher-supervisor similarity along dimensions of personality is not important in predicting the student teacher's perceived success in personal learning during the supervisory process.

Hypothesis III. The student teacher's perceived success of the interpersonal relationship with the supervisor and his perceived success in personal learning during the supervisory process are not significantly associated.

Prior to a presentation of the findings relevant to these hypotheses, Chapter III presents the instruments employed to determine the status of respondents with respect to the personality and success

variables. Additionally, the sample, some methodological concerns, and the approaches used in data analyses are further specified.

CHAPTER III

INSTRUMENTATION, SAMPLE, AND METHODOLOGY

I. INTRODUCTION

The general concern of and conceptual foundation for the study have been presented. In this chapter attention is given to some technical considerations. First, the instruments used in determining the status of respondents with respect to the independent and dependent variables are examined in some detail. Secondly, the nature of the sample is further specified. And, thirdly, the methodology employed in administering the instruments and in preparing and analyzing the data is elaborated prior to the presentation of findings in the subsequent chapter.

II. INSTRUMENTATION

The Sixteen Personality Factor Questionnaire (16PF)

The independent variables employed in this study were given as the degree of similarity, or difference, between the faculty supervisor and student teacher in terms of individual personality dimensions. The instrument selected to determine the status of individuals along dimensions of personality, and hence dyadic similarity, for this study was Cattell's Sixteen Personality Factor Questionnaire (16PF), Form A, 1967-68 edition (The Institute for Personality and Ability Testing, 1967; Cattell, et al., 1970). Selection and use of the 16PF therefore produced sixteen initial independent variables, corresponding to the number of personality factors measured by the instrument. The 16PF, which may be administered to persons individually or in groups without

a significant effect upon results, consists of 187 items requiring approximately forty-five to sixty minutes to complete (Cattell, et al., 1970, pp.3,22,25). The comprehensiveness of the 16PF in providing information regarding a number of primary personality dimensions within this reasonable testing time may be one of the instrument's notable advantages (pp.1,5-6).

The Personality Dimensions. The dimensions of personality which the scales of the 16PF measure have been found as a consequence of repeated factor analyses to "correspond to uniquely definable, functionally unitary, and psychologically significant source traits" (p.13). Those personality dimensions which the 16PF purports to measure are identified below with general descriptors in their non-technical bipolar form (Cattell, et al., 1970, p.80ff.).

Factor A:	Reserved	vs Outgoing
Factor B:	Less Intelligent	vs More Intelligent
Factor C:	Affected by Feelings	vs Emotionally Stable
Factor E:	Humble	vs Assertive
Factor F:	Sober	vs Happy-go-lucky
Factor G:	Expedient	vs Conscientious
Factor H:	Shy	vs Venturesome
Factor I:	Tough-minded	vs Tender-minded
Factor L:	Trusting	vs Suspicious
Factor M:	Practical	vs Imaginative
Factor N:	Forthright	vs Shrewd
Factor O:	Placid	vs Apprehensive
Factor Q1:	Conservative	vs Experimenting
Factor Q2:	Group-dependent	vs Self-sufficient
Factor Q3:	Casual	vs Controlled
Factor Q4:	Relaxed	vs Tense

Standardization and Norms. Raw scores obtained on the personality factors of the 16PF may be translated into standard ten, or sten, scores having a mean of 5.5 and standard deviation of 2.0. The Tabular Supplement No. 1 to the 16PF Handbook (Institute for Personality and

Ability Testing, 1970) presents tables for the transformation of raw scores to stens for each sex, the sexes combined, high school seniors, undergraduate university students, and the general adult population. The age reference points for the latter three groups are seventeen, twenty, and thirty years respectively. For each set of norms a sampling of over one thousand Americans was employed.

Although some significant differences may exist on certain factors between various cultures (Cattell, *et al.*, 1970, p.250), research findings from non-North American cultural contexts do indicate a number of similarities with research on American samples on a number of factors for each sex (p.71). No Canadian norms for the 16PF based on a group of sufficient size were available at the time of this study. However, in view of the strong social, cultural, and economic similarities between the United States and Canada, the use of the American norms should not seriously affect the findings of the study.

For the present investigation raw scores for faculty supervisors and those student teachers over twenty-five years of age were transformed to stens by utilizing the appropriate adult norms. Undergraduate university norms were employed with all other student teachers' 16PF data.

Uses of the 16PF. The 16PF has considerable justification and precedent for its use. Cattell and his associates, having noted the value of the instrument for predictive purposes (1970, p.8ff.), present specification equations against criteria for eight occupations. As well, the personality profiles of twenty-four different

occupations are listed. At least partially because the instrument is concerned with basic personality concepts, the measurements can readily be related to practical and theoretical knowledge in clinical, industrial, and educational fields (pp.5,10). Cattell provides an imposing list of references relevant not only to the development of the 16PF but also to its various uses in research (p.319ff.).

Within an educational context the instrument has been used in a number of studies. It has been utilized to ascertain the personality similarities of students and their teachers (e.g., Replogle, 1968); to determine the personality similarities of student teachers and their cooperating teachers (e.g., Gewinner, 1967; Bell, 1972); and to relate the personality characteristics of student teachers and their supervisors to various aspects of the student teaching experience, to student teaching success, and to teacher effectiveness (e.g., Burk, 1969; Henjum, 1966; Henjum, 1969; Isaacson, et al., 1963; Goodman, 1971; Mattson, 1969; Kimmel, 1964; McClain, 1968b; Flourney, 1971; Heddendorf, 1971; Pugh, 1968). In view of the instrument's appropriateness as a comprehensive, all-purpose instrument and its demonstrated applicability and utility in educational contexts, the 16PF was considered suitable for the present study.

Reliabilities and Validity of the 16PF

Cattell and his associates (1970, p.29ff.) report two forms of reliability and one form of validity for the 16PF which require comment. Data presented by the authors in support of the instrument are summarized in Table II below.

TABLE II

DEPENDABILITY AND STABILITY COEFFICIENTS AND DIRECT
VALIDITIES FOR FORM A OF THE 16PF^a

Type of Coefficient	Source Trait															
	A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
Dependability ^b	81	58	78	80	79	81	83	77	75	70	61	79	73	73	62	81
Stability ^c	80	43	66	65	74	49	80	85	75	67	35	70	50	57	36	66
Stability: Male ^d	49	28	45	47	48	54	49	63	40	43	39	57	52	46	41	56
Stability: Female ^e	62	23	48	52	52	46	64	53	42	49	21	52	51	50	41	51
Direct Validities ^f	79	35	70	63	83	67	92	70	49	44	41	71	62	70	68	57

^a Summarized from Cattell, et al., 1970, p.29ff. Based on 1967-68 edition.

^b American subjects; N=146; test-retest after 4 to 7 days.

^c N=44; two and one-half month interval.

^d N = 432; four-year interval.

^e N = 204; four-year interval.

^f N = 958

NOTE: Decimal points have been omitted.

The dependability coefficient represents "the correlation between two administrations of the same test when the lapse of time is insufficient for people themselves to change with respect to what is being measured" (p.30). Examination of Table II reveals that for the 146 subjects retested after four to seven days the four lowest coefficients were .58, .61, .62, and .70 for factors B, N, Q3, and M respectively. The four highest coefficients were .83 for factor H and .81 for factors A, G, and Q4.

The stability coefficient involves retesting after a period greater than two months. From the difference between the dependability and stability coefficients the part of the variance due to a fluctuation in the trait can be determined. The stability coefficients for three separate samples are presented in Table II.

The stability coefficients for individuals retested after a two and one-half month interval range from .35 (factor N) to .85 (factor I), with a mean of .62. In Cattell's view these fluctuations represent a reversible change of state. Table II also shows that when 432 males were retested after a four-year interval the stability coefficients are substantially lower, ranging from .28 for factor B to .63 for Factor I. Two hundred and four females retested after the same time interval had a low stability coefficient of .21 on factor N and a high of .64 on factor H. In both of the latter samples the mean stability coefficient was .47. Cattell suggests that the fluctuations in score occurring over the longer time interval represent an actual change in the individual's personality traits (p.31).

Table II also presents validities for Form A of the 16PF. Direct concept validity is concerned with "the correlation of the scale with the concept, or factor, which it is supposed to measure" (p.34ff.). The direct validities range from .35 to .92. Factor B, intelligence, with the lowest validity, does not typically achieve the validities of other scales. Other than factor B the lowest validities achieved, based on a sample of 958 persons, are for factors N(.41), M(.44), L(.49), and Q4(.57). The highest validities are for factors H(.92), F(.82), A(.79), and O(.71). With the exceptions of factors M, N, O, and Q2 Cattell indicates that the validities are as high as those typically achieved for scales of equivalent length.

Earlier editions of the 16PF have been subjected to criticism on various grounds (e.g., Buros, 1970, pp.1172ff., 817ff.). It has been argued, for example, that the instrument only measures eight personality factors with sufficient reliability (e.g., Becker, 1961, p.393ff.) and in fact that reliability has been sacrificed for heterogeneity of scale items (e.g., Levonian, 1961a, p.589ff.; 1961b, p.937ff.). The question of the homogeneity of scale items is one which also concerns Cattell (1970, p.32). The reaction of educational researchers toward the 16PF has been mixed. Pugh (1968) considered the 16PF a well-established, effective instrument for assessing the personality of his adult sample. Mattson (1969) found the 16PF quite satisfactory in his study of student teacher personality and student teaching success. On the other hand, Isaacson and his colleagues (1963) were not impressed with the results produced by the 16PF as

they attempted to correlate teacher personality variables with student ratings. Similarly, Flournay (1971) found that the 16PF was not able to distinguish teachers' level of effectiveness as it related to personality. Notwithstanding the criticisms levied at the 16PF, it has been noted in extensive analyses of the 16PF and other personality instruments that the 16PF may well be the best personality inventory available (e.g., Buros, 1972, p.333).

The Semantic Differential (SD)

The dependent variables of this study were the student teacher's perceived success of his interpersonal relationship with the faculty supervisor and of his personal learning during the supervisory conference with the faculty supervisor. The format and procedures employed in the Semantic Differential, or SD, were utilized to collect data for these two variables (e.g., Osgood, et al., 1959).

Uses of the SD. Although the SD was initially conceived as a means of observing and measuring the connotative meanings of concepts (Kerlinger, 1964, p.564), the technique has been broadly utilized in attitude-related research with various age levels and in different cultures (e.g., Osgood, et al., 1957, p.189ff.; Osgood, et al., 1970, p.227-234; Heise, 1970, p.235-253). Snider and Osgood (1969) have reported research employing the SD in cross-cultural literature, in the development of semantic structures and the meanings of concepts in children, in experimental, social, personality, and clinical psychology, and in esthetics and communications research.

The SD has also been used in diverse ways within an educational context. It has been employed to determine the structure of student teachers' self-concepts (e.g., Walberg, 1967) and the attitudes of student teachers and first year teachers toward themselves and others (e.g., Wright and Tuska, 1966). The SD has been used to determine the relationship between the personality structures of high school seniors and the connotative meanings they attach to words (e.g., Sanson, 1964). In modified form the instrument has been used also to determine the interpersonal perception characteristics of teachers (e.g., McCallon, 1966) and to ascertain which of a number of selected teacher job situation variables was most closely associated with job satisfaction (e.g., Brayne, 1971). The SD has been employed to determine the meaning of a college education to groups of students (e.g., Sinnott and Stone, 1964) and to relate value similarity between students and teacher to achievement (e.g., Winter, 1961). The instrument has also been used in pre- and post-training situations to determine the changes in meanings attached to certain concepts over the training period (e.g., Northwest Regional Educational Laboratory, 1972; Brayne and Peach, 1973, pp.59-65). Although the present study utilizes the SD data somewhat differently than most past studies, the SD was employed as an effective means of determining the dimensionality of the two dependent variables and of deriving success scores.

Reliability and Validity of the SD

Osgood and his associates (1957, p.126-127) argue that because test-retest scores on test items of the SD are too consistent the

usual reliability coefficients become meaningless. Error of measurement is therefore employed as an indicator of reliability. The smaller the magnitude of the error of measurement the greater the reliability of the instrument.

Osgood (Osgood, et al., 1957, p.129ff.) reports studies in which test-retest data were gathered and from which errors of measurement were calculated. Each study involved forty or more individuals, over one hundred items, and one or more retests ranging from a few minutes to fifteen weeks after initial testing. Based on the various findings, the average error of measurement for all SD scales approximated .50 of a scale unit (p.131). Thus respondent accuracy, over time, was within one scale unit. Osgood suggests that approximately eighty-three per cent of respondents will deviate one scale unit or less when tested after a period of time and, further, that a change of greater than two scale units might be expected to occur less than five per cent of the time by chance (p.132).

In a study specifically designed to test the reliability of the SD eight groups of approximately twenty-five subjects each was administered a 100-item SD on two separate occasions with time intervals ranging from three minutes to three weeks (p.133ff.). Findings of the study indicated that the average error of measurement with the SD was, from a conservatively high viewpoint, approximately .90 scale units for all scales. Evaluative scales produced the greatest reliability. The results again indicated that a change of greater than two scale units might be expected to occur less than five per cent of the time by chance (p.137).

Since the SD was designed to measure meaning and since, also, there is no generally-accepted independent "quantitative criterion of meaning" against which the validity of the SD can be assessed, reliance must be placed on face validity (p.140). The evidence of certain studies using the SD in which certain concepts or words were grouped into clusters would tend to indicate the instrument has face validity, insofar as the results correspond with those expected from common sense alone (p.141).

A number of studies also lend some support to the construct validity of the SD (e.g., Osgood, et al., 1957, pp.142-143, 153ff.; Staats, 1968, p.197ff.; Solley and Messick, 1968, p.229ff.). As well, although not all adjective pairs have scalar properties, the scheme of utilizing polar opposities as SD scales is advisable and has been shown to be generally warranted since intervals for a sampling of adjective pairs are approximately equal (e.g., Deese, 1968, p.218ff.; Osgood, et al., 1957, p.145ff.).

The Scales of the SD

The success variables in this study were judged by student teacher respondents in terms of twenty bipolar adjective pairs along scales of seven intervals in the format described by Osgood and his associates (1957). In the selection of scales for the study it was arbitrarily decided to include the following: a) at least two adjective pairs representative of the evaluative, potency, and activity dimensions often identified by factor analyses in SD research; b) some adjectives which are not typically assigned to a specific

dimension; c) scales having high variance as determined from a pre-test of some eighty-five adjective pairs with twenty-four secondary school-level student teachers during the autumn of 1972; and d) those adjective pairs of apparent suitability for the two dependent variables employed in the study. This selection process resulted in the final retention of twelve evaluative, three activity, two potency, and three unassigned adjective pairs. Since, however, scales usually labelled as evaluative, activity, and potency are often not clearly identifiable as such in educational research (e.g., Kane, 1969, p.34-37), it was not expected that the analysis of the selected scales would necessarily reproduce the three generally-identifiable factors.

In order to facilitate interpretations, and based primarily upon the conceptual position of the study and its implications for supervision, a decision was made regarding which of each adjective pair would be scored high (7) and which low (1). Except for the first three scales which were deliberately placed for their apparent high relevance to the variables, scales were randomly ordered. To mitigate against response sets, half the scales were randomly reversed for high score-low score polarity.

III. SOURCE OF THE DATA

The 278 student teachers who were enrolled in the Elementary Education Programme, Intermediate Level, at the University of Manitoba during the 1972-73 academic year and their faculty supervisors of student teaching were arbitrarily selected as the potential data source for this study. In the Elementary Education Programme the

practicum experience for the student teacher consisted of nine weeks, generally in one school. The four weeks of practicum during the Fall Term alternated with single weeks of classes at the university. Two weeks of practicum in January and February alternated with weeks of classes. The last practicum session consisted of three consecutive weeks in the school. While in the school it was expected that each student teacher would be visited by his faculty supervisor weekly.

Twenty faculty members supervised the student teachers in the programme. Twelve of these supervisors agreed voluntarily to participate in the study by providing the necessary data and by encouraging the participation of their student teachers. No systematic distinctions were apparent between the twelve faculty supervisors agreeing to participate and the eight who did not.

Since the study required consideration of student teacher-faculty supervisor dyads, the self-selected nature of the faculty supervisor sample reduced the number of eligible student teachers to 163. Fourteen of this number had been supervised by one of the participating faculty supervisors for most but not all the student teaching sessions. Each of the remaining 149 student teachers had been supervised by one of the twelve participating supervisors for all student teaching sessions. One hundred and thirty-two student teachers satisfactorily completed both instruments.

Thirty student teachers did not attend the session during which the instruments were administered. Inquiries were made of a sample of twelve of these non-respondents to ascertain reasons for their not

completing the instruments. Reasons given were not associated with the content of the study but generally concerned pressures of year-end academic work. One student teacher completed only half of the 16PF instrument; his SD data were employed in the initial analyses of the dependent variables only.

IV. METHODOLOGY

Administration of the Instruments

Faculty supervisors who volunteered to participate were requested to ask their students to cooperate in the study by completing the research instruments, administered by the researcher, during their regularly-scheduled large group meeting time the last week in March, 1973. The research instruments were completed by only the student teachers at that time; faculty supervisors, who were requested not to attend the session, completed the 16PF individually during the same week.

Only in the case of the twelve participating supervisors were responses identifiable by name. Assurances that data would be used solely for the purposes of the study were given to all respondents. Moreover, respondents were assured that only the researcher would see or have access to information which they provided.

The nature of the study did not require the identification of individual student teachers by name. At the time of administration each student was asked to indicate his faculty supervisor by name on the instruments in order that dyad members could subsequently be identified by the researcher.

Preparation and Analyses of the Data

Data provided by student teachers having the same faculty supervisor were initially sorted together. Thus, since twelve faculty supervisors volunteered to participate, twelve supervisory groups were formed.

The 16PF Data. Operationally the independent or predictor variables of this study are represented as the similarity, or difference, of dyad members along each of the sixteen personality dimensions identified by Cattell's 16PF instrument. Respondent's raw scores on the 16PF were obtained and transformed to sten scores using the appropriate test edition and age-level norms. Supervisor sten scores were subtracted from student teacher sten scores to obtain sten score differences. To facilitate analyses a constant of ten was added to the sten score differences of each factor thereby eliminating negative values. A score of ten was therefore a reference point indicative of dyadic equivalence in sten score on a given personality factor. The potential range of difference scores was one to nineteen with these extremes indicating maximum difference on a factor.

For analyses the direction or polarity of dyadic personality difference was maintained. Each independent variable was effectively partitioned into two polarity groups. A score below ten, the reference point, indicated that the student teacher scored lower than the faculty supervisor on a factor, above ten that he scored higher on a factor. This partitioning of difference scores for each independent variable resulted in a low polarity group containing scores the same as or less than the reference score and a high polarity group contain-

ing scores the same as or greater than the reference score. In terms of Cattell's bipolar descriptors, the low polarity group of difference scores tended toward the low score description of the personality factor relative to the supervisor. Conversely, the high polarity group of difference scores tended toward the high score description of the factor. With this partitioning the dependent variables were analyzed relative to each polarity group of each of the sixteen independent variables.

The SD Data. The Semantic Differential instrument used to gather data for the dependent variables is presented in Appendix A. For each variable there is a set of twenty scales represented as bipolar adjective pairs. Each scale was scored from "1" to "7" according to the interval on the scale which the respondent marked as directed by the instructions. After these data, and the sten difference scores, were transferred to computer cards, each of the dependent variables was submitted separately to factor analytic procedures to determine the dimensionality of the scales for each variable and to determine which scale or scales would be used to provide student teacher success scores. The results of the two factor analyses are reported in Appendix B.

A preliminary decision was made to employ the single bipolar "successful-unsuccessful" scale as a measure of success on each dependent variable if the findings of the factor analyses warranted doing so. The analyses revealed that the "successful-unsuccessful" scale, with loadings of .910 for IPR-S and .832 for LNG-S, was highly

representative of a basically evaluative factor in each case. For subsequent analyses, therefore, success measures on each dependent variable were drawn directly from each respondent's scores on the "successful-unsuccessful" SD scales.

The Analyses. The basic thrust of this exploratory study concerned the importance or predictive strength of personality factor difference, or similarity, with respect to two success variables. Simple linear regression analysis was selected as the appropriate technique for the study since its purpose is to predict status on one variable, the criterion, from knowledge of status on another variable, the predictor. The regression analyses were undertaken by utilizing the transformed dyadic difference scores between student teachers and their faculty supervisors on each personality factor as a basis for predicting student teacher perceived success on each of the two criterion variables. The analyses required that dyadic difference polarity be maintained. Thus for each personality factor data were sorted according to whether the student teacher scored lower or higher than his faculty supervisor on the factor. Scores of ten, indicating "sameness", were grouped with both data sets. Each dependent variable was then regressed on the scores of each polarity group of each personality factor. With two dependent variables and two polarity groups for each of the sixteen personality factors, sixty-four separate simple regression analyses were therefore undertaken.

The final analysis of the study involved the determination of any existing association between the two dependent variables by means of the correlation coefficient, testing for the significance of the revealed association, and examining the confidence limits of the coefficient.

CHAPTER IV

THE FINDINGS OF THE ANALYSES

I. INTRODUCTION

The undertaking of this study was based on the assumption of the critical importance of the practicum, student teaching experience in teacher education programmes and the importance of supervision in promoting the goal of student teacher learning. It has been suggested that the personality compatibility of interacting individuals may be related to the quality of their interpersonal relationship and to the achievement of learning during the interaction. Moreover, the probability of the occurrence of learning is presumably enhanced if the interpersonal interaction between the dyad members is salutary. This study was concerned with determining possible relationships between the similarities of dyad members along personality dimensions and the success of the dyadic interpersonal relationship and the success of the student teacher's learning within the supervisory process.

The few relevant studies available concerned with exploring personality characteristics as they relate to other variables tend to refer to the personality compatibility of individuals. Dyadic personality compatibility may suggest the desirability of similarity along certain dimensions of personality and dissimilarity along others. The research and the literature is unclear in specifying the dimensions along which it is desirable for dyad members to be either similar or dissimilar in order to promote a successful relationship. In the absence of clear indicators this study was necessarily exploratory.

The examination of individual personality factors in isolation and the analysis of each factor relative to the dependent variables of the study was therefore considered appropriate.

This chapter is organized into three major parts: a statement of the general research hypotheses; the findings of simple regression analyses involving each personality dimension; and the findings of the relationship between the dependent variables.

II. THE HYPOTHESES AND STATISTICAL TEST

The Hypotheses

Sufficient justification for specifying individual hypotheses relating degree of student teacher-supervisor similarity along particular personality dimensions with student teacher success does not exist. The main intent of the study, therefore, has been expressed in two general null statements as follows:

Hypothesis I. The degree of student teacher-supervisor similarity along dimensions of personality is not important in predicting the student teacher's perceived success of the student teacher-supervisor interpersonal relationship.

Hypothesis II. The degree of student teacher-supervisor similarity along dimensions of personality is not important in predicting the student teacher's perceived success in personal learning during the supervisory process.

The statistical approach selected to examine the hypotheses was simple linear regression. A general null hypothesis applicable to the individual analysis of each partitioned personality dimension and each success variable may be stated as (e.g., Ostle, 1963, p.174):

$$H_0: b_1 = b_1'$$

where b_1 is the actual slope of the regression line and b_1' is the

hypothesized value of the regression coefficient, or slope, usually assumed to be zero.

The Statistical Test

Each of the two dependent variables, IPR-S and LNG-S, was predicted from knowledge of the independent variables, student teacher personality factor polarity. The linear regression of each dependent variable on the polarity group of each personality factor resulted in the determination of the slope or regression coefficient, b , which makes prediction possible. The significance of the regression coefficient was found for each regression analysis by obtaining t -values by (e.g., Ostle, 1963, p.174; Snedcor and Cochran, 1956, p.125)

$$t = \frac{b_1 - b_1^i}{s_b}$$

where b_1 is the slope or regression coefficient, b_1^i is the hypothesized value 0.0, and s_b is the error of the regression coefficient. When significant the regression coefficient departs markedly from zero, a functional relationship between the variables is discovered to exist, and the independent variable with which the regressed variable is associated is said to contribute significantly and importantly to the regression or prediction of the latter (Kerlinger, 1973, p.619). Specifically, similarity or dissimilarity along a dimension of personality may be viewed as an important predictor of the dependent variable if the slope of the line formed by regression departs significantly from zero. In this study findings at a .80 level of confidence or greater are reported.

III. THE FINDINGS OF THE REGRESSION ANALYSES

IPR-S on Low polarity Personality Factors

IPR-S was regressed on personality factor difference scores for each independent variable when the scores were grouped for low polarity relative to the faculty supervisor's score. Table III provides a summary of the findings of the various analyses.

The Results of Analyses. For thirteen of the sixteen personality variables, b , the slope or regression coefficient, is small relative to the error of the regression coefficient, s_b . The value of t for these variables, found by $t = b/s_b$, is not significant at the .20 level or less. The slopes of the regression lines formed by regressing IPR-S scores on these personality variables of low relative polarity do not significantly depart from zero slope.

The values of r^2 of IPR-S and the personality variables indicate the proportion of the variance of one variable, IPR-S, which is predictable from the variance of the independent variable (e.g., Ferguson, 1966, p.127). r^2 represents common factor variance, the variance shared by the variables as a result of some common existing influence (e.g., Kerlinger, 1973, p.88). An examination of Table III shows that all r^2 values are low, the highest value of .078 being achieved for Factor E.

The regression coefficients of three personality variables are large relative to the errors of the regression coefficients. The slope, or coefficient, of the line formed by the regression of IPR-S on Factor C scores of low polarity is .20. The calculated t-value of 1.429 is significant at the eighty per cent level of confidence.

TABLE III

SUMMARY OF SIMPLE REGRESSION FINDINGS FOR IPR-S ON
LOW POLARITY PERSONALITY DIFFERENCE SCORES

	Personality Variables	df	b	s _b	t	r ²
	Low Polarity	(n-2)				
Factor A	Reserved	89	0.03	0.08	0.375	.003
Factor B	Less Intelligent	110	0.05	0.08	0.625	.004
Factor C	Affected by Feelings	71	0.20	0.14	1.429*	.026
Factor E	Humble	86	0.29	0.11	2.636***	.078
Factor F	Sober	78	-0.12	0.09	-1.333*	.023
Factor G	Expedient	62	0.09	0.14	0.643	.006
Factor H	Shy	77	-0.05	0.10	-0.500	.004
Factor I	Tough-minded	79	-0.09	0.11	-0.818	.008
Factor L	Trusting	62	-0.03	0.13	-0.231	.001
Factor M	Practical	98	0.10	0.08	1.250	.014
Factor N	Forthright	57	0.07	0.14	0.500	.004
Factor O	Self-assured	51	-0.11	0.14	-0.786	.012
Factor Q1	Conservative	83	0.01	0.10	0.100	.000
Factor Q2	Group-dependent	96	-0.10	0.11	-0.909	.010
Factor Q3	Casual	54	0.08	0.16	0.500	.005
Factor Q4	Relaxed	66	-0.05	0.08	-0.625	.005

* Significant at .20

*** Significant at .01

The relationship of the two variables revealed by $r^2 = .026$ indicates that less than three per cent of the variance in IPR-S scores can be predicted by knowledge of the individual's status on Factor C.

The slope of the line formed by the regression of IPR-S on Factor F scores of low polarity is -0.12 . As indicated by the t -value of -1.333 , this value of the regression coefficient significantly departs from zero at $.20$. The low r^2 value of 0.023 indicates that the two variables share little common factor variance.

The coefficient yielded by the regression of IPR-S on Factor E scores is 0.29 . The revealed t -value of 2.636 is statistically significant at the ninety-nine per cent level of confidence. The r^2 value of 0.078 indicates that less than eight per cent of the variance in IPR-S scores can be predicted from knowledge of status on personality Factor E.

Interpretation. Based on the findings no functional relationship appears to exist between IPR-S and thirteen of the personality variables of low polarity. Functional relationships were revealed between each of three personality variables and IPR-S. In each case, however, the relationships as revealed by the sizes of the regression coefficients, the significance levels, and/or r^2 values are relatively weak.

The finding of Factor C suggests that as the student teacher is more affected by his feelings than is the faculty supervisor IPR-S will tend to be lower. Conversely, the more the student teacher tends to be like the supervisor, the more emotionally stable and less affected by feelings, the higher perceived IPR-S will be.

The result of the regression of IPR-S on Factor F suggests that perceived IPR-S will increase as the student teacher and supervisor increasingly differ with respect to the personality variable. The more serious and reflective the student teacher relative to the more enthusiastic and cheerful faculty supervisor, the higher the perceived IPR-S; the more similar the student teacher and his supervisor the lower the perceived IPR-S.

The t -values associated with Factor C and F are significant at the .20 level, suggesting that the apparent functional relationships of these variables and their predictive utility may be suspect. The t -value associated with Factor E, however, is significant at .01 and the r^2 value, while small, indicates that a relatively larger proportion of the variance in IPR-S scores can be predicted from knowledge of status on Factor E than is true in the cases of Factors C and F. The finding of Factor E suggests that perceived IPR-S will increase as the student teacher is more similar to the supervisor in terms of assertiveness or competitiveness. The greater the dyadic difference on the factor, the more submissive and humble the student teacher, the lower the perception of IPR-S.

IPR-S on High Polarity Personality Factors

The simple regression of IPR-S on student teacher personality factor difference scores for each of the sixteen personality variables was undertaken when the scores were grouped for high relative polarity. Table IV presents a summary of the findings of these analyses.

The Results of Analyses. For twelve of the sixteen personality variables the errors of the regression coefficients, s_b , are large

TABLE IV

SUMMARY OF SIMPLE REGRESSION FINDINGS FOR IPR-S ON
HIGH POLARITY PERSONALITY DIFFERENCE SCORES

Factor	Personality Variables		df (n-2)	b	s _b	t	r ²
	Low Polarity	High Polarity					
Factor A	Reserved	- Outgoing	55	-0.24	0.14	-1.714**	.053
Factor B	Less Intelligent	- More Intelligent	35	-0.05	0.17	-0.294	.003
Factor C	Affected by Feelings	- Emotionally Stable	82	0.06	0.11	0.545	.004
Factor E	Humble	- Assertive	61	0.00	0.15	0.000	.000
Factor F	Sober	- Happy-go-lucky	65	-0.01	0.15	-0.067	.000
Factor G	Expedient	- Conscientious	93	-0.13	0.09	-1.444*	.020
Factor H	Shy	- Venturesome	66	-0.02	0.18	-0.111	.000
Factor I	Tough-minded	- Tender-minded	68	0.24	0.15	1.600*	.036
Factor L	Trusting	- Suspicious	84	0.00	0.11	0.000	.000
Factor M	Practical	- Imaginative	48	-0.07	0.11	-0.636	.008
Factor N	Forthright	- Shrewd	88	0.12	0.09	1.333*	.020
Factor O	Self-assured	- Apprehensive	94	-0.10	0.10	-1.000	.012
Factor Q1	Conservative	- Experimenting	59	0.10	0.11	0.909	.012
Factor Q2	Group-dependent	- Self-sufficient	63	-0.02	0.17	-0.118	.000
Factor Q3	Casual	- Controlled	93	-0.01	0.12	-0.083	.000
Factor Q4	Relaxed	- Tense	77	-0.07	0.13	-0.538	.004

* Significant at .20

** Significant at .10

relative to the regression coefficients, \underline{b} , determined by simple regression. Calculated \underline{t} -values are not significant at confidence levels of eighty per cent or greater. None of these variables has an r^2 value exceeding 0.012, indicating that little variance is common between any given personality variable and IPR-S.

The slope or regression coefficient for high polarity Factor A is -0.24 and the \underline{t} -value of -1.714 is significant at the .10 level. Based on the r^2 finding of 0.053, little variance is shared by IPR-S and high polarity Factor A.

The regression coefficients for high polarity Factors G, I, and N are -0.13, 0.24, and 0.12 respectively. Correspondingly, calculated \underline{t} -values are -1.444, 1.600, and 1.333. These values are significant at the .20 level. r^2 for Factors G and N is 0.020; for Factor I $r^2 = 0.036$. Little common factor variance is shared between any of these variables and IPR-S.

Interpretations. A functional relationship between IPR-S and twelve of the sixteen high polarity personality variables does not appear to exist. In these cases the general hypothesis, $H_0 : b_1 = b_1'$, where $b_1' = 0$, is not rejected.

The sign of the regression coefficient for high polarity Factor A is negative. As with all high polarity personality variables, the interpretation of the sign of high polarity Factor A is the converse of that given to low polarity personality variables in terms of similarity and dissimilarity. With the high polarity group a negative regression coefficient sign indicates that the dependent variable score decreases with increasing student teacher-supervisor personality

factor dissimilarity. The finding for Factor A suggests that as the student teacher is more outgoing than the supervisor the rated IPR-S decreases. Perceived IPR-S increases with increasing dyadic similarity on the factor in terms of personal reserve.

The results of the regression of IPR-S on high polarity Factor G suggest that as the student teacher is more similar to the supervisor on the factor rated IPR-S will increase. Thus, IPR-S will be greater as the student teacher is increasingly more like the supervisor in terms of conscientiousness, persistence, perseverance, or responsibility.

The signs for the regression coefficients of high polarity Factors I and N are positive. Factor I suggests that if the student teacher is very tender-minded, insecure, or sensitive relative to the more tough-minded, self-reliant supervisor the student teacher will tend to perceive dyadic IPR-S higher. In the case of Factor N, the student teacher who is more shrewd and astute relative to the more forthright and unpretentious supervisor will tend to perceive greater IPR-S. Student teacher-supervisor dissimilarity along these two personality variables, then, tends to promote greater perceived IPR-S.

LNG-S on Low Polarity Personality Factors

LNG-S was regressed on student teacher-supervisor personality factor difference scores for each of the sixteen independent variables when scores were grouped for low polarity relative to the supervisor's score. A summary of the findings is presented in Table V.

The Results of Analyses. The regression coefficients or slopes, b , for fourteen of the sixteen personality variables analyzed by simple linear regression are small relative to the errors of the regression coefficients. The t -values for these variables, determined by $t = b/s_b$, are not significant at levels of .20 or less. The slopes of the lines formed by the regression of LNG-S scores on the variables do not significantly depart from zero and the general hypothesis, $H_0 : b_1 = b_1'$, is not rejected.

The coefficient found by the regression of LNG-S on low polarity Factor F scores is -0.16. The t -value of -1.700 is significant at the .10 level. The value of r^2 is 0.029, indicating that approximately three per cent of the variance of predicted LNG-S scores may be accounted for by the variance in the independent variable, low polarity Factor F.

The regression coefficient for Factor Q1 is -0.13. Calculated t is -1.300 which is significant with eighty per cent confidence. The r^2 value of 0.023 suggests that slightly more than two per cent of the dependent variable variance can be predicted by the independent variable.

Interpretation. No substantial functional relationships appear to exist between LNG-S and fourteen personality variables of low polarity. Somewhat weak but notable functional relationships do appear, however, between two personality variables and LNG-S.

The findings of a negative regression coefficient for low polarity Factor F suggest that as student teacher-faculty supervisor similarity decreases perceived LNG-S increases. The student teacher

TABLE V

SUMMARY OF SIMPLE REGRESSION FINDINGS FOR LNG-S ON
LOW POLARITY PERSONALITY DIFFERENCE SCORES

Factor	Personality Variables		df (n-2)	b	s _b	t	r ²
	Low Polarity	High Polarity					
Factor A	Reserved	- Outgoing	89	0.01	0.09	0.111	.000
Factor B	Less Intelligent	- More Intelligent	100	-0.02	0.08	-0.250	.000
Factor C	Affected by Feelings	- Emotionally Stable	71	0.02	0.13	0.154	.000
Factor E	Humble	- Assertive	86	0.12	0.11	1.091	.012
Factor F	Sober	- Happy-go-lucky	78	-0.16	0.10	-1.700**	.029
Factor G	Expedient	- Conscientious	62	0.00	0.16	0.000	.000
Factor H	Shy	- Venturesome	77	-0.03	0.10	-0.300	.002
Factor I	Tough-minded	- Tender-minded	79	0.11	0.12	0.917	.010
Factor L	Trusting	- Suspicious	62	-0.06	0.13	-0.462	.004
Factor M	Practical	- Imaginative	98	0.02	0.09	0.222	.000
Factor N	Forthright	- Shrewd	57	0.06	0.15	0.400	.003
Factor O	Self-assured	- Apprehensive	51	-0.07	0.16	-0.438	.004
Factor Q1	Conservative	- Experimenting	83	-0.13	0.10	-1.300*	.023
Factor Q2	Group-dependent	- Self-sufficient	96	-0.05	0.10	-0.500	.003
Factor Q3	Casual	- Controlled	54	0.17	0.15	0.133	.023
Factor Q4	Relaxed	- Tense	66	-0.01	0.09	-0.111	.000

* Significant at .20

** Significant at .10

perceives greater LNG-S as he is increasingly more sober and serious than the supervisor.

The result of the regression of LNG-S on Factor Q1 suggests that as difference between the student teacher and supervisor increases perceived LNG-S will also increase. Thus, as the student teacher is increasingly more conservative and less experimenting and liberal than the supervisor, he will tend to rate his learning success higher. In this case, as in other cases in which a confidence level as low as .80 is used, the likelihood of a Type I error occurring is great (e.g., Ferguson, 1966, p.163; Runyon and Haber, 1967, p.138-139) and the utility of the factor for predicting LNG-S is questionable.

LNG-S on High Polarity Personality Factors

LNG-S was regressed on student teacher-supervisor personality difference scores for each of the sixteen personality variables when the scores were grouped for high polarity relative to the supervisor's score. The findings of the separate analyses are presented in Table VI.

The Results of Analyses. The regression coefficients for fifteen of the sixteen personality variables determined by simple linear regression do not achieve the critical value of t at significance levels of .20 or less when the errors of the regression coefficients are considered. The general null hypothesis is therefore not rejected. The values of r^2 range from 0.0 to 0.017, indicating that little score variance is held in common by any independent-dependent variable pair.

The slope, or coefficient, found by the regression of LNG-S on high polarity Factor N is 0.15. Calculated t of 1.667 is significant

TABLE VI

SUMMARY OF SIMPLE REGRESSION FINDINGS FOR LNG-S ON
HIGH POLARITY PERSONALITY DIFFERENCE SCORES

Factor	Personality Variables		df (n-2)	b	s _b	t	r ²
	Low Polarity	High Polarity					
Factor A	Reserved	- Outgoing	55	-0.12	0.12	-1.000	.017
Factor B	Less Intelligent	- More Intelligent	35	0.04	0.23	0.174	.001
Factor C	Affected by Feelings	- Emotionally Stable	82	-0.06	0.13	-0.462	.003
Factor E	Humble	- Assertive	61	0.17	0.18	0.944	.014
Factor F	Sober	- Happy-go-lucky	65	-0.06	0.15	-0.400	.003
Factor G	Expedient	- Conscientious	93	-0.12	0.10	-1.200	.014
Factor H	Shy	- Venturesome	66	0.07	0.20	0.350	.003
Factor I	Tough-minded	- Tender-minded	68	0.04	0.16	0.250	.001
Factor L	Trusting	- Suspicious	84	-0.01	0.11	-0.091	.000
Factor M	Practical	- Imaginative	48	0.00	0.11	0.000	.000
Factor N	Forthright	- Shrewd	88	0.15	0.09	1.667**	.029
Factor O	Self-assured	- Apprehensive	94	-0.04	0.10	-0.400	.002
Factor Q1	Conservative	- Experimenting	59	0.13	0.14	0.929	.014
Factor Q2	Group-dependent	- Self-sufficient	63	-0.08	0.19	-0.421	.003
Factor Q3	Casual	- Controlled	93	-0.02	0.12	-0.167	.000
Factor Q4	Relaxed	- Tense	77	0.05	0.12	0.417	.003

** Significant at .10

at the .10 level. The r^2 value for high polarity Factor N approximates three per cent.

Interpretation. The slopes of the lines formed by the regression of LNG-S on each of the fifteen high polarity personality variables do not depart significantly from zero and no functional relationship is revealed. The finding for high polarity Factor N, however, suggests that perceived LNG-S increases as the student teacher increasingly differs from the supervisor in terms of shrewdness. Conversely, LNG-S decreases as student teacher-supervisor similarity increases on high polarity Factor N. The apparent relationship between the variables is not strong.

IV. THE RELATIONSHIP OF THE DEPENDENT VARIABLES

It has been suggested (e.g., Rogers, 1967, p.43ff.; Berman and Ussery, 1966; Vigilante, 1966, p.645; Macdonald, 1966, p.5) that the quality of dyadic interpersonal interaction bears an important relationship to the willingness of students to learn during the supervisory process. In view of the suggested association, one of the concerns of this study has been expressed in a null statement as follows:

Hypothesis III. The student teacher's perceived success of the interpersonal relationship with the supervisor and his perceived success in personal learning during the supervisory process are not significantly associated.

The coefficient of correlation between IPR-S and LNG-S as measured for this study is .704. A coefficient of that magnitude is significant at a level of less than .01. The square of the correlation coefficient, r^2 , is .496. Thus, nearly fifty per cent of the variance of the two variables is shared and some common influence

appears operative in both variables. The relationship between IPR-S and LNG-S appears positive and strong.

By transforming the correlation coefficient to Fisher's Z_r the confidence limits of the correlation coefficient may be established. With the level of significance set at .01 the lower limit of Z_r is .648 and the upper limit is 1.102. These values correspond with correlations of .570 and .801. With ninety-nine per cent confidence, therefore, the true value of the correlation coefficient may be said to fall within these limits. At the lower limit of .570 the relation between IPR-S and LNG-S would not be described as strong. As the true value approaches and exceeds the reported value of .704, the association may be described as quite strong.

V. SUMMARY

Based on the position that dyadic similarity, or difference, along dimensions of personality would affect both the success of the interpersonal relationship, IPR-S, and learning success, LNG-S, within the context of the supervisory process, IPR-S and LNG-S were each regressed on sixteen personality variables partitioned according to student teacher high and low polarity relative to the supervisor's status on the variables. Sixty-four simple linear regressions were thus undertaken.

Fifty-four of the sixty-four regression coefficients, or slopes, found by regression were not significant at confidence levels of 80 per cent or greater when the t -test was applied. Only one coefficient, that for the regression of IPR-S on low polarity Factor E scores was

significant at .01. The regression coefficients determined by the regression of LNG-S on low polarity Factor F and on high polarity Factor N and by the regression of IPR-S on high polarity Factor A were significant at the .10 level. Six regression coefficients were found significant at the .20 level. The regressions of IPR-S on low polarity Factors C and F and on high polarity Factors G, I, and N were significant at .20. The regression of LNG-S on low polarity Factor Q1 was also significant at the .20 level. In the cases of all personality variables with reported significant regression coefficients the proportion of the variance of either IPR-S or LNG-S scores which may be predicted by the personality variables as measured was small.

CHAPTER V

THE STUDY IN PERSPECTIVE

I. THE PROBLEM AND METHODOLOGY

The Problem

The first purpose of this study concerned the attempt to determine the presence of a functional or predictive relationship between student teacher-supervisor similarity along dimensions of personality and the student teacher's perception of the success of his interpersonal relationship with the supervisor. A second purpose focused on the possible functional or predictive relationship between student teacher-faculty supervisor similarity along dimensions of personality and the student teacher's perception of the success of his learning during the supervisory process involving the faculty supervisor. A final purpose involved the determination of any existing relationship between the dependent variables of the study, namely, the perceived success of the dyadic interpersonal relationship and the perceived success of student teacher learning.

The Sample

The faculty supervisor sample for this study was drawn from the Elementary Education programme at the Faculty of Education, the University of Manitoba, during the 1972-73 academic year. Twelve faculty supervisors volunteered to participate in the study and to encourage the cooperation and participation of their student teachers. Since the study involved the pairing of the faculty supervisor with each of his student teachers, the self-selected nature of the faculty supervisor

sample imposed a limit of 163 available student teachers. Absence at the time of questionnaire administration and questionnaire response error reduced the number of student teacher respondents to 132.

The Variables and Methodology

Two dependent variables based on the perceptions of each student teacher were employed in the study. They were:

a) the success of the interpersonal relationship (IPR-S) between the faculty supervisor and student teacher; and

b) the success of the student teacher's learning (LNG-S) during the supervisory process with the faculty supervisor.

Status on each of the dependent variables was determined by means of the Semantic Differential approach (Osgood, et al., 1957). The instrument contained twenty bipolar adjectives set forth on scales of seven intervals. The preliminary but tentative decision to use the "successful-unsuccessful" scale scores as single indicators of status on each dependent variable if warranted was supported by the factor analyses of all scales for each of the two variables. The "successful-unsuccessful" scale was highly representative of a fundamentally evaluative factor in both analyses and the scores therefrom were used in subsequent analyses.

The independent variables for the study were based upon the faculty supervisor's and student teachers' standing on each personality dimension of Cattell's Sixteen Personality Factor Questionnaire (16PF). The maintenance of both the magnitude and the direction, or polarity, of any student teacher-supervisor differences on each personality dimension was desirable for this study. Retaining magnitude involved

the determination of absolute sten score differences and the addition of a constant. Direction or polarity was retained by partitioning difference scores for each variable into a low and a high polarity group according to the polarity orientation of the student teacher's sten score on the factor relative to the supervisor's. The dependent variables were thus separately analyzed in relation to each polarity group of each of the sixteen independent variables.

The Research Design

Two purposes of the study focused upon the functional, or predictive, relationship between personality similarity and a dependent variable. With prediction a concern, a form of regression analysis appeared appropriate. From a preliminary plotting of scores with a sample of the data it was concluded that the simple linear regression of each dependent variable on each of the polarity groups of each of the sixteen independent variables would satisfy the intent of this exploratory study.

The third purpose of the study was to ascertain the relationship of the study's dependent variables. This was accomplished by simple correlation and testing for significance.

II. THE SIGNIFICANT FINDINGS

The position assumed by authorities (e.g., Rogers, 1967, p.43ff.; Berman and Ussery, 1966; Macdonald, 1966, p.5; Vigilante, 1966, p.645) concerning the association between the dyadic interpersonal relationship and the student teacher's predisposition to learn appeared supported in this study. Student teachers' perceptions of their

interpersonal relationships with their supervisors and their perceptions of their personal learning during the supervisory process were correlated at .704, significant at less than .01. Confidence in the magnitude of the correlation coefficient was shaken somewhat by determining the confidence limits of r at the .01 level. Taking the sample size into account, the true value of r was found to lie between .570 and .801. Even within these values, the association between perceived interpersonal relations success and perceived learning success appears reasonably strong, particularly since common factor variance may range as high as sixty-four per cent.

The evidence of the regression analyses of the study lends support to those who question the assumed importance of personality similarity in dyadic interactions (e.g., Lewis, 1960). The findings of ten of the sixty-four analyses undertaken were significant, with nine of these significant at a confidence level of either eighty or ninety per cent. One finding was significant at the ninety-nine per cent confidence level. Subsequent discussion considers the significant results, which are summarized in Table VII, and relates them where possible to previous studies.

IPR-S and Factor C. Low polarity Factor C suggests that student teacher-supervisor similarity in the direction of greater emotional stability and maturity is desirable for IPR-S and that increasing emotional instability, changeability, and lack of control on the part of the student teacher is detrimental to the relationship. One of the findings of Bell's study (1972) indicated that student teachers who scored high on Factor C had a higher opinion of their student teaching.

TABLE VII

A SUMMARY OF SIGNIFICANT REGRESSION FINDINGS: THE RELATION BETWEEN
DEPENDENT VARIABLES AND THE POLARITY AND DIFFERENCE OF
STUDENT TEACHER-SUPERVISOR STATUS
ON PERSONALITY DIMENSIONS

Dependent Variable	PF	Student Teacher Polarity Orientation: Polarity-Descriptor	Confidence Level of Regression Coefficient	Dependent Variable - Personality Factor (PF) Relation
IPR-S	C	Low: Affected by Feelings	.20	High IPR-S - Similarity on PF C
IPR-S	E	Low: Humble, submissive	.01	High IPR-S - Similarity on PF E
IPR-S	F	Low: Sober, serious	.20	High IPR-S - Dissimilarity on PF F
IPR-S	A	High: Outgoing	.10	High IPR-S - Similarity on PF A
IPR-S	G	High: Conscientious	.20	High IPR-S - Similarity on PF G
IPR-S	I	High: Tender-minded	.20	High IPR-S - Dissimilarity on PF I
IPR-S	N	High: Shrewd	.20	High IPR-S - Dissimilarity on PF N
LNG-S	F	Low: Sober	.10	High LNG-S - Dissimilarity on PF F
LNG-S	Q1	Low: Conservative	.20	High LNG-S - Dissimilarity on PF Q1
LNG-S	N	High: Shrewd	.10	High LNG-S - Dissimilarity on PF N

But his examination of the absolute personality differences of student teachers and cooperating teachers as the differences related to the perception of student teaching uncovered no apparent relationships.

IPR-S and Factor E. The single most significant regression found by this study was revealed by the regression of IPR-S on low polarity Factor E. Of the independent variables employed Factor E appeared as the potentially most useful predictor of IPR-S. Extreme relative submissiveness of the student teacher was associated with a low assessment of interpersonal relationship success. Increasing student teacher similarity to the supervisor in the direction of greater assertiveness or dominance promoted greater success. In the supervisory process of student teaching the highly submissive and obedient student teacher may experience a sense of domination by the supervisor which fosters both personal anxieties and dissatisfaction with the interpersonal relationship. Notably the IPR-S perceived by student teachers of greater dominance or assertiveness than the supervisor was not predictable from the data.

Burk (1969) revealed the similar finding that a low relative student teacher score on Factor E was suggestive of a non-successful dyadic relationship on three measures and that student teacher-supervisor similarity was associated with a successful dyad. Mattson (1969) found that a high dominance student teacher score was positively related to classroom effectiveness as rated by the college supervisor. On the other hand, Bell (1972) noted that a student teacher tendency to score low on Factor E, humble or submissive, was associated with a high personal opinion of the student teaching experience. Based on its prominence in

the limited number of available studies, Factor E appears as one of the most potent variables measured by the 16PF.

IPR-S and Factor F. The dissimilarity of student teacher and faculty supervisor on low polarity Factor F, as noted in Table VII, was associated with greater IPR-S. The relatively more sober, serious, and concerned student teacher tended to rate IPR-S higher. The somewhat more enthusiastic, cheerful faculty supervisor may lend a buoyant and encouraging view to the seriously-viewed student teaching situation.

IPR-S and Factor A. Student teachers of high polarity on Factor A tended to rate IPR-S high with increasing similarity to their supervisors on the dimension. Rated IPR-S increased as the students became less outgoing and adaptable and became more similar to the supervisor in terms of detachment, precision, and objectivity.

In another study (Kimmel, 1964) student teaching success as assessed by the cooperating teacher and college supervisor was related to high student teacher standing on the "outgoing" factor (A). Similarly, Mattson (1969) discovered that Factor A was associated with student teachers rated high in classroom effectiveness by the college supervisor.

IPR-S and Factor G. This finding suggests that if a student teacher is highly conscientious, persevering, and responsible relative to a rather more frivolous and undependable supervisor the student teacher will rate the IPR-S lower. Rated IPR-S increased with greater student teacher-supervisor similarity.

Kimmel (1964) and Mattson (1969) found, respectively, that student teaching success and classroom effectiveness was associated with high conscientiousness, Factor G. Burk (1969) noted, as this study has,

that student teacher-supervisor similarity on Factor G was significantly related to successful dyadic membership.

IPR-S and Factor I. From Table VII it may be observed that dissimilarity on high polarity Factor I promoted IPR-S. Student teachers who tended toward greater sensitivity and insecurity relative to their more tough-minded, self-reliant, and practical supervisors appeared to rate IPR-S higher than more similar student teachers. It may be that in the student teaching situation the supervisor may be viewed as a needed ally and confidant.

In his study Burk (1969) revealed that the successful dyad included a student teacher who scored lower on Factor I than the supervisor; similarity did not necessarily promote dyadic success. A high score on Factor I, indicating sensitivity, was associated with highly-rated student teaching success in the study by Kimmel (1964).

IPR-S and Factor N. For high polarity Factor N students this study disclosed that dissimilarity bred high IPR-S. The more shrewd and astute the student teacher relative to the more forthright and unpretentious supervisor the greater perceived IPR-S tended to be. Bell's study (1972) discovered that the more shrewd and astute the student teacher the greater was his perceived satisfaction with student teaching.

LNG-S and Factor F. Low polarity Factor F was found to be functionally related not only to IPR-S but also to LNG-S. The finding suggests that dissimilarity is important. The student teacher who was more sober, serious, and concerned relative to the more cheerful and enthusiastic supervisor tended to rate LNG-S higher than did the student who was more similar to the supervisor. However, in view of the discovered

relation between IPR-S and LNG-S and the absence of a significant Factor F in other studies, the importance of the association of Factor F with both dependent variables need not be unduly emphasized.

LNG-S and Factor Q1. Low polarity Factor Q1 suggests that a student teacher of relatively greater conservatism than the liberal, experimenting supervisor will perceive high LNG-S. Dissimilarity, according to this study, was desirable on Factor Q1. It may be that dyadic difference on this dimension provides some additional dimension and increment of knowledge not available in more similar dyads. In his study, Kimmel (1964) found that student teacher conservatism was associated with a high external rating for student teaching success.

LNG-S and Factor N. Like Factor F this factor was functionally related to both IPR-S and LNG-S. High polarity Factor N suggests that perceived LNG-S increases as the student teacher is increasingly more shrewd and astute than the more forthright, unpretentious faculty supervisor.

III. CONCLUSIONS

Based on the finding of this study the quality of dyadic interpersonal relationships would appear to bear a reasonably strong and positive relationship to the student teacher's perception of his personal learning. Intuitively the suspicion exists that a qualitatively poor dyadic interaction in which excessive tensions and conflict predominate would result in the deflection of focus from the real purpose of the student teacher-supervisor interaction. The individual's willingness to learn and the opportunities for and the probability of

the occurrence of substantive learning and productive growth would be reduced. While the finding does not itself suggest causality, a causal relationship between the quality of the interpersonal relationship and perceived learning may in practice exist. On that unproven possibility supervisors may facilitate learning by attempting to establish a trust relationship with the student teacher through the clarification of feelings, dealing openly with misunderstandings, and through regard for the expressed concerns, perceptions, and ideas of the student teacher.

The importance of the dimensions of personality within the teacher education context has been an underlying assumption of a number of studies. This presumptive importance, as Lewis has commented (1960), tends to be seldom questioned; yet very little empirical evidence exists to warrant the assumption that either personality traits or personality similarity is of consequence in dyadic interactions. Some studies have examined the relationship between the personality traits of student teachers and success during student teaching (e.g., Kimmel, 1964; Henjum, 1966; Laubacher, 1969; Mattson, 1969; Errington, 1970; Titze, 1971). Some researchers have suggested or pursued studies focusing on the student teacher and supervisor for the purpose of determining bases for student teacher assignment (e.g., Heil, 1964, p.12ff.; Chaltas, 1965, p.311-318; Burnett, 1969; Leslie, 1969; 1971; Hohman, 1972, p.375-382). The belief that the personal qualities of individuals may determine the quality of interpersonal interaction (e.g., Heider, 1958, p.94ff.; Newcomb, 1959, p.384ff.; 1961, p.6ff.) and the student teacher's satisfaction with or success in student teaching (e.g., Steiner, 1970) has generated a limited number of studies having diverse results. Direct

comparability amongst these studies concerned with personality, interpersonal relations, and student teaching success is virtually impossible since the variables have been defined and measured in varied ways. Although the definition and measurement of variables in this study also differed, some general comparisons have been attempted.

The significant findings of the regression analyses involving IPR-S and LNG-S with the personality variables in this study are numerically few and statistically non-rigorous. At the reported confidence levels of eighty and ninety per cent the probability is great that the null hypothesis will be rejected when that hypothesis is actually true. The strength of the relationships revealed leave the predictive utility of the independent variables as measured in question. Thus, within teacher education programmes the expenditure of time required to attempt to match dyad members along personality dimensions in order to maximize success would probably be disproportionate to the probable benefits. The evidence from the few earlier studies is weighted toward a similar verdict (e.g., McReynolds, 1966; Burk, 1969; Leslie, 1969; Hill, 1969; Lucasse, 1971; Bell, 1972; Corr, 1972; Hohman, 1972). The very differences in variable definition and measurement amongst the studies, and in their designs, lend some potency to the general conclusion that neither personality traits themselves nor dyadic personality similarities are generally related to nor effective predictors of success in student teaching, however success is defined and measured.

The desirability of matching student teachers and supervisors to maximize the benefits of the supervisory process and the student teaching experience has been advocated elsewhere (e.g., Chaltas, 1965, p.312ff.;

Hohman, 1972, p.376). Personality has been included amongst the various dimensions along which matching has been suggested. The exhortation of the critical importance of dyadic personality comparability in enhancing a relationship appears inherently sound. The evidence, however, frequently does not support the argument (e.g., McReynolds, 1966; Burnett, 1969; Hill, 1969). The findings of the present study suggests that the attempt to match individuals along dimensions of personality in order to maximize perceived interpersonal relations and learning success would be fruitless. Dyadic matching may be important but future endeavours to determine the critical dimensions of desirable compatibility might productively ignore personality. As Lewis suspected (1960), if a tendency does exist for dyad members to interact along certain dimensions of personality, it is probably along different dimensions in varying settings and defensible generalizations are not possible.

Leslie (1969, p.3) noted that no real evidence exists to support the assertion that matching the student teacher with a supervisor should include personality compatibility. Further, he suggested that since human characteristics are continuously distributed rather than neatly packaged matching theory itself is flawed (1971, p.303-309). That personality compatibility has not consistently arisen and does not arise herein as a dimension of apparent importance in dyadic interactions in teacher education should not be surprising. Additionally, the situation of the student teacher demands certain conforming behaviors. He will generally know and understand, though not necessarily appreciate, the requirements institutionally demanded. Since his livelihood may ultimately depend upon his student teaching performance, the student teacher

is probably highly motivated to succeed. He will also recognize that his success, and grade, in student teaching is largely dependent upon the faculty supervisor and the cooperating or supervising teacher. The importance of dyadic differences in personality may well dissipate in the face of the drive to succeed or to appear to succeed. In spite of incompatibilities in dyadic personality, internal and external motivators exist which compel the student teacher not only to make the interpersonal relationship successful but to learn successfully as well.

Notwithstanding the generally doubtful utility of dyadic matching for personality compatibility the findings of this study may suggest some directions worthy of subsequent exploration. Within the student teacher-supervisor context personality compatibility implies dyadic similarity along certain personality dimensions and dyadic dissimilarity along others. Similarity appeared desirable in terms of emotional stability (Factor C), assertiveness (Factor E), reserve (Factor A), and superego strength (Factor G). Dissimilarity was suggested in terms of surgency (Factor F), sensitivity and dependence (Factor I), general shrewdness (Factor N), and conservatism (Factor Q1). The findings of Burk's study (1969) and the present study are comparable with respect to the desirability of similarity on Factors E and G and dissimilarity on Factor I. With respect to the latter factor, however, Burk found that the successful dyad paired a student teacher who was more tough-minded and self-reliant with a more sensitive, insecure supervisor. In this study the successful dyad had the student teacher as the more sensitive, insecure individual. In both cases dissimilarity and success were linked.

The general importance of Factor E has some support in past studies and in this study Factor E appeared as the most useful single predictor of interpersonal relations success. Student teachers of relatively greater submissiveness than the supervisor perceived greater success or satisfaction in the relationship as the disparity on the factor decreased. This finding bears an interesting relationship to the findings reported by Blumberg and Weber (1968, p.109-113).

The Blumberg-Weber study, completed at Temple university, was concerned with teacher morale and perceived supervisory behavior style. Four such behavior styles had previously been identified from instrumentation based on Flanders' system for observing and analyzing teacher classroom behavior. The supervisor having a high direct-high indirect style was perceived by teachers as emphasizing both telling, suggesting, and criticizing behaviors and behaviors which emphasized asking questions and reflecting teacher ideas. The remaining three supervisory styles were identified as low direct-high indirect, high direct-low indirect, and low direct-low indirect. Previous research had reportedly shown that teachers who perceived their supervisors as high direct-high indirect or low direct-high indirect felt more positively about the dyadic interpersonal relationship in supervision and felt that supervision was more productive than did those teachers whose supervisors operated in either of the other two styles. Similarly, Blumberg and Weber found that teacher morale was greatest for those teachers whose supervisors were low direct-high indirect or high direct-high indirect respectively. The authors suggested that the behavior style communicates a non-verbal message to the teacher. The highly direct supervisor tends

to control teacher behavior and exclude the teacher from problem-solving; the behavior is essentially evaluative. The indirect supervisor's behavior of praising, accepting, clarifying ideas, and asking opinions and non-critical questions is an expression of concern for the teacher as a person and for collaborative problem-solving.

A conclusion may be drawn from the derived similarity between the Factor E finding of this study and the Blumberg-Weber findings. Where a student teacher is apparently more submissive than the more dominant, assertive supervisor, perceived interpersonal relations success and the probable productivity of supervision will not likely be maximal. In such a case particularly the supervisor must attempt to moderate his natural assertiveness and adopt a more collaborative, personally considerate or indirect behavioral style in order to generate greater student teacher involvement in the process. By de-emphasizing the possible dissimilarity along the submissive-assertive dimension, the supervisor should enrich the supervisory experience and enhance student teacher morale.

IV. SPECULATIONS

The simplest explanation for the findings revealed by this exploratory study would assume the perfection of all elements of the study, take the findings at face value, and would conclude therefrom that dyadic personality compatibility bears little clear relation to the measures of student teaching success. It seems appropriate, however, to speculate upon and explore other possible explanations; to this end the following examines various aspects of the study.

The Data Source

It may be that student teachers in the Elementary Education Programme were inclined to assess their dyadic interpersonal relationship success and learning success higher than would Secondary Education student teachers. It is doubtful, however, that degree of personality compatibility would bear a strong relationship to the assessments from either sample source. Past studies have employed supervisors, usually cooperating teachers, of elementary school student teachers, secondary student teachers, and blends of both without any evident pattern relating either personality traits or dyadic personality compatibility to the measures of success employed. Since assignment of both elementary and secondary student teachers to faculty supervisors was essentially random and since personality considerations were in no manner involved in assignment, selection of Elementary Education supervisors and their student teachers as sources of data would not appear to bias the findings of the study.

Two issues may be raised with respect to the voluntary participation of supervisors. An assumption was stated in this study regarding the reasons given by supervisors for their non-participation. Conceivably, however, if the volunteering group were essentially more open and less fearful in their interpersonal relationships, some systematic differences may be revealed by a comparison of the personality profiles of the members of the participant and non-participant groups. One may speculate, for example, that the participant group may score higher on Factors A, C, F, G, H, and I and lower on E, L, O, and Q4 of the 16PF. Given that the two supervisor groups may differ somewhat systematically, the essentially random assignment of student teachers to supervisors would

result in correspondingly systematic dyadic personality differences. The findings of the study would therefore be tainted.

As well, if the participating group of supervisors were essentially more open and cooperative in their relationships with student teachers than were the members of the non-participating supervisory group, the perceived success scores may be biased upward. Such a result could affect the findings. If an upward bias in success scores does exist in this study the exact manner in which that bias may be systematically related to dyadic differences along personality dimensions cannot be known. However, the alternative to voluntary supervisory participation, the coercion of the involvement of the otherwise reluctant supervisor, may result in sabotage or reluctance to complete all items of the personality instrument. In such a case findings would be highly questionable.

Some provocative comments by Nunnally (1960) may be pertinent to the size of the data source in this study. Nunnally suggests that the hypothesis-testing model, while neat, is often inappropriate since the null hypothesis is almost never true in actuality. If the null hypothesis is not rejected it is probably because the sample size, n , is too small. Compared means and correlations will generally be significantly different when a sufficient n is used. But if the real intent of research were to reject the null hypothesis there would be no need to gather data; we merely accept that the null hypothesis will be rejected as more data are gathered. In various analyses of this study, the general hypothesis of zero slope was generally not rejected and functional relationships were not usually present. Confidence in

these non-significant findings and the correlations of paired variables may be compromised by the relatively small n of the polarity groups employed.

Instrumentation and the Dependent Variables

The study of human personality is sufficiently complex that virtually any examination of it in educational contexts will seem relatively superficial. In this study the administration and scoring of Cattell's 16PF, Form A, was found convenient and no evidence arose to cast doubt upon its reported validity and reliability as a personality instrument. Comparable past studies have used a variety of personality instruments, including the 16PF, and the findings generally indicate few significant relationships when personality variables are involved. Alternatively, of course, findings inevitably may be compromised whenever a personality instrument is employed.

It is doubtful that the findings of this study were seriously limited by the personality instrument. The 16PF dimensions have a mean of 5.5 and a standard deviation of 2.0. Although the sample might appear homogeneous, a check revealed that sample means for eleven factors did not differ significantly from the mean value of 5.5 at the .05 level of significance. The means for Factors A, B, H, I, and Q2 did differ significantly. Standard deviations generally ranged from 1.79 to 2.23. Only Factors B and L with standard deviations of 1.04 and 1.66 respectively departed notably from the expected value of 2.0. Based on these findings, the sample did not appear to constitute a particularly homogeneous group with respect to the independent variables.

The criterion measures of this study, interpersonal relationship success and learning success, were assessed using a semantic differential format. Although ample evidence exists to support the instrument, some more discriminating scaling procedures may have proved more satisfactory.

One scale, the "successful-unsuccessful" scale, was selected as being highly representative of a basically evaluative factor following the factor analyses of the semantic differential scales for each dependent variable. Scores on the "success" scales were then used as the measures for each variable. The findings of the study may have been attenuated by the negatively skewed distributions of IPR-S and LNG-S scores. For IPR-S the mean was 5.76 and the standard deviation 1.49; the mean and standard deviation for LNG-S was 5.45 and 1.58. The possibility that the five most representative evaluative scales might provide a better indication of success measures was tested as a diversion of the study. The findings of the regression analyses using the composite scores of the five scales were essentially the same as the reported findings in all important respects.

As Nunnally has indicated (1967, p.536-544), the semantic differential approach is highly flexible and sensitive. Rather than the instrument being insufficiently discriminating perhaps the definition of the dependent variables is too gross. The specific dimensions of the interpersonal relationship and of personal learning within the supervision context may require more clear definition.

The learning variable in this study was based upon the student teacher's perception of the productivity of his relationship with the supervisor. The dimensionality, or content, of that learning was not

specified and thus precisely what was being assessed a "success" is not known. The student teacher may have perceived high learning success with little substantive learning having occurred; conversely, perceived learning success may have been low although much substantive learning may have occurred. A matter of expectations with regard to the productivity of the dyadic interaction may be involved. In another setting it would be useful to know, therefore, the learning expectations of the student teacher, the substantive content of the student teacher-supervisor interaction during the supervisory process, the actual learning achievement of the student teacher, and finally the student teacher's perception of his learning success.

Instruments which incorporate various dimensions of interpersonal relationships do exist; however, the criteria employed to establish degree of success with respect to those dimensions would be externally determined based on the individual's composite scores. The respondent's perception of degree of success would not typically be involved. In this study the student teacher assessed the degree of success using his own internal criteria.

The findings of the study may be questioned, therefore, because the specific dimensionality of the dependent variables was not defined and because student teacher perceptions were employed. Were specific factors of the two dependent variables measured by appropriate instruments and then related to the independent variables, functional relationships may have been revealed. Since student teacher perceptions were desired for the study, general measures of success also seemed desirable in order to minimize researcher manipulations of data. Both specific and general

measures of similar dependent variables have been used in past studies and findings have been largely non-significant statistically.

The Research Design

A number of issues may be raised with respect to the design and statistical approach employed in the study. Past studies have varied considerably in design, in variable definition and measurement, and in findings, although personality variables and success variables related to student teaching have not been generally associated strongly. Various statistical approaches have also been used, including analysis of variance, differences in means, d-statistics, factor analysis, simple and multiple correlation, and regression. Since a potential predictive relationship between dyadic compatibility along individual personality dimensions and the success variables was sought in this study, a linear regression model was selected. Ferguson (1966, p.128-129) has indicated that a random relation is not the inevitable conclusion of zero correlations; in fact, the linear regression model may be a poor fit to the data. Observation of a plotting of scores of many of the variable pairs in this study however, did not alter the decision to employ the linear rather than a non-linear model. Both Ferguson (1966) and Hill and Kerber (1967, p.267-268) have pointed out that where deviations are not too pronounced a linear regression model is generally a most adequate substitute for a non-linear relationship pattern and that the assumption of linearity is usually well satisfied.

In view of the generally-accepted complexity and interplay of human personality characteristics, the adequacy of using a simple regression model may be questioned (e.g., Walberg, 1967). If it is inappropriate

to isolate particular personality characteristics and if the model is therefore not suitable, the findings of a very large body of research touching upon human personality are jeopardized. The multiple regression approach may be more appropriate where human personality is involved. Assuming the desirability in this study of maintaining the magnitude and directionality of student teacher-supervisor personality differences, and thus the high and low polarity groupings, application of the multiple regression model would generate enormous difficulties. With sixteen personality variables approximately 67,000 combinations of variables may be predictively effective. An adequate sample would be required for the multiple regression analysis of each combination. The task would be as arduous as human personality is thought to be complex.

The research reported here has been described as ex post facto in which measures were taken at a point in time without any attempt to control other variables having possible influence upon the prediction of the criterion variables. In behavioral research, progress would be ponderous indeed were researchers to be unduly threatened by the requirement of identifying and controlling all the potentially mediating variables which may affect findings. Ideally, one should use an experimental approach wherein independent variables can be manipulated; unfortunately many problems in the social sciences involve important variables which are not manipulable and thus a non-experimental approach must necessarily be employed. Such research has a threefold weakness: first, the independent variables cannot be controlled; second, groups are difficult to randomize; and third, findings may be improperly interpreted (Kerlinger, 1964, p.371-372). Student teacher perceptions of success and ultimately the

findings of this study may have been affected by such variables as the student teacher's self-concept, his relationships with the school staff, the children, the cooperating teacher, or the principal, motivations for teaching, attitudes toward the teacher education programme, learning apart from the relationship with the faculty supervisor, the known demographic characteristics of the supervisor, various contingent variables associated with testing, and so on. Dussault (1970, p.101ff.) has identified an extensive number of input variables which may have a bearing on perceived success. The possible effects of such variables upon the findings of this study were neither controlled nor known.

The Conceptual Foundation

Supervision within the teacher education context has been described as a teaching-learning process. The supervisor-student teacher interaction involves two individuals having distinct personality profiles. The interaction of personality is involved during the course of establishing the relationship, of mutually setting the objectives for supervision, and of aiding in instructional performance assessment. That personality interaction may affect the quality of the interpersonal relationship established and the student teacher's learning during the supervisory process. This assumed importance of personality compatibility in human interaction was not supported by the study however. While varying degrees of dyadic personality differences existed either they were not of great consequence or the measure of the success variables was insufficiently sensitive to demonstrate the effects of such differences. Equally probable, a network of uncontrolled variables exerted greater impact on perceived success. For example, a supervisor who has a well-defined conceptualization of his supervisory role, who is conscious of

his effect on others, and who practices consideration and regard for others within his role may exhibit behaviors during the interaction which may not necessarily correspond exactly with otherwise normal predispositions which are controlled and submerged to the supervisory process and the role adopted. Similarly, the student teacher may perceive success because it is important to do so to achieve the goals of the teacher education programme.

The generalized model of supervision which served as the conceptual foundation for the study was developed from a model of teaching and drew heavily upon three conceptually-similar schemes of the supervision process. The development of the interpersonal aspects of the model were rooted in the ideas and views of Arthur Combs and Carl R. Rogers.

The perceptual view of teacher education programmes is concerned with helping the student teacher develop a thoughtful and positive perception of self and personal self-worth (e.g., Combs, 1967, pp.51ff., 67ff.; 1965; 1972; Soper and Combs, 1967, p.288). A strong self-concept and a positive self-regard are beneficial perceptions since it is upon these that personally meaningful behaviors are founded and developed. The individual with such perceptions tends to behave in effective ways in the classroom by finding modes of behavior which will perpetuate his positive image of self. Within this conceptualization the individual's perceptual field is considered the basis for personality (e.g., Dumas, 1969, p.275). Individual personality exclusive of perceptual concerns is not emphasized. While much of the substance of Combs's position is assimilable into the conceptualization of this study, the position does not specify a role for dyadic personality compatibility which was fundamental to this study.

The work of Carl R. Rogers related to the helping relationship and his theory of therapy and personality change has found expression in the sphere of supervision (e.g., Wilson, et al., 1969; Churukian, 1970; Churukian and Cryan, 1972; Clark and Beatty, 1967). The most complete expression of Rogers' ideas is to be found in the very creative, non-experimental study completed by Gilles Dussault (1970). His middle-range theory of supervision examines similarities between the Rogerian conditions of therapy and the variables within the supervisory conference as well as the outcomes of both therapy and the supervisory conference. The theory establishes the necessary conditions which must exist and continue throughout the supervisory conference if certain desirable outcomes are to result.

While it does not define specific steps for the process of supervision, the Dussault position is not incompatible with the generalized model. In developing the framework for his study, Dussault has identified, from the research and non-research literature, control variables which operate as inputs into the supervisory conference, independent variables operative within the conference, and dependent variables which are conference outcomes. Although he places focus upon the supervisory conference itself and the therapeutic conditions within it, he has noted that compatibility of personalities functions as one input variable which may be related to the outcomes of the conference, one of which is success in student teaching (p.107-108). The generalized model was employed for this study not only because it establishes a relation with the teaching function of supervision in teacher education programmes but also because it is sufficiently all-embracing to accommodate the valuable work already completed in the field of supervision.

The observation-based generalized model of supervision, which requires that the dyadic relationship be adequately established, objectives for the supervision be set, the classroom observation occur, and performance be assessed, may not be a useful guide for the actual practice of the faculty supervisor. Given the restrictions of time and numbers of student teachers, the supervisor may not be able to fulfill the requirements implied by the model and a rather different role may be more appropriate.

In this study the mean scores for perceived dyadic interpersonal relations success and for perceived personal learning success within the supervisory process were 5.76 and 5.45 respectively. Thus student teachers appear to have rated interpersonal relations as generally "quite successful" while personal learning tended toward "slightly successful". Student teachers found that as a consequence of the interaction with the faculty supervisor their personal learning was slightly better than neutral with respect to success. In view of the financial costs and time required in sending supervisors into the field, the latter finding is rather distressing. Notwithstanding the professional expertise supposedly embodied in the supervisor and the advantageous position he holds for beneficially affecting the professional skill of the student teacher, the faculty supervisor was not perceived as enhancing learning to any great extent. The two findings raise a number of questions. Assuming that the supervisor has about twelve or fifteen student teachers, can he realistically expect to establish sound interpersonal relationships which may ultimately be growth-producing with each? Is a visitation once weekly, or less, sufficient to establish such a relationship? Do supervisors have the available time to visit more frequently and, if they

did, would the effects in terms of student teacher learning be different? Does the faculty supervisor who has a number of student teachers centralized in one school actually spend more time with them and have a greater impact than the supervisor whose students are scattered through a larger number of schools? Does the supervisor perceive himself as a friend? a counselor? a teacher? a critic? How is the supervisor's role perceived by the student teacher? What role do student teachers believe a faculty supervisor might best fulfill?

Although the terms have largely passed from the vocabulary of most student teacher programmes, student teacher perceptions associated with "critic lesson" and "critic teacher" may linger. Those perceptions are likely to persist as long as the faculty supervisor, burdened with many student teachers in scattered locales, feels compelled to observe the student teacher's instruction and schedule days and times for doing so. The perceptions may change, however, as the faculty supervisor conceives a new role for himself and behaves in accordance with that conception.

Some emphasis was given in the generalized model of supervision to the need for establishing a sound interpersonal relationship in order to maximize the probability of productive professional growth. More is involved. If there is a need to establish the relationship there is also some need to maintain and develop it. That demands the supervisor's presence for the maintenance requirement is on-going and is fulfilled during the time span between the observation-oriented cycles of supervision. If the productivity of the faculty supervisor-student teacher relationship is limited, it may be that the interpersonal relationship has not been well established and maintained, that the supervisor's knowledge is

wanting, that his skill to observe and collect observable classroom data is not developed, or that he is unable to communicate findings meaningfully or to probe the student teacher into self-analysis. The conceptualization of this study, however, suggests that the supervisor's personal limitations in instructional knowledge and supervisory skill may not be of consequence if the pre-requisite sound interpersonal relationship has not been established.

If the teaching-learning process of supervisor-student teacher interaction is only marginally productive with respect to student teacher learning, as this study has suggested, perhaps the existing constraints upon the supervisor compel that inevitable result. The faculty supervisor may better fulfill a role as practicum advisor. Largely ignoring the actual observation of student teacher instruction, the role demands a twofold concern.

First, the practicum advisor mediates between the teacher education institution and the school. Assuming he has an adequate conception of the supervisory role, he will aid school staff in developing supervisory skill. He may assist in identifying priorities for student teacher development, in formulating a plan to achieve the priorities, and in outlining the means of observing progress. In effect the practicum advisor, by helping the school and its staff develop a sound conception of its role vis-a-vis the student teacher, works through others in order to facilitate student teacher learning. The advisor's position thus parallels the role of the practising supervisor who works through teachers to enhance the school goal of student learning (e.g., Sergiovanni and Starratt, 1971, p.10).

The practicum advisor's other concern must be with the student teacher's perception of himself within the role of professional teacher. The student teacher is in the vulnerable position of exposing himself to a new role, its accompanying expectations, and the scrutiny of others. The demands of that role may necessitate a reformulated concept of self. The plethora of thoughtful concerns held by the student teacher about himself within that professional role and his professional association with children, staff, and community may engender considerable internal conflict. The practicum advisor should focus initially upon establishing a sound interpersonal interaction founded upon trust with the student teacher. As advisor, counselor, or therapist, he might then aid the student teacher in investigating his personal and professional role, in identifying areas of difficulties, and in developing possible solutions to these. Such an advisory role may not exclude classroom observation; but it does not emphasize it. Emphasis is given to helping the student teacher develop an adequate conception of self as teacher and ways of solving problems within that role. In this regard Dussault's theory of supervision (1970) and the emphasis given to teacher preparation by Combs (1965) may be most suitable for the role of the faculty supervisor.

The faculty supervisor, then, may not be able to function well within the requirements suggested by the generalized model of supervision. Within the supervisory role his effectiveness as a teacher concerned with instructional skills may be particularly questionable. The ongoing supervision of the student teacher's instructional

performance may be more capably fulfilled by the school. But this does not preclude the necessity of the faculty supervisor possessing considerable knowledge about the dimensions of and skills required in supervision. As advisor he must function within many of the same constraints previously existing. Now, however, in helping the school staff develop supervisory skill and the student teacher develop a professional view of self, the advisor may have more substantial long-term impact.

V. IMPLICATIONS

For Teacher Education

Widespread attempts to assign student teachers either to faculty supervisors or cooperating teachers based on knowledge of the dimensions of their personalities appears empirically unwarranted. Although the beginning of possible trends may be noted, the evidence of this and previous studies is inconclusive as to the dimensions of personality along which matching should occur. One dimension of Cattell's 16PF instrument, Factor E, does suggest that submissiveness-dominance may have a bearing on the dyadic interpersonal relationship. But to attempt to achieve match along one dimension of personality while a host of uncontrolled and unknown but equally important variables remain operative would ultimately be wasteful of both time and energy. While the random assignment of student teachers appears exquisitely inelegant, research has yet to uncover any substantial and rational alternatives to this and other present practices.

This study revealed a fairly strong association between success in the dyadic interpersonal relationship and student teacher learning

success. The existence of such an association was suggested by authorities. Such success may also be related to the student teacher's self-concept and ultimate performance as a teacher (e.g., Foster, 1969; Passmore, 1970; Laubacher, 1969). Teacher education institutions may be advised to implement a programme for faculty supervisors and, where feasible, cooperating teachers to increase their familiarity with those skills of communication which will aid in forming a dyadic trust and growth relationship.

For Research

This study has been identified as exploratory. To give it direction, and based upon some non-research opinion, three rather general hypotheses were employed. As an exploratory study there exists an obligation to provide some groundwork for more systematic and rigorous hypothesis-testing. The following explores a number of general implications and specific questions arising out of the findings of this study.

1. The nature of the relationship between interpersonal relationship success and learning success requires further examination. Research may be designed to examine the dimensionality of interpersonal relations through a standard instrument relative to possible dimensions of learning such as planning, organization and structuring, motivation, evaluation, and class control. The determination of the dimensionality of learning itself within the supervisory process would be of some conceivable practical and research interest.

2. In research of a similar kind it may be of value to predetermine the student teacher's expectations of dyadic interpersonal

relations and learning success as well as his perceptions of success subsequent to the student teaching experience. Dyadic personality similarity may then be related to the differential between expected and perceived success.

3. Certain specific questions may provide direction to research focusing upon personality and student teacher success:

- Why should the student teacher who is increasingly more outgoing than the more personally reserved supervisor perceive lower interpersonal relations success as the difference between them increases?

- Why should the emotionally less stable, changeable student teacher perceive lower interpersonal relations success than one who is increasingly more similar to the supervisor in terms of emotional maturity and stability?

- Why does the student teacher who is increasingly more sober, serious, and reflective than the more enthusiastic, cheerful, and happy-go-lucky supervisor perceive both higher interpersonal relations success and personal learning success as the difference on the dimension increases?

- Is it important that the student teacher and faculty supervisor be similar in terms of conscientiousness and persistence in order for the student teacher to perceive high interpersonal relations success?

- Why should high interpersonal relations success be perceived as the student teacher is increasingly more tender-minded, sensitive, and insecure than the more tough-minded, self-reliant supervisor?

- Why does the student teacher who is increasingly more shrewd and astute than the more forthright, unpretentious supervisor perceive both higher interpersonal relations success and personal learning success as the dyadic difference on the dimension increases?

- Why should high personal learning success be perceived as the student teacher is increasingly more conservative than a more liberal, experimenting supervisor?

4. In view of the significance of Factor E, submissive-dominant, in this and other studies, the factor appears to warrant special attention in subsequent studies.

5. Researchers undertaking to examine the personality differences of dyad members may find it useful to retain knowledge not only of one individual's position relative to another's but also of the individual's actual scale position. This may be accomplished by appropriate groupings of data. A preliminary examination of the data may also suggest the desirability of grouping dyadic differences into three or five groups. A similarity group may, for example, incorporate all score differences of 0 through ± 2 .

6. As a personality concept the prospective teacher's self-concept may be examined before and after the student teaching experience and related to established dimensions of dyadic interpersonal relations success and learning success. As well, perceived interpersonal relations success and learning success may be examined relative to the compatibility of interpersonal needs of supervisor and student teacher.

7. The experience of the present study combined with the findings of earlier studies casts uncertainty upon the value of exploring the feasibility of personality matching along dimensions of personality. Assuming the importance of matching individuals for assignment, other potential dimensions may be more productively pursued.

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APPENDIX A

THE SEMANTIC DIFFERENTIAL
INSTRUMENT

REACTIONS TO STUDENT TEACHINGGeneral Instructions

The purpose of the following instrument is to assess the meanings which different persons attach to an idea or concept. This is done by having the persons judge the concept against a series of descriptive adjectives. In completing the following instrument, please make your judgements on the basis of what the concept means to you. At the top of each page you will find a concept to be judged. Beneath the concept you will find a set of scales consisting of paired adjectives. You are to rate the concept on each of the paired adjective scales in the order in which the scales appear.

Example

- a) Assume that the concept at the top of the page is ROAST BEEF. If you feel that the concept is very closely related to one end of the scale, Place an "x" as follows:

Pleasant X: : : : : Unpleasant

or

Pleasant : : : : :X Unpleasant

- b) If you feel that the concept is quite closely related to one of the ends of the scale, but not extremely, place an "x" as follows:

Important : X: : : : Unimportant

or

Important : : : : :X : Unimportant

- c) If you feel that the concept is only slightly related to one of the ends of the scale, but is not really neutral, then mark as follows:

Difficult : : X: : : : Easy

or

Difficult : : : : X: : Easy

The direction in which you mark depends upon which of the paired adjectives best describes your reaction to the concept to be judged.

- d) If you feel that the concept is neutral on a given scale of paired adjectives, place an "x" in the middle space. Similarly, if you feel the adjectives are unrelated or irrelevant to the concept or the concept is equally related to both adjectives, place an "x" in the middle space.

Simple : : :X : : : Complex

Important

- 1) Please be certain that you place the "x" mark in the middle of a space. Do not mark on a colon.
 Do this: :X : : : : :
 Do not do this: : : : : X :
- 2) Please place only one "x" on each scale. But, please do not omit any scales. Every reaction on every scale is important.
- 3) Do not worry or puzzle over individual scales. You may occasionally feel that you have had the same item before on the instrument; that will not be the case. Please treat every item separately and independently from all other items. Do not, therefore, look back and forth through the instrument. Work quickly but very carefully. We are interested in your immediate reaction or impression to the paired adjectives as they relate to the concept which is indicated at the top of the page.

APPENDIX B

ROTATED FACTOR MATRICES OF
TWENTY BIPOLAR SCALES

TABLE B.1

ROTATED FACTOR MATRIX OF TWENTY ADJECTIVE VARIABLES
ON "YOUR INTERPERSONAL RELATIONSHIP WITH
YOUR FACULTY SUPERVISOR"*

Variable No.	Variable Name	Factor I	Factor II	Factor III
1	Impractical	836	001	125
2	Inconsiderate	753	094	-022
3	Unsuccessful	910	039	057
4	Weary	791	091	177
5	Disapproving	794	352	-019
6	Excitable	243	-020	-624
7	Weak	853	-006	089
8	Subjective	150	143	648
9	Meaningless	800	129	092
10	Authoritarian	314	789	126
11	Slow	385	-382	518
12	Unfair	819	242	-030
13	Soft	-205	-842	-015
14	Unpleasant	827	284	016
15	Bad	860	246	-001
16	Pessimistic	741	188	-021
17	Competitive	728	286	-082
18	Unfriendly	793	302	-012
19	Hindering	895	074	-005
20	Inconsistent	739	179	071
Per cent variability accounted for by factors:		54.289	7.451	5.495
Per cent variability accounted for by all factors:		67.235		

*Decimal points have been omitted.

TABLE B.2

ROTATED FACTOR MATRIX OF TWENTY ADJECTIVE VARIABLES
ON "YOUR FACULTY SUPERVISOR'S CONTRIBUTION TO
YOUR KNOWLEDGE ABOUT TEACHING"*

Variable No.	Variable Name	Factor I	Factor II	Factor III
1	Impractical	842	135	-068
2	Inconsiderate	720	442	-025
3	Unsuccessful	832	330	-015
4	Weary	707	440	-134
5	Disapproving	554	597	-002
6	Excitable	090	162	125
7	Weak	774	327	-087
8	Subjective	415	-008	-209
9	Meaningless	871	299	079
10	Authoritarian	-051	768	-144
11	Slow	148	210	-784
12	Unfair	457	715	-090
13	Soft	062	-061	-822
14	Unpleasant	363	789	060
15	Bad	649	526	-154
16	Pessimistic	422	646	-231
17	Competitive	335	680	090
18	Unfriendly	315	814	-077
19	Hindering	855	285	054
20	Inconsistent	758	342	062
	Per cent variability accounted for by factors:	50.333	8.178	7.351
	Per cent variability accounted for by all factors:	65.861		

*Decimals have been omitted.