DOCUMENT RESUME

ED 264 189                                    SP 026 719

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TITLE         A Proposal to Study the Effects of Supervisory
              Intervention on the Classroom Teaching Performance of
              Supervisees.
PUB DATE      3 Apr 85
NOTE          18p.; Paper presented at the Annual Meeting of the
              American Educational Research Association (69th,
              Chicago, IL, March 31-April 4, 1985). Prepared at the
              Centre for the Study of Teacher Education, University
              of British Columbia.
PUB TYPE      Speeches/Conference Papers (150) -- Reports -
              Research/Technical (143) -- Information Analyses
              (070)

EDRS PRICE    MF01/PC01 Plus Postage.
DESCRIPTORS   Research Utilization; *Staff Development; Supervisor
              Qualifications; *Supervisory Methods; Teacher
              Improvement; *Teacher Supervision

ABSTRACT
        The proposed study will examine whether effective
clinical supervision requires supervisors who practice certain
strategies and procedures as they dialogue with supervisees in the
conference, or whether the mere acquisition by supervisors and/or
supervisees of research-verified knowledge about teaching and
learning, e.g., the role of academic feedback in pupil learning, is
sufficient to improve the classroom teaching of the supervisee. This
"process" vis-a-vis "content" investigation will be examined in the
light of the supervisor conceptual level. "Process" strategies and
procedures have been identified only in high conceptual level
supervisors. This study may demonstrate that these strategies are
associated with a positive effect on supervisee teaching. Where
practicing supervisors are not using these strategies, they could be
taught as a compensatory model for improving effects of supervisory
intervention. It is suggested that "content" about teaching and
learning in itself is associated with positive effects on supervisee
classroom teaching. It is tentatively concluded that supervisors
and/or supervisees merely need to be exposed to such knowledge. Where
only supervisees are exposed to the "content" amd the effects on
their classroom teaching are found to be positive, the viability of
supervisory intervention is questionable, and different
organizational means to bring about improved classroom teaching
should be sought. (Author/JD)

A PROPOSAL TO

STUDY THE EFFECTS OF SUPERVISORY

INTERVENTION ON THE CLASSROOM TEACHING PERFORMANCE

OF SUPERVISEES

by

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Paper presented to the 1985 American Educational Research
Association Special Interest Group for Instructional Super-
vision Symposium on "Needed Research in Supervision"
April 3, 1985                 -                 Chicago, Illinois.

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# ABSTRACT

Why supervise teachers? Why supervise along clinical lines? Why not cooperative staff development practices with no superordinate intervention? These questions haunt the serious-minded person who wishes to see the ever-dwindling resources in education allocated to those pursuits that make a difference in the education of teachers and the consequent learning of pupils.

The proposed project seeks to test the effects of supervisory intervention on supervisee classroom teaching. Specifically, it sets out to examine whether effective clinical supervision requires supervisors who practice certain strategies and procedures as they dialogue with supervisees in the conference, or whether the mere acquisition by supervisors and/or supervisees of research-verified knowledge about teaching and learning, e.g., the role of academic feedback in pupil learning, is sufficient to bring about an improvement in the classroom teaching of supervisees.

This "process" vis-a-vis "content" investigation will be examined in light of the supervisor conceptual level. A previous study identified the "process" strategies and procedures only in high conceptual level supervisors. This study could well demonstrate that these strategies are associated with a positive effect on supervisee teaching. Where practicing supervisors are not using these strategies (for example, the low conceptual level supervisors in the previous study), they could then be taught to such supervisors as a compensatory model for improving the effects of supervisory intervention.

The study could also find that the "process" strategies are not that consequential in their effects. Rather, it could be that "content" about teaching and learning in itself is associated with positive effects on supervisee classroom teaching. In this case, it could be concluded that supervisors and/or supervisees merely need to be exposed to such knowledge. Where only supervisees are exposed to the "content" and the effects on their classroom teaching are found to be positive, then one is forced to question the viability of supervisory intervention and seek different organizational means to bring about improved classroom teaching.

# STATEMENT OF RESEARCH OBJECTIVES

This proposed project builds on a preliminary study which found certain questioning strategies and exploration procedures (i.e., "process" skills) were utilized by supervisors whose supervisees showed some evidence of developmental growth as a result of the intervention. Since these effective supervisors also evidenced high conceptual functioning, it was tentatively concluded that the clinical approach to instructional supervision requires supervisors capable of understanding the complexities of supervisory intervention, i.e., those functioning at a high conceptual level. What the previous study did not take into account was the role played by the "content" of conference discussions in the professional development of supervisees. Accordingly, this study seeks to test the effects of supervisor "process" skills vis-a-vis "content" about teaching and learning on the observable classroom performances of supervisees.

Specific objectives for the study are:
1. to investigate the relationship between supervisor questioning strategies/exploration procedures and effective intervention (as indicated by an improvement in supervisee classroom teaching).

2. to examine the relationship between effective intervention and the existence of a knowledge and language about teaching-learning situations (re: the role of academic feedback in pupil learning) that is common to both supervisor and supervisee.

3. to establish whether supervisor knowledge about teaching and learning is, in itself, sufficient to bring about an improvement in supervisee classroom teaching.

4. to test whether supervisors of high conceptual level naturally display during clinical supervision conferences the "process" skills discovered in the previous study.

5. to examine the "process" vis-a-vis "content" effects on supervisee classroom teaching in light of the conceptual level of both the supervisor and the supervisee.

6. to ascertain whether the "process" skills (previously found in high conceptual level supervisors to contribute to effective intervention) can be taught to supervisors of low conceptual level for the purpose of acting as a compensatory factor in terms of the effect of the intervention on supervisee classroom teaching.

## REVIEW OF RELEVANT LITERATURE

Clinical supervision was first conceived as a method for facilitating an open supportive supervisor-teacher relationship. Based on the principle of collaboration and the view that "the analysis of teaching can be rigorous and systematic . . . and that the professional teacher should be a careful critic of his own practice" (Mosher & Purpel, 1972, p. 79), the clinical approach proposes a conceptual framework for instructional supervision (see Goldhammer et al. 1980, Chapters 1 and 3). A major component of this framework is the clinical cycle – a five step process proposed by Goldhammer (1969) consisting of pre-observation conference, observation of teaching, analysis and strategy, post-observation conference, and "post-mortem" analysis of supervisory performance.

Research on Clinical Supervision

Much has been written about clinical supervision yet little research has been carried out into the practical operation of the cycle. Such research as has been conducted falls into three categories: studies based on participants' perceptions, exploratory studies, and studies designed to test the effectiveness of the clinical approach.

## Studies Based on Participants' Perceptions

Most surveys of participants' perceptions conducted have attempted to determine the extent to which the basic assumptions and procedures of clinical supervision are acceptable. Research studies (Eaker, 1972; Myers, 1975; Lovell et al., 1976; Arbucci, 1978; and Witt, 1977) conducted along these lines generally found that, although the assumptions and procedures of clinical supervision are acceptable to most teachers and administrators, they are acceptable at the level of logic rather than in actural practice. Despite a rigorous design, these studies contribute little to knowledge of what takes place during the clinical supervision process.

## Exploratory Studies

Nine studies set out to explore the process of clinical supervision. Mershon (1972) explored the concept of analysis as it is used in the clinical process and came up with fourteen analytical sub-skills. Mattalino (1977) explored the key competencies required for effective practice in clinical supervision, concluding that the lack of definitive competencies and the paucity of empirical research combine to make clinical supervision less accepted than it could be.

In a more recent study, Boulet's (1981) four case studies of principals and teachers found that clinical supervision might be accepted by school principals as a valid and valued alternative in supervision. He found that teachers expressed a high degree of satisfaction with changes in supervisory practices by principals; principals favoured a priority shift in order to give more time to supervision; principals and teachers expressed a high degree of satisfaction with the value of clinical supervision.

Five studies examined the supervisor-teacher relationship in the setting of the clinical conference. Pierce (1978) studied the relationships between pedagogical moves and aspects of their managerial abilities and found a significant relationship between two moves (structuring and reacting) and supervisor decisiveness. Cook (1976) examined the question of whether supervisors evidenced changes in perception and behaviour while undergoing training in clinical supervision. Developmental changes such as "other-centredness" were demonstrated by supervisors in their relationship with the teacher as they accepted the complex supervisory role.

Zonca (1972) explored the effects of openness in a clinical supervision relationship on one student teacher. Openness was found to have positive effects on the supervisee's attitude towards supervision and her ability to analyze classroom teaching, but not on her ability to analyze changes made in her classroom performance. Since openness was defined in terms of disclosure, directness, and honesty, it could be that directive communications take away the autonomy supervisees need to appraise their own behaviour changes. Squires (1978) concluded that the "colleagueship" relationship begins to develop when the supervisee becomes more autonomous. Openness might, then, be more appropriately defined in terms of communication patterns that elicit from the supervisee a considered analysis of behaviour rather than in terms of honest directness.

T.G.Kerr's (1976) study would appear to support this. He set out to determine whether teachers with high and low dogmatism scores could, as a result of exposure in

clinical supervision to Flanders' (1970) Interaction Analysis System, move from
direct to indirect teaching behaviours. Kerr found that all teachers, regardless
of dogmatism score, could adopt to more indirect patterns but that the more open-
minded teachers displayed a greater willingness to enter into two-way communication
with supervisors.

It would appear from the exploratory studies mentioned that openness in the
supervisor-teacher relationship is a key variable in contributing to effective
intervention; but it is openness that is defined in terms of communication patterns
that increase the autonomy and openmindedness of the supervisee. Supervisors who
accept the complex role of structuring such openness in the conference appear to
influence positively the relationship and the supervisee's attitudes towards clinical
supervision, whilst facilitating collaborative dialogue and enhancing their own
self-concept.

How do supervisors structure such "openness"? More significantly, since
T.G.Kerr (1976) found that open-mindedness in supervisees leads to willingness to
enter into dialogue, how do supervisors structure the conference to promote open-
mindedness in supervisees who may be more inclined towards dogmatism. Indeed, could
a pre-requisite for conference openness involve an open-minded attitude on the part
of the supervisor as well as the supervisee?

Grimmett (1982) set out to address these questions in his exploration of the
clinical supervision conferencing process. He investigated how clinical supervision
participants conceptually construct the reality of the clinical approach in practice.
The study attempted to understand how supervisors actually "read" and "flex" in the
naturalistic setting of the clinical conference and how supervisees exert "pull" on
supervisors as they enter into the collaborative nature of a "colleagueship" relation-
ship. In short, it attempted to derive how supervision participants cognitively
mediate their behaviour as they dialogue about the teaching-learning situation under
observation and as they relate to each other as professional colleagues.

Grimmett (1984), and Grimmett & Housego (1983) report that supervisee growth
occurred only in those dyads where the supervisors were constructively open in
their verbal communication and conceptually complex in their thought processes.
These supervisors also used certain adaptation procedures that facilitated the
development observed in their respective supervisees.

Tests of the Effectiveness of Clinical Supervision

Eight studies attempted to examine the procedures and activities of the
clinical approach with a view to testing its effectiveness in instructional super-
vision. Coffey (1967) built clinical supervision into an in-service programme and
tested its efficacy in terms of measurable changes in the teachers' verbal classroom
behaviour. Although some changes in teacher behaviour were found, the study
examined a "one-shot" in service programme rather than supervisory influence on
teacher behaviour during on-going cycles. Garman (1971) successfully demonstrated
that college level English teachers receiving clinical supervision and methods
courses were able to implement the desired behaviours whereas those teachers
receiving only mehtods courses were not. Although her study set out to test the
clinical approach, it represents more a demonstration of the usefulness of some
supervision as opposed to none.

Skrak (1973) attempted to test whether the supplemental use of immediate secondary
reinforcement during classroom observations effected a greater change in teacher
behaviour than the normal clinical supervision practices. His finding was that
clinical supervision used without reinforcers appears to be just as effective in

bringing about teaching behaviour change. Shuma (1973) compared the clinical app-
roach with more conventional supervision and found evidence in students' perception
of changes in teacher behaviour within the group supervised along clinical lines.
However, since the students were aware that their teachers were receiving special
supervision and since any differences were based solely on the researcher's own
perceptions, the Hawthorne effect cannot be discounted.

B.J. Kerr's (1976) study demonstrated that supervisory feedback within the
clinical process was vital in helping teachers select teaching behaviours and
strategies for individualized instruction. Turner (1976) set out to test the study,
the credibility of her attempt to validate the clinical model suffers from method-
ological inadequacies.

Krajewski (1976) studied two groups of twenty teachers, both receiving
supervision but the experimental group being also exposed to videotapes of their
lessons and training in interaction analysis. Significant changes in the experimental
group's behaviour were found, which Krajewski attributes to clinical supervision.
The research design is such, however, that the findings could just as easily be
attributed to training in the Flanders' system.

Reavis (1977) studied possible differences in verb.1 exchanges between super-
visors and teachers contrasting clinical and traditional supervision. Significant
differences were found in favour of the clinical approach. Because of the research
design, however, the study was not comparing varied supervisors exhibiting two
different approaches to supervision, but rather two alternative patterns exhibited
by the same supervisors. This research may not, then, be a test of different app-
roaches to supervision but a test of whether the supervisors in the sample could
adopt different patterns of behaviour when asked to do so by the researcher.

## Summary

The preceding sections have discussed the available research on clinical
supervision. Studies based on participants' perceptions were found to contribute
little to knowledge of what takes place during the process. Exploratory studies
appear to have contributed to empirical knowledge of the analytical competencies
required and to an understanding of the supervisory relationship, particularly in
the conferencing process. However, studies designed to test the effectiveness of
clinical supervision were either subject to methodological weaknesses or to the
possibility of the Hawthorne effect. Further, none of these studies has attempted
to test the effects of those skills, competencies, and procedures that exploratory
research has discovered. It would seem appropriate, then, that research on clinical
supervision begin to examine the effects of certain research-verified "process"
strategies on the single focus of the clinical cycle, i.e., the observed classroom
teaching of supervisees. To do so would require a framework which describes how
supervisees as adults learn about teaching.

## A Framework for Teacher (Conceptual) Development

The rationale for development as the aim of education, whether of classroom
pupils or teachers, has been advocated by Dewey (1938), Piaget (1970), and Kohlberg
(1971). At high stages of development an individual tends to function more
abstractly, complexly, comprehensively, and caringly. Higher stages of development
are viewed as desirable since theoretically they encompass more perspectives and
allow for more empathic role-taking and effective problem-solving.

## Stage Characteristics

Rest (1974) has identified the theoretical constructs that developmentalists

associate with each stage of a person's growth.  <u>Structural organization</u> describes
the internalized conceptual framework which is regarded as the mediating structure
which determines how a person translates external reality.  <u>Developmental sequence</u>
relates to the various stages through which a person passes.  Each stage is
qualitatively different from the preceding one, each sequential mode of thought forms
a structural whole, and higher stages reintegrate structures found at lower stages.
The goal of development then is towards higher stage conceptual functioning which
represents more complex and integrated ways of processing information.  <u>Interact-
ionalism</u> describes the process whereby a person's existing cognitive structure is
expanded through interaction with the environment.  The role of the environment is
crucial in creating the mental disequilibrium required to force individuals to alter
their cognitive structure so as to allow for greater complexity of thought.

## Conceptual Development

The process of conceptual development is a saccadic one of differentiation
and integration, of breaking down and interrelating (Harvey et al., 1961. p. 18).
During this process, variations occur along the dimension of concreteness-abstractness.
The more concrete end represents the conceptual use of "static structures with fixed
rules" while the more abstract end employs "emergent rule structures" (Schroder et
al., 1967, p. 6).  Greater concreteness, Goldstein & Scheerer (1941, pp. 87-93)
suggest, has as its "outstanding" characteristic the closeness of responses to
"immediate reality" whereas high abstractness of thought evidences more inter-
relationships among conceptual rules, thereby providing the schemata for forming
new hierarchies of integrations.

## Conceptual Level and Supervision Conditions

Four stages of conceptual development (Harvey et al., 1961) were found by
Schroder and Harvey (1963) to foster different kinds of supervision conditions.
At the concrete end of the continuum is unilateral dependence of thought (Level I),
where a person exhibits undifferentiated, poorly integrated thought patterns that
depend largely upon externally prescribed criteria and result in categorical
judgments of causality.  This level associates with reliable unilateral supervision
conditions; teacher behaviour within the supervisor imposed range of acceptance is
consistently rewarded, and behaviour outside that range is consistently punished.

Unilateral supervision conditions are also cultivated by supervisors funct-
ioning conceptually at Level II (negative dependence), where their thought patterns
are, similar to Level I, poorly differentiated, yet dissimilar in the sense that
they display strong avoidant tendencies towards externally prescribed criteria and
consequently evidence high levels of avidity and negativism.  Supervision conditions
imposed by Level II supervisors are generally unreliable.  Inconsistent patterns of
reward and punishment are sometimes accompanied by excessively high performance
expectations.  Under these conditions teachers often perceive themselves in a
situation of consistent failure.

At the more abstract end of the continuum, two further levels of conceptual
functioning were identified by Harvey et al., (1961).  Level III (conditional
dependence of thought) differs from Levels I and II in that this level of conceptual
functioning is more highly differentiated and integrated and persons functioning at
this level see themselves more as causal agents in the attainment of rewards and
the avoidance of punishment.  At the same time they perceive themselves in a mutual
dependency relationship with sought-out others whose input can help their defining
and solving a problem situation.  Consequently, their thought patterns are conditional
upon the influence of other finite people rather than on rules, etc., as is the case
with persons functioning at Levels I and II.  Interdependent supervision conditions,
where rewards are directed primarily towards exploratory acts and based on situation-
ally determined criteria, associate with the higher levels of conceptual functioning.

Level III conceptual functioning is generally characterized by protective inter-
dependent conditions, wherein supervisors use supportive feedback both as a reward
and as a means of channeling teacher experimental behaviour in certain directions.

Supervisors functioning at Level IV (interdependence of thought) foster
informational interdependent conditions, where they manipulate the task environment
so that teachers' experimentation leads to a meaningful development of skills
through exposure to the consequences of their own actions. Conceptual functioning
at this level is characterized by an information orientation where a person exhibits
both autonomous and interdependent thought patterns and mastery of the problem rather
than of rules or of people is the goal; and the approach to problems is varied and
adaptive.

### Studies of Teacher (Conceptual) Development in Clinical Supervision

Despite the potential link between supervisor-teacher interaction and con-
ceptual levels of supervision participants, only three studies have attempted to
explore this relationship. Abbey and Weiser (1977) report a study where they examined
the relationship between the conceptual level of supervisors, as measured by Kolb's
(1975) Learning Style Inventory, and the strategies they utilized in a psycho-
therapeutic counselling clinical supervision intervention. They found that super-
visors were consistent in their preference for students exhibiting different learning
styles and that they tended to prefer students who were like themselves in terms of
learning style. They conclude, however, that:

> Our attempts to code supervisory behaviour appear to be useful if not
> rustic.. Further work to show how supervisors' learning styles affect their
> choice of intervention strategy is needed. It is clear from the present
> study that their responses (intervention) are related to their own learning
> styles but just how remains the subject of another study (Abbey and Weiser,
> 1977, p. 23).

Thies-Sprinthall (1980) reports a study which distinguishes elements differ-
entiating educative from mis-educative supervision. She grouped student teachers
and supervisors according to their conceptual level (Hunt, 1977) and their moral
principled thought (Rest, 1974). Four groups were used in all: group one consisted
of high Conceptual Level/Principled Thought (CL/PT) supervisors and high CL/PT
student teachers; group two consisted of high CL/PT supervisors matched with low
CL/PT student teachers; group three was made up of low CL/PT supervisors and high
CL/PT student teachers, a deliberate mismatch; and group four comprised low CL/PT
supervisors matched with low CL/PT student teachers. The results demonstrated that
high CL/PT student teachers were more flexible, more responsive and more indirect
(according to a ratio derived from Flanders' (1970) Interaction Analysis System)
than their low CL/PT colleagues. The unique finding in the Thies/Sprinthall study,
however, was that, although groups one and three had high CL/PT student teachers
whose teaching performance had been objectively rated by trained observers at a
similar Flanders' indirect ratio of forty-five, the subjective rating given by the
supervisors differed markedly from one group to the other. Supervisors in group
one rated the student teachers highly whereas supervisors in group three (low CL/PT)
rated the student teachers as mediocre in their instructional performance. Thies-
Sprinthall concludes that "supervisors who themselves are at the modest levels of
psychological development may misperceive or misunderstand the teaching performance
of more developmentally advanced student teachers" (1980, p. 19). Her study suggests
then that the evidence that teachers at higher conceptual levels can "radiate" more
abundant educational environments, can accurately "read" individual differences in
students, are more susceptible to student "pull", and employ a greater repertoire
of teaching models, may also be true for supervisors and student teachers.

Grimmett's (1982) study produced similar findings to Thies-Sprinthall but went

further to unpack the questioning strategies and exploration procedures that the abstract supervisors used to facilitate supervisee development. These are described in Grimmett (1984, 1985). Briefly, four facilitating strategies (open-ended, apprising, focusing, and task-orienting) were found to characterize the questioning patterns of the conceptual complex supervisors. These abstract functioning supervisors also made use of the following exploration procedures: holding questions in abeyance; retrieving questions to be probed; probing for teacher clarification, analysis, and insight; supervidor "press" towards teacher autonomy; and withholding expertise but not support. (These strategies and procedures are described in detail in Appendix A). The proposed study seeks to test the effects of these strategies and procedures on the classroom teaching of the supervisee. It also seeks to test the effects of "content" about teaching and learning (in the case of this study, the focus is on the role of teacher academic feedback in pupil learning - described in detail in Appendix B) on supervisee classroom teaching. In the final analysis, the study proposes to compare the "process" and "content" effects in light of the conceptual functioning level of the respective supervisors and supervisees.

## RESEARCH QUESTIONS

1. To what extent are supervisory "process" strategies critical to effective intervention?

   1.1 Do teachers supervised by supervisors who have acquired the "process" strategies and procedures unpacked in the preliminary study (Grimmett, 1982) increase the frequency and quality of the academic feedback they give to learners?

   1.2 What is the relationship between the gain scores of supervisees in the experimental group and the conceptual level of their respective supervisors?

2. To what extent is the existence of a common language ("content") about teaching and learning critical to effective intervention?

   2.1 Do teachers who are exposed to the same research-derived knowledge about the role of academic feedback in pupil learning as their supervisors increase the frequency and quality of the academic feedback they give?

   2.2 When both supervisors and supervisees have access to a similar knowledge base, what is the relationship between the academic feedback performance of supervisees and the conceptual level of their respective supervisors?

3. To what extent is supervisor acquisition of "content" about teaching and learning per se critical to effective intervention?

   3.1 Do teachers supervised by supervisors who possess research-verified knowledge about academic feedback increase the frequency and quality of the academic feedback they give to learners?

   3.2 Where only supervisors have access to a technical knowledge base, what is the relationship between the academic feedback performance of supervisees and the conceptual level of their respective supervisors?

4. To what extent is high conceptual functioning in supervisors critical to effective intervention?

   4.1 Do teachers supervised by high conceptual level supervisors increase the frequency and quality of the academic feedback they give to learners?

   4.2 Do supervisors capable of functioning conceptually at a highly complex

level naturally evidence the "process" strategies discovered by Grimmett (1982)?

## SIGNIFICANCE OF PROPOSED STUDY

What do we know about clinical supervision? More importantly what do we know about its effects on classroom teaching? Why is there, as Blumberg (1974) and Mosher & Purpel (1972) suggest, a gap between the theoretical knowledge of helping relationships and the practice of supervision, leading them to question its ultimate productivity.

It would appear that, in many cases, supervisory practice is deemed less than satisfactory. Teachers criticize supervisors for being out of touch with the class-room, for communicating procedural trivia, and for engaging in a democratic game which makes the whole process artificial (Blumberg, 1974, pp. 16-18). Principals in ten British Columbia school districts reported supervision-related topics as top priorities for learning in a study that analyzed their professional development needs (Storey, 1978, pp. 92-93). And educators in administrator preparation programmes would like to provide principals and supervisors with research-verified knowledge and skills that would stand the test of practice (Hills., 1975, p. 1). Yet substantive knowledge about instructional supervision appears to be scarce. Most of the questions likely to be asked by teachers, supervisors, and university-level educators have yet to be studied, and much of the current research into clinical supervision does not provide adequate insights or conclusive principles. Much of what has been written in the area of instructional supervision rests, as Pohland points out (1976, p. 9), not on research findings but on personal conviction and experience.

There is indeed a sparceness of empirical knowledge about clinical supervision. But this study goes beyond the obvious need to expand an inadequate empirical knowledge base. The clinical approach can be seen as a special case of the more general practice of instructional supervision. In essence, then, the study proposes to examine the usefulness of supervision per se. It will contribute theoretically to an understanding of the role played by supervision and its effects on teacher classroom performance; where the professional raison d'être of instructional super-vision is clearly established, it will contribute in a practical sense to an under-standing of how supervisory intervention can be made effective. Finally, it will contribute much needed knowledge to the debate about whether teachers, as semi-professionals, should be supervised at all, particularly by members of the bureaucratic hierarchy.

Currently, clinical supervision is much in vogue. Indeed, in many school districts it has been mandated. Writers applaud its merits but the evidence is still lacking. For an approach that is so costly in terms of time and energy, the school workplace appears to be a context that does not allow for such a luxury. When there is a growing accumulation of evidence that school-based instructional improvement is best accomplished through organizational changes that provide ongoing support time and resources for teachers to work collegially and cooperatively, the case for individual supervision (which the clinical approach generally fosters) appears some-what shaky. The significance of this study, then, lies in its examination of the effects of clinical supervision on classroom teaching performance. In so doing, it seeks to address the pertinent questions of why there is a need for supervision of any kind, why the clinical approach is deemed so useful and how, if useful, its effectiveness can be understood and appropriated, and why time and energies of teachers and supervisors should be invested in such a highly individual approach as distinct from a more cooperative staff development process that is devoid of super-ordinate intervention.

Since the study allows for the random assignment of subjects to groups, an experimental design is proposed.

## Randomized Control-Group Pretest-Posttest Design

This design is preferred because it allows for more than one control group. The proposed study will have one experimental group and three control groups. In all, there will be three treatments. The experimental group will receive treatment$_1$. The supervisors in this group will be given workshops in both the "process" strategies and the "content" pertaining to academic feedback. Treatment$_2$ will be given to control group$_1$. This will involve both supervisors and supervisees in workshops about the "content" of academic feedback. Control group$_2$ will receive treatment$_3$. This will involve the supervisees only in workshops on the "content" of academic feedback. Control group$_3$ will receive no treatment at all.

The three treatments and the conceptual level of supervisors (and supervisees) constitute the independent variables. The classroom performance of supervisees in giving academic feedback to pupils is the dependent variable. All four groups will be tested on the dependent variable in the usual pretest-posttest fashion.

Each group will consist of six supervision dyads. Of these, three will contain supervisors of high conceptual level and three supervisors of low conceptual level. The total sample of the project (24 dyads) is made up, then, of twelve dyads whose supervisors are of high conceptual level and twelve dyads whose supervisors are of high conceptual level and twelve dyads whose supervisors are of low conceptual level. The following diagram depicts the design:

|  |  | $T_1$ | $T_2$ | $T_3$ | No T |
|---|---|---|---|---|---|
| Supervisors | High CL (12) | E 1.1 | C 1.1 | C 2.1 | C 3.1 |
|  | Low CL (12) | E 1.2 | C 1.2 | C 2.2 | C 3.2 |

Group E 1.1 (3 high CL supervisors)  
Group E 1.2 (3 low CL supervisors)

Treatment$_1$ ('process' and 'content') to supervisors only.

Group C 1.1 (3 high CL supervisors)  
Group C 1.2 (3 low CL supervisors)

Treatment$_2$ ('content' only) to supervisors and supervisees.

Group C 2.1 (3 high CL supervisors)  
Group C 2.2 (3 low CL supervisors)

Treatment$_3$ ('content') to supervisees only

Group C 3.1 (3 high CL supervisors)  
Group C 3.2 (3 low CL supervisors)

No treatment.

Initial supervisor subject selection will take place on the basis of conceptual level. Once twelve high and twelve low conceptual level supervisors have been identified, they will then by randomly assigned, along with their respective supervisees (who will also be tested for their conceptual level), to the four groups. Supervisees will then be pretested on their classroom academic feedback performance, the three treatments given, and the posttest to ascertain which differential effects from the respective treatments are operative in the classroom teaching of supervisees.

This design controls the potential sources of internal invalidity. The effect

of intersession developments are balanced out by the presence of randomized control groups. Contemporary historical events are experienced by all groups, hence their effects cannot be mistaken for the effect of the treatments. Differential selection of subjects for comparison groups is controlled because the randomization processes practically assure equivalency. Maturation and pretesting effects are controlled for all groups experience an equal effect of these variables.

External validity concerns are also addressed by this design. Pretesting will be carried out without the subjects becoming aware of the academic feedback focus. In this way, any interactive effect between the pretest and the treatment can be discounted since extraneous variables will not be allowed to interact with the various treatments.

Further, the presence of three control groups and three treatments guards against the possibility of a Hawthorne effect taking place in the experimental group.

## Data Sources

Two major sources of data will be used in this study. They are: 1) supervisee classroom academic feedback performance and 2) supervisor-supervisee post-observation conferences.

## Data Collection

Two instruments will be used to collect data. They are: 1) a coding system to measure the frequency and quality of teacher academic feedback (see Appendix B) and 2) a coding system based on the "process" stragegies described in Appendix A.

Pretest data will be gathered in October 1985. Each dyad will be observed through one clinical cycle. Supervisee classroom performance will be observed and coded and the ensuing post-conference videorecorded. After the different treatments, posttest data will be collected along similar lines to those of the pretest. In all, forty-eight classroom performances will be observed and coded and forty-eight post-conferences will be videorecorded over a period of six weeks (three weeks for pretest, three weeks for posttest). Each classroom and conference coding will be undertaken by at least two coders to establish the reliability of the data gathered.

## Data Analysis

Statistical tests for correlation and for analysis of variance and covariance will be used to examine the effects of the treatments on supervisee classroom performance.

<div align="center">WORK PLAN</div>

Phase I  Selection of Supervisor Subjects   (September 1985)

- To select 12 high conceptual level supervisors and 12 low conceptual level supervisors, and then to test their respective supervisees for conceptual level as well.

- Random assignment of supervisors to experimental and control groups.

- Training of G.A.'s in coding on instruments for data collection.

Phase II   Pretest Data Collection   (October 1985)

- 24 classrooms to be observed and 24 conferences to be recorded.

<u>Phase III    Treatments</u>    (November, December 1985, January 1986)

- 4 three-hour workshops on "academic feedback" for 24 subjects drawn from experimental group supervisors (6), control group$_1$ supervisors and supervisees (12), and control group$_2$ supervisees only (6).

- 4 three-hour workshops on "questioning strategies and exploration procedures" for the six supervisors in the experimental group.

- Initial coding of pretest conference data.

<u>Phase IV    Posttest Data Collection</u>    (February 1986)

- 24 classrooms to be observed and 24 conferences to be recorded.

<u>Phase V    Data Analysis</u>    (March - June 1986)

- This phase includes the coding of the remainder of the 48 conferences together with the transposing of data onto fortran sheets for access to the computer and subsequent statistical tests.

<u>Phase VI    Report Writing</u>    (July - August 1986)

- To be done by P.I. with assistance of G.A.'s.

- P.I. on 4 month release time (May-August 1986) funded by U.B.C.

<u>Hours in Project</u>

<u>Phase I</u>    --    <u>Total of 120</u>

- Conceptual Level test administration  12 hours X 3 (two G.A.'s + P.I.) = 36

- Training for coding "academic feedback" 12 hours X 4 (three G.A.'s + P.I. = 48

- Training for coding conference "process" strategies  12 hours X 3 (two G.A.'s + P.I.) = 36

<u>Phase II</u>    --    <u>Total of 288</u>

- Pretest data collection 12 days X 6hours = 72 hours X 4 (three G.A.'s + P.I. = 288

<u>Phase III</u>    --    <u>Total of 240</u>

- Initial coding of pretest conference data 24 X 2 hours = 48 X 2 (two G.A.'s) = 96

- Treatments (8 three hour workshops = 24 hours) + 24 hours preparation time =48 X 3 (two G.A.'s + P.I.) = 144

<u>Phase IV</u>    --    <u>Total of 288</u>

- Posttest data collection 12 days X 6 hours = 72 hours X 4 (three G.A.'s + P.I.) = 288

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<u>Phase V</u>  --  <u>Total of 772</u>

- Coding of posttest conference data 24 X 2 hours = 48 X 2 (two G.A.'s)
    = 96

- Analysis of classroom and conference data 138 hours X 2 (two G.A.'s)
    + 400 hours P.I. (May-June, 1985 full-time release time funded by U.B.C.)
    = 676

<u>Phase VI</u>  --  <u>Total of 508</u>

- Report writing.  Two G.A.'s X 94 hours each + P.I. 320 hours
    (July - August, 1985 full-time release time) = 508

This research plan involves a <u>total of 2,216 hours</u>.  Of these the P.I. will give 948 hours, two G.A.'s 556 each, and one additional G.A. will be required during Phases I, II, and IV for training and coding of teacher academic feedback performance amounting to 156 hours.

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