

# The Effects of Varying Supervisory Conferences on Pre Service Teachers' Specificity, Pedagogical Focus and Implementation of Written Behavioral Objectives

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Supervision of the pre-service physical education teacher plays an invaluable role in the development of the skills and behaviors necessary to become an effective teacher for public schools (Coulon & Byra, 1995; Metzler, 1990; Mosher & Purpel, 1972; Taggart, 1988). These skills and behaviors include, but are not limited to, having effective management routines, being able to give congruent feedback, and developing the ability to measure student achievement (Metzler, 1990). Thus, it seems logical to extend the research base in an area that is considered to be a critical element of teacher preparation.

Before research can be done on the supervisory process, a definition or purpose of supervision must be formed to serve as a model for the researcher to follow. Locke (1979) identified evaluation and skill development as two main purposes for supervision. He defined evaluation as an ubiquitous process designed to make sure somebody else is doing a good job, and skill development as helping someone else learn how to do a better job. Other researchers (Alfonso, Firth, & Neville, 1981) empha-

sized that the main purpose of supervision is skill development. For the purposes of this study, the primary purpose of supervision was identified as pedagogical skill development.

The process of supervision helps pre-service teachers progress from their present skill level to a level that is needed to efficiently carry out the necessary duties and behaviors of teaching (Metzler, 1990). The process consists of monitoring and communicating with teachers to help them achieve the goals and objectives of the program (Macdonald, 1966). According to Coulon and Byra (1995), the process of supervision should help future teachers to develop competent pre-active and interactive decision making and instructional behaviors. Pre-active behaviors are those that occur prior to actual contact with the learners (e.g., lesson planning), whereas interactive behaviors are the pedagogical behaviors that occur during the teaching of the lesson. Taggart (1988) agreed by stating that supervision is the process of teaching pre-service teachers the teaching skills, strategies, techniques, and ideas about effective teaching, and then observing them while they demonstrate the skills, strategies, techniques and ideas.

Ultimately, Metzler (1990) noted that the supervision process can and should be perceived in many ways and that when doing

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so, a logical set of assumptions need to be followed. The first assumption is that teaching is a skill. He argued that whether teaching is an art or a science does not really matter if the teacher does not have the skills to treat it as an art or as a science. He contended that these skills need to be taught. The second assumption is that supervision is teaching. Teaching skills can be developed and learned from good supervision just as sport skills can be learned through effective teaching. Finally, the third assumption is that systematic observation enhances the supervision process. He concluded that the decisions that are made within the supervision process and the demeanor in which they are made are more effective if they are based on valid and measurable information.

Unfortunately, supervising pre-service teachers as they develop pedagogical skills is time consuming and requires training which should include theory, demonstration, practice, feedback, and classroom application (Joyce & Showers, 1980). The amount of effective supervision, or lack thereof, is a major problem facing teacher educators today. According to Metzler (1990) the job of supervising pre-service teachers is usually thrust upon individuals who have insufficient time to do the job correctly. For example, faculty members with large class loads and research duties or graduate students who have their own research and teaching commitments are often chosen as supervisors for the pre-service teaching program. Earlier, Glatthorn (1984) emphasized this sentiment by saying that the supervision done by the individuals in charge is usually inadequate and ineffective. Additionally, the job of effectively supervising pre-service teachers is time consuming. It is unlikely that an individual who has little time to dedicate to supervision will be able to provide the amount of effective supervision that is necessary to facilitate the skills

needed to be an effective physical educator (Randall, 1992).

Ideally, teacher educators would like to have trained supervisors observing and providing feedback to pre-service teachers daily. Randall (1992) found that satisfaction with supervision was based on the amount of observation and feedback given by the supervisors. Some believe that pre-service teachers need to be constantly supervised, but often pre-service teachers have different needs and some prefer different styles or patterns of supervision (Glatthorn, 1984). Keeping this in mind, it could be that pre-service teachers might prefer or need varying patterns of supervision. It also could be that in a teacher preparation program, where constant supervision is not possible, a varying amount of supervision may be effective.

In the literature in physical education there have been numerous studies which have investigated the process and effectiveness of supervision (Birdwell, 1980; Brunelle, Tousignant, & Pieron, 1981; Darst, 1974; Eldar, 1990; Grant, Ballard, & Glynn, 1990; Ocansey, 1988; Paese, 1984; Randall & Imwold, 1989; Ratliffe, 1986; Smith 1992; Taggart, 1988; Tannehill & Zakrajsek, 1990; van der Mars, Mancini, & Frye, 1981). The majority of these studies suggested that supervision which includes supervisory feedback can improve the effectiveness of both pre-service and in-service teachers' instructional behaviors and that supervision can be a vital part of the professional development of both pre-service and in-service teachers. The literature also indicates that at times supervisors and supervision can be ineffective. Thus, new ways to improve supervision and supervisors are an important area of scholarly inquiry.

The overall focus of the investigation was to examine selected elements of the supervisory process during undergraduate teaching practicums. Specifically, the purpose of this study was to compare the effects of three

different schedules of supervisory conferences on pre-service teacher's specificity, pedagogical focus and implementation of written behavioral objectives.

## METHODS

### *Subjects*

The subjects for this study were 12 physical education teacher education pre-service teachers (PTs) from the teacher preparation program at a major university in the Rocky Mountain region of the United States. All of these volunteer subjects were participating in their second formal teaching practicum. The average age of these subjects ranged from 21 to 25 years and they were of mixed gender. The learners in this study were children in grades kindergarten through six. Their ages ranged from 5 to 12 years.

### *Setting*

The setting for this study was a K-6 parochial school with 119 students. The gymnasium at the school was large and contained adequate wall space, two basketball goals, and a near-regulation basketball court. The gymnasium was large enough to allow two PTs to teach simultaneously. Each PT was provided equipment from the university physical education department.

### *Laboratory*

PTs at the university enroll in a three credit hour class titled Teaching Lab II during the spring semester of their junior year. During this class the PTs are provided opportunities to improve effective teaching behaviors such as planning, teaching, and reflecting by teaching physical education in small group situations. By the end of this course students are expected to be able to: (a) implement effective classroom routines, (b) implement specific classroom rules, (c) implement preventative management strategies, (d) actively supervise learners, (e) make short transitions (15 seconds or less),

(f) implement accountability systems, (g) plan for optimal learning time, (h) teach for optimal learning time, (i) modify activities to match student skill levels, (j) plan progressions that allow for both learner success and challenge, (k) systematically assess the above mentioned teaching skills, and (l) incorporate three of Mosston's didactic styles of teaching in lesson, all within small group situations.

This practicum is divided into five 2 to 3 week units with each unit emphasizing different content areas. Each unit consisted of either six or seven lessons. All PTs teach 3 units and are assigned different grade levels for each unit. Data was collected during the first instructional unit taught by each subject.

All six lessons of the unit were audio and videotaped. Each PT was required to watch the tape before the next lesson and systematically analyze their teaching performance. Upon completion of the self-analysis, each PT normally completed a behavioral contract. The behavioral contract is introduced to the PTs in earlier coursework and is specifically addressed at the beginning of the course. Behavioral contracting prompts the PT to reflect on instructional behaviors, prioritize areas for improvement, and specifically identify a target objective and instructional strategies for achieving that objective during their next lesson. The PT also determines whether he/she achieved the tasks and guidelines set forth by the last behavioral contract and determines tasks and guidelines for themselves for the next lesson.

### *Procedures*

During this study the PTs taught six, 25 minute lessons to approximately 8 to 15 students within half of a gymnasium. Each PT was assigned to teach a unit on striking with paddles and long-handled implements.

Prior to the beginning of this study the 12 PTs were randomly assigned to one of three

groups: (a) no-supervision, (b) once-a-week supervision, or (c) every lesson supervision. The no-supervision group reviewed their own lessons from videotape independently after each lesson. A behavioral contract was completed following each post-lesson self-assessment. The once-a-week supervision group conferenced with a university supervisor after one of three lessons each week. The PT and the university supervisor completed the behavioral contract together. These PTs completed the behavioral contract for the remaining two lessons themselves. The PTs in the every lesson supervision group conferenced with a university supervisor after each lesson. The behavioral contract was completed by the university supervisor and PT after each lesson taught.

The dependent variables for this study were the number of times each PT improved/achieved objectives identified on the behavioral contract, the specificity of objectives, and the numbers of behaviors addressed. The amount each group of PTs improved/achieved the tasks, the specificity of objectives, and the number of behaviors addressed were compared across all three conditions in order to determine which schedule of supervisory conference proved to be more effective. The stated objectives focused on behaviors which could be objectively measured with one of the three instruments being utilized in the study. improvement toward, as well as achievement of a stated objective was calculated in the results. For example, if a stated objective was to increase the number of names used from 15 to 25 in the next lesson and the PT only used 20 names, a certain degree of success was achieved and counted as an improvement in the results.

### *Supervisory Conferencing*

Supervisory conferencing occurred immediately after the PT finished teaching the lesson and lasted approximately five min-

utes. The supervisor systematically analyzed each lesson using the same instruments that the PTs used. This allowed for accurate evaluation of the tasks set by the behavioral contract with the PTs.

A collaborative approach to supervising was used during the post-lesson conference (Byra, 1996). In a collaborative supervisory conference the supervisor opens the conversation by asking the PT to tell him/her about what happened in the lesson. This allows the PT to specify what he/she thinks are the strengths and weaknesses of his/her teaching. The use of the collaborative approach helped to foster reflecting behaviors in the PTs. After the lesson, the PT reflected on his/her teaching and the supervisor compared the supervisory data with the objectives. The conference ended with the PT and the supervisor completing a behavioral contract specifically identifying objectives for improvement for the next lesson. The conference was held between classes while other teachers were setting up and introducing the next lesson. This time frame allowed the supervisor to be prepared to systematically assess the next lesson.

### *Data Collection*

Data were collected during the first two units delivered in the course. Data were collected on 8 subjects during the first unit and 4 during the second unit. All subjects were teaching their initial unit in the semester. During this initial unit the PTs were not graded on teaching behaviors. This was done in order to help the PT establish classroom routines, remove tension, and become acquainted with the teaching setting without being concerned with grades.

During the first two-week unit, one-half of the gym was used by a PT who received no supervision, while the other half of the gym was used by a PT who received the once-a-week supervision or every-lesson supervision. This allowed the University supervisor to supervise the lessons without any

overlap of classes. During the second two-week unit, the remaining PTs who received either the full supervision or the once-a-week supervision were teaching. As during the first two-week unit, the four PTs were teaching their first unit within the Lab II experience. The same procedure that was used during the first two week unit was used during the second two-week unit.

### *Instrumentation*

Students were trained to systematically observe their lessons in previous coursework and in the beginning of the course. Students were trained to systematically observe their teaching using the Academic Learning Time-Physical Education (ALT-PE) instrument (Siedentop, Tousignant, & Parker, 1982), Qualitative Dimensions of Lesson introduction, Task Presentation, and Lesson Closure (QDITC) instrument (Byra, 1992), and Verbal Feedback instrument. ALT-PE measures the amount of time students are engaged in activities that are appropriate to the physical education setting (Parker, 1989). The QDITC instrument uses event recording to determine specific behaviors during the lesson introduction, task presentations, and lesson closure. The verbal feedback instrument uses event recording to determine the amount of feedback given in a lesson. Students were expected to systematically observe their videotaped lesson using the three aforementioned instruments. This assessment assisted them in identifying weaknesses and strengths and to objectively ascertain whether identified tasks were achieved. Using these instruments individually or in combination will provide the PT with a rich description of their teaching. All supervisory conferences were audiotaped.

### *Data Analysis*

Descriptive statistics were used in reporting the results of this study. The variables that were measured were achievement of objectives, specificity of objectives, and num-

ber of behaviors addressed. Achievement of objectives was determined by watching the videotape and documenting if the PT achieved his or her stated goal. Each objective was coded for specificity of objectives by making sure that the three components of behavior, condition, and criteria were included. Finally, each behavior that was addressed was counted and totaled for each group.

### *Interobserver Agreement*

Each teaching episode was coded using ALT-PE, QDITC, and event recording for verbal feedback. Each episode was coded by the primary researcher. A minimum of 16.8% of the episodes were then coded by an independent observer for the purpose of establishing reliability of the collected data. The independent observer was taught to use each instrument in an "Analysis of Teaching and Supervision" class at the university. The observer practiced by watching training tapes for each instrument. Each tape contained 3 episodes that had to be coded with 80% accuracy before the observer was deemed trained. The score/unscored method (van der Mars, 1989) was used to calculate observer agreement for the ALT-PE instrument. To establish reliability of the QDITC instrument and the event recording for verbal feedback, the two observers established by using the agreement calculations for numerical data (van der Mars, 1989). For example, when using the verbal feedback instrument, the smaller total frequency was divided by the larger total frequency and multiplied by 100 that provided a percentage of agreement. The results of each are in the results section.

## **RESULTS**

### *Interobserver Agreement*

Interobserver agreement was established for the ALT-PE instrument by having 16.8% of all teaching episodes coded by two independent coders. The result of the scored

interval/unscored interval method yielded an interobserver agreement score of 89.5%. The range for the scored interval method was 77.8 to 93.5%. The range for the unscored interval method was 84 to 94.3%.

Agreement for the QDITC instrument was also established by using 16.8% of the total episodes. Thirty-seven tasks were observed, and 97.2% agreement for all categories was established. Fourteen sections of lesson introduction and four sections of lesson closure were observed all yielding agreement of 100%.

Agreement for verbal feedback was also established by using 16.8% of the total number of episodes. Six verbal feedback categories were observed and interobserver agreement was calculated for each. Agreement for positive general feedback was 89.6%, positive specific feedback was 88.4%, corrective general feedback was 86.3%, corrective specific feedback was 87.1%, negative general feedback was 96.7%, and negative specific feedback was 96.7%.

Each lesson taught by the 12 subjects was audiotaped and videotaped. The taped lessons were analyzed in accordance to the behaviors identified on the behavioral objectives. Results for each of the three dependent variables will be discussed according to group performance (see Table 1). The results are presented by group accompanied by a brief sketch of one subject that best represents that group.

Table 1

Percentage of Achievement, Specificity, and Number of Behaviors Addressed For Each

Group

Group	% of Achievement	% of Specificity	behaviors addressed
Daily	67%	93%	30
Once-A-Week	70%	72%	27
No Supervision	73%	68%	15

*Daily Supervision.* Subjects in this group (n = 4) conferenced with a supervisor immediately following each lesson taught. Subjects who received a supervisory conference following each lesson either achieved or improved upon 31 out of 46 (67%) behavioral objectives. They achieved 18 out of 46 (39%) behavioral objectives and improved upon 13 of the 28 (46%) they did not achieve. The behavioral objectives written by this group focused on 30 different teaching behaviors. The subjects in this group wrote 43 of 46 (93%) behavioral objectives that contained the necessary elements of behavior, criterion, and condition.

Subject A was a female teaching third and fourth grade students. Presented here is a synopsis of her experience. It best reflects the group as a whole. Subject A and the supervisor wrote 12 teaching objectives that focused on seven pedagogical behaviors. She achieved five of the 12 (42%) objectives. She did improve on two of the objectives that were not achieved.

The pedagogical behaviors focused on by Subject A, in the following order, were: (a) providing demonstrations, (b) increasing positive specific skill feedback, (c) providing the appropriate number of skill cues, (d) increasing corrective feedback, (e) providing a closure, (f) providing motivational objectives, and (g) increasing activity time. Increasing positive specific skill feedback was the pedagogical behavior that Subject A addressed the most often. It was an objective on 3 separate occasions. One time her objective was achieved but on the other two occasions it was not met.

She successfully accomplished the objectives in regards to providing demonstrations, providing the appropriate number of skill cues, providing a closure, and providing a motivational objective. However, Subject A experienced some difficulty in achieving the objectives that dealt with increasing corrective feedback, increasing activity time, and increasing positive specific skill feed-

back. Although not achieving the objective, she did improve on one objective dealing with positive specific skill feedback.

*Once-A-Week.* Subjects in this group received a supervisory conference from the supervisor immediately following one of the three lessons per week. After the lessons that were without supervisory conferences, subjects were expected to immediately self-reflect on their teaching experience after the taught lesson and write behavioral objectives. Those subjects who received supervision once a week either achieved or improved upon 28 out of 40 (70%) behavioral objectives, with 24 of these being achieved. On lessons in which they received supervision, the subjects achieved or improved upon 11 of 12 (91%) behavioral objectives, nine of which were achieved. On lessons they self reflected, they achieved and improved upon 17 of 28 (60%) behavioral objectives with three being unmeasurable. The behavioral objectives written by these subjects focused on 27 different teaching behaviors. However, when supervised the subjects focused on 15 different behaviors and when unsupervised, 12 behaviors. The subjects in this group wrote 29 of 40 (72%) behavioral objectives that contained the necessary elements of behavior, criterion, and condition. Once again, however, when supervised the objectives that were written contained the necessary elements of behavior, criteria, and condition 100% of the time as opposed to 37% of the time when unsupervised (see Table 2).

Table 2

*Percentages and Behaviors Addressed For the Once-A-Week Supervision Group*

% of achievement with supervision	91%
% of achievement without supervision	60%
% of specificity with supervision	100%
% of specificity without supervision	37%
behaviors addressed with supervision	15
behaviors addressed without supervision	12

Subject B was a female teaching first and second grade students. Presented here is a sketch of her experience. It is most representative of the once-a-week supervision group. During her experience, she taught seven lessons in the content area of striking. Subject B achieved five out of seven objectives. She achieved two out of four behavioral objectives which were written with the supervisor. In the lessons in which Subject B wrote the objectives herself, she achieved three out of three objectives. However, by herself, Subject B wrote three objectives that could not be measured. Subject B received supervisory conferences after lessons two and five.

During the two supervisory conferences, the supervisor and Subject B wrote four teaching objectives were written that focused on four pedagogical behaviors: (a) raw use of positive specific feedback, (b) use at least five corrective specific feedbacks, (c) increase positive specific feedback rate from .5 to .7 per minute, and (d) decrease the amount of off task behavior from 7% to 0%. She achieved the objectives concerning the raw use of positive specific skill feedback and using at least five corrective feedbacks. However, she failed to meet or improve upon the objectives regarding the increase in use of positive specific feedback per minute and decreasing off-task behavior.

After lessons one, three, four, and six, Subject B wrote three teaching objectives that focused on three pedagogical behaviors without the supervisor. The behaviors she focused on were: (a) better management of equipment, (b) have students completely stop talking before instructing, and (c) limit off task from 4% to 0%. Three other objectives could not be measured due to vagueness in which they were written.

*No Supervision.* Subjects in this group received no supervision. Immediately following each lesson, subjects were expected to reflect on their teaching experience and write no more than two objectives for im-

provement by themselves. Subjects who received no supervision either achieved or improved upon 28 of 38 (73%) behavioral objectives, with 26 of 38 (68%) behavioral objectives being achieved. The behavioral objectives written by these subjects concentrated on only 15 different teaching behaviors. The subjects in this group wrote 26 of 38 (68%) behavioral objectives that contained the necessary elements of behavior, criterion, and condition.

Subject C was a female who taught kindergarten students, she best represents the no-supervision group. The following is an account of her experience. During her experience, she taught seven lessons in the content area of striking. Subject C wrote 10 teaching objectives that focused on six different pedagogical areas for improvement. She achieved five of her 10 stated objectives but failed to achieve or improve on five objectives.

Subject C identified the following pedagogical behaviors as being marked for improvement: (a) use more names, (b) smoother transitions, (c) equipment organization, (d) provide more feedback, (e) control over class, and (d) increase positive specific skill feedback. The pedagogical behaviors of using more names, equipment organization, provide more feedback, and control over class were each focussed on twice. She was able to experience some success in achieving her objectives that targeted equipment organization and providing more feedback, however, she had difficulty in achieving objectives dealing with the other pedagogical behaviors.

One reason for this difficulty was the vagueness in which her objectives were written. Sometimes she had written objectives that could not be achieved because they had already been achieved, therefore allowing no room for improvement. Other times no set criteria was established or criteria that was unreachable was established. It was also found that achieved objectives were set that

had already been achieved in previous lessons, thus, making it impossible to improve or achieve on the objective.

Exemplary of the difficulty this group had in writing objectives is provided in the following descriptions of Subject C's objective writing. For lesson three, Subject C listed an objective as "smoother transitions". This objective lacks both condition and criterion and contains a vague behavior. Therefore, it is difficult to measure. During lesson four, Subject C listed "equipment organization" as one of her objectives. It was met by measuring the "environment arranged" category of the QDITC. However, Subject C listed this objective again for lesson five. Due to the fact that there was no opportunity for improvement in this area, it cannot be said that this objective was met.

## DISCUSSION

The purpose of this study was to compare the effect of three different supervisory schedules on specificity of objectives, objective achievement, and number of behaviors addressed. Each group seemed to out perform the other two groups in at least one of the three dependent variables. The no supervision group achieved a higher percentage of its overall objectives, however the once a week group had the highest achievement of objectives on days they received a supervisory conference. The daily supervision group was more effective at focusing on a variety of teaching behaviors and writing specific objectives. While focusing on the three dependent variables independently provides the reader with concrete results, the true effect of the independent variables is best captured when all three dependent variables are discussed integratively.

The no supervision group did achieve or improve upon many of their stated objectives. However, as a group, the written objectives were incomplete, vague, and easily achievable. A representative example of this type of objective would be "By next lesson I

will have better management.” This incomplete objective indicates “better” as the criteria for achievement. “Better” could be measured by any reduction in total management time during this lesson. Therefore, a 1% decrease in management time constitutes achievement.

The no supervision group also focused on very few instructional behaviors. It is not being suggested that focusing on only a few behaviors is inappropriate, however, when the behaviors that are being focused on being performed effectively, then one must question why? One subject focused on use of names across four consecutive lessons, and only increased the criterion by one each time, even though she easily surpassed her criterion each time. Was this subject really concerned with her use of names, or was it an easy objective to both write and achieve?

The daily supervision group wrote the most specific objectives, focused on the greatest number of behaviors, but were the least successful at achieving the specified objective. Focusing on many behaviors may have been one of the reasons for the lack of consistent achievement. The neophyte teachers in this study probably did have a strong enough pedagogical background to adjust their instruction in significantly different ways. Increasing feedback, decreasing management time, and improving skill presentations was possibly too much to ask these subjects.

Additionally, the lack of experience may have also been a detriment during the collaborative supervisory conferences as far as what behaviors to focus on and to what criteria the behaviors should be performed. Daily supervision subjects may have focused more on what they ideally needed to do according to the Lab 2 teaching assessment form, and less on what they realistically could improve on from lesson to lesson. The assessment form identified specific criteria which each student should reach by the end of the practicum experience. It was possibly

too soon to attempt to reach the specified criteria given each subject's limited experiences. Even when a criterion was achieved for one behavior, that behavior sometimes fell below standards when the supervisory focus moved to another unrelated behavior.

The once a week group did very well when they were supervised. The lessons without supervision may have allowed each subject to reflect more on their instructional behaviors. The weekly conference may have given them a focal point to center on which assisted them both while teaching and writing objectives. The conferences were also truly more collaborative because each subject had to discuss what they had done during the unsupervised lessons. This often served as a springboard for further discussion. The results of this study are similar to other studies on supervision. Darst (1974) found that supervision had a positive effect on student teachers' instructions, reinforcement, feedback, and goal setting. Hamilton (1974) determined that supervision was effective in assisting student teachers reach pre-assigned criterion levels in certain teaching behaviors. The theme of differing schedules of supervision's effect on teaching behaviors was one that was investigated by Smith and Steffen (1993). In their study, it was also found that those receiving supervision and the accompanying feedback were more effective in increasing levels of desirable teaching behaviors. The results of this study support the findings of all three of these studies and suggest that supervision of pre-service teachers was effective. It was evident that the group that did not receive supervision had trouble in identifying appropriate behaviors to address and establishing appropriate criterion. Whereas, the groups that received supervision were helped in the writing of specific behavioral objectives for their teaching and achieving desired criterion.

However, there were some contrasting findings as well. While Darst (1974) found that supervision was able to show positive increases in a number of different teaching behaviors, the results of this study suggest that the supervision might have caused the pre-service teachers to focus on too many different behaviors. Smith and Steffen (1993) discovered that feedback everyday was more effective than other schedules of feedback. However, in this study it can be seen that the subjects who received supervision once-a-week also made meaningful progress in the writing of their behavioral objectives.

In this study, the combined changes across the three dependent variables lends credence to the importance of supervision. The effectiveness of each type is dependent upon what outcomes an undergraduate teaching program expects.

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