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Development and assessment of a structured data-recording
(SDR) technique for classroom observation

Floden, Peggy M., Ph.D.

Iowa State University, 1987

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Development and assessment of a structured

data-recording (SDR) technique for

classroom observation

by

Peggy M. Floden

A Dissertation Submitted to the

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CHAPTER I

STATEMENT OF THE PROBLEM

The demand for excellence and recent research on
teaching have stimulated educators' interest in
teacher evaluation and supervision. Many school
districts across the nation agree that teacher
performance evaluation is "the essential building
block of accountability" (Stow & Sweeney, 1981,
p. 539). Furthermore, researchers have concluded
that the techniques and strategies used by teachers
make a difference in student achievement (Anderson,
Evertson, & Brophy, 1979; Good & Grouws, 1979).
Consequently, the collection and analysis of specific
data gathered during classroom observation appears to
be a prime vehicle for improving teacher performance;
sharing specific data derived from classroom
observation enables teachers and supervisors to
analyze teaching strategies and improve performance
(Borg & Gall, 1983; Latham, Wexley, & Pursell, 1975).
Yet, problems exist--supervisors often fail to provide
specific feedback and data to help teachers improve
practices and decisions. Although researchers agree
on the need for collecting specific, valid data,

little has been done to improve data collection
(Brophy, 1979; Furst & Russell, 1971).

One data collection study, however, was recently
developed and tested by Edwards (1985). The
Structured Data-Capturing Technique (SDCT) was
designed to enable evaluators to (a) capture classroom
observation data, (b) analyze the data, (c) identify
teacher performance strengths and areas for
improvement, and (d) make decisions regarding
performance. Although the researcher found no
significant difference in the data-gathering abilities
of trainees who used the SDCT when compared to those
who used a traditional anecdotal recording method, the
results indicated that evaluators who used the
structured method were somewhat more capable of
examining their recorded data and making decisions
about important aspects of the lesson. Edwards also
found that trainees who used the SDCT made other
gains. For example, trainees were somewhat more
proficient than was the control group in identifying
teacher performance strengths (those important tasks
the teacher did well) as well as targets for growth
(important areas in which the teacher needed to
improve). However, the findings did not indicate that

the training made a significant difference in lesson
analysis skills. Edwards posited that the lack of
significance was due to shortcomings in the method of
training and design of the study. She recommended
that the following modifications be made: (a) expand
the allotted time for training to provide an
opportunity to internalize and practice the coding
technique, (b) emphasize the need for specific
feedback in data collection and lesson analysis,
(c) assess administrators' level of understanding of
the elements of data-gathering and teaching, and
(d) examine the effect of gender on lesson
observation and analysis proficiency.

Building upon Edwards' study, this study was
designed to modify and further develop the process
developed by Edwards and to test a new approach, the
Structured Data-Recording (SDR) with practice
technique. The following research questions were
addressed in this study:

1. What are the effects of a training process
   which utilizes a task analysis, a framework
   for lesson observation and data-gathering
   skills
   a. guided practice

    b.   detailed examples of data-recording

    c.   continuous evaluation of knowledge and comprehension

    d.   field practice

    e.   emphasis on specific feedback

    f.   emphasis on identifying targets for growth

    g.   emphasis on identifying teacher performance strengths

2. What is the effect of gender on lesson observation and analysis skills?

3. Will the SDR technique result in greater interrater reliability, more valid lesson analysis, and specific feedback?

Purpose of the Study

The purpose of this study was to modify and assess the efficacy of a data-gathering technique designed by Edwards. As indicated, her method, the Structured Data-Capturing Technique (SDCT), was formulated to assist evaluators in (a) capturing classroom observation data, (b) analyzing the data, and (c) making decisions regarding teacher performance for formative evaluation. The new method, Specific

Data-Recording (SDR) with practice technique, was
designed to (a) assess the effects of the training
method, (b) study the relationship between gender on
lesson analysis skills, and (c) gather recommendations
from participants and trainers for further
modification of the SDR.

Following were the specific objectives of the
study:

1. To compare the interrater reliability among
    administrators who received SDR training to
    those who did not receive SDR training

2. To compare the validity of the lesson
    analysis of evaluators who received SDR
    training to those who did not receive SDR
    training

3. To compare the effectiveness of the lesson
    analysis of evaluators who received SDR
    training to those who did not receive such
    training in providing specific feedback on
    teacher strengths, targets for growth, and
    specific teaching behaviors

4. To compare the perceptions of evaluators who
    received SDR training to those who did not
    receive SDR training with regard to level of

confidence in identifying the following
components:

    teacher strengths

    targets for growth

    specific teaching behaviors

5. To compare the gender of evaluators who
   received SDR training to those who did not
   receive SDR training with regard to ability
   to identify the following components:

    teacher strengths

    targets for growth

    specific teaching behaviors

Research Hypotheses

To assess the relative effectiveness of this
data-recording and lesson analysis technique, the
following hypotheses were generated:

1. A difference exists between evaluators who
   received the SDR training compared to
   evaluators who did not receive the SDR
   training in their level of confidence in
   data collection and data analysis skills.

2. A difference exists between male and female

evaluators in their level of confidence in
data collection and data analysis skills.

3. A difference exists between evaluators who
   received the SDR training compared to
   evaluators who did not receive the SDR
   training in their ability to record specific
   data.

4. A difference exists between male and female
   evaluators in their ability to record
   specific data.

5. A difference exists between evaluators who
   received the SDR training compared to
   evaluators who did not receive the SDR
   training in their ability to identify teacher
   performance strengths.

6. A difference exists between male and female
   evaluators in their ability to identify
   teacher performance strengths.

7. A difference exists between evaluators who
   received the SDR training compared to
   evaluators who did not receive the SDR
   training in their ability to identify teacher
   targets for growth.

8. A difference exists between male and female

evaluators in their ability to identify
teacher targets for growth.

Basic Assumptions

The following basic assumptions were considered:

1. Extreme differences in ability or personality
   between the groups to be tested do not exist.

2. Improved methods of teacher evaluation should
   lead to improved instruction.

3. Teacher performance in the classroom has an
   effect on student learning.

4. Administrators need training in classroom
   observational data-gathering.

5. Assessments of observations of a videotaped
   instructional session will closely parallel
   the assessments of observations of an actual
   instructional lesson.

6. The opportunity to practice a new technique
   in the field will enhance the acquisition of
   skills.

7. A task analysis of the training method will
   result in better training.

Delimitations

The following factors limited the scope of the
investigation:

1. The subjects, evaluators of the Des Moines
   Independent Community School District, had
   been involved in various professional
   improvement programs (i.e., workshops,
   conferences, and/or college classes) in the
   past several years and, therefore, may have
   demonstrated a more positive disposition
   toward research.

2. Subjects analyzed a taped lesson segment of
   three grade levels, in three subject areas,
   using three particular teaching approaches;
   therefore, generalizability was somewhat
   limited to those grade and subject levels.

3. The subjects came from one school district;
   therefore, they may have had similar goals
   and expectations.

Definition of Terms

The following definitions of terms gave clarity
to usage and meaning in this study:

Framework of data-gathering and observation
skills. Objectives to consider when making a
classroom observation: (a) identify building blocks
to reinforce in the post-conference, (b) provide
specific data to help reinforce building blocks,
(c) identify targets for growth to discuss in the
post-conference, (d) provide specific feedback to
explain or discuss targets for growth, and (e) provide
specific feedback about effective teaching strategies
and lesson design.

Targets for growth. (a) teacher techniques/
strategies which the teacher does not do well or omits
and which significantly detract from his/her
effectiveness; or (b) teacher techniques/strategies
which the teacher may wish to improve upon because
they are important aspects of his/her approach or
style.

Teacher performance. Specific, observable
teaching behaviors as well as the process used by a
teacher when conducting a classroom lesson.

Teacher performance strengths. Specific,
observable teaching behaviors which lead to the

accomplishment of objectives and which should lead to
student achievement.

Valid judgments. Judgments about teacher
performance which closely relate to those specified by
the administrative pool.

CHAPTER II

REVIEW OF LITERATURE

This study investigated the efficacy of a structured data-recording technique as the technique relates to administrators' abilities to (a) capture classroom observation data, (b) analyze the data, and (c) make decisions regarding teacher performance. While the literature is replete with references to the central topic, the review was necessarily limited to four specific categories of classroom observation: History and Background, Issues and Problems, Rationale, and Methods.

The literature review is presented in two sections. Section One summarizes Edwards' review of the literature and includes History and Background, Issues and Problems, Rationale, and Methods. Edwards has given permission for use for purposes of this study. Since this is a summary, the prose is very similar in nature. The second section includes the researcher's updated review of the literature and is expanded to include Issues and Problems, Rationale, and Methods.

Section One

History and Background

Direct classroom observation, virtually non-
existent as an element of supervision and evaluation
prior to 1950, evolved from research and development
efforts in education (Wragg, 1984). During the late
1800s, education was influenced by a variety of
learning theories and prescriptions from the field of
psychology (Furst & Russell, 1971). Classroom
teachers had great difficulty, however, in making the
quantum leap from theory to actual practice. As a
result, research had a minimal impact on the
improvement of teaching.

Although initially education was influenced by
the fields of sociology and psychology, studies in
educational research did not increase significantly
until the twentieth century. By 1960, over 10,000
research studies of teacher effectiveness had been
published (Dunkin & Biddle, 1974). Many early studies
related a causative factor, such as classroom size,
personality characteristic, or new teaching "method,"
to a criterion of teacher effectiveness often affixed
to a type of rating scale. Medley (1979) questioned

the technique, stating that the effectiveness criteria were not empirically based but were merely "perceived" effectiveness measures. Consequently, these early studies did little to improve teaching since researchers rarely examined the actual teaching process.

During the 1940s, however, researchers, hindered in part by the lack of techniques to analyze, observe, or record classroom phenomena, made substantial movement toward the development of discrete observation techniques. One technique, a coding system, permitted observers to describe small group behavior. Another technique, the category system, listed specific, predetermined, and non-evaluative categories of teacher behaviors by which observers tallied behaviors which teachers exhibited. The category system involved studies searching for teacher/classroom behaviors stable across observations and is now more commonly known as process-product research (Furst & Russell, 1971).

As researchers, conducting process-product correlational studies, began to find that teacher behavioral patterns affected student behaviors, many experimental studies ensued. Over 100 classroom

observational techniques and instruments have been developed and used in classrooms as a result of the research findings from the many correlational studies conducted over the last 35 years (Simon & Boyer, 1970). Today, researchers continue to seek solutions to the problems of classroom observation.

Two recent experimental studies have confirmed the results of the process-product correlational research. Significant gains in student achievement were realized by teachers trained according to these process-product research results (Anderson et al., 1979; Good & Grouws, 1979).

<center>Issues and Problems</center>

Classroom observation is a tool for examining, influencing, and evaluating teacher behavior. The majority of experts concur that classroom observations are the best source of gathering descriptive data on classroom behavior (Cooper, 1984b; Evertson & Holley, 1981; Kugle, 1978; McGreal 1983; Wragg, 1984). The literature suggests, however, that concerns stem from problems with classroom observation. These problems are not specifically related to the concept itself, but to (a) conflicting purposes, (b) reliability and

validity of observational techniques, (c) time and frequency, (d) observer's skills, and (e) teachers' perceptions about observations.

Conflicting Purposes

Classroom observation is a critical component of the two basic types of evaluation--formative and summative. Purposes of the two evaluation methods vary, yet overlap. Simply, the purpose of formative evaluation is to improve instruction by shaping and influencing teacher performance (McNergney & Medley, 1984), while the purpose of summative evaluation is to make personnel decisions regarding hiring, retaining, transferring, recognizing, and terminating teachers as well as influencing teacher performance. Most evaluators use data from formative evaluations for summative evaluation. In most cases, the principal performs both formative and summative evaluations (Blumberg, 1980; McGreal, 1983; McNergney & Medley, 1984; Wise, Darling-Hammond, McLaughlin, & Bernstein, 1984).

This duality of roles has been an unresolved issue with many teachers and administrators (Raths, 1982; Wise et al., 1984). Hodel (1979) found the

roles to be incompatible processes. McGreal (1983)
emphasized separating administrative and supervisory
roles as a prerequisite to establishing an effective
evaluation system. Finally, Blumberg (1980) urged
that the problem be confronted by both teacher and
administrator in order to establish dual ownership.

Other researchers minimized the role conflict
(McNergney & Medley, 1984; Wise et al., 1984).
Reporting on the Rand study, Wise and associates found
empirical support for role conflict. They indicated
such conflict depended on the evaluator's temperament,
district's incentive structure, and school ethos.

The issue remains unresolved. Supervisor/
evaluator roles need to be clarified in order to
minimize conflict regarding the purposes of classroom
observation. "The challenge to supervisors is to
support and encourage people, and still be able to
make reasonable and fair decisions about competence"
(McNergney & Medley, 1984, p. 50).

Time and Frequency

Although effective classroom observations
necessitate time for frequent individual observations,
many districts have added evaluation responsibilities

to the principal's role without deleting other responsibilities (Wise et al., 1984). The school districts should give evaluators sufficient time, unencumbered by competing administrative demands, for evaluation (Wise et al., 1984). Although finding adequate time may be difficult, it is rewarding; more time spent in classroom observations seems to enhance teachers' perceptions of evaluation.

Reliability and Validity

Reliability (the consistency of a measure) and validity (the degree to which an instrument measures what it purports to measure) are critical to both formative and summative evaluation. Nevertheless, researchers have found little evidence of a significant degree of reliability, validity, or effects of most classroom observation techniques (Peterson, 1983).

Reliability of classroom observations is affected by observer bias, the "systematic errors that are traceable to characteristics of the observer or of the observational situation" (Borg & Gall, 1983, p. 481). In fact, observer bias is a problem recognized by many researchers (Borg & Gall, 1983; Latham et al., 1975).

The literature reveals that training reduces observer bias (Bernadin, 1978; Borman, 1975) and can result in increased reliability (Bolton, 1973; Evertson & Holley, 1981; Faast & Stow, 1982; Wise et al., 1984).

Researchers note that the validity of classroom observations is affected by the observer's presence, which results in an unrepresentative sample of student and teacher behavior (Evertson & Holley, 1981; Wragg, 1984). As the research has indicated, the lack of reliable and valid classroom observation techniques is chiefly a result of observer bias and the presence of an observer.

Observational Skills and Training

Many evaluation experts identify the lack of skills as a critical issue in analyzing classroom teacher behavior (Gudridge, 1980; Krajewski, 1976; Robinson, 1978; Wise et al., 1984). Principals supported the experts' findings in a response to a National Association of Secondary School Principals (NASSP) poll in which 53% of 2,500 principals indicated their primary inservice need was to develop teacher evaluation skills (Gudridge, 1980).

The literature reveals that observational skills can be enhanced by training. Manatt (1982), a major proponent of an evaluation model which is currently being implemented in school districts across the country, advocates an evaluation system manifesting several features, including multi-dimensional methods for assessing teachers' skills. These skills include objective data-gathering and frequent classroom observation. Manatt likened the Teacher Performance Evaluation (TPE) process to a "skill, or series of skills, not unlike skiing or tennis . . . which can be enhanced by training" (p. 2). Training in classroom observation skills can help principals make a difference in the evaluation process.

Teacher Perceptions

Heishberger and Young (cited by Blumberg, 1980, p. 2) found that many teachers have conflicting perceptions about evaluation and observation. Their survey revealed that, although 82% of the respondents felt a "definite need for supervision and evaluation," 70% viewed supervision and evaluation as "potentially dangerous." While some teachers find the evaluation process a threat to their professional status, others

find the process confusing and of little benefit to them (Cooper, 1984a; Raths, 1982; Zelenak, 1973).

In summary, teachers do not consider classroom observation helpful in improving their teaching performance. However, teachers are more likely to view the process positively if they perceive the purposes to be instructional (Zelenak, 1973), and systematic (Natriello, Hoag, Deal, & Dornbusch, 1977).

Summary

Although classroom observation is common practice, problems continue to plague those who use it as a method for supervision and evaluation of teachers. The purposes of observation, the brevity and frequency of observation, the lack of reliability and validity, the lack of observational skills, and teachers' perceptions regarding observation are major concerns.

Rationale for Classroom Observation

Improving instruction and providing teacher feedback in teacher post-observation conferences are, possibly, the most important uses for classroom observations. Brophy (1979) found that the sharing of

accurate information gathered from the classroom enables teachers to clearly see problems and develop problem-solving strategies. Data on teacher performance, students' behavior, classroom management, and other structural aspects can enable supervisors to analyze and identify trends and patterns. More specific data seem to help teachers improve instruction (Rayder & Taylor, 1979).

Descriptive data collected during classroom observation of teaching performance provide a basis for many decisions regarding teacher performance (Wragg, 1984). In the event of teacher termination, a documented record of teacher performance greatly diminishes the possibility of a libel or slander suit (Strike & Bull, 1981). Observations of classroom performance are unquestionably relevant to competence (Strike & Bull). Because the evaluator must show proof that a teacher is incompetent, the evaluator must be proficient in gathering descriptive data in classroom observations and identifying effective teaching behaviors (Faast, 1982). Classroom observation data are critical to both formative and summative evaluation.

Classroom Observation Methods

The literature reveals an abundance of classroom observation methods and instruments (Acheson & Gall, 1980; Ishler, 1984; Kowalski, 1978). While some methods tend to defy categorization, most can be classified as "structured" or "unstructured." Structured techniques are those which follow a specific format and include checklists, interaction analysis, and observational records based on seating charts. Unstructured techniques encompass various types of narrative, audio, and video recordings. Following is a brief description of each technique, its purpose, and an overview of advantages and disadvantages of each.

Structured Data-gathering Methods

An observation system is a scheme that specifies both events to be recorded and the accompanying procedure (Medley, 1982). Structured data-gathering methods encompass types of systematic observation procedures designed to provide objectivity and minimize observer bias (Medley, 1982). The term "systematic observation" connotes classroom behavior

observations completed by an observer who, after training to use the procedure, systematically records behaviors.

Checklists. Checklists, the simplest and most common of the structured data-gathering techniques, consist of predeveloped lists of items believed to be "essential" to the teaching/learning process. The checklist's main purpose is to provide a frame of reference from which to give evaluative feedback. The following advantages of checklists were outlined by Griffith (1973): (a) they provide focus, (b) they provide a permanent record, (c) they are easy to use, and (d) they are adaptable to specific situations. However, checklists also have disadvantages: (a) they provide little feedback for clarifying information for formative evaluation and (b) the overabundance of non-weighted items and routinization of recording often lead to superficial judgments (Griffith, 1973). Since checklists do not focus on the essentials of the teaching/learning process, they do not provide supportive data regarding the teaching/learning process.

Interaction analysis. Interaction analysis, a
list of categories of teacher and student verbal
interactions, enables a supervisor to record and
analyze data of significant verbal interaction between
the teacher and student (Simon & Boyer, 1970).
Interaction analysis improves the quality of
observations by providing objective feedback to the
teacher, a technique adaptable to any grade level
and/or situation, and a mirror for teacher self-
analysis. However, interaction analysis also has
limitations. It requires intensive in-depth training,
it is limited to verbal interaction, and it yields
only quantitative data. These limitations restrict
the value of interaction analysis to observers who
want to look at teaching/learning activities and
frequency of verbal interactions.

Seating chart observation records (SCORE). SCORE
represents a family of observation instruments which
utilize seating charts to record and analyze data
regarding at-task behavior, verbal flow, or movement
patterns. Since recent research has determined a
clear link between student at-task behavior and
learning, this observational technique is likely to be

the most important of SCORE procedures (Acheson &
Gall, 1980; Fisher et al., 1978). SCORE at-task, a
seating chart with individual student behaviors,
enables the observer to record data regarding student
on- and off-task behaviors. The advantages of SCORE
at-task are that it yields a clear picture of who is
at-task and when, and also provides the teacher with a
mirror of student on- and off-task behavior for self-
analysis. Disadvantages of the instrument are:
(a) it is limited in scope; (b) it entails observer
subjectivity in deciding on certain student behaviors;
(c) it requires the difficult process, the task of
recording simultaneous and varied student behaviors;
and (d) it is difficult to use for an entire class
period due to writing space and observer concentration
limitations. Although the limitations of SCORE at-
task are similar to those of interaction analysis,
SCORE seems to be an excellent technique for
explaining student at-task behavior.

Verbal flow, the use of a seating chart with
interconnected boxes and coding symbols, enables an
observer to record data which identify the type,
initiators, and recipients of verbal communication.
The importance of verbal flow has been stressed by

researchers. Dunkin and Biddle (1974) found that most verbal interaction transpires in the front and center of classrooms. Meredith and Gall (as cited by Acheson & Gall, 1980) found black students, younger students, and female students participate less than their counterparts. Verbal flow data collected by an observer can provide meaningful and useful feedback. Advantages of verbal flow data include: (a) reveals teacher verbal communication behavior, strengths, and biases; (b) identifies the level and type of student verbal participation; and (c) provides the teacher with a mirror of verbal communication for self-analysis. On the other hand, verbal flow data are (a) limited in scope, (b) limited to highly interactive lessons, and (c) difficult to use for an entire period due to writing space and observer concentration limitations.

Movement patterns, the use of a seating chart with interconnected boxes and classroom map, provide the observer with a technique to tract the movement of teacher and students. Advantages of this technique are that it reveals strengths and biases in teacher movement, identifies possible causes of classroom management difficulties related to student/teacher

movement patterns, and provides the teacher with a mirror of classroom movement patterns for self-analysis. Disadvantages of the movement patterns technique are that it is limited in scope, difficult to record and interpret, and difficult to use for an entire class period due to writing space and observer concentration limitations. However, since learning has been linked to classroom management (Fisher et al., 1978), this method can provide specific and meaningful feedback related to movement patterns as an element of classroom management.

Summary. Most of the structured data-gathering techniques have a narrow focus, are referred to as narrow lens techniques, and center on specific student/teacher interactions. The checklist, however, has a wide lens focus, and thus can be categorized as a wide lens technique. Although the narrow lens techniques provide the observer with specific, valid, and generally unbiased data regarding verbal interaction, on-task behavior, and questioning techniques, other aspects of classroom behavior usually go unrecorded.

Unstructured Data-
gathering Methods

    While structured data-gathering techniques focus
on specific strategies to observe and/or record
specific behaviors or interactions, unstructured
techniques have no set format; unstructured techniques
range from very narrow to very wide in their focus.
They center on whatever strategies the observer finds
comfortable. The observer may transcribe a portion of
a lesson or write an anecdote or comment. Materials
such as a blank pad of paper or blank audio or video
tape may be used to record a description of classroom
phenomena. Narrative reporting refers to methods
involving a blank pad, while mechanical reporting
methods involve audio and video recordings.

    Narrative reporting. Generally, narrative
reporting provides the observer with the opportunity
to capture the entire lesson to share with the teacher
in a post-observation conference (Kowalski, 1978).
Using the narrative method, the observer is able to
record and then describe student/teacher behaviors and
interactions as well as classroom events. Types of
narrative reporting vary from a very narrow to a

very wide focus and include: (a) specimen records, (b) selective verbatim, (c) anecdotal records, and (d) script-taping.

Specimen records, the written descriptions of students' behaviors, provide the teacher with specific data on individual students (Evertson & Holley, 1981). The main advantage to specimen records is in discovering individual behavior patterns. Disadvantages of the technique include: (a) it is limited in value due to the amount of time expended on one individual, and (b) it results in a large quantity of written notes. Since specimen records are unconcerned with teacher behavior, they are rarely used by supervisors.

Selective verbatim, a selected transcript of exactly what is said by teachers and students, has the chief purpose of recording student/teacher verbal interaction data for analysis. Specific verbal behaviors may be selected prior to observation. Advantages of selective verbatim include the following: (a) it sensitizes the teacher to the verbal process; (b) its selectivity allows focus on one or two simple verbal behaviors; (c) it provides an objective, non-interpretative record of teacher

behavior; (d) it is relatively simple to use; and (e) it provides the teacher with a verbal mirror for self-analysis. Disadvantages include: (a) prior knowledge of selected behaviors may affect teacher's behavior; (b) a chance of a too narrow focus exists; and (c) little knowledge of students and lesson context may lead to interpretation problems. Nevertheless, the selective verbatim method provides an effective tool for providing feedback regarding teacher behavior problems identified by the teacher and/or supervisor (Acheson & Gall, 1980).

The anecdotal record, selective and descriptive statements of discrete observations, is used to record descriptive data about the lesson, including lesson flow, content activities, and student/teacher behaviors. Advantages of the anecdotal record include: (a) it is helpful in an initial classroom visit or when the teacher/supervisor has no specific area of concern, (b) cause and effect relationships may be analyzed, and (c) whole lessons can be analyzed (Acheson & Gall, 1980; Evertson & Holley, 1981). Disadvantages of the technique are that it requires the difficult task of observing and transcribing simultaneously, it is difficult to interpret, it

requires much practice in order for the observer to become proficient, and it is limited for teacher self-analysis.

Script-taping, the written record of an entire lesson, provides holistic data that allow the examination of cause and effect relationships (Hunter, 1983). Advantages of script-taping are that it provides a complete record of classroom events and behaviors, provides techniques to analyze data in many ways, and reduces interpretive biases (Evertson & Holley, 1981). Disadvantages are that script-taping (a) requires the difficult task of observing and recording simultaneously, (b) is difficult to read and interpret, (c) entails the impossible task of transcribing all events without missing important student/teacher behaviors, (d) provides little observer reflection time, (e) requires much practice in order for the observer to become proficient, (f) generates an overabundance of written material, and (g) limits teacher self-analysis. Although script-taping has wide support, many supervisors find implementation so difficult that the method is rendered virtually ineffective.

Audio recordings. Audio recordings, mechanically
taped audio recordings of classroom lessons,
objectively record student/teacher verbal behaviors.
Advantages are that audio recordings are objective,
have a wide focus, may be replayed repeatedly, are
easy to use, provide the teacher with opportunities to
hear him/herself in private, and provide opportunities
for self-analysis. Disadvantages are that the
recordings take time to replay and are limited to
verbal interactions.

Video recordings. Video recordings, recordings
of classroom lessons in order to objectively capture
verbal and non-verbal data, are probably the most
objective of the observation methods (Acheson & Gall,
1980). Advantages of this technique are: (a) it is
objective, (b) it provides a wide focus,
(c) recordings may be replayed repeatedly, (d) the
teacher can see him/herself as students do, and
(e) recordings capture the "feel" of the classroom.
Disadvantages are that video recordings may alter
teacher and/or student behavior, take time to replay
tapes, take time to set up equipment, require an
equipment operator, may miss classroom events because

of equipment maneuverability limitations, and may
result in sound loss if the speaker turns from the
microphone (Acheson & Gall, 1980). Although most
experts would agree that video recording provides
meaningful feedback for the teacher, the technique is
not regularly used due to the lack of teacher
acceptance.

<div align="center">Section Two</div>

<div align="center">Issues and Problems</div>

Conflicting Purposes

Acheson (1985) agrees that the conflict resulting
from the duality of roles in formative and summative
evaluation remains unresolved. In addition, Acheson
suggests several alternatives to eliminate role
conflict between teachers and administrators:
(a) train teachers to conduct formative evaluations
and administrators to conduct summative evaluations;
(b) divide administrators into two sets, supervisors
to conduct formative evaluation, and administrators to
conduct summative evaluations; (c) use department
heads in secondary schools as supervisors; and (d)
use peer evaluators to conduct formative and summative
evaluations. However, at the same time, Acheson

emphasizes that the role of the principal as supervisor and evaluator of teachers is critical to instructional leadership.

Time and Frequency

School districts continue to expand the principal's role with additional evaluation responsibilities (Acheson, 1985). A school principal, for example, plays many roles: public relations director, chief health officer, head disciplinarian, social director, business manager, and curriculum director to name only a few. In response to research surveys conducted by Acheson, principals repeatedly report that instructional leadership is their most important responsibility. However, the amount of time principals spend on instructional leadership is not consistent with this stated priority (Acheson, 1985). Reporting on the results of a Health, Education and Welfare study, Dreeben (1970 as cited by Natriello, 1983) noted that, on the average, 55% of principals stated that they did not have enough time to conduct accurate evaluations of classroom teachers. Similarly, in response to a national survey by the American Association of Secondary Administrators,

educational administrators indicated they have
neither the skills nor the time for successful
evaluations (Lewis, 1982). Furthermore, in case
studies of four Pacific Northwest school districts,
administrators found the amount of time required to be
the chief barrier to conducting observations (Stiggins
& Bridgeford, 1985). Although educational
administrators agree that instructional leadership
necessitates time for successful evaluations, the lack
of time is an obstacle to successful classroom
observations.

Although a few districts specify a minimum length
of observational time, no firm guidelines exist to
assist practitioners in deciding the length or
frequency of appraisal periods needed to provide a
representative sample of the teacher's behavior
(Cuccia, 1984; Huddle, 1985; Stodolsky, 1984).
Research on teacher effectiveness suggests that
appraisal periods have been as short as a single
lesson or as long as a full year. Preferred practice
is to arrange short periods that incorporate a series
of interrelated lessons into a teaching unit (Borich &
Madden, 1977; Peterson, 1983). Frels, Cooper, and
Reagan (1984) specified the actual observation should

be of sufficient length to adequately evaluate the teacher's performance--generally, the longer, the better. All aspects of the teacher's handling of the class should be observed and evaluated. Therefore, observations should include the teacher's start and finish of the class and representative behaviors between those two points. Further, if the teacher uses a variety of organizational and operational modes of instruction, each mode should be sampled (Peterson, 1983). In summary, in order to ensure the recorded data are representative, observations need to be of sufficient length.

Studies of processes used in teacher evaluation suggest that evaluation is a relatively infrequent event (Blankenship & Irvine, 1985; Huddle, 1985; McCauley, 1971). A survey of Iowa elementary school districts revealed that a few teachers were officially visited only once (21% of 324) and for very brief periods of time (51% of observations lasted a half-hour or less) (Tomhave, 1978). Another recent survey, conducted by the National Institute of Education, supported low frequency of visits. More than 400 secondary school leaders and 10,000 teachers participated in this study. When asked how often they

had been observed by department chairpersons, school administrators, or supervisors during the previous year, the teachers responded as follows: approximately one-fourth (26%) indicated "never"; another fourth (27%) indicated twice (Huddle, 1985, p. 59). In conclusion, the lack of frequency of observation is compounded by the lack of communication regarding those observations. Both administrators and teachers agree that effective evaluation requires frequent classroom observation and is currently hindered by the pressures of time.

Furthermore, several empirical studies reported by Natriello and Dornbusch (1980-1981) support the importance of frequent communication and a shared understanding between administrators and teachers regarding teacher evaluation. The findings of Natriello and Dornbusch, like those of other implementation researchers, reflect differences in perception between superordinate and subordinates regarding the frequency and substance of communications regarding evaluation (Cohen, 1976). Teachers report that they are unaware of or are unfamiliar with the criteria for teacher evaluation, that they are rarely observed, and that evaluation

feedback is scarce; their principals report just the opposite. Regardless of the conflicting reports of teachers and administrators, the literature reveals that frequency of observations and feedback--even negative feedback--is strongly correlated with teacher satisfaction with the evaluation system (Darling-Hammond, Wise, & Pease, 1983).

Several observations preceded by planning conferences and followed by feedback conferences can greatly enhance the observations (Acheson, 1985; Ishler, 1984; Manatt, 1982). Frequent classroom observation is a major component of Manatt's collaborative Teacher Performance and Evaluation model (Manatt, 1982). Finally, frequent classroom observation enhances the reliability of the process. Evaluations based on observations made at least twice a month over the course of an entire year eliminate the common complaint that a single observer cannot adequately measure teaching ability (Wise et al., 1984).

Time is the main resource for teacher evaluation. Evaluators need time to make reliable and valid judgments and to offer assistance. Researchers recommend that the district create time either by

giving evaluation a priority higher than that of competing responsibilities or by assigning additional evaluators. Having allocated the time, the districts must take steps to ensure that evaluators use the time well. Time to complete evaluations continues to be an unresolved issue for principals (Blankenship & Irvine, 1985).

Reliability and Validity

There continues to be little evidence regarding reliability, validity, or effects of most classroom observation techniques in the literature (Stodolsky, 1984). Bulcock (1984), Mooney (1984), and Peterson (1983) agree that observer bias continues to affect reliability of classroom observations. The literature reveals, however, reasons for a lack of observer reliability and attempts to increase observer reliability.

Reasons for a lack of a significant degree of reliability in classroom visits are complex but can be explained (Scriven, 1981 as cited by Peterson, 1983, p. 20): (a) the number of visits are few, resulting in apparent observer patterns rather than patterns emerging from the classroom itself; (b) the visitor

focuses his/her observations according to the situation and his/her own personal interest; (c) the observer relies on his/her recollections, which are greatly determined by preexisting conceptions because the recording system is inadequate; (d) the relationship of the observer and teacher in terms of politics or friendships is important; and (e) the act of visiting itself alters the teaching and student behavior.

Other attempts to increase observer reliability have included (a) using a detailed observation instrument which specifies behaviors to be observed and which includes guidelines for rating each other's evaluations, (b) developing a common standard against which evaluators can critique each other's evaluations (Peterson, 1983; Wise et al., 1984), and (c) involving several evaluators (Furtwengler, 1985). Reliability and validity are major concerns of classroom observation.

Observational Skills and Training

The need to develop evaluation skills continues to be expressed by administrators. In a recent study, Edwards (1985) found supporting evidence that a

primary inservice need for principals was to develop
teacher evaluation skills. Iowa administrators
identified their primary objective as "helping all
teachers to grow." A large percentage (80%) said they
needed to improve their classroom observation skills
and wanted a better way to record what they saw in the
classroom (p. 61). Furthermore, secondary
administrators supported the lack of classroom
observation skills and identified additional concerns
with current evaluations. Responding to a national
survey by the American Association of Secondary
Administrators, administrators specified the following
needs:

1. Better definitions of effective teaching:
   although many evaluation programs attempt to
   define effective teaching, most definitions
   center on teachers' behaviors--not on
   appropriately measured outcomes.

2. More trust in the process: as one
   superintendent said, "We need to know how to
   evaluate people and get them to feel good
   about it."

3. Proof of the link between evaluation and
   instructional improvement: until evidence
   indicates that the process is worth the
   trouble, some say evaluation and
   instructional improvement will remain
   "pro forma."

4. More specifics on evaluation techniques:
   conferences, personal goal-setting, and
   classroom observations are common approaches
   to evaluation, but administrators want to
   perform these techniques in a better way.

5. More sensitivity to the needs of the
   evaluator, primarily the principal: many
   participants feel they have neither the
   skills nor the time for successful evaluation
   (Lewis, 1982).

Perhaps, as a result of a lack of help to solve
problems regarding classroom observation and
evaluation concerns, administrators are becoming
increasingly frustrated. They find evaluation to be
time-consuming, potentially disruptive to staff-
administrator relationships, often distrusted and
criticized by teachers, and seemingly ineffectual in
improving instruction (Stiggins & Bridgeford, 1985).

Although principals often lack the observation
skills needed for effective classroom observation,
training can aid them in acquiring these skills and is
essential for effective leadership (Acheson, 1985;
Ishler, 1984).

Teacher Perceptions

Teachers remain critical of evaluation
procedures. Principal visits are seen, for the most
part, as perfunctory, designed to meet the status quo
rather than to improve instruction or evaluation.
Teachers contend that the assessment methods used are
inappropriate: the performance criteria by which they
are judged are either unspecified or too general;
classroom observations are infrequent and superficial;
the factors evaluated often have little relationship
to instruction; supervisory evaluations are too often
subjective, based on personal characteristics, rather
than on instructional skill; and results are either
not communicated or are not useful in improving
performance (Natriello, 1983). Osmond (1978 as cited
by Kauchak, Peterson, & Driscoll, 1984, p. 4), in his
questionnaire study of teachers' attitudes, found that
57% of the respondents said not enough time was

devoted to evaluation. Rothberg and Buchanan (1981
as cited by Kauchak et al., 1984, p. 5) surveyed 105
elementary and secondary teachers and found that
brevity and infrequency were the second most-mentioned
negative aspects of evaluators' visits. In a study
conducted by Kauchak and associates (1984), teachers'
attitudes toward evaluation practices were
investigated through structured interviews. Analysis
of these interviews revealed four major themes: (a)
doubts about current practices, (b) bad experiences in
the past, (c) lack of control of contributing
circumstances, and (d) impact of evaluation on peer
relationships in a school.

Thus, the overall picture that emerges is one of
acceptance of principal visits as a necessary evil or
nuisance. Unfortunately, there is a general lack of
acceptance of principal visits as a goal for
instructional improvement.

Researchers agree that teachers may view the
evaluation process positively if they believe the
purposes are instructional and completed by a skilled
observer (Kauchak et al., 1984; Stiggins & Bridgeford,
1985). In Kauchak and associates' study, in response
to needed changes in teachers' roles in evaluation,

over half (52%) of the teachers spontaneously urged more opportunities for collegial observation and for self-evaluation through goal-setting and videotaping. Others suggested more proficiency in evaluating lessons and giving teachers knowledge about what constitutes effective teaching. Repeatedly, teachers suggested more frequent formal and informal observations, greater use of peer observation and self-evaluation, more effective preparation, and more effective communication of results, with emphasis on specific suggestions for improvement, increased skill among evaluators, and better general management of evaluation (Kauchak et al., 1984; Stiggins & Bridgeford, 1985).

To summarize, teachers want, at the very least, an evaluation system that provides accurate information on classroom needs, opportunities to acquire and master new learning approaches, and collegial support when instigating needed changes (Berliner, 1982). These activities demand more time, more instructional involvement, and more thorough assessment than many principals seem to find manageable (Stiggins & Bridgeford, 1985). Teachers agree that to be effective, evaluations must

(a) occur more frequently; (b) incorporate methods
that provide relevant, specific, and complete
information; and (c) involve evaluators trained to
provide relevant, specific, and complete information.

Summary

Classroom observation continues to be a common
method for supervision and evaluation of teachers.
Major concerns continue to exist on the purposes of
observation, the brevity and frequency of observation,
the lack of reliability and validity, the lack of
observational skills, and teachers' perceptions
regarding observation.

Rationale for Classroom Observation

Criticism of American education is not a recent
phenomenon but recently has become more intense and
more specific, e.g., the National Commission on
Excellence in Education (1983) and the Carnegie Report
(Boyer, 1985). One of the most pressing concerns is
teacher competence. While, according to the American
Association of School Administrators (AASA), 90% of
all teachers are competent, dealing with the
incompetent 10% is obviously a major concern. Most

suggested methods fall into categories: either fire
incompetent teachers, or improve their competency
levels. As a result of ongoing concern regarding
teacher competency, currently some form of teacher
evaluation is mandated by 42 states (Wuhs, 1982).
Wuhs and Manatt (1983) reported that in nearly all
states, improvement was a primary purpose; in almost
half, evaluation data were also used for personnel
purposes (Stiggins & Bridgeford, 1985). Furthermore,
although an implied component of teacher evaluation,
classroom observation is often an element of state or
locally mandated evaluation systems (Stiggins &
Bridgeford, 1985). As a result, the evaluation
process is affected by individual teaching contracts
which specify the frequency of evaluation criteria,
the restricting of some methods of information
gathering, and the specifying who can and cannot
participate in the evaluation process. Teaching
contracts often require formal communication of
evaluation results, regulate written reports, require
remediation for negative evaluations, allow union
representation at all conferences and procedures, and
necessitate that notice and reasons be filed for
disciplinary action, dismissal, or demotion.

A supervisor must spend time in the classroom in order to influence the improvement of instruction. Brandt (1985) stated that the key to improving instruction and student learning is the "presence in the classroom of another adult who knows enough about teaching to be helpful" (p. 64). Boyan and Copeland (1978) stated, "Instructional supervision emphasizes both an open, collegial relationship between a teacher and a supervisor and a process for confronting instructional problems which uses reality-based data from classroom observation" (as cited in Blankenship & Irvine, 1985, p. 340). Only through classroom observation can other important teaching variables such as climate, rapport, interaction, and questioning be observed (Peterson, 1983). Classroom observation, when focusing on descriptive data to improve instruction and evaluate teachers, is one of the most commonly accepted functions of supervisors (Cooper, 1984b) and the most practical method for collecting formal data about teaching performance (Blankenship & Irvine, 1985). The collection of classroom observation has a major impact on the improvement of instruction.

Classroom Observation Methods

Edwards' review of the literature on structured and unstructured classroom observation methods may be found on pages 23 through 33.

Choice of Methods

A review of the literature, completed to determine whether one observation method was superior to another in meeting classroom observation objectives or more effective in formative or summative evaluation did not yield answers. However, a recent study completed by Edwards (1985) yielded a new alternative, the Structured Data-Capturing Technique (SDCT). The SDCT was based on research conducted by Glaze (1983). Glaze designed an instrument which included criterion items pertaining to aspects of effective teaching from the Program for Effective Teaching (PET) model. This systematic approach provided the observer with a guide to what to look for in the observation, yet retained the advantages of the narrative approach. With research based on Glaze's instrument, Edwards' technique, the SDCT, was designed to enable evaluators to (a) capture classroom observation data, (b) analyze

the data, (c) identify teacher strengths and areas for improvement, and (d) make decisions regarding performance. Results indicated evaluators who used the structured method were somewhat more capable of examining their recorded data, making decisions about important aspects of the lesson, and identifying teacher performance strengths and targets for growth. Although the findings did not indicate that the training made a significant difference in lesson analysis skills, Edwards posited that the method of training and program design needed modification. The SDCT method requires time and practice for observers to learn the process and coding. Edwards recommended that training time be expanded, specific feedback in data collection and lesson analysis be emphasized, and understanding checks be used to assess the administrator's knowledge of the elements of data-gathering and teaching.

Modifications on the SDCT process should help supervisors to (a) more effectively capture classroom data, (b) analyze the data, and (c) make decisions regarding teacher performance for formative evaluation.

Most experts agree with Evertson and Holley (1981) regarding the dilemma of choosing methods. Although no one method is suitable for all classroom observations, purposes, needs, circumstances, advantages and disadvantages of instruments should be considered when deciding which method is most appropriate.

Summary

Although narrow focus observation instruments may be most appropriate for assessing specific classroom behaviors or events, such instruments usually follow wide-lens data-gathering. The majority of initial classroom observations, usually planned to capture the whole lesson, is of the wide-lens type. However, the wide-lens type appears to be the least well developed and the most difficult to see. Supervisors find observing and recording classroom phenomena difficult, if not impossible. Since writing everything is virtually impossible, deciding what to look for and write adds to supervisors' confusion (Edwards, 1985; Ishler, 1984; Peterson, 1983).

Two recent studies (Glaze, 1983; Edwards, 1985) employed structured data-gathering alternatives which

have wide-lens approaches and appear to have great promise for teacher observation and lesson analysis. This study was designed to modify and assess the efficacy of the most recent effort, Edwards' Structured Data-Capturing Technique.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this chapter is to discuss the methods and procedures used to develop and assess the efficacy of a data-recording technique designed to help administrators to capture classroom observation data, analyze the data, and make decisions regarding teacher performance (for formative evaluation). The technique is referred to as the Structured Data-Recording (SDR) with practice technique. Additional purposes of the study are to (a) assess the effects of the training method, (b) study the relationship between gender on lesson analysis skills, and (c) gather recommendations from participants and trainer for further modification of the SDR technique.

This chapter has been divided into two major sections. The first section, "Collection of Study Data," describes the research design, the sample, the development of the SDR technique and materials, the instrumentation, and the workshop training methods. The second section, "Analysis of Data," reviews the analysis of data procedures and the statistical analysis of data.

Collection of Study Data

Research Design

This study included two phases: (a) development of the materials and training method and (b) implementation. Phase one included the development of a training process which utilized a task analysis to identify the emerging elements of the SDR, which included a framework for lesson observation and data-gathering and guided practice. The Task Analysis may be seen in Appendix A. Phase one also included the development of data recording samples and instruments for the study. The field test was designed to assess the reliability and validity of the instruments as well as the training of the SDR technique. Due to scheduling conflicts, the researcher was unable to conduct the field test; however, given Edwards' earlier effort, the lack of the field test did not appear to create serious problems.

In phase two, a modified pre-test post-test control group design was used. Participants in the experimental group (Group A) received the SDR training, an update on effective teaching techniques,

and the reference, Teaching for High Achievement, which may be seen in Appendix B. Participants in Group A spent one and one-half days in the training workshop. Participants in the control group (Group B) also received an update on effective teaching techniques and the reference, Teaching for High Achievement. Study data were collected at both workshops and then at the end of the six-week field practice period. A stratified random assignment sampling technique was used to formulate the groups. Position and gender were considered in order to ensure proportionate representation of the target population as well as adequate cases for subgroup analysis. The workshops were conducted with the Des Moines Independent Community School District, Des Moines, Iowa in January 1986. Dr. James Sweeney of Iowa State University was the trainer/leader, assisted by the researcher. Permission to conduct the study was secured from the Iowa State University Committee on the Use of Human Subjects in Research in January 1986 and from the Des Moines Independent Community School District's Research Committee in October 1985.

The Sample

Subjects for the study consisted of 77 K-12 principals, assistant principals, or other supervisory/administrative personnel involved in teacher performance evaluation in the Des Moines Independent Community School District. The Des Moines administrator/supervisory group has been involved in various professional and improvement programs and workshops: Iowa State University - Teacher Performance Evaluation training; Madeline Hunter Teaching Model training; Des Moines Public School Administrator's Academy training; and Des Moines Public School Curriculum Institute. Seventy-seven of 110 eligible principals, assistant principals, teacher evaluators, or other supervisory/administrative personnel chose to participate in the study. Sixty-five of the 77 participants were principals or assistant principals. The remaining 12 participants were central office personnel. Twenty-two participants were female, 55 participants were male. Twenty-four were unable to participate in the posttest and were eliminated from the study for various reasons such as emergencies and committee meetings. The final

number of participants was 35 in the experimental group and 42 in the control group.

Administrative Pool

A pool of experienced administrators was used to identify the criteria to which the subjects' responses were compared. The pool was comprised of 329 Delaware, Maryland teacher supervisors who were participants in evaluation training and practice exercises. The administrators were asked to:

1. View a selected videotape several times and discuss it

2. Complete the Specific Data-Recording Survey (Eighth Grade Social Studies)

3. Discuss the Specific Data-Recording Survey (Eighth Grade Social Studies) and reach consensus through discussion

4. Complete the Identification of Teacher Performance Strengths and Targets for Growth instruments

5. Discuss the Identification of Teacher Performance Strengths and Targets for Growth instruments and reach consensus through discussion

6. Determine the importance or priority of strengths and targets for growth by the following categories: (a) "best" (most important, of first priority) or (b) "acceptable" (of lesser importance, of less priority)

7. Repeat the entire procedure using another videotaped lesson and substituting the Specific Data-Recording Survey (Transitional Computer Class)

The data identified by the administrative pool became the criteria against which both experimental and control group data were compared.

Judges

Four judges--Dr. Ellen Look, Director of Curriculum, West Des Moines School District; Marilyn Semones, Research Assistant, Iowa State University; Michael Lucas, Graduate Assistant, Iowa State University; and Claudia Harms, teacher, Fort Dodge School District--independently rated the participants' responses on the Identification of Teacher Strengths and Targets for Growth instruments. The following criteria were used to select the judges:

(a) understanding of teacher evaluation,

(b) experience in teacher evaluation, (c) expertise
in effective teaching, (d) expertise in teacher
evaluation, and (e) gender. In order to ensure a
common language, the judges were provided with a list
of "key categories" of effective teaching behaviors.
The list of "key categories" of effective teaching
behaviors may be seen in Appendix C.

The judges were provided with a written copy of
the instructions, which the researcher clarified with
oral directions. The judges were asked to:

1.   Review the "key categories" sheet

2.   Read the participants' responses on the
     Identification of Teacher Performance
     Strengths and Targets for Growth instruments
     and label the responses, using "key
     categories" descriptors

One judge assigned a numerical value of 0, 1, or 2 to
each Strengths and Targets for Growth response, using
the administrative pool responses. These ratings
enabled the experimental and control group responses
on the Identification of Teacher Performance Strengths
and Targets for Growth instruments to be compared.
Since this is a highly ambiguous area, an expert in

the field was consulted. The "most frequently occurring response" ruling was implemented.

One judge assessed evaluators' responses on the Specific Data-Recording Surveys. The judge was asked to view the videotaped lesson, complete the Specific Data-Recording Survey, and assign a numerical value of 0 or 1 to indicate correct and/or incorrect responses. The same process was followed for both pretest and posttest Specific Data-Recording Surveys.

Media Development

The development of the SDR media was an important component of the study. The following media were developed: Registration Card, SDR Guide, Data-Recording samples, and the selection of videotapes. A brief description of each item follows.

The Registration Card was designed to collect information regarding the type of position held and the gender of the participants of the study. The Registration Card can be seen in Appendix D.

The SDR Guide included specific guidelines for using the technique and a detailed explanation of the use of the Data-Recording Sheet. The Data-Recording Sheet was designed to provide the administrator with a

structured format for recording classroom observation
data. The sheet was divided into three columns:
(a) anecdotes and scripting, (b) particular areas of
discussion (PAD), and (c) comments. The SDR Guide
also included a Definition of Terms which briefly
described key effective teaching behaviors supported
by the literature. The definitions enable the
evaluator and teacher to speak in a common language
and promote interrater reliability. The SDR Guide can
be seen in Appendix E.

Data-Recording samples developed by Claudia
Harms, Fort Dodge School District, were provided as
teaching aides and for reference materials. Samples
specifically related to anecdotal recording,
scripting, particular areas of discussion, and comment
data-recording were distributed. An Illustrative
Sample of Data-Recording of a videotaped lesson was
also developed. The sample was designed to provide
administrators with an example of the application of
the SDR technique. The sample represented the
culmination of all types of data-recording. Based on
a videotaped lesson of an eighth grade social studies
class, the Sample provided the link between theory and

practice. Data recording samples may be seen in Appendix F.

Four videotapes were selected from Iowa State University for possible use in the study: (a) an Eighth Grade Social Studies Class, (b) a Transitional Computer Class, (c) a Ninth Grade English Class, and (d) a Seventh Grade Life Science Class. The tapes were selected because they depicted average teaching performance, they revealed teachers who exhibited reasonably explicit strengths as well as weaknesses, they were of appropriate length (approximately 30 minutes), and they were at middle school levels and could be used with K-12 administrators.

The Observation Log was designed to provide participants a record of the amount of time they spent on classroom observations during the six-week field practice period. The log was divided by periods of the day, days of the week, and weeks of the month. No data analysis was completed with this information. The Observation Log can be seen in Appendix G.

Instrumentation

Five instruments were designed specifically for this study: (a) Supervisor Attitude Survey;

(b) Specific Data-Recording Survey, Eighth Grade
Social Studies Class; (c) Specific Data-Recording
Survey, Transitional Computer Class;
(d) Identification of Teacher Performance Strengths;
and (e) Identification of Teacher Targets for Growth.
The instruments were developed after a thorough
examination of the literature. In order to ensure the
content validity of the instruments, objectives were
written for each instrument. Selected staff members
at Iowa State University and others with expertise in
teacher evaluation were consulted for construction of
the instruments. The instruments were modified
several times for clarity before they were finalized.
A Cronbach alpha reliability coefficient was
calculated and reported at the end of the discussion
for each instrument except the Identification of
Teacher Performance Strengths and Targets for Growth
instruments. Since there was one total score recorded
for each of these two instruments, a reliability
coefficient was not calculated.

The Supervisor Attitude Survey; Specific Data-
Recording Survey, Eighth Grade Social Studies; and
Identification of Teacher Performance Strengths and
Targets for Growth instruments were administered to

participants who attended workshops in Des Moines, Iowa in January 1986. The Supervisor Attitude Survey; Specific Data-Recording Survey, Transitional Computer Class; and Identification of Teacher Performance Strengths and Targets for Growth instruments were administered to participants who attended the follow-up meeting in March 1986. Description of, and information for, the four instruments follows.

Supervisor Attitude Survey. This 12-item instrument was designed to gather data related to administrators' level of confidence in teacher observation and data-collection and data analysis skills. A nine-point Likert scale was used for this instrument. The instrument measured supervisor responses on a scale from +4, "strongly agree" to -4, "strongly disagree." Participants completed this survey as a pre- and posttest. A reliability coefficient cf .92 on the pretest and .90 on the posttest resulted (N = 75). The score for each subscale was: level of confidence toward classroom observation and data collection skills, .86 on the pretest and .81 on the posttest; level of confidence toward data analysis skills, .86 on the pretest and

.89 on the posttest. The Supervisor Attitude Survey may be seen in Appendix H.

Specific Data-Recording Survey, Eighth Grade Social Studies. This 10-item instrument was designed to assess the participants' skills in recording specific data after observing a videotaped lesson. This instrument was used as a pretest. Participants were asked specific questions regarding (a) the beginning of the lesson, (b) the objective of the lesson, (c) effective teaching behaviors, and (d) lesson design. Participants were requested to use the information they recorded on pads of paper while observing the videotaped lesson to aid them in completing the instrument. Reliability scores were completed on the sample data (N = 77) using Cronbach's alpha reliability coefficient. The reliability coefficient was .57. This instrument may be seen in Appendix I.

Specific Data-Recording Survey, Computer Class. This instrument was designed to assess the participants' skills in recording specific data after observing a videotaped lesson. This instrument was used as a posttest. Participants were asked specific

questions regarding (a) the beginning of the lesson,
(b) student behavior, (c) the objective of the lesson,
(d) effective teaching behaviors, and (e) lesson
design. Participants were asked to use the
information they recorded on their pads of paper while
observing the videotaped lesson to aid them in
completing the instrument. Reliability scores were
completed on the sample data (N = 77) using Cronbach's
alpha reliability coefficient. The reliability
coefficient was .62. This instrument may be seen in
Appendix J.

Identification of Teacher Performance Strengths.
This instrument was modified and used to measure the
participants' ability to identify teacher
performance strengths. Participants were requested to
(a) list two or three areas of strength and (b) record
specific observations which led them to identify the
strengths. This instrument may be seen in
Appendix K.

Identification of Teacher Targets for Growth.
This instrument was modified and used to measure the
participants' ability to identify teacher targets
for growth. Participants were requested to (a) list

two or three targets for growth and (b) record
specific observations which led them to identify the
targets. This instrument may be seen in Appendix L.

Workshop Training Methods

Experimental group. Group A, the experimental
group, received one and one-half days of training on
the Structured Data-Recording (SDR) with practice
technique for recording classroom observation data.
Participants recorded data on pads of paper. The 35
principals and assistant principals or other
supervisory/administrative central office personnel
from the Des Moines Independent Community School
District served as the experimental group. Of the 35
participants, 29 were principals or assistant
principals, while 6 were central office personnel.
Twenty-four participants were male and 11 participants
were female. Dr. James Sweeney of Iowa State
University conducted the one and one-half day SDR
workshop with the assistance of the researcher. Each
participant was given a numbered packet containing the
following: Registration Card, Teaching for High
Achievement pamphlet, Supervisor Attitude Survey, SDR
Guide, Lesson Observation and Framework Quiz,

Scripting samples, Anecdotal Record samples, PAD and
Comment samples, Illustrative Sample of Data-
Recording, Observation Log, pad of paper, and pencils.
The following procedures were implemented in the one
and one-half day workshop:

1. A statement regarding the purpose of the
workshop and the related research was read to the
participants. The voluntary nature of the research
was emphasized in the statement and read to the
participants. This statement may be seen in
Appendix M.

2. Participants completed a Registration Card
regarding demographic data such as participant's
position and gender.

3. Participants completed the Supervisor
Attitude Survey.

4. Participants viewed the Eighth Grade Social
Studies videotaped lesson and recorded data on their
pads of paper. Decisions about what to write or about
format were left to the observer's discretion.

5. Upon completion of the videotaped lesson, the
Specific Data-Recording Survey, Eighth Grade Social
Studies and the Identification of Teacher Performance

Strengths, and the Identification of Teacher Targets for Growth instruments were distributed.

6. Participants completed the Specific Data-Recording Survey, Eighth Grade Social Studies and the Identification of Teacher Performance Strengths using the data which they recorded on their pads.

7. Participants were given information on effective teaching behaviors and strategies. The reference, Teaching for High Achievement, was used.

8. Participants took part in exercises related to the framework for lesson observation and data-recording skills. Various videotaped lessons were used to model and demonstrate data-recording skills as well as provide guided practice. The trainer stopped the tapes periodically for discussion and clarification purposes.

9. Participants received feedback regarding data-recording.

10. Participants were given copies of the Ninth Grade English Lesson Plan. This plan may be seen in Appendix N.

11. Participants viewed the Ninth Grade English videotaped lesson and recorded data.

12.   Participants were given the Teacher
Performance Rating sheet. This sheet may be seen in
Appendix O.

13.   Participants completed the Teacher
Performance Rating sheet.

14.   Participants adjourned to practice the SDR
technique in the field for approximately six weeks.

15.   Participants reconvened in March 1986.

16.   Participants completed the Supervisor
Attitude Survey.

17.   Participants viewed the Transitional Computer
Class videotaped lesson and recorded data on their
pads of paper.

18.   The Specific Data-Recording Survey,
Transitional Computer Class and the Identification of
Teacher Performance Strengths and Targets for Growth
instruments were distributed.

19.   Participants completed the Specific Data-
Recording Survey, Transitional Computer Class and the
Identification of Teacher Strengths and Targets for
Growth instruments using the data which they recorded
on their pads of paper.

Control group. Group B, the control group,
received a half-day update on effective teaching
behaviors. Forty-two randomly assigned teacher
evaluators from the Des Moines Independent Community
School District served as the control group. Of the
42 participants, 36 were principals or assistant
principals, and 6 were central office personnel.
Thirty-one participants were male and 11 participants
were female. Dr. James Sweeney of Iowa State
University reviewed the elements of effective
teaching, using a 36-page guide, Teaching for High
Achievement. The following procedures were
implemented in the half-day workshop:

1. A statement regarding the purpose of the
workshop and the related research was read to the
participants. The voluntary nature of the research
was emphasized in the statement.

2. Participants completed a Registration Card
regarding demographic data such as participant's
position and gender.

3. Participants completed the Supervisor
Attitude Survey.

4. Participants viewed the Eighth Grade Social
Studies videotaped lesson and recorded data on their

pads of paper. Decisions about what to write or about format were left to the observers' discretion.

5. Upon completion of the videotaped lesson, the Specific Data-Recording Survey, Eighth Grade Social Studies and the Identification of Teacher Performance Strengths and Targets for Growth instruments were distributed.

6. Participants completed the Specific Data-Recording Survey, Eighth Grade Social Studies and the Identification of Teacher Performance Strengths and Targets for Growth using the data which they recorded on their pads of paper.

7. Participants were given information on effective teaching behaviors and strategies. The reference, Teaching for High Achievement, was used.

8. Participants reconvened in March 1986.

9. Participants completed the Supervisor Attitude Survey.

10. Participants viewed the Transitional Computer Class videotaped lesson and recorded data on their pads of paper.

11. The Specific Data-Recording Survey, Transitional Computer Class and the Identification of

Teacher Performance Strengths and Targets for Growth
instruments were distributed.

12. Participants completed the Specific Data-
Recording Survey, Transitional Computer Class and the
Identification of Teacher Performance Strengths and
Targets for Growth instruments using the data which
they recorded on their pads of paper.

Analysis of Data

Analysis of data was conducted in the
implementation phase. Seventy-seven teacher
evaluators participated in a modified pretest/posttest
control group research study to determine the efficacy
of a structured data-recording technique for classroom
observation.

The data were collected from a sample of 77
teacher evaluators in the Des Moines Independent
Community School District located in Des Moines, Iowa.
A stratified random assignment sampling was used on
the K-12 principals, assistant principals, and central
office supervisors and administrators to ensure
proportionate representation of the population. Data
were collected from the following instruments:
(a) Supervisor Attitude Survey; (b) Specific

Data-Recording Survey, Eighth Grade Social Studies
Class; (c) Specific Data-Recording Survey,
Transitional Computer Class, (d) Identification of
Teacher Performance Strengths, and (e) Identification
of Teacher Targets for Growth.

After the five completed instruments were
received, the data were coded and prepared for
transfer to keypunch for computer treatment.
Statistical treatment of the data was completed by the
Iowa State University Computation Center, using the
Statistical Package for the Social Science (SPSSX)
computer program. Descriptive statistics which
provided frequencies, means, and standard deviations
were computed to study the relative value of study
variables.

The analysis of variance using the regression
procedure was used to determine the equivalency of the
groups at the beginning of the study. The
participants' school role was held constant for the
data analysis.

The analysis of variance using the regression
procedure was also used to determine if significant
differences existed between experimental and control
groups and between male and female groups as stated in

hypotheses one through eight. The variables pretest
and the participant's school role were held constant
for the data analysis.

CHAPTER IV

FINDINGS

The basic problem for this study was to assess
the efficacy of the Structured Data Recording (SDR)
with practice technique. Five instruments were used
by 77 principals, assistant-principals, and central
office supervisors and administrators to collect data
for the study. Subjects were members of the Des
Moines Independent Community School District, Des
Moines, Iowa.

The study was conducted in two phases. During
the first phase of the study, materials and training
method were developed. The training process utilized
a task analysis to identify the emerging elements of
the SDR, which included a framework for lesson
observation and data gathering and guided practice.
Phase one also included the development of data-
recording samples and instruments for the study. One
videotape was selected for the pretest; a second
videotape was selected for the posttest.

In the second phase of the study, an experiment
was conducted which compared the lesson observation
and analysis skills of teacher evaluators who had

received the SDR training vis-a-vis teacher evaluators who had not received the SDR training. Specifically, level of confidence in the ability to collect data which reflect expected teaching behaviors in the lesson, the ability to analyze the data, the degree of specificity of data collection, and the ability to identify teacher performance strengths and targets for growth were measured. In addition, the effect of gender on lesson observation and analysis skills was investigated.

Registration cards provided demographic data about the participants. Seventy-seven evaluators participated in the study. Five instruments provided data for the inferential statistics; (a) Supervisor Attitude Survey; (b) Specific Data-Recording Survey, 8th Grade Social Studies Class; (c) Specific Data-Recording Survey, Transitional Computer Class; (d) Identification of Teacher Performance Strengths; and (e) Identification of Teacher Targets for Growth. These instruments may be seen in Appendices H through L.

In this chapter, each of the research hypotheses presented in Chapter I will be presented and the

results of the statistical tests of each will be displayed in table form and discussed.

Demographic Data

Seventy-seven evaluators participated in the study which took place in the Des Moines Independent Community School District, Des Moines, Iowa in January 1986. Subjects for the study consisted of K-12 principals, assistant principals, and other central office supervisory/administrative personnel involved in teacher performance evaluation. The Des Moines administrators and supervisors have been involved in various professional and improvement programs and workshops: Iowa State University, Teacher Performance Evaluation training; Madeline Hunter Teaching Model training; Des Moines Public School Administrator's Academy training; and Des Moines School Curriculum Institute. One hundred and one of 110 eligible principals, assistant principals, teacher evaluators, or other supervisory/administrative personnel chose to participate in the study. For various reasons such as emergencies and committee meetings, 24 of the 101 were not able to participate in the posttest, and therefore, were eliminated from the study.

Tables 1 and 2 provide additional descriptive data about the sample. Sixty-five of the 77 participants were principals or assistant principals. The remaining 12 participants were central office supervisors. Of the participants, 22 were female and 55 were male.

Table 1. Number and percentages of sample of
Des Moines teacher evaluators by group and
position

Position	Experimental Group N = 35		Control Group N = 42	
	Number	Percent	Number	Percent
Principals/ Assistant Principals	29	82.9	36	85.7
Central Office Supervisors/ Administrators	6	17.1	6	14.3

Table 2. Number and percentages of sample of
          Des Moines teacher evaluators by gender
          and group

Gender	Experimental Group N = 35		Control Group N = 42	
	Number	Percent	Number	Percent
Male	24	68.6	31	73.8
Female	11	31.4	11	26.2
Total	35	100.0	42	100.0

Evaluators were randomly assigned to the experimental or control group. There were 35 evaluators in the experimental group and 42 in the control group who took the post-test. The participants were separated into stratified groups. Female gender was equal in both experimental (11) and control (11) groups. There were 24 males in the experimental group and 31 males in the control group.

The Experiment

In January 1986 a one and one-half day workshop was conducted to provide training to the experimental group in the Structured Data-Recording (SDR) with practice technique. The workshop was designed to help

them capture specific, important, classroom observation data, analyze their data, and make decisions for purposes of formative evaluation regarding teacher performance.

Inferential Statistics

This section reports findings on the eight hypotheses tested in this study which are stated in the operational form below and in the null form later in this chapter.

Hypotheses

Following are the eight operational hypotheses tested in the study.

1. There is a significant difference between evaluators who received the SDR training compared to evaluators who did not receive the SDR training in their level of confidence in data collection and data analysis skills.

2. There is a significant difference between male and female evaluators in their level of confidence in data collection and data analysis skills.

3. There is a significant difference between
    evaluators who received the SDR training
    compared to evaluators who did not receive
    the SDR training in their ability to record
    specific data.

4. There is a significant difference between
    male and female evaluators in their ability
    to record specific data.

5. There is a significant difference between
    evaluators who received the SDR training
    compared to evaluators who did not receive
    the SDR training in their ability to identify
    teacher performance strengths.

6. There is a significant difference between
    male and female evaluators in their ability
    to identify teacher performance strengths.

7. There is a significant difference between
    evaluators who received the SDR training
    compared to evaluators who did not receive
    the SDR training in their ability to identify
    teacher targets for growth.

8. There is a significant difference between
    male and female evaluators in their ability
    to identify teacher targets for growth.

Hypotheses Testing

The results of the hypotheses testing are reported in this section. Below are the two statistical analyses completed to determine if a difference existed between groups (a) prior to training, and (b) after training.

1. An equivalence check was completed using the analysis of variance procedure to determine whether the skills of teacher evaluators in the experimental group were significantly different at the beginning of the study. The participants' school role was held constant for the data analysis to eliminate any influence that position may have had on a pretest score. There was a significant difference between groups on the "Specific Data Recording Survey." A two-way interaction between groups and gender resulted in the "Specific Data Recording Survey." A two-way interaction between groups and gender resulted in the "Identification of Teacher Targets for Growth" instrument. The Pretest Subscale results of the "Supervisor Attitude Survey" may be found in Appendix P. Tables 3 through 6 show the results for

each of the instruments for evaluators in both groups. The analyses of variance fail to show a significant difference between the experimental and control groups for any of the other instruments.

2. The analysis of variance using the regression procedure was used to determine if significant differences existed between experimental and control groups and between male and female groups in hypotheses one through eight. The variables pretest and the participants' school role were held constant for the data analyses.

Ho_1: There is no significant difference between evaluators who received the SDR training and evaluators who did not receive the SDR training in their level of confidence in data collection and data analysis skills.

Ho_2: There is no significant difference between male and female evaluatators in their level of confidence in data collection and data analysis skills.

Table 3. Supervisor Attitude Survey: Pretest results
of the analysis of variance by group
(experimental, control) and gender (male,
female) (N = 72)

Sources of Variation	df	Supervisor's Level of Confidence Mean Squares	F-value
Covariates	1	0.00	0.00
Position	1	0.00	0.00
Main Effects	2	0.66	0.51
Group	1	0.39	0.30
Gender	1	1.08	0.83
Two-Way Interactions	1	0.00	0.99
Group Gender	1	0.00	0.99
Residual	67	1.29	

Table 4. Specific Data-Recording Survey: Pretest
          results of the analysis of variance by group
          (experimental, control) and gender (male,
          female) (N = 77)

Sources of Variation	df	Ability to Record Specific Data	
		Mean Squares	F-Value
Covariates	1	0.53	0.14
Position	1	0.53	0.14
Main Effects	2	17.76	4.56**
Group	1	25.26	6.49**
Gender	1	11.23	2.87
Two-Way Interactions	1	17.85	4.89*
Group Gender	1	17.85	4.89*
Residual	72	3.89	

** Significant at the .01 level.

 * Significant at the .05 level.

Table 5. Identification of Teacher Performance
          Strengths: Pretest results of the analysis
          of variance by group (experimental, control)

Sources of Variation	df	Identification of Teacher Performance Strengths	
		Mean Squares	F-Value
Covariates	1	0.07	0.03
Position	1	0.07	0.03
Main Effects	2	0.82	0.33
Group	1	1.06	0.43
Gender	1	0.50	0.20
Two-way Interactions	1	0.57	0.23
Group Gender	1	0.57	0.23
Residual	68	2.48	

Table 6. Identification of Teacher Targets for
Growth: Pretest results of analysis of
variance by group (experimental, control)
and gender (male, female) (N = 71)

Sources of Variation	df	Identification of Teacher Targets for Growth	
		Mean Squares	F-Value
Covariates	1	0.08	0.04
Position	1	0.08	0.04
Main Effects	2	2.78	1.17
Group	1	0.09	0.04
Gender	1	5.53	2.34
Two-Way Interactions	1	11.66	4.93*
Group Gender	1	11.66	4.93*
Residual	66	2.36	

* Significant at the .05 level.

Research Hypothesis One was designed to determine whether evaluators who received the SDR with practice training increased their level of confidence in both data collection and data analysis skills. Data collection refers to the evaluator's ability to record data which will help the evaluator and teacher analyze: the lesson, teaching strategies, and techniques utilized in the lesson. Data analysis refers to the evaluator's ability to analyze specific data which has been recorded in order to provide feedback and to identify teacher strengths and targets for growth. Research Hypothesis Two was designed to determine whether gender had an effect on the level of confidence in data collection and data analysis skills. Evaluators were asked to complete a 12-item, Likert-type survey, the "Supervisor Attitude Survey."

Table 7 shows data collected to test the first hypothesis. The data in Table 7 show that the level of confidence for the experimental group increased from the pretest (M = 5.79) to the posttest (M = 5.93). The mean difference of evaluators in the experimental group from the pretest to the posttest was 0.14. The level of confidence of the control

group also increased from the pretest (M = 5.62) to
the posttest (M = 5.70). The mean difference of
evaluators in the control group from the pretest to
the posttest was 0.08. Evaluators in the experimental
group had a gain score of 0.06 over evaluators in the
control group.

Table 7. Supervisor Attitude Survey: Comparison of
evaluators' level of confidence in
appropriate data-recording and data analysis
skills by group (experimental, control)

Group	Supervisor's Level of Confidence*						Mean Difference
	Pretest			Posttest			
	N	Mean	S.D.	N	Mean	S.D.	ence
Experimental	30	5.79	1.12	30	5.93	0.95	0.14
Control	42	5.62	1.12	39	5.70	1.04	0.08
Total	72			69			

* Choice Range: Strongly agree to strongly disagree
on a 9-point Likert-type scale.

Table 8 shows data collected to test the second
hypothesis. The data in Table 8 show that the level
of confidence for male evaluators increased from the

pretest (M = 5.62) to the posttest (M = 5.64). The
mean difference of male evaluators from the pretest to
the posttest was 0.02. Level of confidence for
female evaluators also increased from the pretest
(M = 5.90) to the posttest (M = 6.27). The mean
difference of female evaluators from the pretest to
the posttest was 0.37. Female evaluators had a gain
score of 0.35 over male evaluators.

Table 8. Supervisor Attitude Survey: Comparison of
evaluators' level of confidence in
appropriate data-recording and data analysis
skills by gender (male, female)

| | Supervisors' Level of Confidence* | | | | | | Mean Differ- ence |
| | Pretest | | | Posttest | | | |
Group	N	Mean	S.D.	N	Mean	S.D.	
Male	54	5.62	1.17	52	5.64	0.96	0.02
Female	18	5.90	0.94	17	6.27	1.00	0.37
Total	72			69			

* Choice Range: Strongly agree to strongly disagree
on a 9-point Likert-type scale.

Table 9 shows posttest means and standard deviations for both experimental and control groups and male and female evaluators. The data allow one to compare the total means and standard deviations against the various groups on the "Supervisor Attitude Survey." Posttest results indicate that evaluators in the experimental group ($M = 5.93$) had a greater level of confidence than evaluators in the control group ($M = 5.70$). The mean difference between evaluators in the experimental and control groups was 0.23. Posttest results indicate that female evaluators had a greater level of confidence ($M = 6.27$) than male evaluators ($M = 5.64$). The mean difference between male and female evaluators was 0.63.

Null Hypothesis One was tested using the analysis of variance procedure to analyze the effects of the SDR training on evaluators' level of confidence in data collection and data analysis. Table 10 shows that evaluators who received the SDR training did not show a significant increase in their level of confidence compared to evaluators who did not receive the SDR training. Therefore, Hypothesis One was not rejected.

Table 9. Supervisor Attitude Survey: Posttest results of a comparison
         of evaluators' level of confidence in data collection and
         data analysis skills by group (experimental, control) and
         gender (male, female)

| | Supervisors' Level of Confidence* | | | | | | | | |
| | Male | | | Female | | | Total | | |
Group	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	23	5.70	0.76	7	6.65	1.21	30	5.93	0.95
Control	29	5.59	1.11	10	6.01	0.79	39	5.70	1.04
Total	52	5.64	0.96	17	6.27	1.00	69	5.80	1.00

* Choice range: Strongly disagree to strongly agree on a
                9-point Likert-type scale.

Null Hypothesis Two was tested using the analysis of variance procedure to analyze the effects of gender on evaluators' level of confidence in data collection and data analysis. Table 10 shows that there was no significant difference between male and female evaluators in their level of confidence in data collection and data analysis. Therefore, Hypothesis Two was not rejected.

Data analyses of the "Supervisor Attitude Survey: Subscales, Data Collection and Data Analysis," may be seen in Appendix Q.

Ho_3: There is no significant difference between evaluators who received the SDR training and evaluators who did not receive the SDR training in their ability to record specific data.

Ho_4: There is no significant difference between male and female evaluators in their ability to record specific data.

Research Hypothesis Three was designed to determine whether evaluators who received the SDR training were more proficient in their ability to record specific data as compared to evaluators who did not receive the SDR training. The ability to record specific data refers to the evaluator's ability to record strategies and student/teacher behaviors in a

Table 10. Supervisor Attitude Survey: Posttest
results of the analysis of variance by
group (experimental, control) and gender
(male, female) (N = 64)

| Source of Variation | df | Supervisor's Level of Confidence | |
		Mean Squares	F-Value
Covariates	2	11.23	18.67***
Position	1	0.01	0.01
Pretest	1	22.46	37.34***
Main Effects	2	0.59	0.98
Group	1	0.00	0.00
Gender	1	1.14	1.90
Two-Way Interactions	1	0.11	0.19
Group Gender	1	0.11	0.19
Residual	60	0.60	

*** Significant beyond the .001 level.

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manner which will help the evaluator and teacher in identifying teacher strengths and targets for growth in the evaluation process. Strategies include teaching behaviors such as beginning the lesson, stating the objective, checking for understanding, summarizing, and using structuring comments; lesson design, the sequence and concepts in the lesson; and student/teacher behaviors which enhance or detract from the lesson. Research Hypothesis Four was designed to determine whether a difference existed between male and female evaluators in their ability to record specific data. Evaluators were asked to observe a videotaped lesson, Transitional Computer Class, record data, and complete a ten-item survey, "Specific Data-Recording Survey," using the data they recorded. Their assessments were compared to expert judgments of an administrator pool.

Table 11 shows data collected to test the third hypothesis. Data in Table 11 show that the abilities of evaluators in the experimental group increased from the pretest (M = 4.17) to the posttest (M = 4.20). The mean difference of evaluators in the experimental group from the pretest to the posttest was 0.03. Evaluators in the control group declined in their

ability to record specific data from the pretest

(M = 4.95) to the posttest (M = 3.90). The mean

difference of evaluators in the control group from the

pretest to the posttest was -1.05.

Table 11.   Specific Data-Recording Survey: Results of
            the comparison of evaluators' ability to
            record specific data by group
            (experimental, control)

| Group | Ability to Record Specific Data* | | | | | | Mean Differ- ence |
| | Pretest | | | Posttest | | | |
	N	Mean	S.D.	N	Mean	S.D.	
Experimental	35	4.17	2.19	35	4.20	2.43	0.03
Control	42	4.95	1.90	42	3.90	1.90	-1.05
Total	77			77			

* Score possible: 10.

Table 12   shows data collected to test the fourth

hypothesis. Male evaluators declined in their ability to

record specific data from the pretest (M = 4.36) to the

posttest (M = 3.98). The mean difference of male

evaluators from the pretest to the posttest was -0.48.

Female evaluators also declined in their ability to

record specific data from the pretest (M = 5.18) to the posttest (M = 4.13). The mean difference of female evaluators from the pretest to the posttest was -1.05.

Table 12. Specific Data-Recording Survey: Comparison of evaluators' ability to record specific data by gender (male, female)

	Ability to Record Specific Data*						
	Pretest			Posttest			Mean Differ-ence
Group	N	Mean	S.D.	N	Mean	S.D.	
Male	55	4.36	1.82	55	3.98	2.06	-0.48
Female	22	5.18	2.52	22	4.13	2.40	-1.05
Total	77			77			

* Score possible: 10.

Table 13 shows posttest means and standard deviations for both experimental and control groups and male and female groups. The data allow one to compare the total means and standard deviations against the various groups on the "Specific Data-Recording Survey." Posttest results indicate that evaluators in the experimental group had a greater ability to record

Table 13. Specific Data-Recording Survey: Posttest results of a
comparison of evaluators' ability to record specific data by
group (experimental, control) and gender (male, female)

	Ability to Record Specific Data*								
Group	Male			Female			Total		
	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	24	4.50	2.30	11	3.45	2.66	35	4.20	2.43
Control	31	3.58	1.78	11	4.82	1.99	42	3.90	1.90
Total	55	3.98	2.06	22	4.13	2.40	77	4.03	2.15

* Score possible: 10.

specific data (M = 4.20) than evaluators in the control group (M = 3.90). The mean difference between evaluators in the experimental and control groups was 0.30. Posttest results indicate that female evaluators had a greater ability to record specific data (M = 4.13) than male evaluators (M = 3.98). The mean difference between male and female evaluators was 0.15.

Null Hypothesis Three was tested using the analysis of variance procedure to analyze the effects of the SDR training on evaluators' ability to record specific data. Table 14 shows that there was no significant difference between the experimental and control groups in their ability to record specific data. Therefore, Hypothesis Three was not rejected.

Null Hypothesis Four was tested using the analysis of variance procedure to analyze the effects of gender on evaluators' ability to record specific data. Table 14 shows that there was no significant difference between male and female evaluators in their ability to record specific data. Therefore, Hypothesis Four was not rejected.

A two-way interaction between groups and gender is represented in Figure 1. Figure 1 shows that male

Table 14. Specific Data-Recording Survey: Posttest
results of the analysis of variance by
group (experimental, control) and gender
(male, female) (N = 77)

Source of Variation	df	Ability to Record Specific Data	
		Mean Squares	F-Value
Covariates	2	1.76	0.38
Position	1	0.00	0.00
Pretest	1	3.51	0.77
Main Effects	2	1.15	0.25
Group	1	1.91	0.42
Gender	1	0.53	0.12
Two-Way Interactions	1	23.34	5.11*
Group Gender	1	23.34	5.11*
Residual	71	5.11	

* Significant at the .05 level.
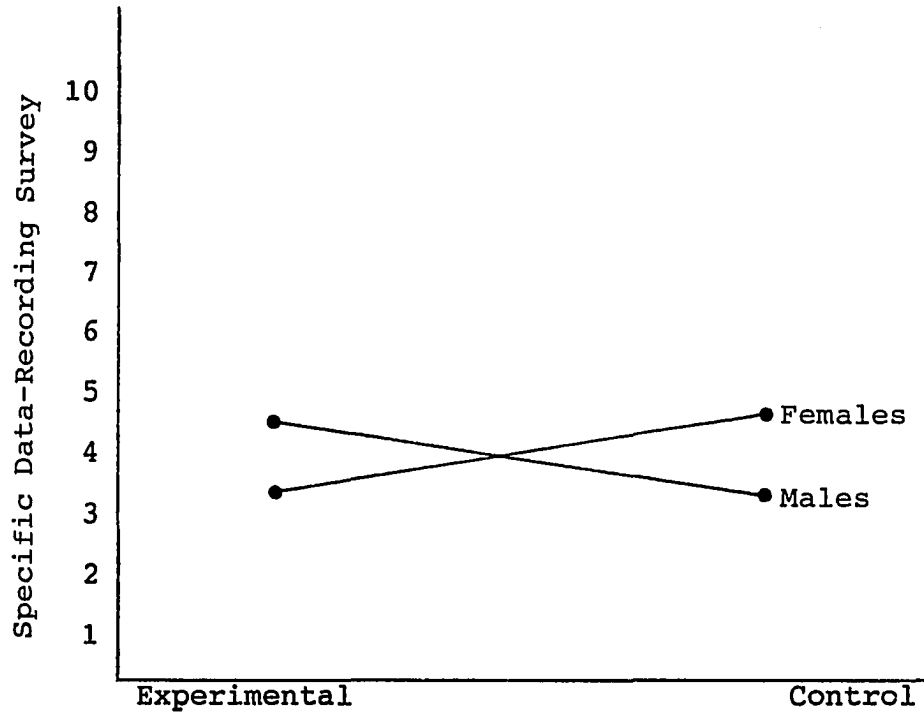
Figure 1.   Specific Data-Recording Survey: Posttest
            results of the representation of data
            reflecting interaction between group
            (experimental, control) and gender (male,
            female)

evaluators in the experimental group had a higher

posttest score (M = 4.50) than males in the control

group (M = 3.58). Females in the experimental group,

however, had a lower posttest score (M = 3.45) than

females in the control group (M = 4.82).

> Ho$_5$: There is no significant difference between
> evaluators who received the SDR training
> and evaluators who did not receive the SDR
> training in their ability to identify
> teacher performance strengths.

> Ho$_6$: There is no significant difference between
> male and female evaluators in their ability
> to identify teacher performance strengths.

Research Hypothesis Five was designed to

determine whether evaluators who received the SDR

training increased their ability to identify teacher

performance strengths as a result of the training.

Teacher performance strengths refer to specific,

observable teaching behaviors which lead to the

accomplishment of objectives which should, in turn,

lead to student achievement. Hypothesis Six was

designed to determine whether gender had an effect on

evaluators' ability to identify teacher performance

strengths. Evaluators were asked to observe a

videotaped lesson, record data, and complete the

instrument, "Identification of Teacher Performance

Strengths," using the data they recorded. Their
responses were compared to the expert judgments of an
administrator pool.

Table 15 shows data collected to test the fifth
hypothesis. Evaluators in the experimental group
increased their ability to identify teacher
performance strengths from the pretest (M = 2.38) to
the posttest (M = 3.43). The mean difference of
evaluators in the experimental group from the pretest
to the posttest was 1.05. Evaluators in the control
group showed a decline in their ability to identify
teacher performance strengths from the pretest
(M = 2.73) to the posttest (M = 2.53). The mean
difference of evaluators in the control group from the
pretest to the posttest was -0.20. Evaluators who
received the SDR training had a gain score of 1.25
over evaluators who did not receive the SDR training.

Table 16 shows data collected to test the sixth
hypothesis. The data show that male evaluators
increased their ability to identify teacher
performance strengths from the pretest (M = 2.53) to
the posttest (M = 2.94). The mean difference of male
evaluators from the pretest to the posttest was 0.41.
Female evaluators also increased their ability to

identify teacher performance strengths from the
pretest (M = 2.70) to the posttest (M = 2.89). The
mean difference of male evaluators from the pretest to
the posttest was 0.19. Male evaluators had a gain
score of 0.22 over female evaluators.

Table 15. Identification of Teacher Performance
           Strengths: Comparison of evaluators'
           ability to identify teacher performance
           strengths by group (experimental, control)

Group	Identification of Teacher Performance Strengths*						Mean Differ- ence
	Pretest			Posttest			
	N	Mean	S.D.	N	Mean	S.D.	
Experimental	32	2.38	1.56	30	3.43	1.78	1.05
Control	41	2.73	1.53	38	2.53	1.20	-0.20
Total	73			68			

* Score possible: 6.

Table 16. Identification of Teacher Performance
Strengths: Comparison of evaluators'
ability to identify teacher performance
strengths by gender (male, female)

	Identification of Teacher Performance Strengths*						
Group	Pretest			Posttest			Mean Differ- ence
	N	Mean	S.D.	N	Mean	S.D.	
Male	53	2.53	1.48	50	2.94	1.38	0.41
Female	20	2.70	1.75	18	2.89	1.97	0.19
Total	73			68			

* Score possible: 6.

Table 17 shows posttest means and standard
deviations by both experimental and control groups and
male and female groups. The data allow one to compare
the total means and standard deviations for the groups
on the "Identification of Teacher Performance
Strengths" instrument. Posttest results indicate that
evaluators in the experimental group (M = 3.43) had a
greater ability to identify teacher performance
strengths than evaluators in the control group
(M = 2.53). The mean difference between evaluators in
the experimental and control groups was 0.90.

Table 17. Identification of Teacher Performance Strengths: Posttest
results of the comparison of evaluators' ability to identify
teacher performance strengths by group (experimental,
control) and gender (male, female)

| | Identification of Teacher Performance Strengths* | | | | | | | | |
| | Male | | | Female | | | Total | | |
Group	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	22	3.32	1.62	8	3.75	2.25	30	3.43	1.77
Control	28	2.64	1.10	10	2.20	1.48	38	2.53	1.20
Total	50	2.94	1.38	18	2.89	1.97	68	2.93	1.54

* Score possible: 6.

Posttest results indicate that male evaluators had a greater ability to identify teacher performance strengths (M = 2.94) than female evaluators (M = 2.89). The mean difference between male and female evaluators was 0.05.

Null Hypothesis Five was tested using the analysis of variance procedure to analyze the effects of the SDR training on evaluators' ability in identifying teacher performance strengths. Table 18 shows that the F-value is significant at the .01 level. Evaluators who received the SDR training showed a significant increase in their ability to identify teacher performance strengths compared to evaluators who did not receive the SDR training. Therefore, the hypothesis was rejected.

Null Hypothesis Six was tested using the analysis of variance procedure to analyze the effects of gender on evaluators' ability in identifying teacher performance strengths. Table 18 shows that there was no significant difference between male and female evaluators in their ability to identify teacher performance strengths. Therefore, the hypothesis was not rejected.

Table 18. Identification of Teacher Performance
         Strengths: Posttest results of the
         analysis of variance by group
         (experimental, control) and gender (male,
         female) (N = 64)

| Source of Variation | df | Identification of Teacher Performance Strengths | |
		Mean Squares	F-Value
Covariates	2	0.39	0.17
Position	1	0.77	0.33
Pretest	1	0.01	0.00
Main Effects	2	8.89	3.80*
Group	1	17.77	7.60**
Gender	1	0.28	0.12
Two-Way Interactions	1	3.63	1.55
Group Gender	1	3.63	1.55
Residual	58	2.34	

** Significant at the .01 level.

 * Significant at the .05 level.

Ho7: There is no significant difference between
      evaluators who received the SDR training
      and evaluators who did not receive the SDR
      training in their ability to identify
      teacher targets for growth.

Ho$_8$: There is no significant difference between male and female evaluators in their ability to identify teacher targets for growth.

Research Hypothesis Seven was designed to determine whether evaluators who received the SDR training increased their ability to identify teacher targets for growth. Teacher targets for growth refer to teacher techniques or strategies which the teacher (a) does not do well or omits and which significantly detract from his/her effectiveness; or (b) may wish to improve upon because they are important aspects of his/her approach or style. Hypothesis Eight was designed to determine whether gender had an effect on evaluators' ability to identify teacher targets for growth. Evaluators were asked to observe a videotaped lesson, record data, and complete the instrument, "Identification of Teacher targets for Growth," using the data they recorded. Their responses were compared to the expert judgements of an administration pool.

Table 19 shows data collected to test the seventh hypothesis. Data in Table 19 show that evaluators in the experimental group showed a decline in their ability to identify teacher targets for growth from the pretest (M = 2.30) to the posttest (M = 1.83).

The mean difference of evaluators in the experimental group from the pretest to the posttest was -0.47. Evaluators in the control group showed a greater decline in their skills from the pretest (M = 2.76) to the posttest (M = 1.79). The mean difference of evaluators in the control group from the pretest to the posttest was -0.97.

Table 19. Identification of Teacher Targets for Growth: Comparison of evaluators' ability to identify teacher targets for growth by group (experimental, control)

Group	Identification of Teacher Targets for Growth*						Mean Differ-ence
	Pretest			Posttest			
	N	Mean	S.D.	N	Mean	S.D.	
Experimental	33	2.30	1.40	30	1.83	1.49	-0.47
Control	38	2.76	1.73	38	1.79	1.46	-0.97
Total	71			68			

* Score possible: 6.

Table 20 shows data collected for the eighth hypothesis. Male evaluators showed a decline in their ability to identify teacher targets for growth from the

pretest (M = 2.39) to the posttest (M = 1.55). The mean

difference for male evaluators from the pretest to the

posttest was -0.84. Female evaluators also showed

a decline in their ability to identify teacher targets

for growth from the pretest (M = 3.00) to the posttest

(M = 2.47). The mean difference for female evaluators

from the pretest to the posttest was -0.53. Male

evaluators showed a greater decline than female

evaluators in their ability to identify teacher targets

for growth.

Table 20. Identification of Teacher Targets for
Growth: Comparison of evaluators' ability
to identify teacher targets for growth by
gender (male, female)

| Group | Identification of Teacher Targets for Growth* | | | | | | Mean Differ- ence |
| | Pretest | | | Posttest | | | |
	N	Mean	S.D.	N	Mean	S.D.	
Male	52	2.39	1.52	49	1.55	1.32	-0.84
Female	19	3.00	1.73	19	2.47	1.61	-0.53
Total	71			68			

* Score possible: 6.

Table 21 shows posttest means and standard deviations for both experimental and control and male and female groups. The data allow one to compare the total means and standard deviations for the various groups on the "Identification of Teacher Targets for Growth" instrument. Posttest results indicate that evaluators in the experimental group had a greater ability to identify teacher targets for growth (M = 1.83) than evaluators in the control group (M = 1.79). The mean difference between evaluators in the experimental and control groups was 0.04. Posttest results indicate that female evaluators had a greater ability to identify teacher targets for growth (M = 2.47) than male evaluators (M = 1.55). The mean difference between male and female evaluators was 0.92.

Null Hypothesis Seven was tested using the analysis of variance procedure to analyze the effects of the SDR training on evaluators' ability to identify teacher targets for growth. The analysis of variance in Table 22 failed to show a significant difference between the two groups. Evaluators who received the SDR training did not show a significant difference in their ability to identify teacher targets for growth compared to

Table 21. Identification of Teacher Targets for Growth: Posttest
           results of the comparison of evaluators' ability to
           identify teacher targets for growth by group (experimental,
           control) and gender (male, female)

| | Identification of Teacher Targets for Growth* | | | | | | | | |
| | Male | | | Female | | | Total | | |
Group	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	21	1.48	1.33	9	2.67	1.58	30	1.83	1.49
Control	28	1.61	1.34	10	2.30	1.70	38	1.79	1.45
Total	49	1.55	1.32	19	2.47	1.61	68	1.81	1.46

* Score possible: 6.

evaluators who did not receive the SDR training. Therefore, Hypothesis Seven was not rejected.

Null Hypothesis Eight was tested using the analysis of variance procedure to analyze the effects of gender on evaluators' ability to identify teacher targets for growth. The analysis of variance in Table 22 shows a significant difference between male and female evaluators in their ability to identify teacher targets for growth. Female evaluators, after training, were better able to identify teacher targets for growth than male evaluators. Therefore, Hypothesis Eight was rejected.

Table 22. Identification of Teacher Targets for
          Growth: Posttest results of the analysis
          of variance by group (experimental,
          control) and gender (male, female) (N = 62)

| Source of Variation | df | Identification of Teacher Targets for Growth | |
		Mean Squares	F-Value
Covariates	2	1.72	0.86
Position	1	2.75	1.38
Pretest	1	1.01	0.50
Main Effects	2	7.21	3.61
Group	1	0.00	0.00
Gender	1	14.41	7.21**
Two-Way Interactions	1	0.35	0.18
Group Gender	1	0.35	0.18
Residual	56	2.00	

** Significant at the .01 level.

CHAPTER V

SUMMARY, CONCLUSIONS, AND

RECOMMENDATIONS

The purposes of the study were (a) to assess the efficacy of the Structured Data-Recording (SDR) with practice technique and (b) to study the relationship between gender and lesson observation and analysis skills and training. In this chapter, the findings are summarized, conclusions from the study based on an analysis of the data are reported, and recommendations for further research are made. The chapter has been organized into two sections: (a) summary and conclusions and (b) recommendations for further research.

A summary of the findings based on data gathered in the winter of 1986 from teacher evaluators regarding lesson analysis and data-recording skills follows.

Summary and Conclusions

Findings

Seventy-seven K-12 principals, assistant principals, and other central office supervisory or

administrative personnel involved in teacher
performance evaluation in the Des Moines Independent
Community School District, Des Moines, Iowa provided
data for the study. In January 1986, 77 teacher
evaluators participated in the experiment conducted to
assess the efficacy of a Structured Data-Recording
(SDR) with practice technique. The findings follow:

1. Evaluators were significantly better able to
    identify teacher performance strengths
    following the SDR training.

2. Training did not have a significant effect on
    evaluators' ability to identify teacher
    targets for growth.

3. Female evaluators were significantly better
    able to identify teacher targets for growth
    than male evaluators.

4. Gender did not have a significant effect on
    evaluators' ability to identify teacher
    performance strengths.

5. Neither training nor gender had a significant
    effect on evaluators' ability to record
    specific data.

6. Neither training nor gender had a significant
    effect on evaluators' level of confidence in
    data collection and data analysis skills.

The following will amplify on the findings and
discuss conclusions related to each finding. It may
be instructive to examine the data in more detail in
order to separate the group effect from an individual

effect. These data may be seen in Appendix R but will not be referred to in the discussion. One of the most significant findings which resulted from the training was the evaluators' increased ability to analyze their recorded data and make better decisions about teacher performance strengths. Helping teachers become aware of their strengths and build on those strengths is an important administrative skill. Identifying those strengths provides a base from which continued growth can be fostered. The continuous improvement of instruction has great impact on students' learning.

The results failed to show a significant difference between evaluators who received the training and evaluators who did not receive the training in their ability to identify teacher targets for growth. However, the results showed a significant difference between male and female evaluators' ability to identify teacher targets for growth. Female evaluators were significantly better able to identify teacher targets for growth compared to male evaluators.

Gender, on the other hand, did not seem to have an effect on evaluators' ability to identify teacher

performance strengths. Results failed to show a significant difference between male and female evaluators in their ability to identify teacher performance strengths. One wonders why gender significantly affected evaluators' ability to identify teacher targets for growth yet not their ability to identify teacher performance strengths, their ability to record specific data, nor their level of confidence in data collection and data analysis.

There was no significant difference between evaluators who received the SDR training compared to evaluators who did not receive the SDR training in their ability to record specific data. There was also no significant difference between male and female evaluators in this area. It is possible that the rapid pacing of the videotaped lesson used in the posttest affected evaluators' ability to effectively record specific data.

Results failed to show a significant difference between evaluators who received the SDR training and evaluators who did not receive the SDR training nor between male and female evaluators in their level of confidence in data collection and data analysis. Although the new method showed promise, it did not

significantly alter evaluators' perceptions of their
ability to collect and analyze the data. It is
possible that the three-hour update on effective
teaching and the reference, Teaching for High
Achievement, which the control group also received,
influenced the level of confidence of the evaluators.
Since Bandura et al. (1978) reported the relationship
between perceived self-efficacy and the persistence
with which one will face obstacles, further work in
this area seems advisable.

In summary, training and gender had an effect on
some aspects of the study, yet not all. Evaluators
who received the SDR training were significantly
better able to identify teacher performance strengths.
However, training did not have a significant effect on
evaluators' ability to identify teacher targets for
growth. Female evaluators were significantly better
able to identify teacher targets for growth than male
evaluators. But gender did not have a significant
effect on evaluators' ability to identify teacher
performance strengths. Finally, neither training nor
gender had a significant effect on evaluators' level
of confidence in data collection and data analysis nor
the ability to record specific data. The results

certainly raise the question of why training and gender had an effect on some measures, but not all.

Feedback from participants through informal conversations and informal writing provide additional insight which may have some bearing on the findings. First, the participants suggested that fall training be implemented in order to incorporate the training into the formal teacher evaluation cycle and the posttest be completed at a time other than near holiday or vacation periods. Next, since the pace of the lesson used in the posttest was very rapid for evaluation and lesson analysis, participants recommended a posttest lesson equivalent to the pretest lesson. (The videotaped lesson has since been reviewed and is perceived to be more difficult than the videotaped lesson used in the pretest.) Last, participants recommended the use of frequent peer team meetings to discuss and clarify concerns regarding implementation of the training.

Research reveals contradictory information regarding the effect of gender in evaluation. Frieze et al. (1978) found that women evaluators tend to rate the performances of women lower than the performance of men. Although additional research doesn't discern

between the gender of the evaluator, the research supports gender bias. Studies focusing on the evaluation of qualifications in selection and promotion situations and research on the perceived causes of performance show fairly consistent bias in favor of men (Goldberg, 1968; Taynor & Deaux, 1975; Rosen & Jerdee, 1974; Shaw, 1974; Gutek & Stevens, 1979; Terborg & Ilgen, 1975). On the other hand, a number of studies have found no difference in the evaluation of males and females (Frank & Drucker, 1977; Taynor & Deaux, 1973; Hall & Hall, 1977; Dipboye & Wiley, 1977). In summary, sex bias seems to affect some evaluation situations more than others. Further research in this area is warranted.

Recommendation for Further Research

Below are findings recommended for further research.

1. Collecting more information about the characteristics of the evaluators would be helpful in order to understand why the training method appeared to work well for some evaluators and not for others. Such factors as openness to learning, learning style,

understanding of effective teaching, and years of experience both in the classroom and in administration may be helpful.

2. Coordinating the training with a district's formal teacher evaluation cycle may result in improved results. Training held in the fall, rather than winter, would better coordinate with the formal evaluation cycle. In addition, training and testing should take place at a time other than before holiday or vacation periods. Peer coaching should be included to ensure successful implementation of the training.

3. Equivalent videotaped lessons should be used. How to ensure this could provide a research study in itself.

4. The sample size of the groups was small (experimental = 33, control = 42). Statistical analysis is difficult with such a restricted sample size. Sample size should be increased in future research efforts.

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ACKNOWLEDGEMENTS

APPENDIX A

TASK ANALYSIS

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
1. To establish the need for a Structured Data-Recording (SDR) technique	Trainer: Lecture and discuss the need for and theory of the SDR technique. Trainer: Reteaching Alternative - further discussion with participants.		30
2. To prepare participants for the 1 1/2 day workshop.	Trainer: Provide an overview of the plans for the 1 1/2 day workshop via lecture and discussion.	Trainer: Monitor.	15
3. To assess confidence level skills and collect data about the participants (pretest): a. collect demographic data.	Trainer: Distribute Registration Cards.	Participants: Complete Registration Cards.	5

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
b. assess perception with regard to level of confidence for teacher evaluation and lesson analysis.	Trainer: Distribute Supervisor Attitude Survey.	Participants: Complete Supervisor Attitude Survey.	20
c. assess skills in data gathering, lesson analysis, identification of teacher strengths, and targets for growth.	Trainer: Show Tape 1 and administer Specific Data-Gathering Survey.	Participants: View Tape 1, gather data, and complete survey. Trainer: Analyze selected items from 10-12 randomly selected respondents to determine entry level skills.	20
4. To understand the framework for lesson observation and data-gathering skills.	Trainer: Lecture and discuss the framework for lesson observation and data-gathering. Trainer: Administer the Framework for Analyzing Lesson Observation Assessment.	Participants: Complete the Framework for Analyzing Lesson Observation Assessment.	45-60

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
	Trainer: Reteach if necessary.	Trainer: Analyze selected items from 10-12 randomly selected respondents to check for understanding.	
5. To understand "key" effective teaching behaviors and strategies.	Trainer (1) Distribute Effective Teaching Behaviors and Strategies reference materials. (2) Lecture and discuss "key" effective teaching behaviors and strategies.		20-35
6. To develop a lesson observation record: a. write anecdotal comments	Trainer: Distribute reference materials. Trainer: (1) Lecture and discuss anecdotal comments. (2) Provide samples.		30-45

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
	(3) Use videotape and model the recording of anecdotal comments. (4) Use videotape for guided practice. Trainer: Reteach if necessary.	Trainer: (1) Circulate and monitor. (2) Collect samples of data recorded by respondents. (3) Analyze data of two to four randomly selected respondents to check for understanding.	
b. script important behaviors	Trainer: (1) Lecture and discuss the scripting of important behaviors. (2) Provide samples.		30-45

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
	(3) Use videotape and model scripting.		
	(4) Use videotape for guided practice.		
c. Use code for Particular Areas of Discussion (PAD) column.	Trainer:		30-45
	(1) Lecture and discuss PAD.		
	(2) Provide samples.		
	(3) Use videotape for guided practice.		
	Participants: Discuss PAD column and rationale in small groups.	Trainer:	
		(1) Circulate and monitor.	
		(2) Collect samples of data recorded by respondents.	
		(3) Analyze data of two or four randomly selected respondents to check for understanding.	

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
d. Record observer comments.	Trainer: Large group discussions regarding comments and questions. Reteach if necessary. Trainer: (1) Lecture and discuss writing comments. (2) Provide samples. (3) Use videotape and model the recording of observation comments. (4) Use videotape for guided practice.	Trainer: (1) Circulate and monitor. (2) Collect samples of data recorded by respondents. (3) Analyze data of two to four randomly selected respondents to check for understanding.	

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
7. Use Structured Data-Recording technique.	Trainer: (1) Distribute Illustrative Data-Recording Sample. (2) Review lesson observation framework and data-gathering method. (3) Use Tape #2. Participants: Record data. Trainer: Distribute Observation Summary Quiz. Trainer: (1) Lead participants in discussion related to: (a) building blocks and specific data	Participants: Complete Observation Summary Quiz. Trainer: Collect and analyze data of two to four randomly selected respondents to check for understanding.	60-75

OBJECTIVE	ACTIVITY	EVALUATION	TIME ALLOTMENTS
	(b) targets for growth and specific data (c) "key" effective teaching behaviors and specific data Trainer: Reteach if needed.		
8. To use the Structured Data-Recording process independently.	Trainer: (1) Review the structured data-recording process, "key" effective teaching behaviors, and coding. (2) Distribute Data-Recording forms. (3) Use Tape #3. Participants: View Tape #3 and record specific data. Trainer: Distribute Observation Summary Quiz #3.		75-110

APPENDIX B

TEACHING FOR HIGH ACHIEVEMENT

TEACHING FOR HIGH ACHIEVEMENT

Dr. Jim Sweeney
Iowa State University

Preface

Effective teaching is and always will be the cornerstone of school effectiveness. What teachers do, on a regular basis, is the single most important activity in education. What was once a mystery has become considerably less mysterious - research on teaching has helped us to understand what great teachers do and what to look for in the classroom. While there is still no recipe for great teaching, we know a great deal more about what to do, with whom it works, and when to do it. This guide was developed for two primary purposes: (1) to help teachers examine their techniques and consider other strategies, and (2) to assist supervisors who observe in the classroom. The contents were extracted from sources too numerous to mention but a special thanks goes to the work of Good and Brophy on questioning. Please feel free to copy any materials and use them as you see fit. I hope that they are useful to you as you strive for our common goal--GREAT TEACHING.

<div style="text-align:right">

Jim Sweeney, Professor
Educational Administration
Iowa State University

</div>

Teaching for Higher Achievement Review

Dr. Jim Sweeney

Explicit factors consistently appear to be associated with higher student achievement or learning;*. This activity is designed to provide an opportunity for you to review these factors and discuss how they can be applied in classrooms. Please examine each factor and indicate its relationship to student achievement. Place a (+) before each factor associated with higher achievement and a (-) after those which have a negative effect. If you think that the factor makes little difference, leave it blank.

_____ 1. ADVANCED DEGREES: The teacher holds a master's or Ph.D. degree.

_____ 2. PLANNING: The teacher formulates a scheme for teaching and learning.

_____ 3. CLASSROOM MANAGEMENT: Students are actively attentive and there are few disruptions.

_____ 4. TIME MANAGEMENT: The teacher uses instructional time wisely.

_____ 5. OBJECTIVE FOCUS: Teaching and learning activities are tied to lesson objectives.

_____ 6. TEACHING EXPERIENCE: As teacher experience increases, student achievement increases.

_____ 7. STAGE SETTING: The teacher "prepares" the learner prior to providing input.

_____ 8. HIGH EXPECTATIONS: The teacher "communicates" that all students are expected to learn and grow.

_____ 9. LECTURE: The teacher lectures over 50 percent of the time.

_____ 10. CLARITY: The teacher presents material effectively.

_____ 11. CONTENT KNOWLEDGE: The teacher presents up-to-date and accurate information and uses examples, stories, and analogies.

_____ 12. QUESTIONING: The teacher uses appropriate questions and questioning techniques.

_____ 13. PROBING: The teacher effectively builds on student responses.

_____ 14. SEATWORK: The teacher gives no seatwork.

_____ 15. STRUCTURING COMMENTS: The teacher uses "signals" to guide students during the lesson.

_____ 16. LEVEL OF DIFFICULTY: The work is neither too easy
nor too difficult for the majority of students.

_____ 17. REINFORCEMENT: The teacher uses appropriate praise
and other methods to reinforce learning.

_____ 18. LEVEL OF CONCERN: The teacher uses strategies which
enhance students desire to do well.

_____ 19. MODELING: Students are provided the opportunity to
form a picture of the learning.

_____ 20. MEDIA: The teacher uses media to guide and reinforce
learning.

_____ 21. CRITICISM: The teacher uses criticism to motivate
students or "put them in their place."

_____ 22. CHECKS FOR UNDERSTANDING: The teacher frequently
checks to see if students are learning.

_____ 23. REMEDIATION: The teacher provides remediation and
reteaches when necessary.

_____ 24. GUIDED PRACTICE: The teacher provides appropriate
opportunities for student practice and error correction.

_____ 25. INDEPENDENT PRACTICE: The teacher provides for the
appropriate quantity and quality of student practice.

_____ 26. GROUPING: More class time is allocated to whole
group activities than to individual work.

_____ 27. EVALUATION: The teacher gives few check-ups, quizzes,
or tests.

_____ 28. EVALUATIVE FEEDBACK: The teacher provides students
feedback on the quality of their work.

_____ 29. POSITIVE CLASSROOM ATMOSPHERE: The teacher provides
an atmosphere conducive to learning.

_____ 30. CARING: The teacher communicates that he or she cares
about learning and about students.

* These factors emanate from research on teaching and countless discussions
with teachers and supervisors. They are presented for discussion, not as
a recipe. Research sources are available upon request.

LESSON PLANNING GUIDE

It is well documented that planning makes a difference. Below are the essential elements of lesson planning and some tips you may wish to consider as you plan for high achievement.

1. Type of Learning -- Determine if the learning is new, review, or diagnostic.

2. Instructional Objectives -- State as student outcomes and include the conditions under which learning will occur as well as the criteria for successful student performance.

3. Student Activities -- Select or develop activities which fit the students and the objectives.

4. Level of Difficulty -- Diagnose the students' skill and knowledge level. Be sure that objectives and activities are at the challenge level.

5. Learning Styles -- Examine your class list and consider the learning styles of the students. Ask yourself, "What variety in content, methodology, student activities or evaluation is needed?" Incidentally, there is no reason why this learning should not be enjoyable.

6. Teacher Methods and Procedures -- Examine the objective(s), the students, and your own style. Ask yourself, "What methods and procedures will work best in this lesson?"

7. Evaluation of Student Outcomes -- Ask yourself, "How will I know if the students have learned?" There is no reason to limit yourself to paper and pencil assessment.

8. Provisions for Remediation -- Ask yourself, "What will I do if some students are not learning the materials?" Select materials or strategies that will enable you to help those who have not learned.

9. Time Allotment -- Perform a task analysis; determine approximately how much time is needed for each element of the plan. If revision is necessary, make some changes. When you are satisfied, lay your plan out in time blocks and try to stick to it. That's not to say you should never deviate from the plan. The wise teacher knows when the "teachable moment" has arrived or when to cut things short.

4

Grade: 7   Subject: Life Science
Date   Teacher: Becky Quinn
Unit Topic:
Topic for this Lesson:

1. Type of Learning

This is essentially a review of yesterday's lesson. Concepts discussed in class, and reinforced in the homework assignment will be dealt with in more detail today. The new concept to be mentioned is "PH,", and how it relates to the topic of "acid rain." The cognitive domain is the sole domain to be used in this lesson.

2. Instructional Objectives

The student should be able:

   a. to explain what acid rain is;

   b. to state the causes of acid rain;

   c. to specify the effects of acid rain;

   d. to discuss the controversy surrounding the solutions to the problem;

   e. to express an opinion, in a rough draft of a letter what she/he believes should be done to deal with the problem.

3. Student Activities

   a. "warm-up" activity - a check on student's understanding of homework assignment.

   b. Discuss students' answers to each of the questions - students should explain reasons for their answers on the warm-up.

   c. Selected students will identify the "PH" level of e different substances and compare with a "PH" chart.

   d. Write a sentence to answer the questions, "How do I feel about acid rain and why?"

   Some students will read their answers to others in class.

   e. Write a sentence to answer the question, "What should be done about acid rain and why?"

   Some students will read their answers in class.

   f. Given an assignment sheet for writing a rough draft of an opinion letter on acid rain, students should write the rough draft as an assignment for tomorrow's class.

4. <u>Level of Difficulty</u>

The lesson is paced to fit the ability level of the students. The activities concerning the meaning, causes, effects, and controversy pertaining to acid rain should adequately prepare students for their homework assignment.

5. <u>Learning Styles</u>

Differences in ability levels were accounted for in reading assignment given to students to prepare for today's lesson. Different articles were assigned to students, matched to students' abilities. The activities requiring speaking, listening, writing, and seeing will hit all the communication channels.

6. <u>Teacher Methods and Procedures</u>

The lesson objectives, students' styles of learning, and ability levels require that students understand the meaning, consequences, and possible solutions for the problem of acid rain. The combined worksheet, discussion, and guided practice activities should adequately prepare students to do their independent practice activity (homework assignment): rough draft of an opinion letter.

7. <u>Evaluation of Student Outcomes</u>

To be obtained from:

    a. observing seatwork during "warm-up" and on writing the two opinion sentences;

    b. listening to student responses in answer to specific questions taken from "warm-up" activity;

    c. reading the rough draft of the opinion letters collected at the next class meeting.

8. <u>Provisions for Remediation</u>

Students who do not reveal a good grasp of problems and solutions concerning acid rain in opinion letters, will be given additional worksheet activity or activities to do. A rewrite of the rough draft of the opinion letter should reflect that remediation has occurred.

CLASSROOM MANAGEMENT GUIDE

The key to good classroom management is not how you discipline disruptive students; it lies in what you do to provide a productive learning environment and prevent potential problems. While a classroom management system must fit the students and teacher, some practices appear to be consistently successful. Provided below are strategies which effective teachers typically employ. Examine each and indicate those which fit your situation and are in need of improvement. Use the space at the end of the exercise to write an objective or Target for Growth.

Successful Practice   Needs Improvement

1. The teacher communicates expectations and high
    standards and emphasizes student responsibility.   _____

2. Classroom rules are clear, flexible and sensible.   _____

3. Housekeeping and other frequent activities have
    been routinized.   _____

4. Seating, materials, and equipment have been
    efficiently organized.   _____

5. Classroom behavior is continuously monitored.   _____

6. Students receive feedback on the appropriateness
    of their classroom behavior.   _____

7. Appropriate classroom behavior is recognized
    through praise and other means.   _____

8. Consequences for behavior are clearly defined
    and rules and procedures consistently enforced.   _____

9. Provisions for dealing with disruptive students
    are established and implemented.   _____

10. The classroom atmosphere is "businesslike" and
    goal-oriented.   _____

11. The teacher uses "signals" to get student
    attention and initiate activities.   _____

12. The teacher scans the room to pinpoint student
    behavior in need of attention.   _____

13. The teacher moves around the room.   _____

Targets for Growth:

7

Stage Setting Guidelines

Research tells us that students learn more when they are <u>ready</u> or <u>set</u> to learn. Below are a few guidelines and tips for setting the stage both at the beginning of a lesson and as new concepts or areas are covered throughout. Use them as you see fit in your situation.

1. It is <u>not</u> necessary to set the stage <u>every</u> time. It depends on the situation. If the students are ready, take off.

2. When making a transition from one concept or area to another it is often necessary to reset the stage.

3. There are three aspects of "set" that appear to enhance readiness. The teacher brings <u>focus</u> on an area, underscores its <u>importance</u>, and heightens students <u>interest</u> in the topic.

Below are some stage setters which work well:

* A thought provoking question about the topic, one that's in their world.

* An attention grabbing statement that focuses their attention and gets their interest.

* Review, bringing them back to where they were.

* A story or anecdote which interests them.

8

Student Character List

a. If you could keep some of your students another year for the sheer joy of it, which students would you pick?

_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____

b. If you could devote all your attention to some of your students who concerned you a great deal, which students would you pick?

_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____

c. If a parent were to drop in unannounced for a conference, which students would you be least prepared to talk about?

_____ _____ _____
_____ _____ _____
_____ _____ _____

d. If your class size were to be reduced, which students would you be relieved to have removed?

_____ _____ _____
_____ _____ _____
_____ _____ _____
_____ _____ _____

9

Teacher Expectations Checklist

Below are some teacher behaviors which promote high expectations in the classroom. Examine the checklist and check any behaviors which you may wish to change in the future.

		Needs Improvement
1.	Distribute questions to students.	_____
2.	Provide adequate wait time for students.	_____
3.	Use appropriate non-verbals with all students: voice tone, smiles, proximity.	_____
4.	Provide maximum feedback to all levels of ability.	_____
5.	Demand "best quality" work from all students.	_____
6.	Use time effectively.	_____
7.	Communicate that achievement is important.	_____
8.	Provide adequate help to all students.	_____

CLARITY CHECK-UP

The manner in which you communicate when providing instruction has a profound effect on student achievement. Provided below is a checklist which includes important elements and characteristics of effective communication. Examine them carefully, assess your effectiveness in the classroom, and check those areas in which you wish to improve. (If you are not sure, audiotape a typical presentation and do another check-up.) When you have completed the self-assessment write one or more growth targets in the space provided.

Element	Characteristic	Target Area
Vocabulary	Proper level of difficulty	_____
Speech Rate	Neither too rapid or slow	_____
Volume	Neither too loud or soft	_____
Pitch	Neither too high or low	_____
Inflection	Change pitch appropriately	_____
Enunciation	Pronounce words clearly	_____
Specificity	Use of words and referents	_____
Distractors	Few "Okays", etc.	_____
Eye Contact	One-on-one and group	_____
Gestures	Use of hands or body	_____
Movement	Settled, but attention getting	_____

Target(s) for Growth:

The Clear Teacher Checklist

As your teacher I hope I am clear. In order to improve my ability
to be clear I need your help. Below are 28 statements that describe
what clear teachers do. Read each statement and place a check mark in
the column that tells how often I perform the behavior that is described.
In that way I'll know what I do well and what I need to improve.

(Put a check (✔) in one box after each statement.)	All of the Time	Most of the Time	Some of the Time	Doesn't Apply to Our Class
1. Explain things simply.				
2. Give explanations we understand.				
3. Teach at a pace that is not too fast and not too slow.				
4. Stay with a topic until we understand.				
5. Try to find out when we don't understand and then you repeat things.				
6. Teach things step-by-step.				
7. Describe the work to be done and how to do it.				
8. Ask if we know what to do and how to do it.				
9. Repeat things when we don't understand.				
10. Explain something and then work an example.				
11. Explain somethings and then stop so we can ask questions.				
12. Prepare us for what we will be doing next.				
13. Give specific details when teaching.				
14. Repeat things that are hard to understand.				
15. Work examples and explain them.				
16. Give us a chance to think about what's being taught.				
17. Explain something and then stop so we can think about it.				
18. Show us how to do the work.				
19. Explain the assignment and the materials we need to do it.				
20. Stress difficult points.				
21. Show examples of how to do classwork and homework.				

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The Clear Teacher Checklist, Continued.
Page 2

	All of the Time	Most of the Time	Some of the Time	Doesn't Apply to Our Class
22. Give us enough time for practice.				
23. Answer our questions.				
24. Ask questions to find out if we understand.				
25. Go over difficult homework problems.				
26. Show us how to remember things.				
27. Explain how to do assignments by using examples.				
28. Show us the difference between things.				

"The Clear Teacher Checklist" is based substantially on research findings contained in the article by Kennedy et al. in Journal of Educational Research, September/October, 1978.

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ITEMS LISTED IN STUDIES OF INSTRUCTIONAL CLARITY

1. Explains the work to be done and how to do it. △

2. Asks students before they start work if they know what to do and how to do it. △O

3. Explains something then stops so students can think about it. △

4. Takes time when explaining. △

5. Orients and prepares students for what is to follow. ☐O

6. Provides students with standards and rules for satisfactory performance. ☐

7. Specifies content and shares overall structure of the lectures with students. O

8. Helps students to organize materials in a meaningful way. ☐

9. Repeats questions and explanations if students don't understand. △O

10. Repeats and stresses directions and difficult points. ☐O△

11. Encourages and lets students ask questions. O

12. Answers students's questions. △O

13. Provides practice time. ☐

14. Synthesizes ideas and demonstrates real-world relevancy. ☐

15. Adjusts teaching to the learner and the topic. ☐

16. Teaches at a pace appropriate to the topic and students. △

17. Personalizes instruction by using many teaching strategies. ☐

18. Continuously monitors student learning and adjusts instructional strategy to the needs of the learner. O

19. Teaches in a related step-by-step manner. ☐O

20. Uses a variety of teaching materials. ☐

21. Uses demonstrations. ☐O

22. Provides illustrations and examples. ☐

23. Emphasizes the key terms/ideas to be learned. ☐

24. Consistently reviews work as it is completed and provides students with feedback or knowledge of results. ☐

25. Insures that students have an environment in which they are encouraged to process what they are learning. O

26. Makes clear transitions. O

27. Reduces mazes.

28. Avoids vague terms. O

29. Avoids fillers (uh, ah, um). O

30. Reduces nonessential content. O

31. Communicates so that students can understand. ☐

32. Demonstrates a high degree of verbal fluency. ☐

Source·
☐ Cruickshank, Myers, and Moenjak, 1975
△ Bush, Kennedy, and Cruickshank, 1977.
O Land 1979; Land and Smith, 1979, 1979

User-Friendly Guide to Improved Questioning

Dr. Jim Sweeney

Questioning is an important but complex teaching strategy.
Below are what research tells us about questioning followed by
some tips for developing and using questions.

WHAT RESEARCH TELL US

Recent research reveals that questioning technique is associated
with higher achievement and there are productive as well as unproduc-
tive techniques.

Winners

- Pause or "wait time" - Produces more and better responses
  from students.

- Purposeful - Productive questions have an objective.
  There is generally balance between fact and thought.

- Class-Directed - Generates more student interest and
  promotes accountability.

- Distributed Selectively - Communicates high expectations,
  motivates, and provides for comprehension checks and
  error correction.

- Evaluative Feedback - Lets the students know how they
  are doing.

- Redirection (to other students) - Provides additional
  information and keeps students on their toes.

- Conversational Tone - Less stressful and gets better
  responses than Simon Legree or "quizmaster".

Losers

- Tugging Responses to Factual Questions - If they knew
  they would respond.

- Long Questions - Keep them short and sweet.

- Guess or Yes/No - Tells the teacher very little.

- Constant Repetition - Encourage student inattention.

- Unfocused Questions - Those which are too broad or
  general provide the teacher little useful information.

- Leading or Rhetorical Questions - Foster student dependency
  and inattention.

Developing Questions

Four simple steps are helpful in planning.

1.	Decide on Purpose	Ask yourself, "What's my teaching objective and what do I hope to accomplish with these questions?"
2.	Consider your Students	Ask yourself, "What ability levels are there in my room and how can I involve and challenge students at each level? What terms and vocabulary should I use?"
3.	Use the Research	Use what you have learned from research as a roadmap as you develop questions.
4.	Formalize the Questions	As you develop the questions write them on index cards or record in some manner which allows you to "order" and make notes on them.

Usage

Developing good questions is only half the battle--the real payoff comes from skillful usage. Questioning technique, like all teaching activities, has a basic structure. Let's review it.

First, organize and sequence the questions for the lesson. Review your cards and order them considering two factors: (1) placement or chronology in the lesson, and (2) purpose and level of the questions. Generally, go from facts to higher level thinking but you may want to use thought provoking questions early to stimulate interest. When the questions are in the desired order:

* Direct the question to the entire class.

* PAUSE -generally 3 to 5 seconds (or more for higher level questions).

* Randomly select or carefully choose a student to direct the question to.

* Call on the student.

* Respond to the Student - You may wish to:

   1. Provide Evaluative Feedback: Apprise the student (and others) of the correctness of his or her response.

   2. Acknowledge: Repeat the question out loud to rest of class.

   3. Modify: Put in different words while conveying original meaning.

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4. **Apply or Compare**: Tie the response to a situation or event.

5. **Summarize**: Draw a conclusion or make a point.

Redirect - Occasionally (but systematically) ask another student to comment on or build on another's response.

Finishing Touches

I suggest that from time-to-time you review your questions, make revisions and deletions, and change the order where necessary. If you use the questions frequently in lessons you will find that after a quick review you often can abandon the cards and work from memory. A great many teachers, however, stay with them, using the cards as a modified lesson plan.

FLASH!!

The suggestions provided above are not a recipe. They will have to be modified to fit you, the subject being taught, and, of course, the students. Use them in whatever way is most effective for you.

Happy Questioning!

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Questioning Checklist
Dr. Jim Sweeney

Below are a number of statements which you may use to check your questioning technique. If you tend to use questioning frequently, I suggest that you use an audiotape and work on those which you answered "no."

		Yes	No
1.	I use questions which are clear and understandable (brief is better).	____	____
2.	My questions are purposeful and used "at the right time."	____	____
3.	My questions are directed to the class as a whole.	____	____
4.	My questions are distributed or intentionally directed to selected students.	____	____
5.	I provide proper wait time.	____	____
6.	I redirect to selected students from time-to-time.	____	____
7.	I don't ask many questions which allow guessing.	____	____
8.	I don't "tug" answers to factual questions.	____	____

Probing Suggestions

Teachers often ask as many as three to four hundred questions during the course of a day. It is often necessary to seek an additional response after the first response for clarification and to stimulate higher level thinking from other students. Below are some tips or suggestions to help you with this activity.

1. Open-ended probes just seem to work best. You should find yourself asking: Why? How! or Can you explain?, etc.

2. A higher level question (in Bloom's Taxonomy) is often met by a lower level response. Hang in there and just keep probing.

3. When it's wise, sometimes focus a probe on the specific question being asked, otherwise, you may go off in another direction. For example, "Tom, can you tell us why...?" may be more effective then, "can you tell us more about..."

4. Students have to learn that it's okay to take time to think and other students must learn that they don't have to be called on. Hands should be ignored or a comment sent their way and "call outs" dealt with.

5. Encourage other students to "think along." We want them all thinking.

6. It's desirable to cue or tug when probing. You're helping them to think.

7. It's often desirable to summarize or ask for a summary to a higher level question. I prefer the latter if possible.

8. Be patient. It's extremely painful to wait but many of us have fallen into a pattern of answering our own questions.

STRUCTURING COMMENT GUIDE

Classrooms are busy places. A large quantity of information is imparted through hundreds of interactions and many, many activities. Students need cues as to what information is most significant as well as how the teacher will help them to acquire it. Cues are generally helpful in five areas: (1) content shifts, (2) level of learning shifts, (3) activity initiation and shifts, (4) content significance and (5) pace. Below are some examples at the elementary and secondary level for each of the five areas. Examine them and consider ways to use structuring comments in your classroom.

Content Shifts

1. "You have learned what the policeman does to help you. Let's turn to the section in our books called 'presidents' and learn some more about our presidents. Please turn to page 22 in the blue book."

2. "You now know why density is important. Now let's consider volume, which is also important but different from density. John, please tell us what volume is."

Level of Learning Shifts

1. "You now know how to write a complete sentence. Let's go beyond that. Let's see if we can put sentences and ideas together into a paragraph. First, let's see if we know what a paragraph is. Open your composition books to page 35 and...."

2. "Now that we understand some common phobias as well as causes of anxiety, let's see if we can figure out how people with phobias can be helped. Now we are ready to put it all together. Mary, what do you think can be done to help people suffering from...."

Activity Initiation Shifts

1. "Today we are going to learn how important it is to work together. We are going to play a game called 'Cooperation'. The game is designed to.... This is how it works."

2. "Okay, gang, let's see if you can do it without any help. Here is what I would like you to do. First, put away.... Is everybody looking at a clear desk? Now I'd like you to..."

Content Significance

1. "This is very important. You must listen very carefully. You will need to know this to...."

Structuring Comment Guide
Page 2

Content Significance, Continued

2. "What we are going to cover in this session is critical.
   Let me tell you why."

Pace

1. "I am going to move through this section rather rapidly.
   It is not necessary that you write down everything I say.
   Please try to get a sense of the topic and we will put it
   all together at the end. If there are important points I
   want you to remember, I will stop and put them on the board."

Learning Levels

The eternal quest -- presenting instruction to students of varied abilities and learning styles. While there is no panacea, there does appear to be some strategies which help to minimize the problem. Examine those below which you may wish to try in the future. Remember, each of these strategies assesses that students must achieve the minimum level of content mastery.

1. **Differentiated Assignments**: Some students or groups have different (not just more) assignments than others.

2. **Contracts**: Students elect tasks which match desired grade.

3. **Extra Credit**: More able or motivated students can opt to go beyond and are rewarded.

4. **Choice of Assignments**: Students can choose from a variety of tasks (same objective).

5. **Peer Tutors**: Students helping students.

Below are a number of other activities which can be used.

Varied Materials and Texts	_____
Teaching Study Skills	_____
Learning Aids (tape recorders, etc.)	_____
Enrichment Materials	_____
Interest Level Materials	_____

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Reinforcement Reminders

Reinforcement is the essence of behavior change. Below are some
reminders.

Positive (+)

1. Reinforce the act, not the person.

2. As close to the set as possible.

3. Different strokes for different folks. One person's "snails"
   are another's escargot.

4. Don't overdo it.

5. Be sincere, not gushy.

6. Private's better than public.

Negative (-)

1. Be humanistic.

2. Don't overdo.

3. Close to the act.

4. Snails and escargot again.

Extinguishment (0)

Judgement call - ignoring can cause it to go away.

Schedule

Folks who believe in reinforcement keep records so that they
can monitor their use of the technique. It's called a schedule
and it works, if they are diligent in keeping it and examine it
daily/weekly.

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Modeling

There are three basic forms of modeling. The first is unintentional in that students observe the teacher and others and tend to imitate behavior. The second form of modeling flows from observation. The teacher provides the students with the opportunity to see the concept or skill via the chalkboard or other media. The third form of modeling is demonstration. Below is a suggested sequence which has proven successful.

Step	Activity
1	Focus attention--get everybody with you.
2	Tell'em what you're going to do.
3	Label the pieces (if necessary).
4	Proceed step-by-step with explanations.
5	Go slow and check for understanding.
6	Have students repeat (optional).
7	Correct errors.

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Checking for Understanding Check-Up

Below are a number of activities teachers use to monitor student learning. Throughout the lesson, examine this list and check those which you may want to use in your future teaching.

Monitoring Activities	Future Use
1. Eye Contact	_____
2. Choral Response	_____
3. Group Response	_____
4. Selective and Random Questioning	_____
5. Student Demonstration	_____
6. Short Written Check-up	_____
7. Student Checks	_____
8. Practice and Walk-around Games	_____

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Guided Practice Suggestions

We know that students must learn the right skills and knowledge. It is important to provide right activity, the right time in the right time in the right amount. Below are a few guided practice activities great teachers use. Choose those which you may wish to add to your repertoire.

seat work   _____   project work   _____

board work   _____   questioning   _____

student demonstrations _____   oral reports   _____

team activities _____

Remember: <u>Perfect</u> Practice makes Perfect

Evaluation Check-Up

There are many ways to evaluate student progress. The advantage of varied approaches is that it provides students more opportunities. Below are some evaluation strategies you may wish to consider when you are assessing student progress.

Written		Activity	
Objective	____	Project	____
Essay	____	Hands On	____
Matching	____		
Multiple Choice	____		
Recall Without Cues	____	When:	
Term Paper, etc.	____	Daily	____
Chalkboard	____	Pop Quizzes weekly upon completion	____

Verbal

Tape Recorder	____
Individual With Teacher	____
Group With Teacher	____

Remember: Shorter, more frequent assessments work best.

EFFECTIVE TEACHING MODEL

Dr. Jim Sweeney

Iowa State University

TEACHER
• preference
• talents

SITUATION
• prior learning
• time
• resources. etc.

EFFECTIVE
TEACHING
STYLE

OBJECTIVES
• what the teacher
  wants the student to
  know or to be able
  to do at end of
  lesson

STUDENTS
• abilities
• learning
  styles
• maturity
• motivation
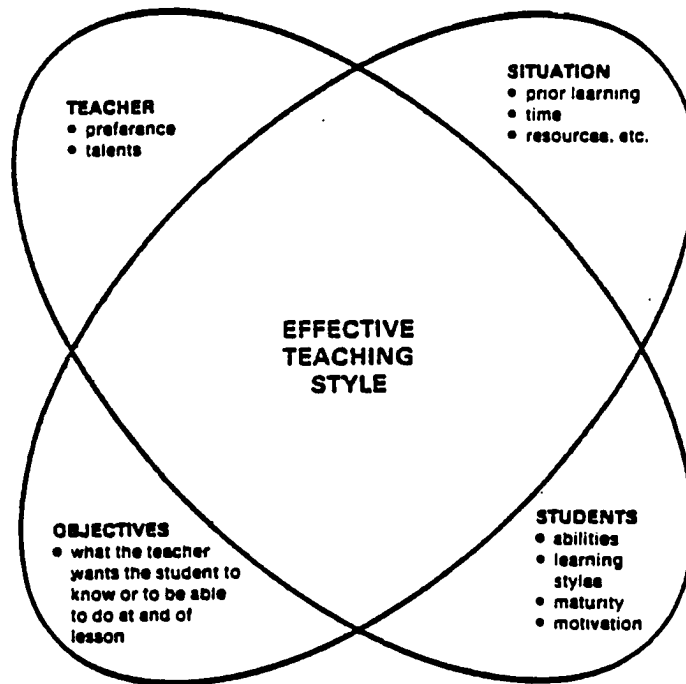
INSTRUCTIONAL EFFECTIVENESS DECISION MAKING STEPS

DECISION #1: Does the method or style fit the objective. students. and situation?

    NO: Modify or change the style
    YES: Go to Decision #2

DECISION #2 Do the personal characteristics or skills of the teacher fit the style well?

    NO: Change or modify method or style
    YES: Go to Decision #3

DECISION #3: What specific and important teaching behaviors or strategies work very well? (Building Blocks)

What specific teaching behaviors or strategies could or should be improved upon? (Growth Targets)

    Go to Decision #4

DECISION #4: How do I reinforce these building blocks?

What's my plan for growth?

Instructional Delivery Approaches

There are many successful approaches to teaching. The important thing, as the preceding diagram illustrates, is that we match the approach with other factors such as the student, the objectives, our strengths and the situation. Below are a number of approaches which may be helpful as these factors change throughout the day, year and your career. Check those you might want to draw upon in the future.

Media (external)		Styles	
Books	_____	Lecture	_____
Articles	_____	Question	_____
Filmstrips	_____	Discussion	_____
Programmed Instruction	_____	Activity	_____
Movies	_____	Drill 'n Practice	_____
Records	_____	Integrated	_____
Videotapes	_____	Combinations	_____
Computers	_____		
Speakers	_____		
Field Trips	_____		
Cassettes	_____		
Games & Simulations	_____		

USER Friendly Guide to Lesson Design

Putting the elements of a lesson together is a complex task. It requires that one engage in the most productive form of work -- thought. Below is a suggested process for designing effective lessons and winners in the classroom.

Step	Activity
1	Decide on the objective(s): What the students will know or be able to do at the end of the lesson. Remember: This is more than a curriculum decision, the students need to be considered when setting an objective. Don't forget about Bloom's taxonomy when formulating the objective.
2	Decide what knowledge or skills the students need to reach the objective.
3	Decide how they will acquire the knowledge or skills and if they will need practice. Remember: Most likely, not all will acquire knowledge and skills the first time around. Make provisions for those who don't as best as you can.
4	Decide how you will monitor learning. Remember: It's more efficient to teach a concept then it is to reteach or remediate.
5	Decide how you will check for understanding before moving to another concept.
6	Decide on provisions for remediation for those who didn't get it. Remember: This is the hard one. Do your best.

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Questions to Consider in Lesson Design

Below are a number of questions you may wish to ask yourself when deciding how to present a lesson.

1. Are there any special "classroom management techniques" I need to focus on?

2. Should I review?

3. How can I be sure they clearly understand the objective?

4. Should I do something to get them "up" for the lesson?

5. How will I present the concept(s)?

6. How will I get them involved or "with it?"

7. How will I monitor learning?

8. Should I provide opportunities for practice? If so, how and for how long?

9. Should I provide a demonstration or modeling for them?

10. Do I want to do anything special to give them feedback or reinforcement?

11. How will I know if they've learned?

12. Do I need to summarize or pull it together?

13. How about directions, structuring comments, and transitions?

14. Is the pacing satisfactory?

15. Should I provide homework or independent practice?

WHAT TO LOOK FOR IN THE CLASSROOM
TEACHING STYLES

Lecture	Presentation of concepts and content.
Questioning	Probing students for factual knowledge and/or stimulating higher level thinking.
Discussion	Student interaction which explores learning and facilitates higher level thinking and value formation.
Activity	Experiences which promote student involvement and learning and provide practice.
Drill and Practice	Structured activities primarily aimed at developing skills.
Integrated	Various teacher approaches or styles that fit the situation and accomplish teaching-learning objectives.

TEACHING STYLES - KEY COMPONENTS

Lecture
- stage setting
- content
- focus
- flow
- monitoring
- summarizing
- clarity

Discussion
- structure
- listening
- teacher response
- student interaction
- level of thinking
- monitoring
- summarizing

Questioning
- form
- process
- feedback
- probing
- focus

Activity
- structure
- focus
- directions
- transitions
- student involvement
- monitoring

Drill and Practice
- stage setting
- directions
- student involvement
- pacing
- timing
- monitoring
- application

Integrated
- appropriateness
- student involvement
- focus
- flow
- timing
- quality

ANCHORS

Effective classroom instruction is *anchored* by two constants:

1. Classroom atmosphere
- Orderly
- Attractive physical environment
- Promotes learning
- Positive and supportive

2. Student involvement or "withitness"
- Student tuned in to teaching-learning activities

REMEMBER!!

EFFECTIVE TEACHING, LIKE TRUTH, IS NEVER PURE AND SIMPLE.

Dr. Jim Sweeney
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APPENDIX C

KEY CATEGORIES

KEY CATEGORIES

LESSON DESIGN

Anticipatory Set - strategies/behaviors the teacher implements to prepare the students to learn.

Objective - teacher statement of what the student will know or be able to do at the end of the lesson.

Lesson Content - subject matter of the lesson.

Concept Development - how the teacher develops the lesson to enhance learning the subject matter.

Time Usage - how time was used in the lesson.

Instructional Method - method the teacher is using: lecture, discussion, demonstration, questioning, etc.

Modeling - formal or informal method of providing a visual picture for student(s).

Guided Practice - an opportunity for the student to try the learning with teacher assistance.

Evaluation - technique used to assess student's/s' mastery of the objective.

EFFECTIVE TEACHING STRATEGIES

Structuring Comments - advanced organizers or cues.

Understanding Check - strategy or behavior that the teacher implements to determine if students have learned.

Clarity - the quality or condition of being clear when providing instruction. Includes vocabulary, voice inflection, speech rate, eye contact, gestures, movement, enunciation, volume, pitch, specificity, distractors.

Feedback - teacher statement or behavior which is said or done to reinforce learning or correct an incorrect response.

Probing - follow-up teacher questions and/or statements designed
     to improve and/or expand upon a student's response.

Monitors - teacher behavior or activity which is designed to
     check student attention to learning and level of understanding.

Questioning - teacher or student initiated statements designed to
     elicit a response.

Transitions - technique or method of facilitating changes in
     activities or content without detracting from the learning.

Summaries - short, concise reviews.

CLASSROOM MANAGEMENT - includes

     management of student behavior
     organization of classroom
     organization of instruction
     organization of materials

STUDENT INVOLVEMENT - observable student behaviors which indicate
     that they are either "with it" or not "with it."

APPENDIX D

REGISTRATION CARD

REGISTRATION CARD

I.D. # _____   DATE _____

JOB TITLE: GENDER:

Principal/Asst. Principal ____   Female ____

Other   ____   Male ____

(Place an "X" on the appropriate lines)

The identification number listed above has been assigned to you and you only. Record this number and use it on all forms throughout this workshop. Information on this card will be used for research purposes only and will not be released in any form that will be identifiable to you. Thank you for your cooperation.

APPENDIX E

STRUCTURED DATA-RECORDING GUIDE

SDR GUIDE

Dr. Jim Sweeney
Iowa State University

PURPOSE

The overarching purpose of classroom observation is to record data which will help you and the teacher analyze the lesson, strategies, and techniques utilized in the lesson. The Structured Data-Recording (SDR) Guide is designed to help you record data pertaining to teacher and student behaviors and activities in the lesson. It will enable you to better identify teacher strengths (those important tasks the teacher does well) and targets for growth (important areas for the teacher to improve upon).

The Definition of Terms sheet is to be used in conjunction with the Data-Recording Sheet. The purpose of the Definition of Terms sheet is to remind the observer of important aspects of the lesson to observe and record. The following information is provided to assist you in using the Data-Recording Sheet.

RECORDING SHEET

This section is designed to help you understand what type of information is to be recorded in each section of the Data-Recording Sheet.

The Data-Recording Sheet has been divided into three columns:

    1. Anecdotal Comments and Scripting
    2. Particular Areas of Discussion (PAD)
    3. Observer Comments

1. ANECDOTAL COMMENTS - SELECTIVE DESCRIPTIVE STATEMENTS OF DISCRETE OBSERVATION SHOULD BE RECORDED:

    a. Constants - always record changes in content and methodology, and activities as well as selected important teacher or student behaviors and teacher methods. This information should aid you in analyzing lesson design.

    b. It is important to capture the flow of the lesson. This includes:

        (1) introduction
        (2) communication of objective(s) to students

(3) modeling
(4) method
(5) checking for understanding
(6) opportunities for practice
(7) summarizing and transition

c. Descriptive - write what you see or hear, not what you feel or think. You can't be specific if you write down only how you feel.

d. Time - record the time whenever the teacher changes content or methodology or when the length of an activity may be important.

You may wish to simplify the matter by drawing a line every five minutes. If you write the time when the lesson begins, it will help you remember to record the time.

2. SCRIPTING - STUDENT/TEACHER VERBATIM COMMENTS MUST BE RECORDED IN ORDER TO PROVIDE SPECIFIC FEEDBACK TO THE TEACHER:

a. Beginning - what the teacher says to begin the lesson sets the stage.

b. Objective - the quality of the objective can be improved upon or maintained if the teacher knows what s/he said.

c. Structuring comments - reinforce those advance organizers and transition statements.

d. Clarity - script what you hear which enhances or detracts from clarity.

e. Questions - good ones and bad can only be analyzed if the teacher knows specifically what was asked.

f. Teacher feedback and comments - feedback can be analyzed and/or reinforced if specific data are gathered.

g. Higher level thinking skills - can be maintained or improved upon if the teacher knows what s/he said.

h. Summaries, directions, etc. - analyzing specific data will enable the teacher to analyze how s/he gives directions and summaries.

3. <u>PAD</u> - PARTICULAR AREAS OF DISCUSSION

This column is designed to help you highlight specific aspects of the lesson which you want to be sure to use in giving feedback to the teacher:

a. When you feel you need more information or an explanation of what you observed in order to make some decisions about timing, flow, and teacher behaviors or strategies, place a (Y) in the PAD column after the activity. Example: when the teacher covers something very quickly and you don't know whether or not it was covered in detail in a previous lesson, record the occurrence in the Anecdotal column and put a "Y" in the PAD column after the activity. You may also want to use the "Y" to remind you to ask about

(1) a particular child
(2) a prior or future activity
(3) why a particular method was used, or why certain events occurred
(4) timing or length of an activity
(5) other areas (to be expanded upon in the workshop)

b. Put an exclamation mark (!) in the PAD column after the activity when you see something you want to be sure to reinforce in the conference.

c. Put a question mark (?) in the PAD column following the activity when what was observed was not effective and you want to discuss it.

4. <u>COMMENTS</u>

Use comments to help remind you about what happened and what you want to discuss in the post-conference. These may include questions, observations, or other comments.

DEFINITION OF TERMS

<u>Framework of Data-Recording and Observation</u> - objectives to consider when making a classroom observation:

a. Identify building blocks to reinforce in post-conference
b. Provide specific data to help reinforce building blocks
c. Identify targets for growth to discuss in post-conference
d. Provide specific feedback to explain or discuss targets for growth
e. Provide specific feedback about effective teaching strategies and lesson design

<u>Targets for Growth</u> -

a. Teacher techniques/strategies that the teacher does not do well or omits which significantly detract from his/her effectiveness; or

b. Teacher techniques or strategies that the teacher may wish to improve upon because they are an important aspect in his/her approach or style.

<u>Building Blocks</u> - important teacher techniques/strategies that the teacher does well which significantly contribute to lesson effectiveness or could if they were used more frequently.

<u>Anecdotal Recording</u> - selective descriptive statement of discrete observation (content activities, student and teacher behaviors).

<u>Scripting</u> - writing student or teacher verbatim comments or questions or statements (anticipatory set, objective, structuring comments, clarity, questions, teacher feedback and comments, probing, summaries, directions, etc.).

<u>PAD</u> - Particular Areas of Discussion - designed to highlight specific aspects of the lesson to be discussed in the conference:

a. Y observer needs more information
b. ! reinforce - a winner!
c. ? did not appear to work well or was not present

<u>Comments</u> - written notations to remind the observer what to reinforce and discuss in the post-conference.

Method - method the teacher is using: lecture, discussion, demonstration, questioning, etc.

Clarity - the quality or condition of being clear when providing instruction. Remember to check on such things as

    a. vacabulary   d. eye contact
    b. voice inflection   e. gestures
    c. speech rate   f. movement

Structuring Comments - advanced organizers or cues.

Questioning - teacher or student initiated statements designed to elicit a response.

Classroom Management - includes

    a. management of student behavior
    b. organization of classroom
    c. organization of instruction
    d. organization of materials

Probing - followup teacher questions and/or statements designed to improve and/or expand upon a student's response.

Feedback - teacher statement or behavior which is said or done to reinforce learning or correct an incorrect response.

Student Involvement - observable student behaviors which indicate that they are either "with it" or not "with it."

Monitoring - teacher behavior or activity which is designed to check student attention to learning and level of understanding.

Understanding Check - strategy or behavior that the teacher implements to see if the students have learned.

Objective - teacher statement of what the student will know or be able to do at the end of the lesson.

Anticipatory Set - strategies/behaviors the teacher implements to prepare the students to learn.

Modeling - demonstration or providing a visual picture for student(s).

Teacher _____
Subject _____
Date _____
Time _____

DATA-RECORDING SHEET

ANECDOTES & SCRIPTING	PAD	COMMENTS

APPENDIX F

DATA-RECORDING SAMPLES

ANECDOTAL RECORD SAMPLES

There are certain student/teacher behaviors which need to be recorded. You'll want to record the following: constants (changes in content and methodology, important teacher/student behaviors and methods); time (change in content and methodology or every five minutes). Don't forget to use ample spacing and shorthand system to save you time.

CLASSROOM BEHAVIOR	ANECDOTAL COMMENT
2:07 Teacher is leading a lecture and discussion on "balance of power."	2:07 Teacher lectures on balance of power.
Student in green striped shirt is gazing in space.	Green shirt gazing.
2:15 Teacher is leading a lecture and discussion on militarism in Germany in 1914.	2:15 Teacher lectures on militarism in Germany.
Teacher uses chalkboard to record Field Marshall Von Moelke.	Chalkboard: Von Moelke
Teacher walks back and forth in front of the classroom.	Teacher paces.
Student in green striped shirt plays with ruler and gazes off in space.	Green stripes gazing.
2:20 Teacher is leading a discussion and lecture on the alliance between Austria and Germany.	2:20 Teacher lectures on Austria/Germany alliance.
Teacher uses chalkboard to record student responses.	Chalkboard: student responses.
2:25 Teacher is leading a lecture on Wilhelm.	2:25 Teacher lectures on Wilhelm the Man.

SCRIPTING SAMPLES

There are some teacher/student comments which must be recorded
verbatim. It's the only way the teacher can receive specific
feedback. You will want to script the following: the beginning
of the lesson, the objective, structuring comments, questions,
probes, summaries, teacher feedback, clarity, and comments.

BEGINNING:

T   "ALRIGHT, YESTERDAY WE WERE TALKING ABOUT THE CONDITIONS IN
EUROPE IN 1914...FRANCE AND BRITAIN...FEARFUL OF GERMANY AND
GERMANY'S DOMINANCE...

AUSTRIA AND RUSSIA FIGHTING FOR CONTROL...

EVERYBODY REMEMBER THAT?"

OBJECTIVE:

T   "O.K., TODAY WE'LL FIRST BRIEFLY LOOK AT CONDITIONS INSIDE
RUSSIA AND GERMANY IN 1914."

STRUCTURING COMMENTS:

T   "YOU NEED TO GET THIS IN YOUR NOTES."

QUESTIONS:

T   "WHO CAN TELL ME SOMETHING ABOUT ECONOMIC PROBLEMS RUSSIA
WAS HAVING?"

T   "WHY IS RUSSIA WEAK AND INSECURE INFLUENCE ON INTERNATIONAL
POLITICS, BRIAN?"

T   "WHAT WERE WILHELM'S AMBITIONS FOR GERMANY, JIM?"

T   "WHAT TYPE OF IDEOLOGY IS THAT?"

T   "WHO CAN TELL ME THE ALLIANCE STRUCTURE OF EUROPE IN 1914,
PHILLIP?"

T   "ANY QUESTIONS OVER BALANCE OF POWER?"

T   "AT THIS POINT THE U.S. ENTERED THE WAY, WHY?...REASONS?"

PROBES:

T   "WELL, THAT WAS ECONOMIC PROBLEM..DIDN"T HAVE FORTS...
SOMETHING ELSE...WHAT ABOUT INDUSTRIAL REVOLUTION?"

T   "CAN SOMEONE GIVE ME A CLEARER DEFINITION. SHE'S RIGHT."

T   "I'LL GIVE YOU A HINT...LENIN WAS THEIR LEADER..."

T   "THAT'S WHAT THEY SAID - WHAT'S THE REAL REASON?"

T   "THERE'S ONE MORE, CONNIE."

TEACHER FEEDBACK:

T   "O.K., THAT'S ONE REASON..."

T   "EXACTLY, THIS IS WHAT CZAR NICHLAUS HAS IN MIND...SUCCESSFUL
WAR TO INCREASE STATE'S PRESTIGE."

T   "GOOD EXAMPLE."

S   WHAT'S THAT WORD?"

T   "L-A-G-G-E-D BEHIND REST OF EUROPE."

SUMMARIES:

T   "SO THOSE TWO REASONS WERE:

     1. FILL POWER VACUUM

     2. TEMPTS WEAK STATE BY WAR."

T   "SO THESE ARE THE THREE AMBITIONS OF WILHELM."

T   "THIRD IS BRITISH SENTIMENT...THOSE ARE THREE REASONS -
ANYONE WANT REASONS REPEATED? EVERYBODY'S GOT THEM?"

T   "SO, THE U.S. IN THE WAR PROVED TOO MUCH. GERMANY SURRENDERED
IN 1918. WE'LL COVER THIS TOMORROW. WE'LL TALK ABOUT THE
EFFECTS OF WWI TOMORROW."

PAD
&
COMMENT SAMPLES

Use comments to help remind you about what happened and what you want to discuss
in the post-observation conference. These may include questions, observations, or
other feedback. The main purpose of the comment column is to provide helpful infor-
mation and feedback to the observer to use in the post-observation conference.

DATA-RECORDING SHEET

Teacher _____
Subject _____
Date _____
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
J Rationale is bal. of power ensures peace. Everybody understand that?	?	Checking for understanding?
J What's Triple All. going to do?	1	Higher level question!
2:06 Discussion on bal. of power.		
J Any questions over bal. of power?	?	Checking for understanding?
S Explain that again- bal. of power.	Y	What is students ability level?

ILLUSTRATIVE SAMPLE OF DATA-RECORDING

Jim Sweeney

Claudia Harms

DATA RECORDING SHEET

Teacher: Larry Moon
Subject: _____
Date: 11-4-85
Time: 1:50

ANECDOTES & SCRIPTING	PAD	COMMENTS
1:50 Attendance.		
T Alright, yesterday talked about conditions in Europe, 1914, ... Fearful of Ger. Dominance.	!	Review
Everybody remember that?	?	Understanding check?
T Today, briefly look at Conditions inside Rus & Ger. 1914	?	What is learning outcome?
Teacher writes on Chk Bd. : Wilhelm II / Nichlauss II	?	Overhead?
Lecture: Pol. / Econ. Dev. in Ger / Rus.		

DATA RECORDING SHEET

ANECDOTES & SCRIPTING	P.D.	COMMENTS
Teacher writes on Chk. Bd. : Pol / Econ Dev.	?	Overhead ?
T You need to get this in notes.	!	Hard Structuring Comment
T Who can TELL me something about econ. Prob. Bus. was having?	?	Purpose of questions?
T Well, that's econ. Prob. - ... didn't have facts - something else ... what about indust. recov?	!	Probes
Students taking notes - slept boy L.H. corner	?	Where is his pad? Did you notice?

DATA RECORDING SHEET

Teacher _L. Menn_
Subject _7th Gr. S.S._
Date _11-4-95_
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
1:55 Lecture: Pol. Dev under Nichlaus II		
T Two diff factors contr. to Rus being backwards 1. Econ Dev. - Indust 2. Pol. Dev. - Slaves freed.	!	Summary
T Does anyone have any questions over Czar Nichlaus' Reign?	?	Check for understanding
T Why is Rus weak & insecure a dangerous influence on internat Pol., Brian?	!	Higher level question
T OK, that's one reason...	!	Poor feedback
Teacher pacing	?	How about monitoring the class?

DATA RECORDING SHEET

Teacher *L. Mann*
Subject *Th. Soc. H.*
Date *11-4-95*
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
T — What's another thing, Terry?	!	Probes
T — Exactly, this is what Czar Nicklaus had in mind...	!	Pos. Feedback
T — So, those two reasons were: 1. Fill Power Vacuum 2. Tempts weak state by war.	!	Summary
Discussion: Wilhelm The Man	!	Great - Student interest
2:00 Lecture: Czar Wilhelm.		
T — What were Wilhelm's ambitions for Ger. (im?)		Factual question

DATA RECORDING SHEET

Teacher *L. Mann*
Subject *7th Soc St*
Date *11-4-88*
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
S ... Compete with Brit.; Dominate Europe, build overseas empire ...		
Put student responses on chk. bd.	!	Reinforces student
T So, these are the three ambitions of Wilhelm.	!	Summary
Put student responses on chk bd	!	Reinforces student
Lecture : Ser - Militarism		
Teacher writes on chk. bd. Field Marshall Van Moelk	?	Overhead ?
Teacher Pacing	?	How about monitoring class?

DATA RECORDING SHEET

Teacher _L. Mann_
Subject _9th Soc. H._
Date _11-11-85_
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
Dirt. Str. Shirt - Gazing	?	Did you notice him?
Lecture on Aust/Ger alli.		
Teacher writes on Chk bd: Aust - Ger.	?	Overhead?
T 'Who can tell me something about the alli structure of Europe in 1914, Phillip?	?	Purpose of question? Get them thinking?
S Triple alli is Aust Ger & Italy.		
T Who can tell me members of the Triple Entente?		Factual question

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DATA RECORDING SHEET

Teacher _J. Mann_
Subject _P.E. Soc St._
Date _11-4-85_
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
S Brit., Fr., Rus.		
T Brit., Fr., Rus.	!	Pos. Feedback
Teacher writes student responses on chk bd.	!	Reinforces student
2:03 T Who can give me the def. of Bal. of Power?	?	Factual question
T Good example. Can someone give me a clearer def.? She's right.	!	Pos. Feedback Probes
Student playing with string.	?	Did you notice him?

DATA RECORDING SHEET

ANECDOTES & SCRIPTING	PAD	COMMENTS
T Rationale is Bal. of Power ensures peace. See how that will work? Everybody understand that?	?	Checking for understanding
T What's Triple alli going to do?	!	Higher level question
2:06 Discussion on Bal. of Power / War.		
T Any questions over Bal. of Power?	?	Are you checking for understanding?
S Explain that again - Bal of Power.	Y	What is student's ability?
2:10 T Repeats def.		

DATA RECORDING SHEET

Teacher _L. Menge_
Subject _History_
Date _11-6-__
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
Grn St. Skirt - Slaying	?	Did you notice?
2:10 Overhead / Transparencies		
Teacher pacing	?	How about monitoring the class?
Lecture : Ger - 2-front war.		
T Does everybody understand ... 2-front war ?	?	Checking for understanding
S No.		
Teacher explains 2-front war	!	Pos. feedback

DATA RECORDING SHEET

Teacher *L. Mann*
Subject _____
Date *11-4-86*
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
T Who were Bolsheviks? I'll give you a hint... Lenin was their leader...	!	Factual question Probes
Some students getting ready to go.	?	Did you notice?
Lecture: One front War		
T At this point U.S. entered war, why? ... Reasons?	!	Higher level question
S To ensure democracy		
T That's what they said— what's the real reason?	?	Probes

DATA RECORDING SHEET

Teacher: _____
Subject: _____
Date: _____
Time: _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
T — O.K., that's one reason. War at sea... what's another? What about Bal of Power...	! .!	Summary. Good way of probing + cues.
2:14 — Hill/front row – Picture	?	Did you notice?
T — There's me... mmm, Connie.	!	Probes.
T — Third is Brit sentiment. There are the 3 reasons. Anyone want reasons repeated? Everybody got them?	!?.	Summary. Checking for understanding
T — So, the U.S. in the war proved too much. Ger surrendered in 1918.	!	Summary

DATA RECORDING SHEET

Teacher _Larry Minor_
Subject _P4 6m 1t_
Date _11-4-85_
Time _____

ANECDOTES & SCRIPTING	PAD	COMMENTS
Bell. Students leaving.	?	Dismiss students?
T Will cover this tomorrow. Will talk about effects of WWI tomorrow.	?	Did you notice the time?

APPENDIX G

OBSERVATION LOG

OBSERVATION LOG

ID # _____

Week	MONDAY			TUESDAY			WEDNESDAY			THURSDAY			FRIDAY		
Feb. 3 1															
Feb.10 2															
Feb.17 3															
Feb.24 4															
Mar. 3 5															
Mar.10 6															

Note: Record length of observation in appropriate squares.

APPENDIX H

SUPERVISOR ATTITUDE SURVEY

SUPERVISOR ATTITUDE SURVEY

ID# _____

Directions: This survey is designed to assess your attitude
toward data-recording and lesson observation. Below are twelve
items to be answered. Please read each statement carefully and
circle only response for each item.

---

1. I need to improve my classroom observation skills to affect
   classroom improvement.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

2. I find it difficult to observe and record teacher/student
   behaviors and other occurrences in the lesson.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

3. Identifying specific areas in which the teacher need to
   improve in the classroom is difficult for me.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

4. I feel overwhelmed when deciding what to record from what I
   see and hear in the classroom.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

5. Observing and recording classroom occurrences as well as
   student/teacher behaviors is a simple task for me.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

6. I feel that after observing a lesson I am able to provide
   adequate, specific feedback to help teachers improve.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

7. Selecting specific areas for needed teacher improvement in the
   classroom is easy for me.

   +4   +3   +2   +1   0   -1   -2   -3   -4
   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

8. I feel confident when selecting what data to record from what
   I see and hear in the classroom.
   ```
    +4   +3      +2  +1     0      -1  -2      -3   -4
   Strongly Agree   Agree   Not Sure  Disagree  Strongly Disagree
   ```

9. I would describe my ability to use recorded data to help
   teachers improve as
   ```
    +5   +4      +3  +2    +1   0   -1    -2  -3      -4   -5
   Highly Able    Able      Somewhat Able    Unable   Highly Unable
   ```

10. After completing a classroom observation, I find it difficult
    to provide adequate, specific data to help teachers improve.
    ```
     +4   +3      +2  +1     0      -1  -2      -3   -4
    Strongly Agree   Agree   Not Sure  Disagree  Strongly Disagree
    ```

11. I am now able to bring about classroom improvement through
    classroom observation.
    ```
     +4   +3      +2  +1     0      -1  -2      -3   -4
    Strongly Agree   Agree   Not Sure  Disagree  Strongly Disagree
    ```

12. I would describe my ability to analyze the data I've recorded
    in order to help teachers improve as
    ```
     +5   +4      +3  +2    +1   0   -1    -2  -3      -4   -5
    Highly Able    Able      Somewhat Able    Unable   Highly Unable
    ```

APPENDIX I

SPECIFIC DATA-RECORDING SURVEY,

EIGHTH GRADE SOCIAL STUDIES

SPECIFIC DATA-RECORDING SURVEY
8TH GRADE SOCIAL STUDIES - MANN

Directions: This questionnaire is designed to examine your
ability to record and analyze what was observed in the videotaped
lesson. Please respond to each question. For those questions
which follow a yes or no response: if you reply "yes," please
supply the information requested. You will want to refer to the
data you recorded form the videotaped lesson.

---

1. What did Mr. Mann say or do to begin the lesson?

2. Was the objective of the lesson communicated to the students?

   Yes

   No

3. If your answer was yes, what did Mr. Mann say specifically?

4. Did Mr. Mann attempt to check on students' understanding
   after the segment on "Balance of Power"?

   Yes

   No

5. If your answer was yes, use the data you recorded to indicate
   specifically what he said.

6. What concept did Mr. Mann teach after the segment on
   "Wilhelm, the Man"?

7. Did Mr. Mann use summaries during the lesson?

   Yes

   No

8. If your answer was yes, use the data you recorded to indicate specifically what he said.

9. Did Mr. Mann use structuring comments during the lesson?

   Yes

   No

10. If your answer was yes, use the data you recorded to indicate specifically what he said.

APPENDIX J

SPECIFIC DATA-RECORDING SURVEY,

COMPUTER CLASS

SPECIFIC DATA-RECORDING SURVEY
TRANSITIONAL COMPUTER CLASS - HAVICE

Directions: This questionnaire is designed to examine your
ability to record and analyze what was observed in the videotaped
lesson. Please respond to each question. For those questions
which follow a "yes" or "no" response: if you reply "yes,"
please supply the information requested. You will want to refer
to the data you recorded from the videotaped lesson.

---

1. What did Mrs. Havice say or do to begin the lesson?

2. State the behavior of the student who was not yet ready to
    begin the lesson.

3. Was the objective of the lesson communicated to the students?

    Yes

    No

4. If you answered "yes," what specifically did Mrs. Havice say?

5. Did you observe Mrs. Havice check on students' understanding
    after the segment regarding the command "NEW"?

    Yes

    No

6. If you answered "yes," what specifically did Mrs. Havice say?

7. What computer command did Mrs. Havice teach after the command
    "LOAD HI"?

8. What computer command did she teach after the command "NEW"?

9. Did Mrs. Havice use summaries during the lesson?

   Yes

   No

10. If you answered "yes," what specifically did Mrs. Havice say?

APPENDIX K

IDENTIFICATION OF TEACHER

PERFORMANCE STRENGTHS

IDENTIFICATION OF TEACHER

PERFORMANCE STRENGTHS

Directions: Please list two to three areas of strength to be
communicated to the teacher during the post-observation
conference. Please write what s/he said or did from the data
you recorded which led you to identify the areas of strength.

1. AREA OF STRENGTH:

    Specific Observed Example(s):

2. AREA OF STRENGTH:

    Specific Observed Example(s):

3. AREA OF STRENGTH:

    Specific Observed Example(s);

APPENDIX L

IDENTIFICATION OF TEACHER

TARGETS FOR GROWTH

IDENTIFICATION OF TEACHER

TARGETS FOR GROWTH

Directions: Please list two to three targets for growth to be
communicated to the teacher during the post-observation
conference. Please write what s/he said or did from the data
you recorded which led you to identify the targets for growth.

1. TARGET FOR GROWTH:

    Specific Observed Example(s):

2. TARGET FOR GROWTH:

    Specific Observed Example(s):

3. TARGET FOR GROWTH:

    Specific Observed Example(s):

APPENDIX M

ORAL STATEMENT

ORAL STATEMENT OF THE VOLUNTARY

NATURE OF THE STUDY

The purpose of this study is to assess the efficacy of a
Structured Data-Recording technique. The findings will be used
for research purposes. You are not required to give your name
or respond to any questions revealing your identity. Your
participation in this project is voluntary. Your cooperation is
greatly appreciated.

APPENDIX N

NINTH GRADE ENGLISH LESSON PLAN

LESSON PLAN

Grade: 9
Subject: English
Teacher: Mrs. Haas

Unit Topic: Punctuation
Topic For This Lesson: Apostrophes and Hyphens

1. Type of learning

    The class period will be devoted to reviewing for a
    test tomorrow on the correct use of apostrophes and
    hyphens. The cognitive domain will be emphasized over
    the affective and psychomotor domains.

2. Instructional Objectives

    Given 10 words, students should write a singular
    possessive, the plural form of the word, and the plural
    possessive for each of the words, with 70% accuracy.
    Given sentences supplied by the teacher, on a homework
    assignment, each student should place hyphens where they
    belong, with 70% accuracy.

3. Student Activities

    a. Students will spend the first few minutes taking a
       quiz over 10 words--identifying the singular
       possessive, plural form of the word, and plural
       possessive.

    b. Students will correct their own homework assignments
       on the use of hyphens. The class will take each
       sentence and look at it together. The teacher will
       call on certain students to provide the correct
       answer to selected sentences.

    c. On 2 worksheets provided them, students will take one
       sentence at a time, decide where to place an
       apostrophe in the sentence, and be prepared to defend
       the choice in class discussion.

4. Level of Difficulty

    The quiz and the guided practice activities should be
    well within reach of everybody's ability level, especially
    since they are review activities. I have included a few

sentences that will challenge students'understanding of
how to use apostrophes to show possessiveness: e.g.,
the words, "ours" or "yours."

5. Learning Styles

The students appear to learn how to use hyphens and
apostrophes best through drill and practice. Plenty of
opportunity should be provided for "trial and error" and
"trial and correct answer" responses. Activities requiring
writing or analysis of words and sentences for correct
placement of apostrophes and hyphens are important.
Immediate feedback on the correctness of responses is very
necessary.

6. Teacher Methods and Procedures

The objectives for this lesson and the learning styles
of the students suggest the use of drill practice -
feedback approach to the lesson design.

The lesson will have the following format:

   a. Quiz over use of apostrophes

   b. Return papers to students for review for
       tomorrow's test

   c. In-class homework check over the correct use of
       hyphens--papers to be turned in to teacher

   d. In-class worksheet assignment (guided practice
       activity) in identifying the number of apostrophes
       to be used and where to use them in sentences

       --discussion of and defense of answers.

7. Evaluation of Student Outcomes

To be obtained in the following ways:

   a. on quiz

   b. check on homework assignment

   c. answers provided in class to worksheet activity

   d. results on test to be given tomorrow

8. <u>Provisions for Remediation</u>

   Students who give evidence of not mastering the
material will be provided additional drill and practice
activities until s/he reaches the level of mastery.

9. <u>Time Allotment</u>

   Quiz - approximately 8 minutes

   Returning papers to students - approximately 2
   minutes

   In-class homework check - approximately 15 minutes

   In-class worksheet assignment and discussion -
   approximately 18 minutes

APPENDIX O

TEACHER PERFORMANCE RATINGS

TEACHER PERFORMANCE RATINGS

Directions: Please rate the teacher's performance in the areas below. Use a 1-10 rating scale with 1 representing very low or very poor performance and 10, very high or very good performance. Circle the number which reflects your rating of the teacher's formance in each area.

		very poor									very good
1.	Management of classroom (management of student behavior, and organization of classroom, instruction, and materials).	1	2	3	4	5	6	7	8	9	10
2.	Use of follow-up questions or probes	1	2	3	4	5	6	7	8	9	10
3.	Use of reinforcers (teacher statements or behavior used to strengthen a student behavior)	1	2	3	4	5	6	7	8	9	10
4.	Involvement of students in the learning task (the extent to which she was able to truly involve the students in learning	1	2	3	4	5	6	7	8	9	10
5.	Presentation of a smoothly flowing lesson	1	2	3	4	5	6	7	8	9	10
6.	Monitor learning of individual students during the lesson	1	2	3	4	5	6	7	8	9	10
7.	Monitor learning of the class as a whole during the lesson	1	2	3	4	5	6	7	8	9	10
8.	Accomplishment of objectives	1	2	3	4	5	6	7	8	9	10

APPENDIX P

SUPERVISOR ATTITUDE SURVEY

SUBSCALE PRETEST RESULTS

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Table P1. Supervisor Attitude Survey Subscale:
Pretest results of the analysis of
variance of evaluators' level of confidence
in data collection by group (experimental,
control) and gender (male, female) (N = 75)

Level of Confidence in Data Collection

Sources of Variation	df	Mean Squares	F-Value
Covariates	1	2.32	1.48
Position	1	2.32	1.48
Main Effects	2	0.72	0.46
Group	1	0.51	0.32
Gender	1	0.93	0.59
Two-Way Interactions	1	0.00	0.00
Group Gender	1	0.00	0.00
Residual	70	1.57	

Table P2. Supervisor Attitude Survey Subscale:
Pretest results of the analysis of
variance of evaluators' level of confidence
in <u>data analysis</u> skills by group
(experimental, control) and gender (male,
female) (N = 72)

Level of Confidence in Data Analysis			
Sources of Variation	df	Mean Squares	F-Value
Covariates	1	0.37	0.22
Position	1	0.37	0.22
Main Effects	2	1.33	0.80
Group	1	0.10	0.06
Gender	1	2.65	1.61
Two-Way Interactions	1	0.07	0.04
Group Gender	1	0.07	0.04
Residual	68	1.65	

APPENDIX Q

SUPERVISOR ATTITUDE SURVEY

SUBSCALE DATA

Table Q1.   Supervisor Attitude Survey Subscales:
            Posttest results of the comparison of
            evaluators' level of confidence in <u>data</u>
            <u>collection</u> skills by group (experimental,
            control)

<u>Data Collection Skills*</u>

| | Pretest | | | Posttest | | | Mean Differ- |
Group	N	Mean	S.D.	N	Mean	S.D.	ence
Experimental	33	5.47	1.33	32	6.31	1.14	0.84
Control	42	5.29	1.17	40	6.01	1.03	0.72
Total	75			72			

* Choice Range: Strongly agree to strongly disagree
                  on a 9-point Likert-type scale.

Table Q2. Supervisor Attitude Survey Subscales:
          Posttest results of the comparison of
          evaluators' level of confidence in <u>data</u>
          <u>collection</u> skills by gender (male,
          female)

Data Collection Skills*

Group	Pretest			Posttest			Mean Differ-ence
	N	Mean	S.D.	N	Mean	S.D.	
Females	21	5.52	1.41	19	6.64	1.17	1.12
Males	54	5.31	1.18	53	5.96	1.00	0.65
Total	75			72			

* Choice Range: Strongly disagree to strongly agree
                on a 9-point Likert-type scale

Table Q3. Supervisor Attitude Survey Subscale: Posttest results of a
comparison of evaluators' level of confidence in <u>data</u>
<u>collection</u> by group (experimental, control) and gender (male,
female)

| | Data Collection Skills* | | | | | | | | |
| | Male | | | Female | | | Total | | |
Group	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	23	5.97	0.86	9	7.17	1.37	32	6.31	1.14
Control	30	5.96	1.12	10	6.18	0.76	40	6.01	1.03
Total	53	5.96	1.00	19	6.64	1.17	72	6.14	1.08

* Choice range: Strongly disagree to strongly agree on a 9-point Likert-
type scale.

Table Q4. Supervisor Attitude Survey Subscale:
Posttest results of analysis of variance of
evaluators' level of confidence in <u>data
collection</u> skills by group (experimental,
control) and gender (male, female) (N = 77)

Source of Variation	df	Data Collection Skills	
		Mean Squares	F-Value
Covariates	2	13.59	20.19
Position	1	0.01	0.01
Pretest	1	27.13	40.31
Main Effects	2	1.39	2.06
Group	1	0.34	0.50
Gender	1	2.55	3.79
Two-Way Interaction	1	1.71	2.54
Group Gender	1	1.71	2.54
Residual	64	0.67	

Table Q5. Supervisor Attitude Survey Subscales:
          Posttest results of the comparison of
          evaluators' level of confidence in <u>data</u>
          <u>analysis</u> skills by group (experimental,
          control

| Group | Data Analysis Subscale* | | | | | | |
| | Pretest | | | Posttest | | | Mean Differ-ence |
	N	Mean	S.D.	N	Mean	S.D.	
Experimental	31	6.31	1.42	30	7.04	1.13	0.73
Control	42	6.28	1.16	39	6.73	1.26	0.45
Total	73			69			

* Choice Range: Strongly disagree to strongly agree
                 on a 9-point Likert-type scale

Table Q6. Supervisor Attitude Survey Subscales:
         Posttest results of the comparison of
         evaluators level of confidence in <u>data
         analysis</u> skills by gender (male, female)

<u>Data Analysis Subscale</u>*

Group	Pretest			Posttest			Mean Differ-ence
	N	Mean	S.D.	N	Mean	S.D.	
Female	18	6.64	0.99	17	7.54	0.99	0.90
Male	55	6.18	1.33	52	6.64	1.19	0.46
Total	73			69			

* Choice Range: Strongly disagree to strongly agree
                on a 9-point Likert-type scale

Table Q7. Supervisor Attitude Subscale: Posttest results of a comparison of evaluators' level of confidence in <u>data analysis skills</u> skills by group (experimental, control) and gender (male, female)

| | Data Analysis Subscale* | | | | | | | | |
| | Male | | | Female | | | Total | | |
Group	N	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.
Experimental	23	6.76	1.03	7	7.96	0.97	30	7.04	1.13
Control	29	6.55	1.32	10	7.25	0.94	39	6.73	1.26
Total	52	6.64	1.19	17	7.54	0.99	69	6.87	1.21

* Choice Range: Strongly disagree to strongly agree on a 9-point Likert-type scale.

Table Q8. Supervisor Attitude Survey Subscale:
Posttest results of the analysis of
variance of evaluators' level of confidence
in <u>data analysis</u> skills by group
(experimental, control) and gender (male,
female) (N = 77)

| Source of Variation | df | Data Analysis Subscale | |
		Mean Squares	F-Value
Covariates	2	13.43	14.01***
Position	1	0.00	0.00
Pretest	1	26.65	27.96***
Main Effects	2	1.72	1.81
Group	1	0.64	0.68
Gender	1	3.31	3.47
Two-Way Interaction	1	0.19	0.20
Group Gender	1	0.19	0.20
Residual	61	0.95	7.39

*** Significant beyond the .001 level.

APPENDIX R

FREQUENCY TABLES

Table R1. Frequencies of gain scores between pretest
and posttest results of evaluators' level of
confidence by experimental group

Value	Frequency	Valid Percent
-2.08	1	3.7
-1.58	1	3.7
-1.50	1	3.7
-1.33	1	3.7
-0.83	2	7.4
-0.75	2	7.4
-0.67	2	7.4
-0.50	1	3.7
-0.25	1	3.7
-0.17	1	3.7
-0.08	1	3.7
0.00	1	3.7
0.17	1	3.7
0.33	2	7.4
0.42	1	3.7
0.50	1	3.7
0.58	1	3.7
0.67	2	7.4
0.92	1	3.7
1.42	1	3.7
1.75	1	3.7
2.00	1	3.7
Total	27	100.0

Table R2. Frequencies of gain scores between pretest
and posttest results of evaluators' level
of confidence in appropriate <u>data
collection</u> by experimental group

Value	Frequency	Valid Percent
-1.13	1	3.3
-0.88	2	6.7
-0.75	1	3.3
-0.63	1	3.3
-0.38	2	6.7
-0.25	3	10.0
-0.13	2	6.7
0.13	1	3.3
0.38	2	6.7
0.50	2	6.7
0.88	3	10.0
1.13	1	3.3
1.25	1	3.3
1.38	2	6.7
1.50	1	3.3
1.75	1	3.3
1.88	1	3.3
2.38	2	6.7
3.00	1	3.3
Total	30	100.0

Table R3. Frequencies of gain scores between pretest
and posttest results of evaluators' level
of confidence in <u>data analysis</u> by
experimental group

Value	Frequency	Valid Percent
-3.00	1	3.6
-2.25	1	3.6
-1.00	2	7.1
-0.25	4	14.3
0.00	1	3.6
0.25	2	7.1
0.50	5	17.9
0.75	1	3.6
1.00	3	10.7
1.25	1	3.6
1.50	1	3.6
1.75	1	3.6
2.00	1	3.6
2.25	2	7.1
2.75	1	3.6
3.00	1	3.6
Total	28	100.0

Table R4. Frequencies of gain scores between pretest
and posttest results of evaluators' ability
to record specific data by experimental
group

Value	Frequency	Valid Percent
-0.80	2	5.7
-0.40	2	5.7
-0.30	4	11.4
-0.20	6	14.3
-0.10	4	11.4
0.10	7	17.2
0.20	2	5.7
0.40	4	11.4
0.50	1	2.9
0.60	1	2.9
0.70	2	5.7
Total	35	100.0

Table R5. Frequencies of gain scores between pretest
           and posttest results of evaluators'
           ability to identify teacher performance
           strengths by experimental group

Value	Frequency	Valid Percent
-4.00	1	3.7
-3.00	1	3.7
-2.00	4	14.8
0.00	5	18.5
2.00	11	40.7
4.00	3	11.1
6.00	2	7.
Total	27	100.0

Table R6. Frequencies of gain scores between pretest
and posttest results of evaluators'
ability to identify teacher targets for
growth by experimental group

Value	Frequency	Valid Percent
-3.00	4	14.3
-2.00	6	21.4
-1.00	7	25.0
0.00	4	14.3
1.00	3	10.7
2.00	2	7.1
4.00	2	7.1
Total	28	100.0

Table R7. Frequencies of gain scores between pretest
and posttest results of female evaluators'
level of confidence in data collection and
data analysis

Value	Frequency	Valid Percent
-2.08	1	6.7
-1.25	1	6.7
-0.83	1	6.7
-0.75	1	6.7
-0.42	1	6.7
-0.25	1	6.7
-0.08	1	6.7
0.08	1	6.7
0.33	1	6.7
0.58	1	6.7
0.67	1	6.7
0.92	1	6.7
1.42	2	13.3
2.67	1	6.7
Total	15	100.0

Table R8. Frequencies of gain scores between pretest and posttest results of female evaluators' ability to record specific data

Value	Frequency	Valid Percent
-0.80	1	4.5
-0.40	3	13.6
-0.30	4	18.0
-0.20	4	18.0
-0.10	1	4.5
0.00	2	9.1
0.10	4	18.0
0.30	1	4.5
0.40	1	4.5
0.70	1	4.5
Total	22	100.0

Table R9. Frequencies of gain scores between pretest
          and posttest results of female evaluators'
          level of confidence in <u>data analysis</u>

Value	Frequency	Valid Percent
-2.00	1	6.7
-0.75	1	6.7
-0.25	3	20.0
0.50	3	20.0
1.00	3	20.0
2.25	3	20.0
3.00	1	6.7
Total	15	100.0

Table R10. Frequencies of gain scores between pretest
and posttest results of evaluators' ability
to record specific data by control group

Value	Frequency	Valid Percent
-0.70	1	2.4
-0.40	3	7.1
-0.30	7	16.7
-0.20	9	21.5
-0.10	7	16.7
0.00	7	16.7
0.10	1	2.4
0.20	2	4.8
0.30	4	9.5
0.40	1	2.4
Total	42	100.0

Table R11. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to identify teacher performance
strengths

Value	Frequency	Valid Percent
-4.00	1	6.3
-2.00	5	31.3
0.00	4	25.0
2.00	3	18.8
4.00	3	18.8
Total	16	100.0

Table R12.   Frequencies of gain scores between pretest
             and posttest results of female evaluators'
             ability to identify teacher targets for
             growth

Value	Frequency	Valid Percent
-3.00	5	31.3
-2.00	2	12.5
-1.00	1	6.3
0.00	4	25.0
2.00	2	12.5
4.00	1	6.3
5.00	1	6.3
Total	16	100.0

Table R13. Frequencies of gain scores between pretest
and posttest results of male evaluators'
level of confidence in data collection and
data analysis (by control group)

Value	Frequency	Valid Percent
-1.08	1	3.4
-0.67	2	6.9
-0.58	2	6.9
-0.50	1	3.4
-0.42	1	3.4
-0.33	2	6.9
-0.17	1	3.4
-0.08	2	6.9
0.00	2	6.9
0.08	2	6.9
0.17	1	3.4
0.25	3	10.3
0.33	2	6.9
0.50	1	3.4
0.58	1	3.4
0.67	2	6.9
1.00	1	3.4
1.08	1	3.4
2.08	1	3.4
Total	29	100.0

Table R14. Frequencies of gain scores between pretest
and posttest results of male evaluators'
level of confidence in <u>data collection</u> (by
control group)

Value	Frequency	Valid Percent
-0.50	1	3.3
-0.38	1	3.3
-0.13	1	3.3
0.00	1	3.3
0.13	3	10.0
0.25	1	3.3
0.38	1	3.3
0.50	4	13.3
0.63	3	10.0
0.75	3	10.0
1.00	2	6.7
1.13	2	6.7
1.38	4	13.3
1.63	1	3.3
1.75	1	3.3
2.88	1	3.3
Total	30	100.0

Table R15. Frequencies of gain scores between pretest
            and posttest results of male evaluators'
            level of confidence in <u>data analysis</u> (by
            control group)

Value	Frequency	Valid Percent
-0.50	3	10.3
-0.25	4	13.8
0.00	2	6.9
0.25	4	13.8
0.50	5	17.2
0.75	5	17.2
1.00	2	6.9
1.50	3	10.3
1.75	2	3.4
Total	29	100.0

Table R16.   Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to record specific data (by control
group)

Value	Frequency	Valid Percent
-0.70	1	3.2
-0.40	2	6.4
-0.30	4	12.9
-0.20	6	19.2
-0.10	6	19.2
0.00	5	16.1
0.10	1	3.2
0.20	2	6.5
0.30	3	9.7
0.40	1	3.2
Total	31	100.0

Table R17. Frequencies of gain scores between pretest and posttest results of male evaluators' ability to identify teacher performance strengths (by control group)

Value	Frequency	Valid Percent
-4.00	1	3.7
-2.00	7	25.9
0.00	13	48.1
2.00	5	18.5
4.00	1	3.7
Total	27	100.0

Table R18. Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to identify teacher targets for
growth (by control group)

Value	Frequency	Valid Percent
-4.00	3	11.5
-3.00	4	15.4
-2.00	6	23.1
-1.00	2	7.7
0.00	6	23.1
1.00	2	7.7
2.00	3	11.5
Total	26	100.0

Table R19. Frequencies of gain scores between pretest
and posttest results of male evaluators'
level of confidence in data collection and
data analysis (by experimental group)

Value	Frequency	Valid Percent
-2.08	1	4.5
-1.58	1	4.5
-1.50	1	4.5
-1.33	1	4.5
-0.83	1	4.5
-0.75	1	4.5
-0.67	2	9.1
-0.50	1	4.5
-0.25	1	4.5
-0.17	1	4.5
-0.08	1	4.5
0.00	1	4.5
0.17	1	4.5
0.33	1	4.5
0.42	1	4.5
0.50	1	4.5
0.58	1	4.5
0.67	1	4.5
0.92	1	4.5
1.75	1	4.5
2.00	1	4.5
Total	22	100.0

Table R20. Frequencies of gain scores between pretest
and posttest results of male evaluators'
level of confidence in data collection (by
experimental group)

Value	Frequency	Valid Percent
-1.13	1	4.5
-0.88	2	9.1
-0.63	1	4.5
-0.38	1	4.5
-0.25	2	9.1
-0.13	2	9.1
0.13	1	4.5
0.38	2	9.1
0.50	2	9.1
1.13	1	4.5
1.38	1	4.5
1.75	1	4.5
2.38	2	9.1
Total	22	100.0

Table R21.   Frequencies of gain scores between pretest
             and posttest results of male evaluators'
             level of confidence in data analysis (by
             experimental group)

Value	Frequency	Valid Percent
-3.00	1	4.3
-2.25	1	4.3
-1.00	2	8.7
-0.25	3	13.0
0.00	1	4.3
0.25	2	8.7
0.50	4	17.4
0.75	1	4.3
1.00	1	4.3
1.25	1	4.3
1.50	1	4.3
1.75	1	4.3
2.00	1	4.3
2.25	1	4.3
2.75	1	4.3
3.00	1	4.3
Total	23	100.0

Table R22. Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to record specific data (by
experimental group)

Value	Frequency	Valid Percent
-0.80	1	4.2
-0.30	3	12.5
-0.20	5	21.0
-0.10	4	16.7
0.10	3	12.5
0.20	2	8.3
0.40	3	12.5
0.50	1	4.2
0.60	1	4.2
0.70	1	4.2
Total	24	100.0

Table R23. Frequencies of gain scores between pretest
            and posttest results of male evaluators'
            ability to identify teacher performance
            strengths (by experimental group)

Value	Frequency	Valid Percent
-4.00	1	4.8
-3.00	1	4.8
-2.00	3	14.3
0.00	4	19.0
2.00	9	42.9
4.00	1	4.8
6.00	2	9.5
Total	21	100.0

Table R24. Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to identify teacher targets for
growth (by experimental group)

Value	Frequency	Valid Pecent
-3.00	1	5.0
-2.00	5	25.0
-1.00	6	30.0
0.00	3	15.0
1.00	3	15.0
2.00	1	5.0
4.00	1	5.0
Total	20	100.0

Table R25.   Frequencies of gain scores between pretest
             and posttest results of female evaluators'
             confidence level in data collection and
             data analysis by experimental group

Value	Frequency	Valid Percent
-0.83	1	20.0
-0.75	1	20.0
0.33	1	20.0
0.67	1	20.0
1.42	1	20.0
Total	5	100.0

Table R26. Frequencies of gain scores between pretest
and posttest results of female evaluators'
level of confidence in <u>data collection</u> (by
experimental group)

Value	Frequency	Valid Percent
-0.75	1	12.5
-0.38	1	12.5
-0.25	1	12.5
1.25	1	12.5
1.38	1	12.5
1.50	1	12.5
1.88	1	12.5
3.00	1	12.5
Total	8	100.0

Table R27. Frequencies of gain scores between pretest
and posttest results of female evaluators'
level of confidence in data analysis skills
(by experimental group)

Value	Frequency	Valid Percent
-0.25	1	20.0
0.50	1	20.0
1.00	2	40.0
2.25	1	20.0
Total	5	100.0

Table R28. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to record specific data by
experimental group

Value	Frequency	Valid Percent
-0.80	1	9.1
-0.40	2	18.2
-0.30	1	9.1
-0.20	1	9.1
0.10	4	36.4
0.40	1	9.1
0.70	1	9.1
Total	11	100.0

Table R29. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to identify teacher performance
strengths by experimental group

Value	Frequency	Valid Percent
-2.00	1	16.7
0.00	1	16.7
2.00	2	33.3
4.00	2	33.3
Total	6	100.0

Table R30. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to identify targets for growth by
experimental group

Value	Frequency	Valid Percent
-3.00	3	37.5
-2.00	1	12.5
-1.00	1	12.5
0.00	1	12.5
2.00	1	12.5
4.00	1	12.5
Total	8	100.0

Table R31.   Frequencies of gain scores between pretest
             and posttest results of female evaluators'
             level of confidence in data collection and
             data analysis (by control group)

Value	Frequency	Valid Percent
-2.08	1	10.0
-1.25	1	10.0
-0.42	1	10.0
-0.25	1	10.0
-0.18	1	10.0
0.08	1	10.0
0.58	1	10.0
0.92	1	10.0
1.42	1	10.0
2.67	1	10.0
Total	10	100.0

Table R32.   Frequencies of gain scores between pretest
             and posttest results of female evaluators'
             level of confidence in <u>data collection</u> (by
             control group)

Value	Frequency	Valid Percent
-1.38	1	10.0
-0.63	1	10.0
0.00	1	10.0
0.13	1	10.0
0.25	1	10.0
0.88	1	10.0
1.25	1	10.0
1.88	1	10.0
2.00	1	10.0
1.75	1	10.0
Total	10	100.0

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Table R33. Frequencies of gain scores between pretest
and posttest results of female evaluators'
level of confidence in data analysis (by
control group)

Value	Frequency	Valid Percent
-2.00	1	10.0
-0.75	1	10.0
-0.25	2	20.0
0.50	2	20.0
1.00	1	10.0
2.25	2	20.0
3.00	1	10.0
Total	10	100.0

Table R34. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to record specific data (by control
group)

Value	Frequency	Valid Percent
-0.40	1	9.1
-0.30	3	27.3
-0.20	3	27.3
-0.10	1	9.1
0.00	2	18.2
0.30	1	9.1
Total	11	100.0

Table R35. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to identify teacher performance
strengths (by control group)

Value	Frequency	Valid Percent
-4.00	1	10.0
-2.00	4	40.0
0.00	3	30.0
2.00	1	10.0
4.00	1	10.0
Total	10	100.0

Table R36. Frequencies of gain scores between pretest
and posttest results of female evaluators'
ability to identify teacher targets for
growth (by control group)

Value	Frequency	Valid Percent
-3.00	2	25.0
-2.00	1	12.5
0.00	3	37.5
2.00	1	12.5
5.00	1	12.5
Total	8	100.0

Table R37. Frequencies of gain scores between pretest
and posttest results of evaluators' level
of confidence in data collection and data
analysis by control group

Value	Frequency	Valid Percent
-2.08	1	2.6
-1.25	1	2.6
-1.08	1	2.6
-0.67	2	5.1
-0.58	2	5.1
-0.50	1	2.6
-0.42	2	5.1
-0.33	2	5.1
-0.25	1	2.6
-0.17	1	2.6
-0.08	3	7.7
0.00	2	5.1
0.08	3	7.7
0.17	1	2.6
0.25	3	7.7
0.33	2	5.1
0.50	1	2.6
0.58	2	5.1
0.67	2	5.1
0.92	1	2.6
1.00	1	2.6
1.08	1	2.6
1.42	1	2.6
2.08	1	2.6
2.67	1	2.6
Total	39	100.0

Table R38. Frequencies of gain scores between pretest and posttest results of evaluators' level of confidence in <u>data collection</u> skills by control group

Value	Frequency	Valid Percent
-1.38	1	2.5
-0.63	1	2.5
-0.50	1	2.5
-0.38	1	2.5
-0.13	1	2.5
0.00	2	5.0
0.13	4	10.0
0.25	2	5.0
0.38	1	2.5
0.50	4	10.0
0.63	3	7.5
0.75	3	7.5
0.88	1	2.5
1.00	2	5.0
1.13	2	5.0
1.25	1	2.5
1.38	4	10.0
1.63	1	2.5
1.75	1	2.5
1.88	1	2.5
2.00	1	2.5
2.75	1	2.5
2.88	1	2.5
Total	40	100.0

Table R39. Frequencies of gain scores between pretest
            and posttest results of evaluators' level
            of confidence in <u>data analysis</u> by control
            group

Value	Frequency	Valid Percent
-2.00	1	2.6
-0.75	1	2.6
-0.50	3	7.7
-0.25	6	15.4
0.00	2	5.1
0.25	4	10.3
0.50	7	17.9
0.75	5	12.8
1.00	3	7.7
1.50	3	7.7
1.75	1	2.6
2.25	2	5.1
3.00	1	5.1
Total	39	100.0

Table R40. Frequencies of gain scores between pretest
and posttest results of evaluators' ability
to identify teacher performance strengths
by control group

Value	Frequency	Valid Percent
-4.00	2	5.4
-2.00	11	29.7
0.00	16	43.2
2.00	6	16.2
4.00	2	5.4
Total	37	100.0

Table R41. Frequencies of gain scores between pretest
and posttest results of evaluators' ability
to identify teacher targets for growth by
control group

Value	Frequency	Valid Percent
-4.00	3	8.8
-3.00	6	17.6
-2.00	7	20.6
-1.00	2	5.9
0.00	9	26.5
1.00	2	5.9
2.00	4	11.8
5.00	1	2.4
Total	34	100.0

Table R42. Frequencies of gain scores between pretest
           and posttest results of male evaluators'
           level of confidence in data collection and
           data analysis skills

Value	Frequency	Valid Percent
-2.08	1	2.0
-1.58	1	2.0
-1.50	1	2.0
-1.33	1	2.0
-1.08	1	2.0
-0.83	1	2.0
-0.75	1	2.0
-0.67	4	8.0
-0.58	2	3.9
-0.50	2	3.9
-0.42	1	2.0
-0.33	2	3.9
-0.25	1	2.0
-0.17	2	3.9
-0.08	3	5.9
0.00	3	5.9
0.08	2	3.9
0.17	2	3.9
0.25	3	5.9
0.33	3	5.9
0.42	1	2.0
0.50	2	3.9
0.58	2	3.9
0.67	3	5.9
0.92	1	2.0
1.00	1	2.0
1.08	1	2.0
1.75	1	2.0
2.00	1	2.0
2.08	1	2.0
Total	**55**	**100.0**

Table R43.   Frequencies of gain scores between pretest
             and posttest results of male evaluators'
             level of confidence in <u>data collection</u>

Value	Frequency	Valid Percent
-1.13	1	1.9
-0.88	2	3.8
-0.63	1	1.9
-0.50	1	1.9
-0.38	2	3.8
-0.25	2	3.8
-0.13	3	5.8
0.00	1	1.9
0.13	4	7.7
0.25	1	1.9
0.38	3	5.8
0.50	6	11.5
0.63	3	5.8
0.75	3	5.8
0.88	3	5.8
1.00	2	3.8
1.13	3	5.8
1.38	5	9.6
1.63	1	1.9
1.75	2	3.8
2.38	2	3.8
2.88	1	1.9
Total	52	100.0

Table R44. Frequencies of gain scores between pretest
and posttest results of male evaluators'
level of confidence in data analysis

Value	Frequency	Valid Percent
-3.00	1	1.9
-2.25	1	1.9
-1.00	2	3.8
-0.50	3	5.8
-0.25	7	13.5
0.00	3	5.8
0.25	6	11.5
0.50	9	17.3
0.75	6	11.5
1.00	3	5.8
1.25	1	1.9
1.50	4	7.7
1.75	2	3.8
2.00	1	1.9
2.25	1	1.9
2.75	1	1.9
3.00	1	1.9
Total	52	100.0

Table R45. Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to record specific data

Value	Frequency	Valid Percent
-0.80	1	1.8
-0.70	1	1.8
-0.40	2	3.6
-0.30	7	12.7
-0.20	11	19.8
-0.10	10	18.0
0.00	5	9.1
0.10	4	7.3
0.20	4	7.3
0.30	3	5.5
0.40	4	7.3
0.50	1	1.8
0.60	1	1.8
0.70	1	1.8
Total	55	100.0

Table R46. Frequencies of gain scores between pretest
and posttest results of male evaluators'
ability to identify teacher performance
areas of strength

Value	Frequency	Valid Percent
-4.00	2	4.2
-3.00	1	2.1
-2.00	10	20.8
0.00	17	35.4
2.00	14	29.2
4.00	2	4.2
6.00	2	4.2
Total	48	100.0

Table R47. Frequency of gain scores between pretest
and posttest results of male evaluators'
ability to identify targets for growth

Value	Frequency	Valid Percent
-4.00	3	6.5
-3.00	5	10.9
-2.00	11	23.9
-1.00	8	17.4
0.00	9	19.6
1.00	5	10.9
2.00	4	8.7
4.00	1	2.2
Total	46	100.0

APPENDIX S

ADMINISTRATIVE POOL RESPONSES

HAVICE PRETEST RESULTS

TARGETS FOR GROWTH: The "best" or most important, of first priority areas are:

1. Monitoring

2. Student Involvement

3. Concept Development

TARGETS FOR GROWTH: The "acceptable" or other, of less priority areas are:

1. Classroom management

2. Time Useage

3. Clarity

HAVICE POSTTEST RESULTS

AREAS OF STRENGTH: The "best" or most important, of
                     first priority areas are:

1. Concept Development

2. Lesson Content

3. Summaries

    Classroom Management

AREAS OF STRENGTH: The "acceptable" or other, of less
                     priority areas are:

1. Modeling

2.

3.

MANN PRETEST RESULTS

TARGETS FOR GROWTH: The "best" or most important, of
first priority areas are:

1. Student Involvement

2. Monitoring/Checking for Understanding

3. Questioning

TARGETS FOR GROWTH: The "acceptable" or other, of less
priority areas are:

1. Concept Development

2. Clarity

3. Classroom Management

MANN PRETEST RESULTS

Directions: Please read and label each response. The
key category sheet is provided to ensure a common
language.

AREAS OF STRENGTH

1. Lesson Content

2. Classroom Management

3. Concept Development

AREAS OF STRENGTH: The "acceptable" or other, of less
priority areas are:

1.

2.

3.