MONTANA STATE UNIVERSITY

The effects of instruction in the Hunter Instructional Model on teachers' sense of efficacy
by Ronald Ray Bolinger

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:
This study investigated the effects of training in the Hunter Instructional Model and Teachers' Sense of Efficacy, an important expectation of performance for teachers based on Bandura's two-factor theoretical model of self-efficacy. Overall Efficacy was clarified by Ashton and Webb to include the Sense of Personal Efficacy, or the assessment by the individual teacher of his/her own competence, and the Sense of Teaching Efficacy, or the expectations that teaching can influence student learning.

The purpose of the study was to determine if a teaching model such as the Hunter Instructional Model, which is designed to enhance individual teachers' skills and effectiveness, also contributed to their attitudes and feelings about how well they can perform their jobs and their feelings of whether they can effect student learning.

Further, the study determined whether the variables of gender, grade level of students taught, teachers' experience, and the ability level of the students made a significant difference in Teachers' Sense of Efficacy.

The Teacher Efficacy Scale, designed by Sherri Gibson, was used as the major instrument to gather the information based on a pre/post mean change score design. A series of two-way and one-way analysis of variance measures were used as the statistical measurements. A t-test was applied to determine the significant difference between the pre/post mean change scores.

The study determined that training in the Hunter Instructional Model significantly changed the attitudes and opinions of the teachers about their ability to teach (Personal Efficacy) and their Overall Efficacy, but did not promote a significant change in the teachers' attitudes about students' ability to learn (Teaching Efficacy). Further, the study determined that the teachers' experience and grade level taught made a significant difference in Personal Efficacy and Overall Efficacy.

THE EFFECTS OF INSTRUCTION IN THE

HUNTER INSTRUCTIONAL MODEL ON

TEACHERS' SENSE OF EFFICACY

by

Ronald Ray Bolinger

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APPROVAL

of a thesis submitted by

Ronald Ray Bolinger

This thesis has been read by each member of the thesis
committee and has been found to be satisfactory regarding
content, English usage, format, citations, bibliographic
style, and consistency, and is ready for submission to the
College of Graduate Studies.

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ABSTRACT

This study investigated the effects of training in the Hunter Instructional Model and Teachers' Sense of Efficacy, an important expectation of performance for teachers based on Bandura's two-factor theoretical model of self-efficacy. Overall Efficacy was clarified by Ashton and Webb to include the Sense of Personal Efficacy, or the assessment by the individual teacher of his/her own competence, and the Sense of Teaching Efficacy, or the expectations that teaching can influence student learning.

The purpose of the study was to determine if a teaching model such as the Hunter Instructional Model, which is designed to enhance individual teachers' skills and effectiveness, also contributed to their attitudes and feelings about how well they can perform their jobs and their feelings of whether they can effect student learning.

Further, the study determined whether the variables of gender, grade level of students taught, teachers' experience, and the ability level of the students made a significant difference in Teachers' Sense of Efficacy.

The Teacher Efficacy Scale, designed by Sherri Gibson, was used as the major instrument to gather the information based on a pre/post mean change score design. A series of two-way and one-way analysis of variance measures were used as the statistical measurements. A t-test was applied to determine the significant difference between the pre/post mean change scores.

The study determined that training in the Hunter Instructional Model significantly changed the attitudes and opinions of the teachers about their ability to teach (Personal Efficacy) and their Overall Efficacy, but did not promote a significant change in the teachers' attitudes about students' ability to learn (Teaching Efficacy). Further, the study determined that the teachers' experience and grade level taught made a significant difference in Personal Efficacy and Overall Efficacy.

CHAPTER 1

INTRODUCTION

In the last ten years, there has been a great deal of research in the school improvement literature concerning teacher effectiveness. The literature points out various teaching models with the objectives for improving teacher behaviors to "increase the likelihood of learning" (Hunter, 1985). For example, there are various models of teaching as outlined by Bruce Joyce (1983), in addition to specific research that has detailed methodologies that teachers can use to improve instruction (Bennett, 1978).

Madeline Hunter developed and presented the Hunter Instructional Model to many teachers and school districts across the country. The model is based on psychological principles and learning theory from a variety of educational researchers. Translating "theory into practice," the Hunter Model purports to undergird the teaching decisions made by every teacher into meaningful classroom instruction (Hunter, 1979).

Madeline Hunter has been lauded as "one of today's foremost practitioners in the areas of teaching and learning" (Lambert, 1985, p. 68) and has had "more

influence on teachers in the last ten years than any other person" (Brandt, 1985, p. 61).

Proponents of the model indicated that it shows teachers the value of studying the process of teaching, as well as the content to be taught (Freer and Dawson, 1987).

Freer and Dawson noted:

There exists a vast chasm, which educators have called the theory-to-practice gap. Madeline Hunter has been busily filling it for years with propositional and conditional knowledge, based on research, subject to further testing, but joyfully recognized as truth by administrators and teachers afflicted with a pragmatic hunger for practical approaches (p. 68).

The Hunter Instructional Model is not without its critics. One of the most often noted criticisms is that there has been little scientific research to support the model (Gibboney, 1987a; Davidman, 1984; Slavin, 1987).

Several studies have investigated the success of various instructional improvement programs. As noted by Thomas Guskey, "Few have assessed the . . . effects of [instructional improvement programs] upon teachers" (Guskey, 1985, p. 378).

Guskey continued:

There is some evidence that indicates that when teachers adopt more effective instructional practices and gain evidence of increased learning among their students, they accept greater personal responsibility for their students' learning and feel more positively about teaching (p. 378).

In 1976 and 1977, the Rand Corporation sponsored two comprehensive studies dealing with the cognitive social

learning theory defined as "the extent to which a teacher believed he or she had the capacity to affect student performance" (Berman et al., 1977, p. 137). Later the concept, based on Albert Bandura's (1977) self-efficacy cognitive social learning theory, was refined and further applied to education by Patricia Ashton and Rodman Webb (1986) in which they defined it as "teachers' situation-specific expectation that they can help students learn" (p. 3). Ashton and Webb further clarified teachers' sense of efficacy in two dimensions: (1) Sense of Teaching Efficacy, or the expectation that teaching can influence student learning, and (2) Sense of Personal Teaching Efficacy, or the assessment by the individual teacher of his/her own teaching competence. These two dimensions together make up the Overall Teachers' Sense of Efficacy (Ashton and Webb, 1986).

In order to study the effects that an instructional improvement program such as the Hunter Instructional Model has on Overall Teachers' Sense of Efficacy and its dimensions, the following problem statements are presented.

Statement of the Problem

The problems of the study were:

(1) To determine if there was a significant difference in teachers' Overall Efficacy after instruction in the Hunter Instructional Model.

(2) To determine if there was a significant difference in Teaching Efficacy after instruction in the Hunter Instructional Model.

(3) To determine if there was a significant difference in Personal Efficacy after instruction in the Hunter Instructional Model.

(4) To determine if there was a significant difference in teachers' Overall Efficacy based on gender, grade level of teaching, years of teacher's experience, and the ability level of the students being taught.

(5) To determine if there was a significant difference in Teaching Efficacy based on gender, grade level of teaching, years of teaching experience, and the ability level of the students being taught.

(6) To determine if there was a significant difference in Personal Efficacy based on gender, grade level of teaching, years of teaching experience, and the ability level of the students being taught.

Need for the Study

Although the Hunter Instructional Model has been used extensively, a frequently heard criticism is the lack of research evidence in supporting the claim that the model improves learning, as well as teachers' sense of efficacy. Most recently, Gibboney (1987a) noted:

> Without a solid pattern of evidence to support
> the claim for improved learning, there is no
> scientific basis for the Hunter Model. The links
> she infers (I cannot use the term cause and
> effect) between learning theory and roles for
> teaching have not been demonstrated. Even the
> basis for the model, learning theory, can be
> questioned if the criterion for testing in educa-
> tional settings is applied (p. 48).

Others, including Leonard Davidman (1984) of the

California Polytechnic State University, reviewed several

teaching models in general, and the Hunter Instructional

Model specifically, and concluded that "the Hunter Model

should undergo research-based scrutiny just as other models

and theorists about learning have" (p. 11).

Hunter has addressed the need for further research,

while defending past and present studies of her work. In a

conversation with the writer, she stressed the importance

and need of further studies, especially in the areas of

student gains and teacher behavior (Hunter, 1985a).

In 1979, Patricia Ashton and Rodman Webb began an

intensive study specifically addressing the concept of

teachers' sense of efficacy which they defined as "the

extent to which teachers believe they can affect student

learning" (Ashton and Webb, 1986, p. vii). The conceptual

framework of self-efficacy had been researched by Albert

Bandura and others as psychological constructs. Ashton and

Webb felt that "teachers' sense of efficacy might be an

important construct to further our understanding of the

motivation [and attitudes] of teachers" (Ashton and Webb, 1986, p. vii).

According to Bandura, the efficacy theory noted that teachers' efficacy "influences their thoughts and feelings, their choice of activities, the amount of effort they expend, and the extent of their persistence" (Bandura, 1981, pp. 200-201). In addition, several constructs of the Hunter Instructional Model parallel the dimensions of teachers' Sense of Efficacy. According to Hunter (1985b), the concept that every student can be reached by a "skilled, artful" teacher is an assumption which corresponds to the Sense of Teaching Efficacy dimension. Further, the major purpose of the model addresses the idea of increasing personal teaching competence which corresponds to the Sense of Personal Efficacy dimension.

Several Hunter Instructional Model studies have been conducted, including the Beginning Teacher Evaluation Study in Napa/Vacaville (Robbins and Wolfe, 1987; Stallings, 1985), a four-year study in California, which provided supportive data. The Hunter Instructional Model was first validated by Project Linkage, a state-funded grant provided by the California State Department of Education (Hunter, 1987). In addition, research papers and dissertations have been completed regarding specific areas of the model.

Nonetheless, according to the critics of the model, there has not been a satisfactory research base

demonstrated for the Hunter Model (Gibboney, 1987b; Slavin, 1987).

Hunter (1987) noted the main strength of the program and the reason for its popularity is that, according to teachers, "it works."

She continued:

> After a day in 'the trenches,' teachers and administrators have neither the inclination nor energy to wade through research--particularly when they find these research-based learning principles corroborated by common sense to be effective (p. 52).

Davidman (1984) believed the assessment of the popularity of the Hunter Instructional Model was due to the fact that it raises the status of the teaching profession and "fulfills important teacher needs" (p. 11).

To elaborate on this point, Davidman continued:

> The line of reasoning which supports this view is that the model gives experienced teachers new labels for the kinds of teaching behaviors they already manifest, to some degree. Thus, the model, for many teachers, provides positive reinforcement for what they're already doing, or agree that they should be doing. After completing [the program], teachers can see what was only dimly perceived prior to the program, namely that they are already utilizing most, but not all, of the instruction [principles] (pp. 11-12).

Davidman believed that the Hunter Instructional Model gives teachers and their administrators their own "scientifically sanctioned, very precise, commonly understood vocabulary which can be utilized in conversations with other teachers, administrators, parents, [etc.]" (p. 12).

Davidman continued:

Although it has not been established empirically,
I believe the above mentioned factors provide
many teachers with a greater sense of intel-
lectual, or cognitive, control over their very
complex work environment. This control, in turn,
may contribute to anxiety reduction, and higher
degrees of teacher satisfaction and morale, as
well as improved instructional techniques
(p. 12).

The end result, according to Davidman, is that "many

teachers, because of the . . . model which is now their

tool, feel more professional" (p. 12). He concluded,

"Certainly the possibility that this is true calls for more

investigation into the alleged phenomena" (p. 12).

The research concerning teachers' sense of efficacy,

although not labeled specifically, addresses Davidman's

belief as noted by the studies of Ashton and Webb (1986)

and others.

Ashton and Webb (1986) noted:

The results of our research indicate that teach-
ers differ in their efficacy attitudes, and these
differences are reflected in teachers' behavior
and students' performance (p. viii).

Ashton and Webb (1986) included as "particularly

relevant for the design of research to enhance teachers'

sense of efficacy" among others, teacher education

programs.

Madeline Hunter (1985b) agreed with Davidman concern-

ing the need for additional research of her work in noting

that:

Models are judged on their ability to guide behavior, predict outcome, and stimulate research; not on being the final answer. My model was developed to accomplish all three purposes. If it has contributed to educators' use of research-based knowledge to make and implement more successful professional decisions, if it encourages the constant addition of new research-based propositions to guide future actions of teachers and administrators, if it results in increased teacher and student success and satisfaction in schooling, then it will have served its purpose (p. 60).

Bruce Joyce (1983) noted:

Models can bring about specific changes in a teacher's teaching [techniques] and that one objective of training teachers is to help them acquire a variety of models of teaching which they can use according to their judgement (p. 81).

Carroll (1963) pointed out:

Such a model should use a very small number of simplifying concepts, conceptually independent of one another and referring to phenomena at the same level. . . . It should suggest new and interesting research questions and aid in the solution of practical educational problems (p. 723).

As is noted by Gorton (1982):

. . . beyond the issue of the improvement of teacher satisfaction and morale lies the even more basic issue of the relationship between improving teacher satisfaction and morale and increasing teacher productivity. It is the latter issue that is likely to assume greater importance in the 1980's and beyond, and it deserves more attention on the part of theorists, researchers, and education managers (p. 1907).

Research has shown that "teaching practices and behaviors are generally strongly and consistently related to student learning and, hence, to teachers' effectiveness

in the classroom" (Brophy and Evertson, 1976). This study attempted to determine if training in the use of the Hunter Instructional Model, which is intended to improve teachers' effectiveness, also improves teachers' sense of efficacy. In addition, it provided "further investigation of the relationships between teacher characteristics (i.e., sex, years of teaching experience, grade levels) and sense of efficacy," as recommended by Sherri Gibson (1983, p. 106) in her study.

General Questions to Be Answered
by the Study

(1) Was there a statistically significant change in Teachers' Sense of Overall Efficacy after they complete training in the Hunter Instructional Model?

(2) Did gender, level of teaching, years of teaching experience, or ability level of students being taught have any effect on Teachers' Sense of Overall Efficacy after completing training in the Hunter Instructional Model?

(3) Did teachers change their attitudes and opinions about their own ability to teach after training in the Hunter Instructional Model?

(4) Did teachers change their attitudes and opinions about students' ability to learn after training in the Hunter Instructional Model?

(5) Did teacher characteristics such as gender, grade level of teaching, years of teacher's experience, and the ability level of the students being taught have any effect on the Teaching Efficacy of the teacher after completing training in the Hunter Instructional Model?

(6) Did gender, grade level of teaching, years of teaching experience, and the ability level of the students being taught have any effect on the Personal Efficacy of the teacher after completing training in the Hunter Instructional Model?

Procedures

The procedures of the study were to survey the literature and existing research related to the Hunter Instructional Model along with a description of the major elements of the Hunter Model. A chronological review of the research concerning self-efficacy was completed.

A list of school districts which offered training in the Hunter Instructional Model for the 1987-88 school year was obtained with assistance from the University of Idaho and Idaho State University. Several Idaho school districts offered the training, with ten of the districts participating in the study. Teachers enrolled in the participating districts served as the population for the study (see Appendix A).

A telephone call, followed by an introductory letter, was directed to each district trainer (see Appendix F). In addition to explaining the project, the letter detailed the research topic and solicited each trainer's assistance.

During a followup telephone call, any questions of the trainer were answered and details of training such as timing, length, procedures, and individual qualifications of the trainer were requested. In all but one district, the contact person was also the trainer. In all cases, the trainers had been either trained by Madeline Hunter or another qualified trainer of the program.

A specified number of instruments, based on the number of participants enrolled in each class, was sent to the trainers to be administered during the first class session and served as the pre-test for the study. After the instruments were administered by the trainer, they were returned to the writer.

Each instrument included a cover page with a note of explanation to the participant and four demographic questions in addition to a request for an identification number. The two-page, thirty-question Teacher Efficacy Scale was attached to the cover letter (see Appendix A).

The followup instrument that served as the post-test was similar to the pre-test with the exception that a revised form was used which presented the questions in a

different order (see Appendix B). Negatively stated items were reverse scored.

The Teacher Efficacy Scale was given to determine each participant's teacher efficacy score, which served as the major data for the study. The Teacher Efficacy Scale is a thirty-item, Likert-format instrument developed and validated by Dr. Sherri Gibson (1983) at the University of Southern California. The instrument was created as part of a study to develop a measure of teacher efficacy which, as noted earlier, had been identified as a variable for individual differences in teaching effectiveness (Ashton and Webb, 1982). The study also examined the relationship between teacher efficacy and observable teacher behaviors (Gibson and Dembo, 1984).

Factor analysis of response from teachers to the thirty-item Teacher Efficacy Scale yielded two substantial factors that corresponded to Albert Bandura's (1977) two-factor theoretical model of self-efficacy. A multitrait-multimethod analysis that supported both convergent and discriminate validity analyzed data from teachers on three traits (teacher efficacy, verbal ability, and flexibility) across two methods of measurement (Gibson and Dembo, 1984). Although the scale contains thirty items, sixteen items were considered for analysis based on acceptable reliability coefficients.

The scale represents scores in two dimensions: (1) the Teachers' Sense of Personal Efficacy, which refers to "the teachers' assessment of their own teaching competence," and (2) Teachers' Sense of Teaching Efficacy, which refers to "the teachers' expectations that teaching can influence student learning" (Ashton and Webb, 1986, p. 4), and an Overall Sense of Teacher Efficacy scores. Analysis of internal consistency reliabilities of the measures yielded Cronbach's alpha coefficients of .78 for the personal teaching factor, .75 for the teaching efficacy factor, and .79 for the total teacher efficacy score for the total sixteen items (Gibson and Dembo, 1984).

The information and data were analyzed using a one-way analysis of variance to determine if there was a difference in teachers' Overall Efficacy, Personal Efficacy and Teaching Efficacy after instruction in the Hunter Instructional Model. A series of two-way analysis of variance measures were used to determine if there was interaction in Overall Efficacy, Teaching Efficacy and Personal Efficacy based on gender, level of teaching, experience, and the ability level of students being taught after instruction in the Hunter Instructional Model. Finally, a t-test was computed between the pre-test and post-test change scores to determine if there was a significant difference. A two-tailed test was conducted at the .05 level of significance.

Participating teachers were identified only by the last four digits of their social security number, or another identification number, to allow for the matching of pre-test and post-test scores, which was a major part of the study. All participants' testing instruments included a section in which the necessary demographic data were furnished, including social security number, gender, years of experience, level of teaching, and ability level of students being taught.

Limitations and Delimitations of the Study

(1) The study was limited to the 1987-88 academic year.

(2) The study considered only teachers participating in schools from the state of Idaho.

(3) The study was limited to the teachers from school districts who had access to training in the Hunter Instructional Model.

(4) In some cases, participation in the training was due to a condition of employment in the teachers' school districts, while some of the participants in the training volunteered to take the training.

(5) The study was limited to the areas of self-efficacy that deal with Teacher Sense of Efficacy as it relates to education.

Definition of Terms

(1) <u>Teachers' Sense of Overall Efficacy</u>: The situation-specific expectation of teachers that they can help students learn and that students are capable of learning what they teach (Ashton and Webb, 1986), as measured by the Teacher Efficacy Scale.

(2) <u>Sense of Teaching Efficacy</u>: A dimension of Teachers' Sense of Overall Efficacy which refers to teachers' expectations that teaching can influence student learning (Ashton and Webb, 1986), as measured by the Teacher Efficacy Scale.

(3) <u>Sense of Personal Efficacy</u>: A dimension of Teachers' Sense of Overall Efficacy which refers to the individual teacher's assessment of his/her own teaching competence (Ashton and Webb, 1986), as measured by the Teacher Efficacy Scale.

(4) <u>Self-Efficacy</u>: A cognitive social learning theory of behavioral change that regulates behavior and develops as an individual acquires a conviction of personal competence necessary to achieve a desired outcome, determines how much effort will be expended, and determines how long it will be sustained in the face of obstacles and adverse experiences (Bandura, 1977).

(5) <u>Teaching</u>: A constant stream of professional decisions made before, during, and after interaction with the

student; decisions which, when implemented, increase the probability of learning (Hunter, 1982).

(6) <u>Model of Teaching</u>: Guidelines for designing educational activities and environments that specify ways of teaching and learning -- the patterns for teaching strategies (Joyce, 1983).

(7) <u>Hunter Instructional Model</u>: The practices and teaching strategies associated with Dr. Madeline Hunter, emphasizing three critical teaching decisions: (a) content to be learned, or what content to teach; (b) learner behavior, or what the student will do to learn and to demonstrate learning has occurred; and (c) teacher behavior, or what the teacher does to facilitate the process of learning based on identified principles of learning (Hunter, 1976).

CHAPTER 2

REVIEW OF THE LITERATURE

For the purposes of this study, the related literature will be presented under the following main topics. These topics will include: (1) The Development of the Hunter Instructional Model, (2) What Is the Hunter Instructional Model--A Description of the Model, (3) Related Research Studies and Programs Using the Hunter Model, (4) Criticisms of the Model and Hunter's Responses, (5) Reasons for Success of the Hunter Instructional Model, (6) Chronological Development of Teachers' Sense of Efficacy, and (7) Research Related to Teachers' Sense of Efficacy.

The Development of the Hunter Instructional Model

Madeline Hunter has been noted as one of the major influences on teachers during the last ten years (Brandt, 1985), whose ideas have "spread like wildfire" since her elements of an effective lesson were introduced in the late 1960's (Slavin, 1987, p. 56). She was the principal of the lab school at the University of California at Los Angeles for many years and is currently a faculty member of the UCLA Graduate School of Education (Slavin, 1987). She is

an international consultant and has written several books and made an extensive series of video tapes. She has published articles extensively in many educational journals, periodicals, and magazines, writing about her "theory-into-practice" ideas that have come to be known as the Hunter Instructional Model.

The Hunter Instructional Model was developed over a number of years at the UCLA lab school. With the help of her colleagues, behaviors and characteristics of hundreds of teachers were observed, and exemplary characteristics were isolated and identified (Farrell, 1982; Wallace, 1982).

Hunter credits the basis of her model to theorists such as Benjamin Bloom, whom she lists as one of the most influential contributors to American education (Hunter, 1985b). Hunter claims to have taken what the research has validated about teaching and translated it into "something teachers can use tomorrow morning as they make educational decisions" (Brandt, 1985, p. 61).

Hunter's Instructional Model is referred to in the literature by several names, including: "A Clinical Theory of Instruction," "ITIP," "Mastery Teaching," "PET," "Clinical Teaching," "Target Teaching," "The UCLA Model," and "The Hunter Model" (Hunter, 1985b; Evans, 1982), as well as Essential Elements of Instruction" (Mannatt and Stow, 1986). There is also a followup component dealing with

supervision. For the purposes of this discussion, it is
referred to as the Hunter Instructional Model and focus is
primarily on the teaching-learning process.

The Process of Teaching in the
  Hunter Instructional Model

In the literature concerning the Hunter Instructional
Model, Hunter discusses the process of teaching in two
ways: the science and the art of the process of teaching.
Based on two decades of studying effective classroom
teachers, Hunter explains the debate of whether teaching is
an art or true science by calling the "science" of teaching
the "professional [teacher] decisions and the [student]
behaviors that result from those decisions." The "art" of
teaching, she refers to as the "non-tangible, intuitive,
extrasensory perceptions, which still reside in the cate-
gory of the unarticulated 'artistry' of teaching" (Hunter,
1976, p. 162).

Hunter defines the act of "teaching" as:

> . . . a constant stream of professional decisions
> made before, during, and after interaction with
> the student; decisions which, when implemented,
> increase the probability of learning (Hunter,
> 1982, p. 3).

As the foundation of the theory of the model, Hunter
believes that teachers are not necessarily born, but
through a systematic, planned series of developed competen-
cies, can be made (Hunter, 1976). According to Hunter,

> Successful teaching is not based on what the
> teacher was, but depend[s] on what the teacher
> [does] in planning and implementing . . . the
> plans in the teaching-learning process (Hunter,
> 1976, p. 163).

What Is the Hunter Instructional Model--
A Description of the Model

The basis of the Hunter Model lies in the teaching process itself, and the decisions that a teacher uses, regardless of who or what is being taught (Hunter, 1982). In her research, after identifying hundreds of the critical elements used by successful teachers, three major categories of teacher decisions were identified: (1) content to be learned, or what content to teach next; (2) learner behavior, or what the student will do to learn and to demonstrate learning has occurred; and (3) teacher behavior, or what the teacher does to facilitate the process of learning (Hunter, 1976). This, therefore, is Hunter's contention; if these professional decisions are made correctly in the framework of the students, and to the specific situation, "learning will be increased" (Hunter, 1982, p. 3). To elaborate, Hunter states,

> If what the teacher does is consonant with what
> is now known about cause-effect relationship in
> learning, and if that teacher's decisions and
> actions reflect awareness of the current state of
> the learner and the present environment, their
> learning will predictably increase in the desired
> direction (Hunter, 1979, p. 1).

Hunter's goal is to produce teachers who can make correct teaching decisions, either before or during instruction, based on research principles and based on deliberate artistic practice (Hunter, 1985b; Hunter, 1987).

In the sections to follow, each of the three critical teaching decisions according to the Hunter Instructional Model will be detailed.

The Critical Elements of Teacher Decisions

Content to be learned. The first critical teaching decision outlined in the Hunter Instructional Model is the "what" or content of teaching, or the intended learning to which teacher-learner attention is being directed (Hunter, 1982). Elements considered under this heading entail many facets of "essential sub-learnings" (Hunter, 1982), including knowledge of prior student learning, prerequisite learning, use of time, etc. (Hunter, 1979) (see Figure 1).

In addition, the criteria of an instructional objective such as the audience, the desired behavior of the students, specific circumstances of instruction, and the criteria for completion should all be considered (Hunter, 1982).

The training model emphasizes the need for the teacher to be able to correct by diagnosing the level of difficulty of the lesson, to be certain that the content is appropriate to the learner. Bloom's Taxonomy is stressed to

Figure 1. The Hunter Model.

THREE CRITICAL TEACHER DECISIONS

Teaching is a constant stream of making and implementing decisions, before, during and after instruction which, when implemented, will increase the probability of learning.

CONTENT-->LEARNER BEHAVIOR ------------------------------------->TEACHER BEHAVIOR

CONTENT

What will the content be? What is to be taught? Describe what the learner already knows.

OBJECTIVES:

Where are we going?	Teaching to an objective
What will we do?	1) Why the lesson is
Why?	important
	2) How the lesson will
Goal, Long-term--	benefit him/her per-
teach reading	sonally
	3) Better selection of
Objective-Purpose	learning activities
short-term	4) Evaluation

CRITERIA OF AN INSTRUCTIONAL OBJECTIVE:

1) Audience (Who-TLW)
2) Behavior (What will the learner do?)
3) Condition (What situation?)
4) Degree of completion (Criterion)

State objectives at beginning of class discovery of objective.

1) Students learn better.
2) Teachers enjoy teaching more.
3) Adds vigor to teaching, resulting in increased learning.

DIAGNOSIS:

Why diagnose? Find out....know/don't know
                         can/can't do

How? Formal - Pretest
      Informal - Sampling/oral
      Inferential - Infer about present
        from past. (Student in Algebra II
        must have passed Algebra I.)

LEVEL OF DIFFICULTY: Task analysis to formally diagnose the correct level of difficulty.

LEVEL OF COMPLEXITY: Compared with Bloom's Taxonomy:

Higher--Evaluation	Lower--Application
Synthesis	Comprehension
Analysis	Knowledge

LEARNER BEHAVIOR

What will the student do to learn?

INPUT:

How will the student learn?

1) Determine basic information.
2) Organize information so that the student can see the relationships.
3) Present in simplest possible language.

Read
Listen
Observe
Discuss
Experience
Do

OUTPUT:

What will the student do to show that learning did take place?

1) Choral responses
2) Sample individual response
3) Signaled response

Write
Demonstrate
Perform
Tell
Recite
Contrast
Compare

1) Perceivable to the teacher--observable
2) Validates learning; measures learning

ERRORS:

1) Dignifying Errors (Supply question to answer; express value of the answer given.)
2) Prompt or assist
3) Hold the student accountable--gentle, mild, firm, severe

LESSON PLAN

1) Anticipatory Set

   a) Focus the students' attention.
   b) Provide very brief practice on previously achieved or related learning.
   c) Develop a readiness for the instruction that will follow.

TEACHER BEHAVIOR

What will the teacher do to facilitate learning?

MOTIVATION:

C Level of Concern-Visibility-Stand close to student
                      Neutral--Doesn't do anything

F Feeling Tone - Pleasant - Unpleasant

I Interest - Personalizing things - Vivid or novel

K Knowledge of Results -- Immediate reinforcement
                            specific

S Success - Achievement - Some challenge or difficult
             Change level of difficulty
             Risk - uncertainty

R Reward -- Intrinsic (learning for sake of learning)
             Extrinsic (paycheck)

REINFORCEMENT:

1) Positive -- Increases the desire of the student
2) Negative
3) Intermittent
4) Extinction--Ignore behavior--go away
               Regular massed positive reinforcement
               Intermittent

RATE AND DEGREE:

1) Meaning--Greater the meaning, the better the rate
            and degree of learning.

2) Sequence-The sequence of items to be learned will
            affect 1,2,3 & 10 will be easiest to
            remember.

            a) Pulling out the middle and reviewing
            b) Chaining--Learn sequence in reverse
               order
            c) Using vividness in the middle

3) Relationships--Establish relationships between
                  items to be learned (coat-sweater).

4) Active participation by the learner increases his/
   her rate and degree.

   a) Overt -- Observable--write, do, say
   b) Covert-- Can't be seen--thinking

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Figure 1--continued.

CONTENT---➤LEARNER BEHAVIOR ---➤TEACHER BEHAVIOR

TASK ANALYSIS:

1) Select objective task.
2) Break down tasks into sub-tasks.
3) Sequence the sub-parts.
4) Determine what the student can or can't do.

THINGS TO DO TO AVOID WASTING TIME:

1) Sponge activities.
2) Beam questions to entire group (while passing out paper).
3) Give assignment or quiz.
4) Utilize prime time wisely.

TIME:

1) Quantity of time--function of administration
2) Quality of time---function of teacher

PRINCIPLES OF CHALKBOARD/OVERHEAD PROJECTOR USE:

1) Say it before you write it.
2) Use only key words and simple diagrams.
3) Positional -- Relationships.
4) Erase before introducing new material.

BRAIN--TWO HEMISPHERES:

Left: Thinks in words | Right: Thinks in pictures

o Reading	o Art
o Writing	o Media
o Calculating	o Meditation

Modal Descriptors	Modal Descriptors
o Linear	o Intuitive
o Sequential	o Simultaneous
o Verbal	o Holistic
o Analytical	o Visual Spatial
o Rational	o Synthetic
o Propositional	o Metamorphic
o Explicit	o Appositional
o Logical	o Tacit

Three ways to provide an anticipatory set:

a) Ask questions
b) Quick quiz
c) Provocative or controversial statement (interest grabber)

2) State Objectives

Why relevant to student?
State the purpose of the lesson.

3) Input

Providing basic information (films, books, lecturers)

a) Determine basic information.
b) Organize information so that the student can see the relationships.
c) Present in simplest possible language.

4) Model

Example--Illustration--Outline

a) Highlight the critical attributes--description.
b) Avoid distractions or controversial issues.
c) Teacher presents the first model to avoid the risk of an incorrect model.
d) Introduce non-examples:

Makes material relevant and meaningful--
Past ---> Present

Why Model?

a) Reaching into the past and using models the student is familiar with.
b) Introduce new materials building on the past.

5) Check for Understanding

a) Choral response (All respond in unison; must be on task; avoid embarrassment.)
b) Signaling
c) Ask questions (sampling/dip-sticking)
d) Quick quiz

6) Guided Practice--Monitored work; Individual/Group

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5) Practice--Small amount with meaning; many short better than long; mass at first; quality is the key.

a) How much material? -- Short, meaningful chunks

b) How long? -- Intense short periods with intent to learn

c) How often? -- New learning -- mass practice Many, close together

d) How well? -- Thorough at first; briefly after learning

RETENTION:

1) Meaning -- Reason to learn
Past learning to give meaning to present

2) Feeling Tone -- Neutral feeling tone doesn't aid remembering
Pleasant - Unpleasant

3) Degree of Original Learning -- Short, meaningful

4) Practice Schedule -- Mass practicing
Distributed practice

5) Transfer -- Old learning can aid or block learning

TRANSFER:

1) Similarity -- of the elements
2) Association -- of time
3) Degree of original learning
4) Critical attributes

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teachers, encouraging consideration of all content, based
on specific levels of complexity. Hunter notes the need
for teacher planning of the content of the lesson and
consideration of correct level based on the needs of the
students (Hunter, 1982).

Other "decisions" and techniques are suggested in the
model such as ideas for use of classroom time on task, use
of the chalkboard or overhead, and considerations of
learner "learning style" and hemisphericity.

The learner behavior. What the learner will do, or
the student behavior that makes learning possible, is the
second critical decision (Hunter, 1982). The model focuses
on two aspects of the student's learning behavior. The
first aspect is the input, or how the student acquires the
knowledge or skill, such as read, observe, discuss, etc.
(see Figure 1). The other aspect is based on what Hunter
calls the output, "which validates acquisition of the
knowledge or skill," is perceivable, and "validates" that
the student has learned the objective (Hunter, 1982, p. 5).

The Hunter Model distinguishes three important gener-
alizations:

(1) Teaching and learning is focused on the intended
    objective since the attaining of this objective is the
    purpose of the instruction.

(2) As with content, the learning objective is at the appropriate level of difficulty, including the levels suggested in Bloom's Taxonomy.

(3) Monitoring and adjusting is occurring, or the constant monitoring to adjust learning to make sure that the new learning being considered challenges and is being learned by the student. Hunter refers to this as "dipsticking" (Hunter, 1976, p. 165), and suggests several methods including choral responses, individual "probing," writing, etc.

Included in the model as a learner behavior, but noted by educators as "doing Madeline Hunter" (Slavin, 1987, p. 56), is the specific approach to presenting a lesson, or the seven steps of a teaching episode.

According to Hunter (1987), all seven steps are not necessary in every lesson, but it is a "decision" of the teacher to decide which steps are appropriate. The steps in the model include:

(1) Anticipatory Set: By asking questions, "interest grabbers," etc., the learner's attention is focused on the lesson.

(2) Statement of Objectives: The purpose of the lesson and relevance to the student are explained.

(3) Provide Input by the Teacher: At this step, the teacher provides the basic information and explains relationships in a variety of methods and techniques.

(4) Modeling the New Learning: By highlighting the "critical attributes" and demonstrating, learning will be enhanced.

(5) Checking for Understanding: The teacher determines the level of understanding by a variety of methods.

(6) Guided Practice: The teacher monitors the learner's work and is available to provide assistance.

(7) Independent Practice: With the assumption that the students understand the lesson, extra practice is assigned.

Teacher behavior. The third critical decision is the behavior of the teacher, or what the teacher does to facilitate learning. Hunter indicates a teacher, like everyone else, can only control one person in the student-teacher relationship -- him/herself (Hunter, 1985b). For this reason, she notes, the "deliberate and conscious" use of the established research-based principles of learning by the teacher will guide student response and "increase the likelihood" of accelerated student achievement, increase the motivation of students to learn, increase the speed and amount (rate and degree) of learning, and promote retention and appropriate transfer of that learning to new situations (Hunter, 1982, p. 6).

Hunter believes it is unnecessary to argue about methodology of learning, but rather, given the content, learner task, and teaching the principles of learning,

achievement will be facilitated at each particular time for each particular learner (Hunter, 1976). Knowing these principles of learning, in her view, and "deliberately and artistically using them, is a hallmark of the master teacher" (Hunter, 1982, p. 6).

Principles of learning. These are the major principles of teacher behavior as described above, and are discussed as follows:

(1) Motivation: This is the student's "intent" to learn and is very important to the overall success of student learning (Hunter, 1967a, p. 37). According to Hunter, "motivation is not generic, but it is learned." Teachers need to become knowledgeable about it and skilled in increasing the students' motivation to learn (Hunter, 1982, p. 11). Although many factors are beyond the teacher's control, there are six factors that the Hunter Instructional Model outlines as possible ways to "interact" and assist in student motivation:

(a) Level of concern: Finding an optimal point in the student's caring to learn is the objective. Either too high a level or too low will produce little or no learning, but a moderate level "stimulates effort to learn." Examples of techniques are physical proximity to a student not participating, surprise testing, etc. The model

encourages deliberate and conscious adjusting of
this level to gain motivation (Hunter, 1982).

(b) Feeling tone: Since the way a student feels in a
classroom affects motivation, students will put
forth more effort in a pleasant learning situa-
tion and if they feel successful, produce a
pleasant feeling. However, an unpleasant feeling
tone may be required to increase achievement. It
is the knowledge of the creation of the desired
feeling tone that will produce the necessary
student motivation (Hunter, 1982).

(c) Interest: Creating interest in learning by
relating learning to the   student's life or
accentuating the novel or vivid are ways of
creating interest and motivation (Hunter, 1982).

(d) Knowledge of results: Motivation will likely
increase if specific knowledge of results is
known. According to Hunter, we find out what we
are doing well, what needs to be improved, and
what to do to improve it; then there is reason-
able probability that we can improve it (Hunter,
1982).

(e) Success: Teachers can help students feel suc-
cessful by making a careful diagnosis of the
student's ability. In order for a student to
feel success there must be some effort in the

task to give a feeling of accomplishment. Lack
of success or success affects motivation and is a
major concern for instruction (Hunter, 1982).

(f) Relation of activity to reward: When the activity itself is rewarding, it produces a situation
where the motivation is intrinsic, the activity
will always achieve the goal, and motivation will
compound. Extrinsic motivation is dependent on
and changes with the specific environmental
situation (Hunter, 1967a).

The six factors of motivation as described above
are not presented as discrete items, but rather a
combination of one or all of them promotes, according
to Hunter, a motivation to learn (Hunter, 1982). If
all students attained intrinsic motivation or self-
motivation, a teacher's job would be easier, but, as
Hunter indicates, because this is usually not the
case, a teacher using the principles of motivation
can stimulate learning (Hunter, 1982).

Hunter concludes,

If you are the learner and are putting forth
effort and are somewhat concerned about the
outcome, yet you experienced (1) the pleas-
ant feeling tone of being (2) successful and
you found the material (3) interesting,
novel, and related to your own life, then if
a teacher gave you (4) immediate and spe-
cific knowledge of results about what you
had accomplished and helped you to continue
to improve your performance, there is a high
probability that you enjoyed the whole

process.   You're motivated to 'do it some
more' because you enjoyed it (pp. 22-23).

Farrell (1982), in his article "Motivation and

Learning" concerning the Hunter Model, concluded that

> If   these   [principles of learning] are
> present, learning will be successfully
> enhanced and reinforced; if they are miss-
> ing, learning will at best be inhibited or
> at worst nonexistent (p. 8).

(2) Reinforcement: This is another principle of learning

that applies the ideas of Skinner in the classroom.

Hunter (1967a) outlines the four major concepts of

reinforcement, which she says "should be of value to

everyone engaged in the process of learning which is

essentially the process of changing behavior" (p. 1).

(a) Positive reinforcement: A positive reinforcer

will strengthen the response it follows and make

it more likely to reoccur.   It means strengthen-

ing of the behavior that brought on the positive

reinforcer.

(b) Negative reinforcement: A negative reinforcer

can be anything, according to Hunter, unpleasant

or not desired by the student that weakens the

behavior it immediately follows.

(c) Intermittent reinforcement: Intermittent rein-

forcement distinguishes timing of the reinforce-

ment, meaning more at first and then a gradual

decline.

(d) Extinction: Extinction will happen if there is no positive or negative reinforcement causing the behavior to stop.

(3) Rate and Degree: This is the principle of learning in which several areas are explored including meaning; the greater the meaning to the learner, the better rate and degree of learning. Hunter describes sequence as the order in which items are learned, affecting the speed in which learning takes place. Suggestion of relationships by the teacher building associations between two or more items enhances the rate and degree of learning. Finally, practice in a specific and systematic way increases the rate and degree of learning (Hunter, 1969), with small amounts with meaning at first when the learning process is occurring. Hunter maintains the quality of learning is the most important concern.

(4) Retention: This is the principle of learning that, according to Hunter, is the way a teacher can help students remember as a teacher searches "for methods that are more productive of learning and ways that result more surely in retention of that which has been learned" (Hunter, 1967b, p. 1).

(a) Meaning: Relating the lesson to the learner's own life and experience provides meaning and aids remembering.

(b) Feeling tone: When the teacher tries to make the learning as pleasant as possible, Hunter contends that the pleasant feelings will promote learning. Unpleasant feelings also promote learning, but this could be non-productive. Finally, a neutral feeling tone is "useless" as far as memory is concerned, as it does not invoke any feelings.

(c) Positive transfer: Retention can be gained by the students through the teaching of the new information and by pointing out the similarities of old learning. Whenever the transfer of old learning to new learning takes place, it assists the new learning.

(d) Negative transfer: Retention, according to Hunter, is impeded whenever the memory of one learning interferes with another and the teacher stresses difference.

(e) Practice schedule: Hunter notes that teachers must decide "how much," "how many times," and "how often" the learners should practice the lesson to "maintain adequate meaning" (p. 35). She suggests "mass practice" with short intervals at first, and later, distributed practice to maintain the information.

(5) Transfer of Learning: This is the fifth principle of learning and is referred to by Hunter (1971) as a