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Classroom tasks and student ability effects on motivation goal orientation in early adolescence: A cognitive-developmental study

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CLASSROOM TASKS AND STUDENT ABILITY EFFECTS ON MOTIVATION GOAL ORIENTATION IN EARLY ADOLESCENCE: A COGNITIVE-DEVELOPMENTAL STUDY

by

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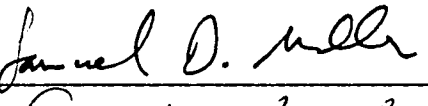
APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro. The committee wishes to designate this dissertation as one that has been approved with distinction.

Dissertation Adviser 

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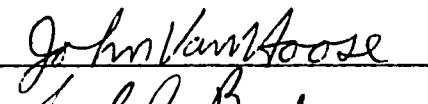
Committee Members 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Motivation goal orientation declines across school years from learning to master tasks to learning for grades, to please others, avoid negative evaluations, or to do the task as quickly as possible. This research assessed the relationship between different types of language arts tasks, student ability levels, and motivation goal orientation in sixth grade. Six high, six average, and six low achievers (nine girls and nine boys) comprised the sample.

Motivation goal orientations are defined as learning to master tasks and increase competence (task-mastery), learning for a grade, to please others, or avoid a negative evaluation of ability (ego-social), or to do the task as quickly as possible (work-avoidant). Tasks are written products that demonstrate student proficiency. Classroom tasks were collected for eight days and quantitatively analyzed by cognitive level and the type of written response required (literacy response). Tasks below application cognitive levels and below sentences literacy response are simple tasks; tasks application and above, and sentences and above are complex tasks.

Each student was interviewed on at least two simple and two complex tasks. Interviews were analyzed for motivation goal orientation.

Results suggested that: (1) motivation goal orientation is more influenced by task complexity than ability level, and (2) clustering patterns of motivation goal orientation responses were

found. Discrepancies to the cluster patterns were found on tasks that severely limited creativity.

Methodological implications indicate that a decline in motivation goal orientation across grade levels may be decreased. An intra-individual approach to motivation research may best demonstrate variations of motivation goal orientations within each student according to the type of task completed.

Theoretical implications indicate that tasks may be a mediating factor between intrinsic motivation and the degree of cognitive engagement. There may be minimum task levels that challenge students of varying ability.

Classroom practice implications suggest that teachers may be able to offer a complex task to students of varying ability. Such a task would: (1) require "scaffolding." That is, tasks that stretch students' writing and thinking skills may require support from teachers and peers; (2) provide the opportunity for students to develop high cognitive skills and self-directed learning skills; and (3) emphasize intrinsic motivation.

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CHAPTER I

INTRODUCTION

> ". . . motivational influences on achievement behaviors can be summarized with . . . Can I succeed at this task? Do I want to succeed at this task?" (Eccles & Wigfield, 1984, p. 187)

> ". . . we must [know] when individuals will seek to be competent rather than incompetence and how they will judge their competence." (Nicholls, 1984, p. 40)

The Problem

Why do students appear to lose their motivation to learn as they progress from the early to late elementary grades? Teachers have long sought to understand this question. Specifically, they wonder why some students appear eager to learn, participate fully in their learning, and persist when they are having problems doing a task, while others appear to be highly disinterested in learning, find clever ways not to participate, and give up when a task becomes difficult.

It can be argued that students do not lose their motivation and, in fact, that both younger and older elementary students <u>are</u> motivated. They are just motivated to learn for different reasons. Thus, motivation to learn changes over the school years. Some students are motivated because they want to increase knowledge and skill; others to please teachers, to gain a high grade, and/or to avoid a

negative evaluation; and still others want to complete the task as quickly as possible regardless of whether or not learning occurs. Such reasons for learning are based on how students value tasks and are known as motivational goal orientations (Meece & Holt, 1989).

Teachers prefer students who are motivated to learn in order to increase knowledge, skills, and to demonstrate their competence (Miller & Hooper, 1989; Miller, Adler, & Hooper, 1990). The problem then is how to maintain the value to increase knowledge and skill beyond the early elementary school years. Therefore, questions need to be asked and answered. For example, why does a change in motivation to learn over the school years occur? Why do some students want to increase competence while others work either to gain a reward, avoid negative ability evaluations, or to finish quickly?

Purpose of the Study

In order to begin answering questions on motivational change, the present study evaluated how different classroom assignments (to be referred to as tasks) affect student motivation.

This dissertation is an extension of a previous study which examined how third- and fourth-grade average achievers responded to different language arts classroom tasks (Miller & Hooper, 1989; Miller et al., 1990). Results suggested that student interpretations and judgments of various types of classroom tasks differed and may be a major contributing factor in motivational change. For example, motivation to learn varied with the type of classroom task. Students

reported motivations towards getting good grades and other rewards, avoiding bad grades, or the desire to finish the task as quickly as possible when the task was not challenging. When the task was challenging, students generally reported the desire to master the skill and increase competence. Presently, a two-year study with third-grade students of low, average, and high abilities is being conducted in language arts by the first author of the pilot study.

The present study extended the pilot by examining the reactions of middle-school students of high and low, as well as average ability, on different language arts tasks. The middle grades were chosen as students in these grades are said to be at different developmental stages (Piaget, 1952) and, therefore, different in what they value from younger students (Pintrich & DeGroot, 1990). Language arts tasks were chosen because they replicate the previous study and have not been given much attention in the research. Existing task studies utilize science tasks (Meece, Blumenfeld, & Hoyle, 1988; Meece & Holt, 1989).

Study Questions and Predictions

This study asked the following questions:

1. Are there motivational goal orientation differences among high, average, and low achieving sixth-grade students on simple language arts tasks?

2. Are there motivational goal orientation differences among high, average, and low achieving sixth-grade students on complex language arts tasks?

From these questions the following predictions were made:

1. High achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex and simple tasks.
2. Average achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex tasks. On simple tasks, the dominant profile will be ego-social and/or work-avoidant.
3. Low achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant on simple tasks. On complex tasks, the dominant profile will be work-avoidant.

Methodology

These questions were investigated from a cognitive-mediational theoretical perspective. Within this perspective, Expectancy X Value (Atkinson, 1964), Task Perspective (Blumenfeld, Mergendollar, & Swarthout, 1987), and Motivation Goal Orientation (Meece & Holt, 1989) models were utilized.

Motivation goal orientation theory argues that children are motivated to learn either to increase mastery, skills, and competence (task-mastery); or to gain teacher approval, get a good grade, or avoid a negative ability evaluation (ego-social); or to complete the

task as quickly and easily as possible whether or not learning occurd (work-avoidant); or some combination of these on the same task.

These motivation goal orientations are important because the different underlying reasons for learning result in different task behaviors. For example, the task behaviors associated with task-mastery are higher cognitive task engagement, higher ability perceptions, higher intrinsic motivation, and higher achievement. Students with task-mastery/ego-social combination goals came second in achievement, and those work-avoidant students had the lowest achievement scores (Meece & Holt, 1989).

Quantitative and qualitative measurements were used to control for the dependent variables of ability and tasks and measure the independent variable, motivation goal orientation. Tasks in seven sixth-grade classrooms were collected and analyzed quantitatively for levels of difficulty. Ability levels were measured by teacher report based on grades and students' standardized test scores. Measurement of motivation goal orientation involved the use of interviews conducted after task completion. Each subject was interviewed on at least two unchallenging and two challenging tasks. Thus, measurement was intraindividual; that is, differences in motivation to learn on dissimilar task types was measured within the same student. Analysis for motivation goal orientation was completed by ability level and gender.

Results

The results paralleled the pilot study and demonstrated a pattern of motivation goal orientation that is related to task type and not ability level. Motivation goal orientations clustered by task type. This clustering suggested that there may be a minimum level of challenge for each ability group. Discrepancies to the clustering pattern occurred when tasks were either not challenging or too challenging; that is, discrepancies were found when either simple or complex tasks severely decreased creativity. Thus, more strength was added to the argument that the type of classroom task influenced task values or motivation goal orientations and in turn task behaviors.

Implications

There were theoretical and classroom practice implications. In the theoretical area, the motivational changes found across school grades and the type of motivation goal orientation may be due in part to the type of tasks students are expected to complete, regardless of ability or intrinsic motivation levels. In the classroom, it was suggested that there are minimum difficulty levels of task complexity that challenge high, average, and low achievers.

Dissertation Chapters

Chapter I, Introduction, has provided a brief overview of the area to be studied--motivation to learn; the purpose of the study; the study's questions; and the methods, results, and implications. Chapter II, Literature Review, provides the cognitive-mediational

theoretical basis for the study. Several models are explored as they relate to the problem of motivational change across the school years and the influence of the type of task on students of various abilities. Implications for teacher instructional decision-making and the predictions end the chapter. Chapter III, Methodology, describes the study's design and procedures under the heading of: (1) demographics; (2) subjects; (3) materials; (4) procedures; and (5) interview coding. Chapter IV, Results, describes quantitative and qualitative analysis on task understanding, task expectations, and task value (motivation goal orientation) as they relate to the predictions. Chapter V, Discussion and Implications, explores the patterns found in each ability level and compares them with the findings from the literature, suggests future research, the limitations of the study, discusses rival hypotheses, and methodological, theoretical, and classroom practice implications.

CHAPTER II

LITERATURE REVIEW

Overview

This chapter begins with a discussion of motivational change across the school years and the developmentalist, environmentalist, and interactionalist rationales for such a change. It next traces the history of motivational research from the behavioristic to the present day cognitive influence, including the elements of the Expectancy X Value theory of motivation which involves student ability conceptions and how ability conceptions have resulted in motivation goal orientation categories.

The chapter next discusses the task perspective influence in motivation goal orientations research, then turns to the influence of challenging of not challenging tasks on students of high, average, and low ability levels. The chapter then discusses the measurement of motivational differences by task type within the framework of motivation goal orientation categories utilized in the pilot study. This discussion is followed by a description of the pilot study and its results, and a discussion of the results on the implications in teacher instructional decision-making. The chapter ends with the predictions of the present study and a chapter summary.

Motivational Change

Research has demonstrated that changes in student motivation occur across school years. As students proceed through elementary school grades, their self-concepts, expectations for success, attitudes towards school, and values for learning (motivation) become more and more negative. Obvious transitions occur between kindergarten and first grade and again between elementary and middle-school grades. These changes have been explained from both developmental and environmental perspectives.

Developmental Factors

Developmentalists argue that students begin school with a natural desire to master tasks and increase competence (Nicholls, 1979a; Piaget, 1952; Stipek, 1984a; Veroff, 1962). For example, for survival purposes children are born motivated to understand or deal effectively with the environment and are ". . . programmed to go on developing knowledge, to consolidate this knowledge, and when this is achieved, to seek stimuli that will enable further development" (Nicholls, 1979a, p. 1079).

Children are cognitively preoperational through second grade with a qualitative shift occurring between kindergarten and first grade. Developmentally, preschool and kindergarten students perceive achievement as "good" conduct. They do not judge their ability to succeed or fail on present tasks according to past successes because they do not differentiate between their wishes to succeed and their

expectations for success (Piaget, 1952). It is not until first grade that students begin to develop the idea that achievement is separate from conduct (Stipek, 1984a). This is the point of a first major transition in motivation to learn from kindergarten to first grade, and the first of Veroff's (1969) three developmentally hierarchial stages. Veroff (1969) argued that students begin school motivated to increase competence and ask, "Can I or can I not do it myself?" (a mastery question). They do not compare their performance either by their past successes or by the achievements of other students unless the environment forces such comparisons. Thus, no matter how often they fail, they maintain a high level of self-concept, performance expectancy, a positive affect towards school, a high value for achievement, a positive emotional response to specific achievement outcomes, and intrinsic mastery reasons for engaging in tasks. Ability, effort, and achievement outcomes are perceived as the same psychological process. Thus, they believe that effort increases ability (Covington, 1984). In sum, although qualitative developmental shifts occur, preoperational children are intrinsically motivated to learn in order to increase competence and mastery levels.

By second grade (age seven), students naturally begin to compare their performances on tasks to other students and simultaneously score lower on measures of self-confidence. Thus, by third grade, the beginning of the stage of concrete operations, students develop the ability to evaluate their potential for success on tasks based on their past performances (Piaget, 1952). Students' expectancies to

succeed drop, as do positive cognitions, affects, and attitudes so that by grade four (age nine) most students begin to develop a negative affect towards classroom life (Stipek, 1984a). This is the second of Veroff's (1969) three developmentally hierarchal stages. Veroff (1969) argued that children naturally begin to ask a social comparison question, "How do I compare with others?." Success at this stage is vital, especially in middle childhood (ages eight or nine), if students are to reach his third stage. Moreover, the qualitative shift in self-evaluation results in beliefs that ability is limited and that the more effort one must expend to achieve, the lower the ability level (Covington & Beery, 1976; Covington & Omelich, 1979; Nicholls, 1984).

The ability to evaluate self based on past performance continues to mature so that by grade five and six, the end of the concrete operations stage and the beginning of young adolescence, students begin to differentiate ability, effort, and achievement as separate processes (Covington, 1984). This is the third of Veroff's (1969) three developmentally hierarchal stages. Veroff (1969) argued that by early adolescence, children ask themselves both mastery and social comparison questions; that is, "Can I or can I not do it myself?, and "How do I compare with others?." Thus, students base their assessments of these processes on comparison with other students. What was an effort focus becomes an ability focus. Present performance, however, not only is based on past success rates (Covington, 1984) but also on the developmental increase in peer group influence (Veroff, 1969).

By grade six, because of qualitative changes in cognitive processes that mediate achievement behavior, children have become more realistic and accurate in their self-perception of ability and are more able to process information which allows them to understand how likely they are to do something based on their previous successes and failures (Stipek & Tannatt, 1984). Due to this natural developmental change in self-assessment from "I can do anything well" to "I cannot do everything well," then, sixth-grade students are primarily lower in self-concept, performance expectancy, affect towards school, and values for achievement. Additionally, they hold negative emotional responses to specific achievement outcomes and are extrinsically motivated to either demonstrate ability, please others, or avoid low-ability evaluations than are early elementary children.

The naturally developing peer group influence augments the natural increases in social rather than self-comparison. Veroff (1969) reasoned that early adolescence, with its dramatic physical changes and awareness of approaching adulthood, results in a strong push for differentiation from parents and peers, a requirement of Veroff's (1969) state three attainment. Typically, however, young adolescent students differentiate from parents but not from peers. Thus, it can be argued that few students in early adolescence would attain stage three.

Meece and Holt (1989) support this argument. Recent research results concluded that most students in grades five and six did not demonstrate a mixture of mastery and social comparison reasons for

learning. An explanation given was that the integration of stage one and stage two may actually occur at a later age than Veroff (1969) thought. Additionally, Meece and Holt (1989) found that students who had stage three reasons for learning did not achieve as high as students whose reason for learning involved only mastery. These inconsistencies lead to arguments that more than just developmental factors are responsible for changes in children's motivation to learn.

Environmental Factors

Environmentalists believe that student motivational changes are not developmentally based but are primarily due to how schools are structured. They argue that if developmental factors account for the change in motivation to learn across grade levels, then there would be uniform effect across different subjects (e.g., reading, arithmetic) as well as across different domains (e.g., academic, social, athletic). Evidence, however, demonstrates that the magnitude of the decline varies across domains (e.g., only achievement motivation declines steadily) (Epstein & McPartland, 1976; Prawat, Grissom, & Parish, 1979), across subject areas (e.g., greater in mathematics more than language arts) (Brush, 1980), and by gender (e.g., greater in females than males) (Dweck, 1987). As a result of these differences, environmentalists have examined the factors of school sturcture and how the different factors may contribute to the motivational changes. For example, as students move into the middle-school grades, a greater emphasis is placed on public evaluation and classroom competition (Nicholls, 1979a).

There is evidence that the nature of performance feedback as well as teacher control and grading practices, ability and tracking procedures, and classroom goal structures (e.g, with or without rewards) account for motivational differences by grade and age levels (Ames, 1988; Nicholls, 1979a). It is argued that as the grade level rises, classroom environments and, thus, students' social experiences become more confining (e.g, less personal, more formal, more teacher controlled, and more ability-centered) and involve goal structures that become progressively more extrinsically-reward oriented (Nicholls, 1979a). These school changes are most prevalent in early adolescence when, developmentally, students actually require less teacher control, less competition, and more freedom to differentiate themselves from parents and peers (Lee, 1979; Thomas, 1980). Eccles, Midgley, and Adler (1984) concluded that ". . . classroom environments change significantly . . . with increasing grade level, toward a less personal, more formal, more controlling, competitive, ability-centered environment . . ." (p. 190). They further concluded that the results of such changes are increased focus on ability as a stable concept, increased student anxiety levels, and decreased student sense of control and choice; that is, a loss of the elements required in motivation to learn for increasing task skills and competence. For example, in terms of the emergent competency needs of middle-school students Lee (1979) argues that ". . . as children move through grades they do not have exposure to teachers who adjust to their emerging sense of competence" (p. 19). In sum, a relationship between environment and the declining achievement motivation in students is suggested.

Historically, by first and second grades, although students are motivated by forces within themselves to increase competence and master tasks, they begin to modify their performances in response to psychosocial performance, i.e., achievement feedback from teachers and peers, and from an increase in reward/competitive attitudes (Stipek, 1984a). Recall that Veroff (1969) reasoned that social comparison is not natural for young children but can be forced on them. One way this occurs is by the nature of teacher and peer feedback (Eccles Parsons et al., 1984; Stipek, 1984a). Most teacher and peer feedback is negative and results in debilitating reactions in students (such as learned helplessness) by grades four or five. Such feedback also accelerates natural decreases in success expectancy and self-perception resulting in increases in a negative affects toward school as students progress through the grades. Early elementary classrooms are generally more personal, less formal, less controlled, less competitive, and more task-centered. As shown above, the pattern is reversed by the middle grades. Moreover, changes in classroom structure occur simultaneously with other school environmental changes. For example, middle grades involve adjusting to different teachers for each subject, being grouped and tracked by ability, the loss of a stable peer group, attending larger schools, being graded by ability assessment, and being instructed in whole-class formats. Thus, environmental pressures in the form of negative achievement feedback from teachers and peers, aligned with an increase in the classroom reward/competitive system, accelerates and modifies natural

developmental tendencies towards self-evaluation in comparison to others. Moreover, the self-evaluation is now based on extrinsic factors.

There is evidence that ". . . extrinsic contexts may sacrifice process for product" (Condry & Chambers, 1978, p. 69) in that the context changes how students go about solving task problems. For example, the learning process involves four stages: initial engagement, information usage, disengagement from the task, and reengagement. When the classroom environment is reward-oriented, students demonstrate a product orientation. They (1) are answer-oriented, guess before all the information is obtained and thus incur more negative feedback; (2) make little or no use of available resources; (3) take short-cuts (i.e., terminate when the answer is achieved even if the problem has not been worked all the way through); (4) are passive learners in that they allow others to initiate, direct, and terminate goals; and (5) are less likely to return to a task. Conversely, in no-reward environments students demonstrate a process orientation. They (1) are learning-oriented; (2) make fewer guesses before all the information is obtained and thus incurred more positive feedback; (3) make better use of available resources; (4) avoid short-cuts (i.e., terminate when their self-initiated learning goals are achieved); (5) are active learners in that they self-initiate, direct, and terminate goals; and (6) are more likely to return to a task.

In sum, when classroom processes involve predominantly negative feedback and direct students attention to the rewards (e.g., grades),

the learning process changes in all four stages, and students are motivated to learn through forces outside themselves.

Interaction of Factors

It can be argued that changes in children's processing of performance feedback and in classroom reward systems interact and are reinforced by the educational environment and underlie changes in achievement-related cognitions such as learning for rewards or learning for skill mastery; that is, in what students value. Both developmental and environmental factors affect student motivation to learn. As shown, evidence suggests that young adolescents are developmentally more likely than early elementary students to determine their abilities by comparing their performances to other students. Other evidence suggests that the extent to which this comparison occurs is related to different environmental factors. For example, the school environmental changes described earlier override or prematurely foster developmental differences in children and increase students' focus on acquiring certain grades, pleasing others, and/or avoiding risks as opposed to completing tasks for the sake of acquiring new knowledge or demonstrating competence (Ames & Ames, 1984; Condry & Chambers, 1978; Stipek, 1988). In other words, student attention is directed away from the process of learning and towards the product of learning. Thus, as stated by Stipek (1984a), environmental factors may increase or modify developmental tendencies.

Therefore, motivation to learn may be best understood in terms of the ongoing interaction between children's developmental stages and

their educational environments. Changes in children's achievement-related cognitions interact with changes in classroom environment as students progress through the grades. For example, in the case of the early adolescent student, cognitive changes and the changes resulting from the onset of puberty interact with the environmental change to a middle-school structure and the earlier described changes in classroom atmosphere. The classroom changes that occur may be in response to the cognitive development but may also delay those changes as well as reinforce or extend them (Stipek, 1984a). Further evidence can be found in the argument that the salient factors that can delay, reinforce, or extend cognitive developmental changes are a focus on extrinsic rewards and a focus on negative performance feedback (Condry & Chambers, 1978; Stipek, 1984a).

The nature of performance feedback and rewards changes with grade level (Stipek, 1984a). In early grades, teachers tend to emphasize conduct and effort (process). By upper grades, teachers tend to emphasize ability and grades (outcome). Such differences interact with the student's ability to process information and affect what they value in the classroom. For example, young preoperational children respond better to social evaluation, such as praise, even when it conflicts with the objective correctness of their answers. They tend to internalize the teachers' verbal feedback without questioning its validity. Once children have reached the stage of concrete operations, however, they no longer attribute full evaluative authority to adults and tend to respond better to the objective

correctness of their answer. If the objective correctness of answers becomes the focus of classroom evaluation, then the rewards become more important than the learning. In fact, the learning process is undermined. Recall that classroom processes that direct students' attention to rewards instead of aspects of the task result in task engagement for the sake of the rewards rather than the sake of increasing competence (Condry & Chambers, 1978).

Thus, it is reasonable to assume that motivation differences between students (interindividual) may be associated with the interaction of developmental self-assessment skills and the environmental changes involved as students proceed through the grades and during the transition to middle school.

History of Motivational Research

Investigators concerned with motivation have focused mostly on approaches that follow the Expectancy X Value model (Feather, 1982). This theory assumes that effort on a task is the product of the degree to which one expects to perform the task successfully and gain the reward ("Can I do the task?") X the degree to which the rewards are valued ("Why am I doing this task?"). More recently, Weisz and Cameron (1985) claimed that the element of task understanding precedes expectations and values. That is, if students do not understand the task, their expectations and values are not based on reality and, therefore, are distorted.

Despite the fact that cognitive theory was influential before behaviorism (Feather, 1982), until 15 years ago most of the

motivational literature was dominated by learned drive theory (Atkinson, 1964; McClelland, 1965). From this perspective, motivation was the result of the internal conflict between the desire to succeed and the fear of failure. One of the most sophisticated models of learned drive theory was that of Atkinson (1964).

Based on the Expectancy versus Value model, Atkinson's (1964) goal was to predict approach or avoidance in a learning situation. According to his theory, the level of achievement motivation was the result of conflict resolution between a natural tendency to approach tasks and the simultaneous tendency to avoid them. Schematically, the theory arques that the motive to succeed (Ms) and the motive to avoid failure (Maf) are not only conflicting inner forces but also stable personality conditions. Achievement motivation (Ts) is equal to the motive to succeed (Ms) X probability of success (Ps) X incentive for success (Is). Tendency to Avoid Failure (Taf) is equal to the motive to avoid failure (Maf) X probability of failure (Paf) X incentive for failure (Iaf). Therefore, achievement motivation results when the motive to succeed (Ms) is greater than the motive to avoid failure (Maf).

Achievement motivation, then, is the result of stimulus and response antecedents and consequences. The quality of early parent-child interactions, in terms of behaviors that reinforced a motive to succeed versus a motive to avoid failure, determined how the conflict was resolved and the subsequent level of motivation. If parents gave frequent positive reinforcement, achievement behaviors increase

and vice versa. Thus, the parent-child antecedents of success and failure became a primary focus of study. The next logical step is teacher-child interactions. From a teaching perspective, reinforcement theory assumes that the child exerts effort to get rewards (good grades) and to avoid pain (low grades). Hence, both parent and teacher training programs become the focus of research and practice (Covington, 1984). For example, Coopersmith (1967) contended that parents must be trained to (1) accept the child in his/her own right; (2) have clear and enforceable rules of conduct that will give order and predictability in the child's world and also act as secure limits within which to explore the world; and (3) permit the child a wide latitude to explore while offering support, e.g., giving task-oriented hints. Such guidelines also apply to teachers in the classroom.

Since the mid-1970s, cognitive mediational theory has replaced reinforcement theory as a dominant focus of achievement motivation research. The change was precipitated by the seminal work of Weiner (1972) who posed a radical reinterpretation of learned-drive theory with his cognitive Social Learning Theory and Attributional Theory of Motivation and Emotion (Weiner, 1984). Rather than achievement motivation being the result of stimulus and response antecedents and consequences, Weiner (1972) argued that the response to a stimulus was mediated by cognitions. Thus, thinking has an active role in stimuli response results. A fuller discussion of Weiner (1972) and other cognitive views of the Task Expectation X Task Value Model will be presented later. At this point, a discussion on the assumptions of cognitive theory will clarify the mediating role of cognitions.

Cognitive theory assumes that individuals seek to structure and conceptualize the world by interpreting and judging their experiences (Condry & Chambers, 1978; Rohrkemper & Bershon, 1984; Vygotsky, 1962). These interpretations and judgments regarding their experiences mediate between teacher tasks and motivation and can be utilized to measure motivation goal orientations. In other words, behavior (including motivational behavior) is determined by individual beliefs, thoughts, and inner self-verbalizations, not just antecedents and consequences. For example, Vygotsky (1962; a book originally written in 1934) reasoned that individuals actively internalize, construct, and reconstruct the social environment which in turn is influenced by the individual. Language is part of this process. As interpretations and judgments are internal, they take the form of self-directed inner verbalizations that are activated especially in problem situations. Younger students voice these verbalizations whereas in older students they change to thoughts or "inner speech." The verbalizations, whether verbal or nonverbal, facilitate understanding, organization, and interpretation of one's world.

The content of these verbalizations appears to be dependent on what children experience in life. For example, what children see and hear from parents, teachers, and peers during their experiences with solving problems of classroom tasks becomes the basis for what they say to themselves later under similar conditions. Vygotsky (1962) called the change from audible to "inner speech" the process of "interiorization"; Rohrkemper and Bershon (1984) use the term

"internalization." Regardless of the name used, the process is salient in both the initiation and the transformation of tasks (Rohrkemper & Corno, 1988). Some children verbalize questions on how to go about solving the task, while others verbalize a "can't do" posture. In either case, however, self-directing verbalizations affect the motivational process and the type of tasks students choose to complete (Veroff, 1969).

In 1978, Condry and Chambers claimed that the motivational process in children depends upon the interaction of students' cognitive interpretations and the motivational context (e.g., with or without rewards) with specific concrete classroom tasks. Based on Vygotsky (1962) and their own research, Rohrkemper and Bershon (1984) believed that this interaction is mediated by "inner speech." Working in grades three to six, they found that the substance of inner speech changes with task difficulty levels. The most productive inner speech was evident when tasks were moderately difficult; that is, a challenging task that stretched students' knowledge and skills and required some teacher help to initially complete. Vygotsky (1962) called this the "zone of proximal development." Therefore, instead of viewing motivational differences as related primarily to the reinforcements students receive (e.g., their history of successes and failures), cognitive mediational theory focuses on a student's personal interpretation of why he or she was successful or not. Therefore, students with similar successes and/or failures could have different expectations or values because of their interpretations as to why certain

events occurred (Covington, 1984). For example, failure on a task may be interpreted as lack of ability, lack of effort, bad luck, or the difficulty level of the task. Further, recall that by young adolescence, if one student succeeds after expending a great deal of effort, and another student succeeds without doing so, the first student is prone to believe that the need for so much effort connoted inability and interprets that as failure (Covington & Beery, 1976; Covington & Omelich, 1979; Nicholls, 1984).

As developmentally older students believe that ability is the cause of success, and as people are measured in our society by their accomplishments, failure is threatening. It indicates low ability and decreases feelings of personal worth (Covington, 1984). These issues of causes and self-competence in failure situations have been studied and assessed. They suggest that students of different ability levels hold cognitively different expectations on similar tasks.

Task Understanding and Task Expectations

In assessing student interpretations in success and failure situations, most of the past research has focused on expectancy issues. Expectancy is defined as the perception of one's ability to complete a task and focuses on achievement outcomes. In other words, "Can I do this task?" Expectancy theories all agree that beliefs are mediators in achievement outcomes, but they disagree on which beliefs are the most salient. Within the expectancy area, three distinct research components focus on the conditions that maintain effort and

persistence on tasks, achievement motivation (ability versus effort), efficacy perception, and causal attribution (Good & Brophy, 1990).

Achievement motivation researchers posit that effort and persistence is greatest when students meet moderately difficult goals, commit themselves to those goals, and work for success (Dweck & Elliot, 1984). Such effort and persistence is not based on the actual ability level of the student. Some students with low ability do achieve, whereas some highly skilled students do not achieve and demonstrate debilitating behaviors (e.g., learned helplessness). If such a distinction between intellectual skills and the motivation process can be made, then another factor is responsible for achievement. These authors believe the other factor is the student's focus on effort or ability.

If students have an effort focus, they believe that effort extends their ability, are motivated to learn in order to master and understand new tasks, and demonstrate persistence on a task in the face of difficulty. If students have an ability focus, they believe that ability is stable, that effort connotes low ability; are motivated to learn in order to obtain favorable judgments of their ability and avoid unfavorable ones, and demonstrate a lack of persistence on a task in the face of difficulty. The former goal focuses on the process of learning; the latter on outcomes. Effort and ability goals may be held simultaneously or come into conflict, such as when competition is the focus of the classroom.

Teacher practices that promote competency (e.g., challenging tasks, an effort focus, and noncompetitive classroom standard) can maximize effort and persistence on tasks (Dweck & Elliot, 1983). For example, the use of tasks of intermediate difficulty (challenging tasks) maximize both the feeling of competence and favorable competency judgments. However, recall that children who learn to maximize competencies believe that ability can be increased by effort (incremental ability), whereas children who learn to maximize favorable competency judgments believe that ability is stable and cannot be changed (entity ability). Thus, challenging tasks must be augmented with an effort focus that encourages children to use their past performance as a standard for present task behavior. In this way, children's cognitive sets guide their reasons for learning (achievement goal) and can affect their expectancy formations in positive ways.

Efficacy perception researchers assert that effort and persistence is greatest when students believe they have competence to succeed (Bandura & Schunk, 1981). Based on the assumption that ability is changeable through effort, self-efficacy is described as a concern ". . . with judgments about how well one can organize and execute courses of action required to deal with prospective situations containing many ambiguous, unpredictable, and often stressful elements" (Bandura & Schunk, 1981, p. 587). A student's self-efficacy perception, therefore, affects choice of activities, how much effort will be spent on the activity, and how long persistence in the face of difficulties will last.

Considering the magnitude of self-efficacy effects, Bandura and Schunk (1981) contend that teachers must instill students with a sense of competency, especially in those who lack positive efficacy in the first place. To do so, teachers need to develop a program that combines short range goals, a mastery learning format, and careful use of external rewards. Both goal achievement and mastery learning instill a sense of satisfaction and competence and thus leads to high self-efficacy. Along with such recommendations, Bandura and Schunk (1981) presented evidence that extraneous external rewards are detrimental to the development of efficacy and interest in tasks. Their studies demonstrated that existing high interest can be destroyed with the introduction of rewards, unless the rewards are already part of the activity. For example, if a game utilizing rewards are part of the process, interest is not affected. However, in activities where rewards are not a part of the natural process, interest decreases and learning to gain the reward increases.

Causal attribution researchers reason that effort and persistence is greatest when students attribute success to internal or controllable causes (Weiner, 1984). Weiner's (1984) attributional theory of motivation and emotion is somewhat complex. In general, it argues that individuals seek to understand why events occur, especially when the outcome is unexpected. In achievement, the answer to "why" usually involves perceived abiility and self-perception. Weiner (1984) takes the cognitive perspective that mental capacities mediate between stimulus and response. Thus, ". . . one acts on the

perceived, rather than the real world" (Weiner, 1984, p. 16). The core of these mediational thoughts and feelings about ability is self-perception.

The attributional model of motivation and emotions is based on attributions (e.g., ability, effort, task difficulty, luck, or failure to use the right strategies), emotion, and action. As such, it considers the locus (source) of the cause, the stability (duration) of the cause, and control (individual) over the cause. Once an event is perceived, the student makes certain attributions based on their self-perception of ability that are either controllable (e.g., effort or failure to use the right strategies) or uncontrollable (e.g., ability, task difficulty, luck). Such attributions result in different types of actions. For example, students who feel competent usually attribute successes to effort and failure to not using the right strategies. Students who do not feel competent usually attribute successes to luck and failure to ability or task difficulty. Thus, competent (high efficacy) students have a sense of internal control through stable predictable causes, individual control over task completion, and a tendency to approach learning goals. Students who do not feel competent (low efficacy) have a sense of being controlled externally through causes that are not predictable and stable, a lesser sense of individual control over task completion, and a tendency to avoid learning goals. Each of these positions carried certain emotional responses. In turn, these emotional responses further influence efficacy positions and learning goal approach/avoidance.

Although based on the Expectancy X Value model, Weiner (1984) criticized Atkinson (1964) for not fully acknowledging the role of affect in human action. Atkinson (1964) posited that whether goals are approached or avoided is partly dependent on the affective anticipation of pride and shame. Weiner (1984), however, believed that affect has a more powerful role in human action. ". . . affect mediates the relation between thought and action . . . . thoughts give rise to feelings and feelings guide behavior . . . . [thus] we think the way we feel and act on the basis of those feelings" (Weiner, 1984, p. 31).

In a complicated pattern, different causes result in different emotions and actions. Causes are either internal or external. Attributions of internal causes result in different emotions and lead to different actions than do attributions to external causes. For example, successes give rise to feeling of happiness and failures to anger, frustration, and sadness. These emotional reactions are static with all success or failure situations, but the perceived reasons for the success or failure result in additional emotions. If success or failure is attributed to help from others (external), the student feels gratitude along with the happiness or frustration; if from luck (external), surprise with the happiness or frustration; if from ability (external), competence or incompetence with the happiness or frustration; and if from long-term effort (internal), relaxation or anxiety with the happiness or frustration.

The consequence of such a process if the student's tendency to choose one type of learning goal over another. If attributions of success can be described as internal and controllable, subjective expectancy for future goal attainment is positive. Therefore, it can be argued that students will focus on effort to increase their competency and knowledge. If attributions can be described as external and uncontrollable, doubt of future success occurs. Thus, it can be argued that students will attempt to avoid negative ability attributions.

An effective treatment for students who subscribe to the latter attribution-emotion-action process is an achievement change program. Such a program involves the modification of external, uncontrollable attributions and aims to affect a change in learning actions. Assignments are divided into short-range, achievable goals, and instructor feedback is delivered in a positive, descriptive manner.

In sum, students answer "Can I do this task?" by judging the consequences of effort needed versus the amount of ability it will take to succeed on the task; that is, achievement outcomes. Such focuses are based on the reasons students engage in the learning process. Generally, all three expectancy areas of research conclude that when students are motivated towards an effort focus, they learn in order to increase competence, knowledge, and skills; they believe that effort will increase ability; and will persist in the face of difficulties on tasks. Students who engage in learning to increase competence, knowledge, and skills must: (1) have an effort focus;

(2) believe they have the competence to succeed; and (3) believe that they can control the causes of their successes. These theories, however, were criticized for not considering the value factors of the expectancy versus value model (Nicholls, 1979a). The value perspective investigates the reasons behind achievement behavior and asks qualitatively different questions from "Can I do this task?"

Task Value

The Expectancy X Value model (Feather, 1982) has existed for 30 years, yet the majority of research has focused on expectancy. Therefore, there has been a lack of systematic research on value issues. More recently, cognitive theorists have begun to focus on the value factors in motivation to learn (Eccles & Wigfield, 1985; Meece et al., 1988). Value is defined as the goals for doing a task as well as the importance of and interest in the task (Pintrich & DeGroot, 1990). Thus, value questions usually follow expectancy questions (Eccles & Wigfield, 1985) and address the reasons behind achievement motivation. In other words, instrumental questions like "Why am I doing or not doing this task?" or "Why am I learning or not learning this?" follow "Can I do this task?" Some students focus more heavily on one type of question than the other.

Whether an individual asks expectancy or value questions depends on the student's focus of attention (cognitive sets). Value questions are qualitatively different from expectancy questions. Consequently, they lead to different perspectives of motivation that require a different analysis. The reasons for these differences lie in the assumption of each (Eccles & Wigfield, 1985; Nicholls, 1979a).

In expectancy, action is considered externally determined as it accounts for success/failure outcomes and does not reflect the needs and intentions of the student. For example, when a student focuses on "Can I do the task?", attributions based on past task experience are applied to similar tasks. With this focus on outcomes, tasks become the means to an end (Nicholls, 1979a). They become the way to reach other goals rather than being a goal in themselves.

In value, action is internaly determined as it reflects a student's needs and intentions. For example, when students focus on "Why am I doing or not doing this task?" or "Why am I learning or not learning this?" "they begin to question whether or not the task fulfills present learning needs, goal attainment, and personal values for task completion and education. With this focus on the process, tasks become the ends in themselves (Nicholls, 1979a). They become the final goal. The interaction of tasks and students' needs, goals, and values are further explored in the Subjective Task Value Theory of Eccles and Wigfield (1985).

Subjective Task Value theory assumes that the value of engaging in specific tasks is determined by task characteristics (undefined) X student characteristics (e.g., needs, goals, and values). Among the needs, goals, and values is a person's self-concept. If a task fills needs or enhances self-concept, the student will be motivated to work on it. If the task does not fill needs or threatens self-concept, the student will be motivated to avoid it. Additionally, there are differences in students who anticipate success and students who do not.

If the student anticipates success on a task, the amount of effort needed to do the task versus the time lost to do other valued activities becomes a dominant need. If the student is unsure of success or certain of failure, protecting the self-concept becomes the dominant need. Such protection may be achieved in several ways. Students can avoid tasks that may lead to failure and a low ability judgment, attempt a balance between exerting maximum effort and failing, and/or exerting just enough effort to get by while avoiding failure, or deciding that the amount of effort needed is not worthwhile. Judgments such as these decrease subjective task value. Thus, subjective task value theory is defined as ". . . the value an individual places on a task" (Eccles & Wigfield, 1985, p. 202) and involves three major components-attainment value, intrinsic or interest value, and utility value.

Attainment value is the importance of doing well on a task and incorporates the perception of task ability to affirm personal valued characteristics like achievement, competence, power, masculinity, femininity, etc. This value is thought to be higher in middle-class girls and lower in low socioeconomic status children and some minority groups.

Intrinsic or interest value involves the inherent enjoyment one gets from engaging in an activity; that is, intrinsically motivated learning. It is thought that younger children cite intrinsic reasons for learning more than older students. Therefore, it is argued that schools inhibit natural tendencies toward intrinsic learning by

evaluation procedures, teacher control, and lock-step task pacing. This inhibition of intrinsic tendencies undercuts motivation, particularly in low ability children (Eccles Parsons et al., 1984; Eccles & Wigfield, 1985).

Utility value describes tasks that are undertaken to reach short- and long-term goals. Such value is more normally found in middle-school and high-school students rather than lower elementary students. Developmentally, adolescents have the ability to develop stable short- and long-term goals and plan for them. Younger students are not yet cognitively ready for such a future orientation. Thus, by middle school, students do not necessarily complete a task because it is of interest but because it will fulfill some future goal. For example, although disliking English, a student who wants to become a teacher may take extra English courses in middle and high school so that college entrance requirements are filled.

In summary, task value reveals the reasons behind achievement behavior, whereas task expectancy focuses on achievement outcomes. Instead of expectancy attributions of success and failure to effort, ability, luck, or degree of task difficulty students may value a task because they want to master the skill and increase competence, or because they can gain certain coveted rewards, avoid failure, or finish quickly and easily. Such reasons are the basis of ability conceptions or motivation goal orientations, also known as students' focus of attention (Nicholls, 1979a).

Ability Conceptions

Given expectancy X value perspectives, effort and ability beliefs will influence the reasons for doing a task and result in certain motivational differences. If students believe that ability is fixed, they are more likely to learn to please others, gain a reward, avoid negative evaluation, or get the task completed as quickly as possible. However, if students believe that ability is fluid, they are more likely to learn for reasons of skill mastery and increased competence. Both Covington (1984) and Harter's (1981, 1985) self-worth theories address ability/effort beliefs.

Covington's (1984) self-worth theory assumes that a central part of classroom achievement is the need to protect a sense of worth or personal value. It asserts that the degree of self-worth (also known as self-confidence, self-esteem, etc., cf. Harter, 1985) mediates learning and achievement behavior. Ability perceptions are critical to this self-protection; that is, students may not try if they lack self-worth (Covington, 1984). Therefore, ability attributions define self-worth.

Covington's (1984) model illustrates direct causal links between ability and self-worth, effort and self-worth, and performance and self-worth. It also illustrates causal links between ability and performance and effort and performance (see Figure 1). He argued that self-worth can be increased with success at some valued activity, and that success at some valued activity is the main source of self-worth.

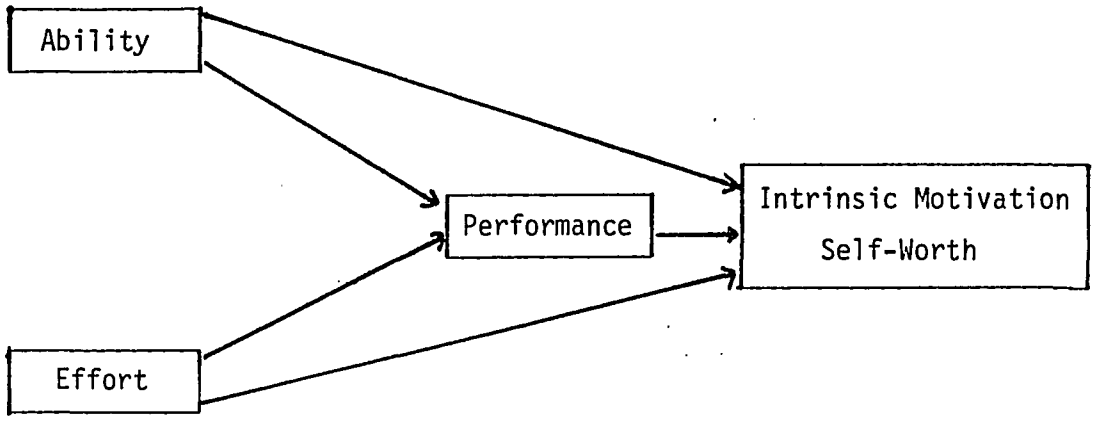

Figure 1. Causal Model of Self-Worth, Ability, Effort, and Performance. (Covington, 1984)

Harter (1985) defined self-worth as the relation between ability estimates in a domain and the importance of the domain (e.g., academic, social, athletic). Her model of self-worth differentiates between global and specific self-worth. Global self-worth addresses "Who am I?" whereas specific self-worth addresses "How good am I?" Specific self-worth may differ within the separate domains for the same person; that is, self-worth estimates may vary by domains within an individual. If the domain is important to the person, then the degree of success in the domain becomes critical and results in global self-worth factors.

Such self-judgments of worth affect levels of intrinsic motivation. Harter (1981) asserts that students high in intrinsic motivation prefer challenging tasks versus easy ones, are motivated to learn by curiosity versus to please others, desires to work independently versus is dependent upon the teacher, utilizes individual judgment on task selection versus teacher judgments, and utilizes internal criteria for success and failure versus external criteria. In sum, effort and ability conceptions influence learning goals.

Prior to 1989, effort and ability perspectives resulted in two types of ability conceptions. The conception based on an effort focus assumes that effort can increase ability (Dweck & Elliot, 1983; Stipek, 1988), thus, students engage in learning tasks to master tasks, develop skills, and increase competence. The conception based on an ability focus assumes that ability is stable and no amount of effort will change it (Dweck & Elliot, 1983; Stipek, 1988). Therefore, students engage in learning tasks to gain positive judgment, please others, and avoid failure or negative ability evaluations whether or not learning occurs. Various names have been used to describe effort versus ability conceptions: autonomy versus social comparison (Veroff, 1969); task versus ego (Nicholls, 1979a); intrinsic versus extrinsic (Maehr, 1983); mastery versus ability (Ames & Ames, 1984); learning versus performance (Elliot & Dweck, 1988); mastery versus performance (Ames & Archer, 1988); and task-mastery versus ego-social (Meece & Holt, 1989) are examples.

Despite differences in nomenclature, a common thread in motivational theory is the desire to maximize student motivation by developing methods that promote an effort focus so that students' learning goals are to master tasks and increase competency, and a value focus so that students ask, "Why am I doing this task?" In answering why doing this task, an effort focus will result in intrinsic reasons for task completion. Consequently, students work with little or no outside reinforcement, and with little concern over the comparison of their capacity to others (Nicholls, 1983) because learning is intrinsically satisfying (Covington, 1984; Nicholls, 1983; Stipek, 1988). "Working on tasks for intrinsic reasons, such as because you are interested in the tasks, is believed to be more enjoyable and ultimately to result in more learning than working on tasks for extrinsic reasons, such as to please a person in authority, escape punishment, or to obtain a reward" (Stipek, 1988, p. 39). Even low ability students perform better when working for intrinsic reasons (Nicholls, 1983). Classroom tasks, then, become salient to motivational research and are an emergent area of research.

Task Research

An emergent area in research involves the type of assignments students are expected to complete (e.g., Blumenfeld et al., 1987; Meece & Holt, 1989). As students proceed through the grades, not only do assignments become more procedurally and cognitively difficult, but students are expected to take a progressively more

independent role in assignment completion (Blumenfeld et al., 1987). Academic tasks are defined by the answers students must produce and the routes to those answers. Therefore, they influence the learner by directing attention to particular aspects of content, by specifying ways to cognitively process the information, by whether the task is procedurally simple or complex, and by the required prerequisite skills. Along with the student developmental factors discussed earlier, content, ways to cognitively process information, procedures, and prerequisite skills increase in difficulty as students proceed through the grades. At the same time, given a higher cognitive developmental level, teachers also expect middle-school students to achieve task completion more independently than teachers of younger elementary students.

It can be argued that if students are not systematically trained to complete difficult tasks in early elementary grades, they may have difficulty doing so in the middle grades. The student who has such difficulties will differ from students who do not in patterns of motivation to learn (Covington & Omelich, 1979). Before elaboration on this point, methods to determine how tasks may affect patterns of motivation will be discussed.

The question of task effects on student motivation to learn involves an intraindividual perspective; that is, how individual students respond to tasks of various difficulty levels. To date, however, most of the developmental and environmental research cited above exploring factors involved in motivation to learn has

concentrated on differences between individuals (interindividual). A review of this research will be discussed later. Little attention, however, has been given either to the motivational learning differences within individuals (intraindividual), or the effects of specific classroom tasks on those differences. A pilot study conducted during the 1988-1989 school year in a city school's third- and fourth-grade classrooms has provided evidence that motivation to learn may be related to types of tasks in that the change in motivation to learn may be influenced by the type of work students are given, at least for average achievers; that is, challenging tasks gave rise to intrinsic motivation towards learning for mastery.

Tasks, Ability Levels, and Intraindividual Responses

In order for intrinsic motivation to occur, researchers (Dweck & Elliot, 1983; Vygotsky, 1962) reasoned that students need to be given challenging tasks. This basic principle suggests that students may be more motivated to learn when presented with one type of task and not another (intraindividual difference). It also suggests that tasks that match students' skill levels result in motivation to learn for task mastery and give feelings of developing competence. Therefore, if students see a task as challenging and can complete it, high, average, and low achievers will view effort as a means to increase ability and demonstrate a mastery approach (Elliot & Dweck, 1988; Nicholls, 1984). If, however, students see the task as threatening

rather than challenging, they might attempt it to please others, or they might attempt to avoid the demonstration of low ability (Nicholls, 1984).

From the viewpoint of ability level, researchers have explored what happens to the students who are and are not able to complete the task. The literature suggests that students who can complete the task are usually high achievers. These students will demonstrate a mastery approach regardless of the types of tasks (Covington & Beery, 1976; Nicholls, 1984). High achievers tend to be what Covington and Beery (1976) called success-oriented and Nicholls (1979a) call task-oriented. They have proven their ability by past performances and have no need to protect it. Therefore, success and failure can be seen in terms of quality of effort. If students fail, the failure is a learning experience and can be overcome by more effort. Additionally, success-oriented students believe they are the cause of their success, accept responsibility for failures, and attribute success to effort and failure to lack of effort (Covington & Beery, 1976).

Students who cannot complete the task are usually low-ability students who develop the goal of avoiding demonstration of low ability (Covington & Beery, 1976) for the purpose of avoiding shame (Nicholls, 1984). Covington and Beery (1976) called these students failure-avoidant, and Nicholls (1979a) called them ego-oriented. These students, unsure of their ability, must protect themselves from low-ability judgments; that is, from failure. Therefore, they do not see failure as a learning experience. Additionally, failure-oriented

students do not believe they cause their success, nor do they accept responsibility for failure. They attribute success to luck and failure to lack of effort (Weiner & Kukla, 1970).

Since students attempt to maintain a self-concept of high ability (competence), failure for students who suspect that their ability is low can be highly threatening in that it may confirm the suspicion of low ability (Covington & Omelich, 1975). Individuals are motivated to maximize success, which reflects well on ability and minimize failure, which will devalue the effects of ability. One way low-ability students do this is to demonstrate just enough effort to avoid the displeasure of the teacher but not enough to succeed on the task. Thus, low-ability students expend as little effort on tasks as possible because, if they apply maximum effort and fail, low ability is confirmed and is most debilitating. Consequently, these students usually select easy tasks and are more likely to utilize work avoidance strategies. For example, should they meet with failure on a task, they tend to describe it as very difficult, thereby attributing failure to causes outside their ability level and reducing the threat to their self-esteen (Covington & Omelich, 1975).

Less is known about how average achievers react in this situation. Most studies on tasks and motivation considered only high and low achievers. The pilot study (Miller & Hooper, 1989b; Miller Adkins, & Hooper, 1990) suggested that average achievers assume mastery postures when tasks are challenging and attempt to please others or avoid demonstration of low ability when tasks are not challenging.

Since what challenges one student differs from what challenges another, it is difficult for teachers to implement challenging tasks in classrooms with students of different abilities (Stipek, 1988). In order to cope with this difficulty, teachers usually give the whole class one moderately difficult task (Nicholls, 1984). In such instances, the dominant profile for high achievers would be task mastery. This profile would be due to the fact that these students have the ability to complete such tasks. In the same situation, the dominant profile for low achievers might be work avoidant since they believe they lack the skills needed to complete such tasks. Similarly, the dominant profile for average achievers would vary according to their ability to complete tasks. If the task was within their ability, they would demonstrate a task mastery perspective, yet if it were beyond their range, they might avoid the task or complete it if required to by others.

One of the problems with the student differences described above is the lack of consideration given to the introduction more than one type of task in a classroom; for instance, easier tasks for the low achieving students, moderate tasks for average achievers, and difficult tasks for high achievers. The easy tasks may involve the gaining of or memorization of basic facts; moderate tasks may involve comprehending material, and difficult tasks may involve the application of knowledge. Given the mixed task scenario described above, it could be argued that low, average, and high achievers would then demonstrate a task mastery approach on the easy, moderate, and difficult tasks, respectively.

In sum, one would expect to find differences between students of varying ability and expect to find differences by tasks for each student. As stated, however, most of the research has concentrated on differences between individuals (interindividual). Little attention has been given to the relationship between specific classroom tasks and learning differences within individuals on those tasks. This is an important area considering the results of the pilot study (Miller & Hooper, 1989b; Miller et al., 1990), that is, that the task difficulty level, not ability, was more influential on motivation goal orientation.

Motivation Goal Orientations

One way to measure differences in classroom motivation has been to examine intraindividual goal orientations. Motivation goal orientations have been defined as "A set of behavioral intentions that determine how students approach and engage in learning activities" (Meece et al., 1988, p. 514). Learning intentions may be to master a task, get a good grade, or to avoid work.

Three motivation goal orientations are presently defined in the literature: task-mastery, ego-social, and work-avoidant (Meece & Holt, 1989). Task-mastery goals involve learning to master tasks and to increase competency. Students who hold task mastery goals desire to understand tasks, increase their competence, and utilize self-comparisons when evaluating their progress. Ego-social orientations involve learning to gain rewards or please others. Students who hold

ego-social goals desire to prove their ability to others and utilize social comparisons when evaluating their progress. Work-avoidant goals involve learning to avoid low ability evaluations. Students who hold work-avoidant goals seek to accomplish the task as quickly and easily as possible regardless of whether or not learning occurs. Research associated with motivation goal orientations will be discussed in the next section.

Few studies have addressed the question of ability level effects on motivation goal orientation and task approach. The available studies concentrate on science tasks. The first study by Meece et al. (1988) assessed fifth- and sixth-grade science students scoring from the second to the ninety-ninth standardized achievement score range. This study demonstrated that motivation goal orientation affects the way students behave on tasks regardless of whether the tasks involve lower- or higher-order skills. Utilizing questionnaires, these researchers assessed the motivation goal orientation. Six science activities were then given to the sample and the degree of cognitive task engagement was measured. The results demonstrate that if students hold task-mastery goals, they demonstrate higher cognitive task engagement, higher ability perceptions, and higher intrinsic motivation. Students who hold social recognition goals (ego-social) demonstrate lower cognitive task engagement, lower ability perceptions, and low intrinsic motivation. Some students attempted to avoid the tasks or do them as quickly and easily as possible. These students demonstrate low ability perceptions and thus

utilized strategies that would result in an escape from negative implications of ability, behaviors that Meece and Holt (1989) later called work-avoidant.

It could be argued that the behaviors associated with task-mastery, that is, higher cognitive task engagement, higher ability perceptions, and higher intrinsic motivation, are important to achievement in students regardless of their ability level. Using the same data as in the previous study, Meece, Blumenfeld, and Hoyle (1988) applied a structural equation analysis to determine causal links or paths between student differences and active cognitive engagement on six science activities classified as 52% high cognitive level and 48% low.

The results revealed a model illustrating the direct and indirect effects of student differences in achievement, perceived competence, intrinsic motivation, science attitudes, and task-mastery, ego-social, and work-avoidant motivation goal orientations, and active engagement (see Figure 2).

First, none of the causal paths between perceived competence and academic ability were significantly related to active cognitive engagement. As to perceived competence, it was hypothesized that the significant portion of variance (r = .64) shared with intrinsic motivation suppressed the influence of this variable. Thus, these researchers concluded that results are consistent with literature that addresses the strong influence of self-concept of ability, i.e., perceived competence or self-worth, on achievement by the end of

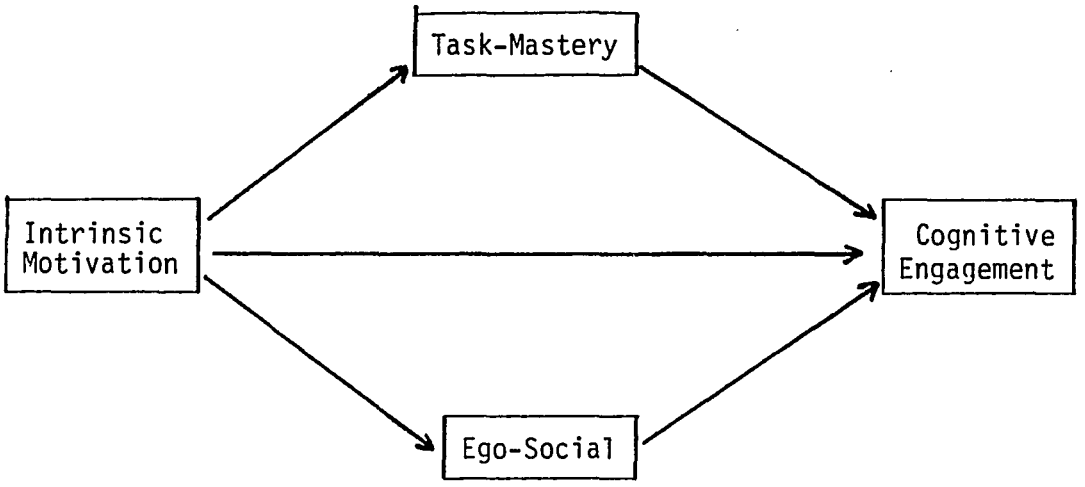

Figure 2. Modified Causal Model of Cognitive Engagement (Meece, Blumenfeld, & Hoyle, 1988)

elementary school, this influence being independent of objective measures of ability (Eccles, 1983).

Second, science attitudes indirectly influenced cognitive engagement as they were mediated by the type of motivation goal orientation.

Third, the largest statistically significant direct effects were task-mastery goals (.63) and ego-social goals (.17). Both goals are approach forms of motivation. Ego-social students, however, usually had stronger concerns about their ability and utilized more effort-minimizing strategies to reduce effort, thereby protecting feelings of self-worth and avoiding negative evaluation of low ability when performance is poor (Covington & Omelich, 1979).

Fourth, intrinsic motivation had a small but statistically significant direct effect on cognitive engagement. However, the majority of its effect (61%) is indirect. It is mediated by the motivation goal orientation. When intrinsic motivation is high, task-mastery goals mediated cognitive engagement. When intrinsic motivation is lower, ego-social goals mediated. Lower intrinsic motivation resulted in lower cognitive engagement in students with ego-social goals.

Thus, intrinsic motivation (incorporating self-concept or self-worth) both directly and indirectly affect cognitive engagement. Students higher in intrinsic motivation are more task-mastery and are the most cognitively engaged. Actual ability levels of the students were not significant factors in this process.

Meece and Holt (1989) further support the premise that behaviors associated with task-mastery are important in student achievement. Again using the same data as the two studies cited above, the researchers found that students who demonstrated task-mastery (31%) also had the highest achievement scores, followed by those who demonstrated a task-mastery/ego-social combination (39%), followed by work-avoidant (27%) with the lowest achievement scores (3% were eliminated). Additionally, the majority of task-mastery students were girls (59%), and a majority of work-avoidant students were boys (61%). In general, however, a master focus was more prevalent within the high achiever group and work-avoidance in the low achiever group.

Although they suggested that different goal configurations may be related to academic performance and achievement, the relationship does not indicate a linear affect of ability on orientation (Meece et al., 1988) but a mediational affect by other factors. In their study, achievement correlated with task-mastery .03, with ego-social -.09, and with work-avoidant -.21. Furthermore, they stated that the .03 correlation between task-mastery and achievement illustrates that the items were not biased towards high achievers. Thus, Meece & Holt (1989) support the literature (Ames & Archer, 1988; Elliot & Dweck, 1988; Meece et al., 1988), when they contend that ". . . characteristics of the learning situation can moderate the relationship between children's individual characteristics and goal orientations" (p. 29).

The findings of Meece and Holt (1989) also refute some of the learning goal and gender differences literature. First, they refute Veroff's (1969) claim that successful achievement at the middle-school level is based on the student development of both task-mastery and ego-social goals. Meece and Holt (1989) did not find overwhelming evidence of extrinsic motivation by middle school and proffered that such a focus may develop later than Veroff (1969) believed. Secondly, gender literature has suggested that boys develop motivational goals that are adaptive for mastery more easily than girls, as girls are more oriented to the demands of others (DePree, 1962; Dweck, 1987; Lahtiner, 1964). It could be argued that such adaptation would suggest that boys are generally more task-mastery and girls more

ego-social. Meece and Holt (1989), however, did not find this expected pattern. Girls comprised the majority of task-mastery students and boys the majority of ego-social students.

Meece and Holt (1989) do support the literature presented earlier (Dweck & Elliot, 1983) that reasoned (1) that ability and achievement are not necessarily synonymous, and (2) for the need of what this study calls the task-mastery student profile. For example, expectancy theorists argued that effort and persistence are not based on actual ability level, as some students with low ability do achieve whereas some students of high ability do not. The influential factor in achievement, therefore, may be the student's focus on effort. In sum, they advocated teacher practices that promote effort and competency by offering challenging tasks and stressing effort in the classroom.

Such behaviors are supported by self-efficacy research (Bandura & Schunk, 1981) and attributional theory (Weiner, 1984) that claimed the effect of self-efficacy and ability perceptions on student choice of activities, the amount of effort expended, and the length of persistence in the face of difficulties. In other words, these factors result in the tendency to choose one type of learning goal over another. They also advocate teacher practices that promote short-term goal attainment, a mastery learning format, and judicious use of external rewards.

Thus, the development of a task-mastery behavior in students of all ability levels may be important to their subsequent achievement.

The dissertation study, however, demonstrated that the type of classroom task may also be a factor. Complex tasks may foster the value approach of task-mastery in high achievers, while high level simple and complex tasks may foster it in average and low achievers.

To summarize, the studies reviewed here focused on an inter-individual perspective and suggested that: (1) there are three types of motivation goal orientations (task-mastery, ego-social, and work-avoidant), each resulting in different reasons to learn (Meece & Holt, 1989); (2) these orientations predict classroom task behavior because they influence the degree of task involvement or preference and intrinsic motivation to learn; (3) these orientations may be operating simultaneously in the same situation; (4) these orientations may differ by gender; and (5) these orientations may be affected by teacher behaviors.

Consequently, the current literature argues a causal link between perception of self-worth and performance (Covington, 1984) and between intrinsic motivation (which includes self-worth) and degree of cognitive engagement in a task, and motivational goal orientation with the degree of cognitive task engagement at all ability levels (Meece et al., 1988). In sum, motivation goal orientations mediate intrinsic motivation and affect task behavior (Meece et al., 1988; Meece & Holt, 1989).

The pilot study (Miller & Hooper, 1989b; Miller et al., 1990) suggested that motivation goal orientations may differ within the same student according to the type of task students complete.

Therefore, different types of tasks may influence motivation goal orientation which influences task behavior. This is important as it suggests that each student may vary in motivation goal orientation and task behavior according to the complexity or challenge level of the task regardless of ability level.

The Pilot Study

As part of a school improvement study, students' performance was investigated by focusing on how student learning and motivation covaried with task difficulty. Student motivation goal orientation was explored utilizing a qualitative interview that focused on task understanding, expectancy, and value. The question examined was: Do students have different motivational goal orientations on different tasks?

Six classrooms from a local magnet school, three third grades and three fourth grades, were selected on a volunteer basis. The third-grade teachers had 13, 21, and 10 years of teaching experience, and fourth-grade teachers had 19, 3, and 27 years teaching experience (15.5 average).

Six third-grade and six fourth-grade average achieving students (CAT 40-60) were selected by the teachers for a total of 12 students. A gender balance was achieved.

To provide a contextual view of the classroom, tasks were collected from each teacher in language arts (reading, English, spelling, and handwriting) for 10 typical teaching days. Tasks were

analyzed by content, cognitive difficulty, literacy requirement, social organization, and graded versus ungraded. Simple tasks were defined as knowledge or comprehension cognitive levels (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956) and required written responses, also known as literacy responses, of simple mark, draw, copy, word, fragment, sentence. Complex tasks were application and above cognitive levels and required sentences, paragraph, or paragraphs.

The interviews, based on the Expectancy versus Value model, focused on students' understanding of the task, their expectations, and the value they placed on doing the task (Appendix A). A total of 51 tasks were assessed during the 43 interviews.

Despite the fact that total tasks for the six classrooms were primarily simple in form (92% simple versus 8% complex), findings indicated that as tasks progressed from simple to complex, students progressed towards a task-mastery goal orientation. This indicated that for an average achiever, there is a qualitative shift in motivational orientation as tasks become more difficult. On simple tasks, students primarily worked to please others, gain rewards, or avoid failure and negative evaluation of ability. On complex tasks, students primarily worked for intrinsic reasons.

More specifically, nine of the twelve students had a differential task range. Six were in fourth grade and three in third grade; five females and four males. Of these, eight had both simple and complex tasks, and one had a full range of simple tasks. Six of

these students demonstrated an ego-social or work-avoidant orientation on simple tasks and a task mastery on complex tasks (one from grade three and five from grade four), and one demonstrated a progression towards task mastery statements as the literacy requirement became more complex even on simple tasks. In sum, 78% of the sample (N = 7) demonstrated the major pattern.

Two of the nine students, one in grade three and one in grade four, demonstrated what appears to be the opposite pattern. These students were ego-social on simple tasks but became work-avoidant on complex tasks.

The last student appeared to be only concerned with writing "good answers" no matter the type of task. The only time she demonstrated more than work-avoidant tendencies was when given a task requiring a "word" response that had to come from the student and not from a provided list. The former student, however, was given a complex task of writing a paragraph with his spelling words. His response to this task was, "I don't like writing stories with my spelling words . . . sometimes I can't even get them enough in . . . I like to just have a normal story with just normal words." One can argue that this student may have been task-mastery had the assignment been his "normal story."

The last of the nine students, a fourth-grade female, demonstrated a task-mastery focus on both simple and complex tasks.

The remaining three students had simple tasks and few response differences (third graders). Without the opportunity to compare their

responses on simple tasks to their responses on complex tasks, these students were unable to contribute a comparison. However, two demonstrated an ego-social orientation throughout all simple tasks. The other student was clearly work-avoidant. Thus, one could argue that these students may still fit the major pattern.

The pilot study suggested that despite few complex tasks, students were sensitive to task differences when they found them. For example, complex tasks appeared to activate an intrinsic value and a task-mastery orientation, whereas simple tasks appeared to active an extrinsic value and either ego-social or work-avoidant orientations. The two cases that demonstrated the opposite motivational pattern, that is, work-avoidant, extrinsic or complex tasks and task-mastery, intrinsic on simple tasks raise speculations. One possible explanation is that the type of complex task makes a difference, as demonstrated above; another is that these students, having had no training in high task forms, found them to be too difficult, therefore, risky. One wonders if some students are "schoolized" into low task functioning and would require extensive teacher modeling and opportunities to practice. However, future interviews of this sort might alleviate speculation by probing students' reasons for responses.

In summary, students appear to be sensitive to different types of tasks and respond in more mastery profiles to tasks that are complex. These suggested results may have implications for instructional planning and implementation.

Task Perspective and Instructional Improvement

The basic unit of teacher instructional planning is the task (Doyle, 1980). Classroom tasks, however, are the result of teacher instructional decision-making. "The conception of teacher planning . . . is one in which instructional tasks are created by the teacher" (Shavelson & Borko, 1981, p. 478). If different types of tasks result in different motivational goal orientations in students, then the language arts tasks planned by the teacher may be of critical importance in student motivation to learn.

It can be argued that instructional decisions influence (a) students' interpretations and judgments of classroom tasks and (b) students' ability concepts. The assumptions for such arguments are that (1) what students are asked to do, that is, the specific classroom tasks will influence their judgments and interpretations of a curriculum as well as its meaning to their daily lives, and (2) student understanding of a curriculum is determined by the complexity of the task (Blumenfeld et al., 1987; Doyle, 1983). Tasks have different cognitive requirements, written response forms, and different social forms. The tasks that teachers choose, therefore, will influence student interpretation, judgment, and ability assessment.

However, although there is evidence that the tasks teachers select during instructional planning influence the motivation goals of classroom students ". . . most planning is unsystematic and general in

nature; teachers appear uncertain as to what the planning process requires" (Shavelson & Borko, 1981, p. 479). Teachers appear to be most concerned with the selection of content than with what would be positively motivating to the students. An emphasis on subject matter, especially low level tasks, may result in the inability to alter the task during instruction if it is found to be ineffective. For instance, in a study of 12 social science junior-high school teachers, Peterson and Clark (1978) found that teachers who were focused on the instructional process demonstrated the use of alternative procedures and different teacher behavior during instruction if the task developed during planning appeared not to be working. Conversely, teachers who were focused on subject matter, particularly lower-order subject matter were less willing to change, even if the task did not appear to be effective. A recommendation was for teacher preparation of a variety of task types that would provide alternatives during instruction.

Additionally, in order to reduce the complexity of classroom demands, planning and instructional procedures appear to become routinized early in the school year and remain fairly static from then on (Yinger, 1979). The dissertation project has provided evidence of task type influence on motivation at the middle-school level. It could be that such information may be helpful in systematizing and particularizing teacher instructional planning and providing alternative methods that may prevent a dependency on only one type of task and routinization. With this in mind, a closer look at teacher

instructional planning and tasks may provide a basis for classroom decision-making.

According to research on teacher instructional decisions (Shavelson & Stern, 1981), some of the main factors that influence which tasks teachers include in their lessons are the classroom subject matter and outside pressures.

Subject Matter

In terms of subject matter, research demonstrates that teachers (kindergarten through college) focus on content (subject matter) in instructional planning (Shavelson & Borko, 1981). There is evidence that, when deciding on content or subject matter, teachers rely on the textbooks utilized in their schools (Barr, 1975; Clark, 1983; Goodman, Freeman, Murphy, & Shannon, 1987; Miller & Hooper, 1989a; Miller et al., 1990; Shavelson & Borko, 1981; Strahan, 1990). For example, in 1975 Barr argued that instructional decisions for high, average, and low reading groups depend primarily on the availability of workbooks, and secondarily on class size, and ability ranges. This type of argument still appeared in the literature eight years later. In 1987, Goodman et al. postulated the same argument. Thus, ". . . published curricular materials have a powerful influence on the content and process of teaching" (Clark, 1983, p. 9). For example, textbooks provide the specific tasks teachers select for use during the interactive stage of teaching.

There is also evidence that textbook tasks are primarily low cognitive levels and rarely require students to write a sentence. For example, in a study by Miller and Hooper (1989a), 1131 tasks (482 cause effect and 649 main idea) were analyzed in two popular reading (series A had 537 tasks; series B had 594 tasks) for grades one through six. The majority of the 1131 tasks (65%) were at the comprehension complexity level (N = 736). Thus, 26% (N = 293) of the tasks at the knowledge level and 9% (N = 102) of the tasks at the application and above level. In terms of the level of the written response, 64% (N = 721) were simple mark, that is, underline, circle, etc., 3% (N = 32) required oral responses, 4% (N = 42) were to draw, 7% (N = 82) were word, 16% (N = 181) were sentence or sentences, 4% (N = 51) were paragraph, and 2% (N = 22) were paragraphs. In sum, in the basal reading series described here, the tasks were primarily low level tasks.

Teacher use of low level textbook tasks is also supported by evidence from the pilot study (Miller & Hooper, 1989b) illustrating that in a typical five-day period, three third and three fourth grade teachers chose 114 reading, language, and spelling tasks for their classes. All the tasks were from the textbooks. Of the 114, 92% (N = 105) were low level tasks in cognitive complexity and written response form; that is, in cognitive complexity, they were either knowledge or comprehension. As to the written response required in each task, most were to underline or circle, use a word, or use a sentence fragment. Therefore, students had an 8% chance (N = 9) of

completing a high level task where the cognitive complexity was application and above, and where they were required to write a sentence, sentences, a paragraph or paragraphs.

The pilot study included interviews with teachers. Some evidence of the process behind such choices emerged. In general, teachers believed that low level tasks are not conducive to literacy in reading and writing. However, higher level tasks require more time for students to complete and more time for teachers to grade. Teachers reported that time is of the essence. There is not enough time in a day to utilize student-centered, creative higher level tasks. They are under pressure to cover the entire textbook in all language arts subjects during the school year and they are required to teach skills so that students can score well on standardized tests (e.g, CATs). The teachers relied on textbooks for task assignments in reading, language, and spelling. Consideration must also be given to outside pressures that impact on teacher task decisions.

Outside Pressures

There is some evidence that outside pressures influence teachers' instructional task decisions even when those decisions do not correspond to teacher philosophy. Both the pilot studies (Miller & Hooper, 1989b; Miller et al., 1990) and other research illustrate this dilemma. The teacher in Strahan's (1990) cogent case study expressed an orientation to language arts that involved two seemingly conflicting orientations: (1) language arts is a set of prescribed

skills; and (2) language arts is a process of communication. The first orientation led to preparation of guidesheets based on state-wide curriculum guide and California Achievement Test coverage and practice skills for the test. The second orientation led to encouragement of discussion and student daily journal writing. This teacher was pressed from outside sources to cover the material and prepare students for the CAT. By her own report, covering the curriculum was at odds with enrichment. Communication was secondary to prescribed skills in instructional decision-making. In other words, low level skills took preference, not because of teachers' implicit beliefs, but because of outside pressures. Two other case studies (Strahan, 1987, 1989) demonstrated that expert teachers are more student-centered than novice teachers. When experienced teachers are in a system that demands program-centered instructional decisions, frustration may result. One of the teachers in the pilot study (Miller & Hooper, 1989b; Miller et al., 1990), a 28-year expert teacher demonstrated such frustration:

> . . . when I started, we were teaching the "whole child." That was more the philosophy that the child was there and his feelings were first . . . . Today, I think it is much more fragmented and we are also teaching subject matter instead of teaching children as individuals.

The overuse of simple tasks was also addressed by Carter and Doyle (1989). Classroom teachers must establish and maintain social order (classroom management) while representing and enacting the

curriculum. Research has shown a relationship exists between the type of classroom assignment and the goals of classroom management and enacting the curriculum. For example, ". . . assignments with different cognitive and procedural complexity for students were enacted in very different ways in the classroom and that these differences had substantial consequences for classroom management and for the nature of the work students actually accomplished" (Carter & Doyle, 1989, p. 59). Additionally, it could be argued that in today's classrooms, outside pressure to cover textbook content and uphold student CAT scores in classrooms with widely varying ability levels (Miller & Hooper, 1989b; Miller et al., 1990; Strahan, 1990) is also a factor.

According to Carter and Doyle (1989), in order to maintain classroom management and accomplish content coverage and ensure high CAT scores, teachers tend to select cognitively and procedurally simple tasks which become routinized. When such tasks are implemented in the classroom, teacher explanations are clear and precise, thus minimizing student misunderstanding. Students begin work quickly and work efficiently; there is a high congruence between the stated work and the finished product, and teacher evaluation procedures are consistent and rigorously applied.

In contrast, when teachers utilize tasks that are cognitively and procedurally complex, students are required to work with tasks that are novel and/or problem-solving, thus require students to make decision; teacher explanations are longer, thus students misunderstand or fail to grasp key points more frequent; the work usually does not

proceed quickly and efficiently and result in teachers becoming more and more specific, thereby reducing student decision-making; the finished product is less congruent with the stated work; and teacher evaluation procedures are not as consistent and rigorously applied.

In sum, if student responses are the result of their interpretations and judgments of classroom activities, then the instructional decision process may provide specific ways to modify instruction goals and adjust activities in reaction to student task responses. Therefore, tasks that promote a student-centered focus, while covering content and preparing students for standardized tests, may be a way to resolve the frustration and ease conflicts in the teacher instructional decision process. At the middle-school level, both classroom context and developmental differences must be considered.

Chapter Summary

Changes in student motivation, self-concept, expectations for success, and attitudes towards school occur as students proceed through elementary grades. Such changes can be traced to the interaction of developmental and environmental factors. One such interactional factor is the type of tasks students are expected to complete in the classroom. Research has suggested that how much students learn is largely a function of task engagement. Learning occurs most productively when students are exposed to tasks that are challenging. Challenging, or moderately difficult tasks, are those which are based on student prior knowledge and ability level while at the same time

extend that knowledge and skill. Further, there is evidence that different types of tasks influence the type of motivation found within the same student by eliciting different student judgments. For example, simple tasks may encourage learning to achieve certain grades, please others, or avoid negative ability judgments while complex tasks may encourage learning to master a skill and demonstrate competence.

Cognitive theory assumes that students interpret and judge their experiences and that such interpretation mediate between tasks and motivation. Such judgments involve task understanding issues, expectancy issues in the form of "Can I do the task?" (an outcome question) and value issues, in the form of "Why am I doing or not doing this task?" or "Why am I learning or not learning this?" (questions addressing reasons behind achievement). Some students focus more heavily on one question than the other. The type of task may influence which question receives the major focus and thus a different motivation goal orientation. Tasks that elicit a motivation goal orientation that results in learning to master skills and increase competency is desired.

The types of tasks selected by the teacher, then, are factors in learning. Studies of how teachers select tasks suggest that most planning is unsystematic and general in nature. Utilizing primarily low level tasks, the primarily foci in task selection are subject matter, ease of classroom management, content coverage, and maintaining standardized achievement test scores. Additionally, such plans become routinized early in the school year and remain fairly static

from then on. Thus, the influence of task type interacting with student ability level and the resultant motivation goal orientation could be important to teacher planning. It may be helpful in systematizing and particularizing teacher instructional planning and providing alternative methods to prevent a dependency on only one type of task and routinization.

Predictions

The dissertation study suggests that the drop in motivational goal orientation may in part be due to the type of classroom tasks students are expected to complete. To assess this premise, predictions were based on the following literature: (1) that younger children are at different developmental stages than older children (Eccles Parsons et al., 1984; Eccles & Wigfield, 1985); (2) that goal orientation will be reflected in inner speech (Rohrkemper & Bershon, 1984; Vygotsky, 1962); (3) that younger and older students may value tasks differently since middle-school children have a different array of classroom tasks (Pintrich & DeGroot, 1990); (4) that self-worth is central to achievement (Covington, 1984); (5) that the need to protect the self-worth is the basis for mastery orientation in high and low achievers (Covington & Beery, 1976; Nicholls, 1984); and (6) that motivation goal orientation can measure inner speech (Blumenfeld & Meece, 1988).

Operationally, students are task-mastery when they learn to master a skill and increase competence. Students are ego-social when

they learn for the grade, to please others, or to avoid a negative ability evaluation. Finally, students are work-avoidant when they want to accomplish the task as quickly and easily as possible regardless of whether learning occurs or not (Meece & Holt, 1989). From this literature, the following predictions were explored:

1. High achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex and simple tasks.
2. Average achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex tasks. On simple tasks, the dominant profile will be ego-social and/or work-avoidant.
3. Low achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant on simple tasks. On complex tasks, the dominant profile will be work-avoidant.

Presently, a two-year study with third-grade students of low, average, and high abilities is being conducted in language arts by the first author of the pilot study. The present study was meant to extend the pilot and include the effects of ability level on motivation goal orientation and task response at a higher developmental level in middle grades in language arts. Similar results lend more strength to the argument that the type of classroom task influences intraindividual motivation goal orientations and in turn task behavior.

CHAPTER III

METHODOLOGY

The study took place in a classroom setting and used a combination of quantitative and qualitative methodologies. This combination offered a picture of both classroom products (tasks) and the processes underlying the products (perceptions) that influence task understanding, task expectations, and task value or motivation goal orientations. The procedures for the study are discussed under: (1) demographics; (2) subjects; (3) materials, (4) procedures; and (5) interview coding.

Demographics

Demographic data on the North Carolina county, the middle school, and the sixth-grade classrooms were collected from school records. These descriptions are provided as a measure of transferability (external validity) (see Table 1).

The County

The county school system had a 1990 enrollment of 24,430 students, 81% white (N = 19,788) and 19% minority (N = 4,642). County wide SES and gender distributions were unavailable. Achievement levels can be seen in the 1990 county CAT total battery scores of reading, language, and mathematics for grades three, six, and eight.

Table 1

Demographics

	Student Numbers	Gender	
		Male	Female
County	24,430		
Minority	4,642 (19%)		
White	19,788 (81%)		
School	1,194 (5% of 24,430)	601 (50%)	593 (50%)
Minority	232 (19%)	119 (51%)	113 (49%)
White	962 (81%)	482 (50%)	480 (50%)
Sixth Grade	196 (16% of 1,194)	92 (47%)	104 (53%)
Minority	28 (14%)	13 (46%)	15 (54%)
White	168 (86%)	79 (47%)	89 (53%)
Sample	N = 18		
Minority	2 (11%)	1 (50%)	1 (50%)
White	16 (89%)	8 (50%)	8 (50%)

Table 1 (continued)

Achievement Level			
	1989-90 CAT		
Grade	Total Language	Total Battery	Total Spelling
3	76	78	70
4	58	62	63
5	69	74	62
6	M = 67 F = 72	NA	NA
7	NA	74	65
8	71	73	60

The county third-grade percentiles are 72%; grade six, 66% and grade eight, 62%. Guilford County Schools score above the national average of 50%.

The School

The middle school consists of grades three through eight. The 1990-1991 school population is 1,194 students, 50% are boys (N = 601) and 50% girls (N = 593). Ethnically, 19% (N = 232) of these are minority students and 81% (N = 962) are white. This is proportionally equal to the county population. Of the 19% ethnic population, 51% are boys (N = 119) and 49% are girls (N = 113). In the white

population, 50% are boys (N = 482) and 50% (N = 480) are girls. Numbers on SES distribution were unavailable. However, 1989-1990 parent education levels were available and may be an indication of SES. Ten percent did not receive a high school diploma (N = 21), 40% held a high school diploma (N = 740), and 50% attended above high school (N = 940). Thus, the SES is generally middle to high level.

In terms of school-wide 1989-1990 CAT achievement scores provided by the school counselors, all school-wide test scores in total language, total battery, and total spelling were above the national average. The highest percentiles on all three measures occurred in grade three, that is, Total Language 76% and Total Spelling 70%; the lowest on Total Language at 58% and Total Battery at 62%, while the lowest on Total Spelling, 62%, occurred in grade five. For grade six, only total language was available. Boys scored 67% and girls scored 72%. Not all totals were available for every grade and totals were unavailable by gender (except sixth grade) or ethnicity.

The Sixth Grades

Although only 16% (N = 196) of the total school population, the sixth grades are representative of the school demographics. Of the 196 sixth graders, 47% (N = 92) are boys and 53% (N = 104) are girls. This is imilar to the 50/50 gender proportion of the school. Ethnically, 14% (N = 28) of these are minority students and 86% (N = 168) are white. Of the 14% ethnic population, 46% (N = 13) are boys and 54% (N = 15) are girls. In the white group, 47% (N = 79) are boys

and 53% (N = 89) are girls. Again, these are similar to the above percents. SES can be approximated by parent education levels: 3% (N = 6) parents did not receive a high school diploma; 14% (N = 27) have a high school diploma; and 83% (N = 153) are above high school.

Achievement distributions are unavailable by high, average, or low achievement designations. As the above given CAT scores are the only indications available, it can only be said that these students tend to score above the national average.

Subjects

Classrooms

Three of the sixth-grade language arts classrooms were selected and participated in this study. Table 4, Task and Teacher Data, describe the data. The teachers in the selected classrooms (Teachers C, D, & F) were white, middle SES females, with teaching experience of 21, 10, and 24 years, respectively, for an average of 18.3 years.

Teacher C taught English, spelling, and handwriting to 22 students. Using student grades as a criterion, Teacher C reported having one boy and three girls as high achievers, four boys and seven girls as average achievers, and four boys and three girls as low achievers. Teacher D also taught English, spelling, and handwriting to 24 students. Using student grades as a criterion, Teacher D reported having four boys and five girls as high achievers, four boys and five girls as average achievers, and four boys and two girls as low achievers. Teacher E taught English, spelling, and handwriting to 16 students.

Using student grades as a criterion, Teacher E reported having four boys and four girls as high achievers, one boy and three girls as average achievers, and three boys and one girl as low achievers.

Students

The final sample was randomly selected from ability level lists provided by the teachers (see Procedures section). This sample consisted of nine boys and nine girls (N = 18), six high, six average, and six low achievers (see Table 2).

Students ranged in age from 10 years 11 months to 12 years 4 months with a mean age of 11 years 6 months. The ethnic distribution of the 18 students in the sample showed that 89% were white (N = 8 boys and N = 8 girls), and 11% minority (N = 1 boy and N = 1 girl). SES could not be determined for the sample. Most, however, appeared to be middle class children. One black boy was of the low SES group. In sum, the random sample appears fairly representative of the school and the sixth grade. Students were deliberately picked by achievement level. There were six high, six average, and six low achievers in the sample. The average CAT total language score for high achievers was 73 with a range of 90-68; the average CAT for average achievers was 66 with a range of 61-46; and the average CAT for low achievers was 27.1 with a range of 30-15. This distribution supports teacher designations of students by their grades into three achievement levels. Student data are reported with fictitious names.

Table 2

Student Sample Profile

Teacher	Student	Gender	Age		Achievement by Teacher			CAT Total Language
			Years	Months	High	Average	Low	
C	1 Will	M[a]	11	11.5	X			61
	2 Lynn	F[b]	10	11	X			90
	3 John	M	11	5		X		NA[c]
	4 Ann	F	11	4		X		NA
	5 Mike	M	12	1			X	24
	6 Sheri	F	11	1			X	23
D	1 Steve	M	11	6	X			76
	2 Sara	F	11	4	X			78
	3 Dave	M	11	8		X		74
	4 Dora	F	10	11.75		X		76
	5 Pete	M	12	4			X	46
	6 Sue	F	10	11			X	25
E	1 Lou	M	11	6	X			74
	2 Kathy	F	11	3	X			61
	3 Rob	M	11	4		X		46
	4 Bobbie	F	11	9		X		68
	5 Paul	M	12	2			X	15
	6 Lil	F	11	1			X	30
TOTAL	18	9 M 9 F			3 M 3 F	3 M 3 F	3 M 3 F	
AVERAGE AGE			11	6				

[a]Male
[b]Female
[c]Not available

Note: Age range 10 years 11 months to 12 years 4 months.

Materials

Classroom Context Scale

The classroom context scale served two purposes. First, it was used to determine the proportion of simple and complex tasks within classrooms. These proportions were used to select classrooms that were similar to those in the pilot study. Second, it was used to select the simple and complex tasks with which students were interviewed.

Task coding. The rationale for coding classroom tasks is based on the task perspective work of Blumenfeld et al. (1987) and Doyle (1983). In general, tasks are the written products students must complete to demonstrate competence at a skill. More specifically, tasks are (1) written or oral products that demonstrate skill proficiency, (2) the operations to produce the product (e.g., recalling facts), (3) the resources needed (e.g., notes), and (4) how much the task counts towards a final grade (Doyle, 1983). In sum, tasks define how students come to think about or process curriculum information, understand its meaning in everyday lives, and learn the cognitive strategies used to do so.

Tasks have both content and form. Content involves the cognitive level and subject matter of task (Doyle, 1983). Form, on the other hand, involves the classroom activities: (1) the level of difficulty of the written response (literacy requirement), e.g., a simple mark or paragraphs; and (2) social organization, that is,

individual (student working alone to produce the product); cooperative (students work together in a group to produce one product); or interdependent (group work where each student produces a product) (Blumenfeld et al., 1987).

Classroom language arts tasks were coded in ways similar to the procedures in the pilot study, that is, by content according to cognitive level and by form according to the type of written response required. Cognitive level was determined through a modification of Bloom's Taxonomy which included three categories: knowledge, comprehension, and application. The latter includes analysis, synthesis, and evaluation levels (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). The type of written response (literacy requirement) was determined through a coding format devised by the first author of the pilot. Written responses were coded by the amount of writing students were required to use when completing a task: (1) simple mark (e.g., circle, underline), (2) copy, (3) draw/number, (4) work, (5) sentence fragment, (6) sentence, (7) sentences, (8) paragraph, or (9) paragraphs.

After cognitive level and literacy requirement coding was completed, tasks were further coded into simple or complex categories. Simple tasks were at the knowledge or comprehension level and utilized either simple mark, draw/number, copy, word, sentence fragment, or sentence level responses. Complex tasks were at application, analysis, synthesis, or evaluation levels and utilized sentences, paragraph or paragraphs (see Appendices A and B).

Inter-rater agreement. Inter-rater agreement for coding tasks was established between the first author and this writer in the pilot study and a basal reading study. The pilot study involved 323 tasks and the basal study 66 tasks (Miller & Hooper, 1989a). Inter-rater agreement was $p = .938$ or 88% with all disagreements settled by consensus. The inter-rater agreement and consistency of coding augments applicability and transferability (internal and external validity) and consistency and dependability (reliability) of the data.

Student Interviews

The interview assessed task content and form effects on student thinking. In order to make this assessment, students were asked a standardized list of questions developed for the pilot study. These questions were designed to parallel the task perspective model of task content and form and to address students' interpretations and judgments about different types of tasks including task understanding, task expectancy, and task value issues (see Appendix C).

Task understanding was assessed by asking, "What did your teacher want you to learn?", "Have you had this assignment before?", "How long did it take to do this assignment?", and "What and how much did you learn?", "What did your teacher say about why this assignment was important?", and "What did your teacher say happens if you make mistakes?" Task expectations were assessed by asking, "How difficult was this assignment for you?", "How sure are you of doing well?", and "What parts were most difficult?" Task value was assessed by asking, "Do you like doing this assignment?" and "Are you interested in this

assignment?" In addition to a verbal answer, students were also asked to rate the intensity of liking and interest by using a one to ten scale. A rating of one indicated very high like or interest, whereas a ten was the most disliked or least interested.

Procedures

Classroom Selection

Six language arts sixth-grade classrooms were considered for participation in the study. Demographically, all teachers, except one (black) were white, middle-class females, who had been teaching for 19, 28, 21, 10, 20.5, and 24 years, that is, an arithmetic average of 20.4 years. Prior to data collection, a letter of introduction was written to each of the teachers with a copy to the principal. The principal set up a meeting with all the parties involved at which time the researcher fully explained the study and answered questions. Additionally, each teacher was asked to provide data on the subjects taught, class ability ranges, class SES levels, teacher's SES level, and number of years of teaching experience. At this initial meeting, it was found that there were seven language arts teachers at the middle school. One teacher was on extended sick leave and eliminated from the study.

To extend the pilot study and as a measure of applicability (internal validity), classroom selection of the remaining six teachers was based on three criteria: (1) subjects included in the class curriculum, that is, reading, language, spelling, etc.; (2) range of

student ability levels in the class, that is, high average, or low by gender; and (3) range of tasks in the class, that is, procedurally simple (not challenging) to procedurally complex (challenging).

In the pilot study, subject areas included reading, language, and spelling. Classrooms that came closest to this distribution were selected. Subject range was determined by teacher report. As the three reading classes were separately grouped by ability level, they were eliminated from the study.

Student ability levels were assessed to extend the pilot studies sample and select a "purposive" sample. To accomplish these goals, teachers were asked to group the students in each class by ability level. Sampling methodology was "purposive" in order to document unique variations that emerged as students adapted to different task conditions (Lincoln & Guba, 1985). Thus, students considered "gifted" and students assigned to classrooms designed to teach very low students, e.g., learning disabled, Chapter 1 students, were eliminated ($\underline{N}$ = 32). The sixth grades together had 196 students in all subject areas, e.g., language arts, acience, arithmetic, etc. Elimination of the above students ($\underline{N}$ = 32) left 164 students in the population pool for the purposes of teacher ranking and random subject selection. Classrooms with the widest distribution of students in each category by gender were selected. The sample, therefore, consisted basically of average students who were high, average, and low achievers.

Finally, as to task range, the pilot study was based on tasks that ranged from simple structures to complex structures. The first collection of tasks in the pilot study demonstrated that students were given simple tasks 92% of the time and complex tasks 8% of the time. In this study, the goals were to at least replicate these task conditions in sample selection and provide a measure of transferability (external validity). The original plan was to collect 10 days of task by xeroxing the teachers' plans. However, at the first meeting with the teachers it was decided that as the school had only been in session two weeks, and some of the days were shortened due to hot weather, task collection began the day of our meeting for eight typical teaching days. This plan was approved by the head of the dissertation committee. Teachers were given a task form and asked to write down the written tasks students completed for eight days (Appendix E). This form was collected every two days with attached copies of the tasks.

In this way, language, spelling, and reading assignments were collected in six of the seven classrooms for eight days. These assignments were analyzed for the number of tasks, cognitive level, literacy response, graded/ungraded, topics by subjects, and simple versus complex tasks. The topics and graded/ungraded data were archived.

The general summary of tasks for the six sixth-grade classrooms is illustrated in Table 3. The table describes sub-totals for each teacher; a sample total for topics covered within each subject area;

Table 3

Sixth-Grade Task Summary

Reading	Language	Spelling	Totals
Author's Purpose	Complete Subjects & Predicates	Alphabetical Order	
Comprehension	Descriptive Writing	Challenge Words	
Definitions	Power Writing	Definition	
Description	Recognizing Sentences	Description	
Inferences	Simple Subjects & Predicates	Dictionary Skills	
Literal & Figurative Language		Final Test	
Main Idea		Homographs	
Predictions		Long & Short Vowels	
Study Skills		Practice	
Vocabulary		Pretest	
		Proofreading	
		Trial Test	
		Vocabulary	
		Writing Skills	
Total Cognitive Level	Total Cognitive Level	Total Cognitive Level	Total Cognitive Level
K 0	K 0	K 11	K 11 07%
C 38	C 49	C 35	C 122 76%
A 7	A 13	A 7	A 27 17%
Total Tasks 45	Total Tasks 62	Total Tasks 53	Total Tasks 160

Table 3 (continued)

Total Response Format		Total Response Format		Total Response Format		Total Response Format		
1 Simple Mark	15	1 Simple Mark	24	1 Simple Mark	17	1 Simple Mark	56	35%
2 Draw/Num/Copy	3	2 Draw/Num/Copy	2	2 Draw/Num/Copy	1	2 Draw/Num/Copy	6	4%
3 Word	11	3 Word	3	3 Word	27	3 Word	41	25%
4 Sentence Frag	6	4 Sentence Frag	19	4 Sentence Frag	1	4 Sentence Frag	26	16%
5 Sentence	2	5 Sentence	2	5 Sentence	2	5 Sentence	6	4%
6 Sentence(s)	5	6 Sentence(s)	6	6 Sentence(s)	3	6 Sentence(s)	14	9%
7 Paragraph	1	7 Paragraph	3	7 Paragraph	1	7 Paragraph	5	3%
8 Paragraph(s)	2	8 Paragraph(s)	3	8 Paragraph(s)	1	8 Paragraph(s)	6	4%

Total Task Type		Total Task Type		Total Task Type		Total Task Type		
1 Simple	38	1 Simple	50	1 Simple	46	1 Simple	134	84%
2 Complex	7	2 Complex	12	2 Complex	7	2 Complex	26	16%

the cognitive level; the literacy response; and the types of tasks derived when cognitive level and literacy response were crossed.

In reading, language, and spelling, the six classrooms had a total of 160 tasks in eight days, an average of three tasks per day. An analysis of the cognitive level of the 160 tasks demonstrated that 7% (N = 11) were at the knowledge level, 76% (N = 122) were at the comprehension level, and 17% (N = 27) were at the application level. The literacy response of the 160 tasks was as follows: simple mark 35% (N = 56); draw/number/copy 4% (N = 6); word 25% (N = 41); sentence fragment 16% (N = 26); sentence 4% (N = 6); sentences 9% (N = 14); paragraph 3% (N = 5); and paragraphs 4% (N = 6). Thus, 80% (N = 129) of the tasks required less than a sentence response, 4% required a sentence, and 16% required sentences or above. Finally, as to task type, 84% (N = 134) were simple tasks and 16% (N = 26) were complex. These totals were acceptable.

Analysis of the subject, ability ranges, and task data determined that only three classrooms fit the criteria required for sample selection (see Table 4).

Reading classes were eliminated because students were homogeneously grouped. Teachers B and D had low achieving groups, Teacher C had the average achieving group, and Teacher F had the high and academically gifted (AC) groups. Language and spelling classes were heterogeneously grouped and were chosen to assess the third criteris, task type distribution. Teacher A had too few complex tasks (N = 2 10% of the 21 total tasks), Teacher B taught only reading. Teacher C

Table 4

Task and Teacher Data

Teacher	Subject	Total Tasks	Simple Tasks	Complex Tasks	Total Students	Achievement Levels					
						High		Average		Low	
						M	F	M	F	M	F
A	Language	21	19 (90%)	2 (10%)	20	3	1	5	6	3	2
B	Reading	7	6 (86%)	1 (14%)	23	1	0	7	9	4	2
C	Reading	18	14 (78%)	4 (22%)	27	4	1	8	11	1	2
	Language	23	20 (87%)	3 (13%)	22	1	3	4	7	4	3
D	Reading	5	5(100%)	0	26	0	0	0	0	12	14
	Language	27	23 (85%)	4 (15%)	24	4	5	4	5	4	2
E	Language 1	13	9 (69%)	4 (31%)	17	1	1	4	8	2	1
	Language 2	5	4 (80%)	1 (20%)	18	5	3	3	4	2	1
F	Reading	15	13 (87%)	2 (17%)	14	4	5	4	1	0	0
	Language	26	21 (81%)	5 (19%)	16	4	4	1	3	3	1
TOTALS		160	134 (84%)	26 (16%)	207[a]	27	23	40	54	35	28

[a]Greater than total sixth-grade student numbers (n = 196); often same students in two classes, e.g., reading and language arts.

qualified for selection in task variety and ability ranges. In terms of task variety, 87% (N = 20) were simple and 13% (N = 3) were complex, and an ability distribution for potential student sample selection consisting of one boy and three girl high achievers, four boy and seven girl average achievers, and four boy and three girl low achievers. Teacher D was also selected in terms of task variety with 85% (N = 23) simple and 15% (N = 4) complex, and an ability distribution for potential student sample selection consisting of four boy and five girl high achievers, four boy and five girl average achievers, and four boy and two girl low achievers. Teacher E had two language arts classes; the first had too few students in each achievement level for random selection (high achievement, one boy and one girl; average achievement, four boys and eight girls; and low achievers, two boys and one girl), and the second class demonstrated too few complex tasks (N = 1, 20%). Finally, Teacher F was selected in terms of task variety with 81% (N = 21) simple and 19% (N = 5) complex, and an ability distribution for potential student sample selection consisting of four boy and four girl high achievers, one boy and three girl average achievers, and three boy and one girl low achievers. In sum, selection of 18 students for the final sample was taken from language classrooms of Teachers C, D, and F.

Student Sample Selection

Utilizing the achievement lists requested from Teachers C, D, and F, selections were made within each achievement group. One boy

and one girl in the high, the average, and low group in each of the three classrooms were selected using a table of random numbers (N = 18). Backup subjects in each category were also selected where available.

Parent permission letters were distributed to the 18 selected students. Copies of the signed parent permission forms were given to the sixth-grade counselor. The counselor provided national percentile standardized achievement total language test scores for each subject except two, an average achieving girl and boy. These students had recently moved to North Carolina from Georgia and Texas. The counselor reported that neither CAT or equivalent scores were available from these states. Teachers provided the age in years and months for each student.

As sixth-grade students change classes for various subjects, some of the same students were counted in more than one classroom. Thus utilizing a table of random numbers, the final sample was selected from classrooms C, D, and F (N = 117, 35 high, 54 average, and 28 low achievers).

Once the sample of 18 students was completed, teachers met with the researcher to purposely select at least two simple and two complex tasks in each of the three classrooms to be utilized in interviews. It was determined that a graded task could contaminate the students' responses to the questions. For example, if a student received a low or high grade on a task, the answer to "Do you like doing this assignment?" may be answered from the point of view of doing well or not

doing well on the task rather than from the qualities of the task. Other questions could be similarly contaminated.

Interview Administration

Interview procedures followed preapproved human subjects research proposals from Guilford County Public Schools and the University of North Carolina at Greensboro.

Interviews of 10-15 minutes each were conducted and taped in a private room provided by the school. Prompts varied based on the nature of the task and the question. Interviews were conducted by the author of this study and introduced by telling the students that the interviewer was interested in what students thought about the different types of tasks they did in school. Each student was interviewed on at least two simple and two complex tasks (N = 18 each high, average, low achievers). Originally, a total of 72 observations of the independent variables was anticipated. However, due to the nature of teacher tasks, 93 observations of the independent variables were actually obtained in 72 interviews. Interviews were conducted within one day of task completion. Because of the pilot experience, the interviewer did not anticipate problems with student reluctance to answer the questions. However, had a student been reluctant to answer a question, the interviewer was prepared to explore the reasons for such reluctance (e.g., "You look like you do not want to answer that question. Can you tell me about that?") and dispel the reason. If the reason could not be dispelled, the interviewer was prepared to honor the student's right to not answer.

Confidentiality was a major focus. Interviews were transcribed and coded by a letter/number system and the student's first name only. The code consisted of a letter designating the teacher, a number designating the interview in that class, a letter indicating gender, and a letter indicating achievement level. For example, C12FL means Teacher C, interview 12 in that class, girl, low achiever.

Interview Coding

Interview Tasks

The rationale and inter-rater agreement was the same for interview tasks as for the tasks utilized in the classroom context scale discussed in the materials section of this chapter.

It will be recalled that the coding of sixth-grade classroom tasks illustrated 160 total tasks in reading, language, and spelling in eight days. Of these, 84% (N = 134) were at the simple level and 16% (N = 26) were at the complex level. As the tasks utilized in the interviews were more purposively selected from classroom work conducted in the 12 school days following the end of the general task collection, coding provided a somewhat different picture (Table 5).

Twenty-four tasks were utilized in interviews. As to cognitive level, 0% (N = 0) were knowledge, 71% (N = 17) were comprehension, and 29% (N = 7) were application. Similarly, tasks with literacy responses below sentences were 71% (N = 17), and tasks with literacy responses above sentences was 29% (N = 7). Thus, in this sample of tasks, 71% (N = 17) of the tasks were simple, and 29% (N = 7) were complex. Each

Table 5

Interview Task Analysis

Teacher C Total Cognitive Level		Teacher D Total Cognitive Level		Teacher F Total Cognitive Level		Totals Total Cognitive Level		
K	0	K	0	K	0	K	0	0%
C	4	C	5	C	8	C	17	71%
A	2	A	2	A	3	A	7	29%
TOTAL TASKS	6	TOTAL TASKS	7	TOTAL TASKS	11	TOTAL TASKS	24	
Total Response Format		**Total Response Format**		**Total Response Format**		**Total Response Format**		
1 Simple Mark	0	1 Simple Mark	1	1 Simple Mark	0	1 Simple Mark	1	4%
2 Draw/Num/Copy	1	2 Draw/Num/Copy	0	2 Draw/Num/Copy	0	2 Draw/Num/Copy	1	4%
3 Word	1	3 Word	0	3 Word	0	3 Word	1	4%
4 Sentence Frag	1	4 Sentence Frag	2	4 Sentence Frag	4	4 Sentence Frag	7	29%
5 Sentence	1	5 Sentence	2	5 Sentence	4	5 Sentence	7	29%
6 Sentence(s)	0	6 Sentence(s)	0	6 Sentence(s)	0	6 Sentence(s)	0	0%
7 Paragraph	0	7 Paragraph	0	7 Paragraph	0	7 Paragraph	0	0%
8 Paragraph(s)	2	8 Paragraph(s)	2	8 Paragraph(s)	3	8 Paragraph(s)	7	29%
Total Task Type		**Total Task Type**		**Total Task Type**		**Total Task Type**		
Simple	4 (67%)	Simple	5 (71%)	Simple	8 (73%)	Simple	17	(71%)
Complex	2 (33%)	Complex	2 (29%)	Complex	3 (27%)	Complex	7	(29%)

K = Knowledge; C = Comprehension; A = Application. Each student was interviewed on at least two simple and two complex tasks.

student (N = 18) was interviewed on at least two complex and two simple tasks. Repeated use of the selected tasks in each classroom resulted in 93 tasks utilized in 72 interviews. Originally, plans included the attempt to interview students in the same class on the same tasks. This worked fairly well with Teacher C and D. However, it was not possible to do so with Teacher F, therefore, other similar tasks were selected. Hence, Teacher C had a total of six tasks, Teacher D a total of seven tasks, and Teacher F a total of 11.

Teacher C had six tasks. Cognitively four were at the comprehension level and two at the application level. Students had to respond with letter (N = 1), word (N = 1), sentence fragment (N = 1), sentence (N = 1), and paragraphs (N = 2). In sum, 67% (N = 4) were simple tasks and 33% (N = 2) were complex.

Teacher D had seven tasks. Cognitively, five at the comprehension level and two at the application level, while student response format were simple mark (N = 1), sentence fragment (N = 2), sentence (N = 2), and paragraphs (N = 2). In sum, 71% (N = 5) of the tasks were simple and 29% (N = 2) were complex.

Teacher F had 11 tasks. Cognitively, eight at the comprehension level and three at the application level, while student response format were sentence fragment (N = 4), sentence (N = 4), and paragraphs (N = 3). In sum, 73% (N = 8) of the tasks were simple and 27% (N = 3) were complex.

In sum, of the 24 interview tasks 71% (N = 17) were simple and 29% (N = 7) were complex, and all were in language and spelling. Inter-rater agreement was well within acceptable levels.

Interview Questions

Interview questions were coded for task understanding, task expectation, and task value or motivation goal orientations across simple (N = 57) and complex (N = 36) tasks by ability levels (see Appendix D).

Task understanding. The rationale for coding task understanding questions 1, 2, and 9 by ability, task type, and gender was based on task perspective literature (Blumenfeld et al., 1987) and the self-efficacy paradigm in the expectancy part of the expectancy X value model of motivation (Weise & Cameron, 1985). The first set of literature suggested that when confronted with a classroom task, students asked themselves questions that addressed task understanding. For example, "What do I have to do?" and "How do I have to do it?" The answers to those questions influence student perception of the task purpose and task procedures. That is, the answers influence how students approach a given task and the cognitions and behaviors demonstrated while working on it (Blumenfeld et al., 1987). Thus, if students misinterpret what they are supposed to do, their motivation goal orientation may be somewhat useless. Thus, the goal of questions 1, 2, and 9 was to determine the degree to which students understood the task's objectives. Other task understanding questions (8, 10, and 11) were not used in the study and archived for future analysis. The second set of literature illustrates that the concentration on questions 1, 2, and 9 is important because it showed that the students were aware of the focus. Without this understanding, it could be

argued that the student's goal orientation would lack a base in reality (Weise & Cameron, 1985).

Generally, students were coded as having high task understanding if they were: (1) inaccurate on what the teacher wanted but did learn the requirements of the task (the teacher may not have emphasized the point); (2) accurate on what the teacher wanted but did not learn the requirements of the task (students knew what the teacher wanted even if they had problems learning the skills); and (3) accurate on what the teacher wanted and learned the requirements of the task. Students were coded as having low task understanding if they did not know what the teacher wanted learned and did not learn the requirements of the task. Coding procedures for questions will be described separately.

Question 1 asked, "What did your teacher want you to learn?" Three categories were established as they emerged from the data: (1) accurate; (2) inaccurate; and (3) not aware. These categories were coded by achievement level and task type. For example, in the accurate category, when given a complex task, Will, a high achieving boy said, "She wanted us to learn how to form a letter and . . . she's very interested in . . . how we write, our sentence structure and things like that. She just wanted us to see how creative we were I think." In the inaccurate category on a complex task designed to improve creative writing skills, Pete, a low achieving boy said, "Well, she wanted us to find out or make an invention on how to wake somebody up gently but surely." In the not aware category on a complex task,

Dave, an average achieving boy said, "Well, I don't know. I don't even know what we were supposed to figure out to do here . . . be creative?"

Question 2 asked, "Have you had this task before?" Two categories were established as they emerged from the data: (1) familiar and (2) unfamiliar. These categories were coded by achievement level and task type. For example, on a simple task, Mike, a low achiever said, "We did this in fifth grade. This is like a review too." In the unfamiliar category, John, an average achiever said, "No."

Question 9 asked, "What did you learn?" (that is, did the student learn what the teacher wanted learned). Four categories were established as they emerged from the data: (1) skill (that the teacher wanted learned); (2) process (e.g., thinking, writing, etc.); (3) don't know; and (4) nothing. These categories were coded by achievement level and task type. For example, in the skill category on a simple task, Ann, an average achiever said, "I learned how to identify fragments and run-ons." In the process category on a complex task, John, an average achiever said, "I learned how to write letters . . . and . . . express my thoughts in a better way." In the don't know category on a complex task, Lou, a high achiever said, "I don't know. I can't think of anything." In the nothing category on a simple task, John, an average achiever said, "Nothing at all."

Inter-rater agreement for task understanding was established. One boy and one girl at each achievement level ($\underline{N}$ = 6) was selected. Three of these had simple tasks and three complex tasks. The study

investigator and an outside person separately rated these students according to the categories described. Inter-rater agreement was 88%, $p = .942$.

Task expectations. The rationale for coding task expectation questions 5, 6, and 7 by ability, task type, and gender is based on the expectancy part of the expectancy X value model of motivation (Blumenfeld et al., 1987; Feather, 1962) and somewhat parallels that for task understanding. The literature suggested that when confronted with a classroom task, students ask themselves the question, "Can I do the task?" The answers to this task expectation question influence student perception of the task-specific abilities and in turn influence how students approach a given task and the cognitions and behaviors demonstrated while working on it (Blumenfeld et al., 1987; Feather, 1962). Thus, it could be argued that to determine the degree students expected to successfully complete the task is important because the student's expectations for success will influence their motivation goal orientation (Dweck & Elliot, 1983; Weiner, 1984). Coding procedures for questions will be described separately.

Question 5 asked, "How difficult was this assignment for you?" Three categories were established as they emerged from the data: (1) very easy (included not real difficult, not very difficult, not too difficult, wasn't very difficult, not that difficult, pretty easy, and not difficult); (2) average (included kind of hard, sort of difficult, in the middle, and pretty difficult); and (3) very difficult (included difficult and hard). These categories were coded by

achievement level and task type. For example, in the very easy category on a complex task, Lynn, a high achiever said, "Not that difficult at all." In the average category on a simple task, Lil, a low achiever said, "It . . . was sort of difficult because you had to see if it was like fragment or something like that." In the very difficult category on a complex task, Steve, a high achiever said, ". . . it's just hard."

Question 6 asked, "How sure are you of doing well?" Three categories were established as they emerged from the data: (1) very sure (included real well, not much doubt, I did well, I did good, I feel good about it, and sure); (2) somewhat sure (included pretty sure, 50/50, moderately, and in between); and (3) not sure (included not [too, very] really sure). These categories were coded by achievement level and task type. For example, in the very sure category on a complex task, Will, a high achiever said, "Very sure." In the somewhat sure category on a complex task, John, an average achiever said, "I'm pretty sure I did a good job on it . . . it's very hard to tell." In the not sure category on a simple task, Sheri, a low achiever said, "I'm probably sure I got three right."

Question 7 asked, "What parts were most difficult? Four categories were established as they emerged from the data: (1) no difficulty; (2) a skill; (3) a particular item; and (4) don't know. These categories were coded by achievement level and task type. For example, in the none difficult category on a simple task, Ann, an average achiever said, "None." In the skill category on a complex

task, Lynn, a high achiever said, "I found it difficult to tell her demandingly but not make her feel bad that I'm scared of the dog, to please tie it up . . . I got to give her the message without making her feel bad." In the particular item category on a simple task, Mike, a low achiever said, ". . . the [sentence] numbers eleven and seventeen." In the don't know category on a simple task, Sheri, a low achiever said, "I don't know."

Generally, students were coded as having high task expectations if they reported low to average difficulty level, sure to somewhat sure of success, and only a small part of the task as difficult. Students were coded as having low task expectations if they reported the task as very difficult, were not sure of doing well, and difficulty on most of the tasks. All three questions were coded by categories that emerged from the data.

Inter-rater agreement for task expectation was established. One boy and one girl at each achievement level (N = 6) was selected. Three of these had simple tasks and three complex tasks. The study investigator and a trained outside person separately rated these students according to the categories described. Inter-rater agreement was 88%, p = .942.

Task value. The major focus of this study was task value. The rationale for coding was based on the value part of the expectancy X value model of motivation (Eccles & Wigfield, 1985; Feather, 1962), task perspective factors (Blumenfeld et al., 1987), and the motivation goal orientation model (Meece & Holt, 1989). This literature

suggested that when confronted with a classroom task, students asked themselves, "Do I want to do the task?", a question that addressed need fulfillment and task value. The answers to those questions influence student perception of the interest in completing the task. That is, the answers influence how students approach a given task and the cognitions and behaviors demonstrated while working on it (Blumenfeld et al., 1987; Eccles & Wigfield, 1985; Feather, 1962). These cognitions and behaviors have also been called motivational goal orientations (Meece & Holt, 1989). Three such orientation categories have emerged from the literature: task-mastery, ego-social, and work-avoidant, or some combination of these (Meece & Holt, 1989). As defined earlier, students are task-mastery when they learn to master a skill and increase competence. Students are ego-social when they learn for the grade, to please others, or to avoid a negative ability evaluation. Finally, students are work-avoidant when they want to accomplish the task as quickly and easily as possible regardless of whether learning occurs or not (Meece & Holt, 1989). Value questions 3 and 4 were coded according to these motivation goal orientation categories.

Interview coding on the value questions followed both a general and a specific strategy. The general analytical strategy involved the category validation process utilizing the Constant Comparative Method (Lincoln & Guba, 1985) or topological analysis. For example, motivation goal orientation categories were derived from the literature and validated in the pilot study. In this study, comparison of different

interviews with the same student served as methods of triangulation of category designation. Thus, the general strategy reflected a descriptive framework of theoretical propositions (Yin, 1989) which reflected a set of research questions, pilot results, reviews of the literature, and new insights. These propositions shaped the data collection plan and gave priorities to the relevant analytic strategies. For example, a proposition derived in the pilot study was that as tasks become more complex, students become more task motivated. The proposition resulted in new research questions for the present study that included ability and developmental differences. Such a question would be, "Does the proposition apply to all ability levels in young adolescents?". Thus, the proposition dictated a focus on data that reflected one or a combination of motivational orientations.

The specific analytical strategy is known as pattern-matching (Yin, 1989). Pattern-matching is a process that addresses internal and external validity in case studies. In its use, one compares an empirically based pattern with a predicted one. If these coincide, internal validity is strengthened. For example, the empirically based pattern from this middle-school study was compared with the predicted one suggested by the pilot study. Thus, a theoretical orientation guided the analysis of the interviews and attempted to account for any extreme cases (outliers). The result was to create sub-categories (e.g., combinations of motivation goal orientations). Coding procedures for these questions will be described separately.

Question 3, "Do you like doing this assignment?" and 4, "Are you interested in this assignment?" were task value questions and were coded in quantitatively and qualitatively. Quantitatively, the interviews were coded by ability and task type to determine the degree in percentages of motivation goal orientation. Each question was first coded separately according to task-mastery, ego-social, work-avoidant, and/or combination motivation goal orientation categories by achievement level and task type. The orientations were then combined for a final motivation goal orientation category placement. Designations to these categories were made according to student statements and reported by percentage in Table 6. Examples of what students say that indicated each category are given below.

Qualitatively, the motivation goal orientations derived from the initial coding were recoded by cognitive level and literacy requirement to offer a picture of how students in this study valued tasks (Table 7).

Question 3 asked, "Do you like doing this assignment?" and question 4, "Are you interested in this assignment?" In the first coding, three categories were obtained and their combinations: (1) task-mastery; (2) ego-social; (3) work-avoidant; (4) task-mastery/work-avoidant; (5) task-mastery/ego-social; and (6) ego-social/work-avoidant. These were coded by gender, achievement level, and task type. For example, in the task-mastery category on a simple task, Will, a high achiever said of a complex task, "Thinking . . . it was pretty fun . . . I was pretty much into it"; whereas Rob, an average

Table 6

Motivation Goal Orientation: Quantitative Analysis

Task	Motivation Goal	Achievement Level			Total
		Low	Average	High	
Simple	TM[a]	8 (47%)	10 (53%)	0 (00%)	18 (32%)
N = 56	ES[b]	4 (24%)	1 (05%)	0 (00%)	5 (09%)
	WA[c]	5 (29%)	5 (26%)	13 (65%)	23 (41%)
	TM/WA	0 (00%)	3 (16%)	1 (05%)	4 (07%)
	TM/ES	0 (00%)	0 (00%)	2 (10%)	2 (04%)
	ES/WA	0 (00%)	0 (00%)	4 (20%)	4 (07%)
Complex	TM	7 (59%)	8 (66%)	8 (66%)	23 (64%)
N = 36	ES	1 (08%)	0 (00%)	0 (00%)	1 (03%)
	WA	3 (25%)	2 (17%)	2 (17%)	7 (19%)
	TM/WA	1 (08%)	2 (17%)	0 (00%)	3 (08%)
	TM/ES	0 (00%)	0 (00%)	2 (17%)	2 (06%)
	ES/WA	0 (00%)	0 (00%)	0 (00%)	0 (00%)
Total		29	31	32	92

[a]Task-Mastery

[b]Ego-Social

[c]Work-Avoidant

achiever said, "It's fun picking out the things and rewriting them"; and also on a complex task, Sue, a low achiever said, "Thinking . . . it's fun." In the ego-social category no high achievers were in this category, however, on a simple task, Dora, an average achiever said, "I'm not that good in language arts . . . I have trouble"; whereas Sue, a low achiever said, "Just getting it correct"; and on a complex task, Sheri, a low achiever said, "[prefers tasks] when she doesn't

Table 7

Motivation Goal Orientation: Qualitative Analysis

Student Ability	CAT TL	Simple					Complex	Totals
		Simple Mark	Letter	Word	Sentence Fragment	Sentence	Paragraphs	
HIGH								
Steve	76	WA			WA	WA	WA & TM	5
Sara	78	WA			WA	WA	WA & TM	5
Will	61		WA/ES		WA/ES	WA/TM	TM & TM	5
Lynn	90		WA		ES/WA	ES/WA	TM & TM	5
Lou	74				WA & WA	WA & WA	TM & TM	6
Kathy	61				WA & TM/ES	WA & TM/ES	TM/ES & TM/ES	6
AVERAGE								
Dave	74	WA			WA	WA	WA & TM	5
Dora	76	ES			WA	WA	TM & TM	5
Ann	NA		TM		TM	TM	TM & TM/WA	5
John	NA			TM/WA	TM/WA	TM/WA	TM/WA & WA	5
Rob	46				TM & TM	TM & TM	TM & TM	6
Bobbie	68				TM & TM	TM	TM & TM	5
LOW								
Pete	46	ES			TM		WA & TM	4
Sue	25	ES			TM	TM	TM & TM	5
Mike	24		WA		ES	ES	WA & TM/WA	5
Sheri	23				WA	WA	TM & ES	4
Lil	30				TM & TM	WA & TM	TM & WA	6
Paul	15				TM & WA	TM	TM & TM	5
								92

CAT TL = California Achievement Test, Total Language score; TM = Task-Mastery; ES = Ego-Social; WA = Work Avoidant. A combination, e.g., TM/WA indicates a mixed orientation to that task. Orientations connected with an ampersand indicates two different tasks.

grade them." In the work-avoidant category on a simple task, Steve, a high achiever said, "I just don't like the assignment much . . ."; whereas Dora, an average achiever said, "You had to write a lot"; and Mike, a low achiever said, "It's easy but I just don't like it." On complex tasks, Sara, a high achiever said, "It was hard because you couldn't use any of the main words," whereas Dave, an average achiever said, "It was hard to think of all those words . . . she said you couldn't use ice cream or cream or cold"; and Pete, a low achiever said, "I just don't like writing like in power writing."

Combination orientations were held by a student within the same task. For example, when asked if he liked a simple task, Will, a high achiever said, "[No], I like creative writing things instead of just identifying sentences. That's not fun" (work-avoidant). But when asked if he was interested he said, "The teacher said I had to get pretty interested in it so I wouldn't just goof off and make a bad grade" (ego-social). Thus, he was coded work-avoidant/ego-social on that task.

The qualitative coding of questions 3 and 4 involved recoding the motivation goal orientation by the literacy response (Table 7). For example, Steve, a high achiever, was interviewed on five tasks. One required simple mark, one sentence fragment, one sentence, and two paragraphs. He was work-avoidant on tasks requiring simple mark, sentence fragment, sentence and one of the paragraph task, and task-mastery on the other paragraph task. A similar procedure was followed for each of the other 17 students in the sample on all 93 tasks.

Inter-rater agreement on value questions was obtained by comparison of coder ratings with two other persons. One was the first author of the pilot study and the second a trained outside person. These procedures were accomplished to augment applicability (internal validity) and consistency and dependability reliability. Inter-rater methodology was identical in both cases. First, both training and final interview samples were randomly selected from high, average, and low achievers. Before copies were distributed to the other raters, the achievement level of the student was deleted to attenuate bias. Secondly, two training sessions were conducted with the first author and the outside person. When the training sessions were completed, a set of 16 randomly selected interviews were used to determine inter-rater agreement. Final inter-rater agreements were $\underline{p} = .968$ or 94% agreement with the author of the pilot and $\underline{p} = .968$ or 94% agreement with the outside person. All disagreements were settled by consensus.

Gender differences. Although not a focus of this study, the final coding centered around gender differences in motivation goal orientation under task value. This issue emerged in response to apparent differences between answers girls and boys gave during the interviews. Percentages of gender differences within and between motivation goal orientation, task type, and ability levels are shown in Table 9. "Within" ability level and motivation goal orientation by gender is read across. "Between" ability levels and motivation goal orientation by gender is read down.

CHAPTER IV

RESULTS

Overview

The major focus of this study was to identify the cognitive and affective task value patterns among students of varying ability levels on different types of tasks. The differences fell into motivation goal orientation categories. Results suggested that the majority of students at all ability levels in this study both understood the tasks and expected to complete them fairly successfully. Thus, it could be argued that the motivation goal orientations derived from the task value analysis of the students in this study were valid.

The task value analysis demonstrated that the original predictions were partially supported. Supporting data are provided later in this chapter. Here, the general results are offered.

The first prediction stated that the majority of high achievers would be task-mastery on simple and complex tasks. Results suggested that the majority were work-avoidant on simple and task-mastery on complex. The second prediction stated that the majority of average achievers would be ego-social or work-avoidant on simple tasks and task-mastery on complex. Results suggested that the majority were task-mastery on both simple and complex tasks. The third prediction stated that the majority of low achievers would be task-mastery on simple tasks and work-avoidant on complex. Results suggested no clear

majority on simple tasks and task-mastery on complex tasks. This partial support suggested that the relationship between task type, student ability and motivation goal orientation was more complex than proposed in the predictions in that the motivation goal orientation was associated more with task complexity than with the student's ability level. As the task progressed from simple to complex, the majority of students in all ability levels progressed towards a task-mastery approach. An additional analysis of gender differences suggested that when not demonstrating a task-mastery orientation, boys were work-avoidant on simple and complex tasks but girls were work-avoidant on simple and demonstrated a mixture of orientations on complex.

Interview Analysis

Interview questions were analyzed primarily for a synthesis of task understanding and task expectation, task value, and secondarily for gender differences on task value for 18 students of high, average, and low ability levels in 72 interviews across 93 tasks, 57 (61%) of which were simple and 36 (39%) of which were complex.

Task Understanding

Questions 1, 2, and 9 were analyzed to determine the degree to which students understood the task they were asked to complete. Question 1 asked, "What did your teacher want you to learn?" and was analyzed by three categories: (1) accurate; (2) inaccurate; and (3) not aware. On the 93 tasks, students were accurate on 99% (N = 92) and inaccurate on 1% (N = 1).

Question 2 asked, "Have you had this task before?" and was analyzed by two categories: (1) familiar and (2) unfamiliar. On the 93 tasks, 74% (N = 69) were familiar and 26% (N = 24) were unfamiliar.

Question 9 asked, "What did you learn?" (that is, did the student learn what the teacher wanted learned) and was analyzed by four categories: (1) skill; (2) process; (3) don't know; and (4) nothing. On the 93 tasks, 83% (N = 76) learned skills, 8% (N = 7) learned a process, 5% (N = 5) didn't know what they learned, and 5% (N = 5) learned nothing.

It will be recalled that students were coded as having high task understanding if they were: (1) inaccurate on question 1, what the teacher wanted but did learn (question 9) the requirements in the task (the teacher may not have emphasized the point); (2) accurate on what the teacher wanted but didn't learn the requirements of the task (students knew what the teacher wanted even if they had problems learning the skills); and (3) accurate on what the teacher wanted and learned the requirements in the task. Students were coded as having low task understanding if they didn't know what the teacher wanted learned and didn't learn the requirements in the task or didn't know. Task familiarity analysis (question 2) had no relationship to task understanding. Therefore, these data were not used. Analysis showed that students demonstrated high task understanding on all but one simple task (98%, N = 56) and all complex tasks (100%, N = 36). As students need to understand a task in order for task expectations and task value to be realistic (Weise & Cameron, 1985),

the one low understanding task interview was dropped from the study. Thus, 92 tasks remained; 56 (61%) were simple and 36 (39%) were complex.

Task Expectations

Questions 5, 6, and 7 were analyzed to determine the degree to which students expected to succeed on the tasks assigned.

Question 5 asked, "How difficult was this assignment for you?" and was analyzed by task type and achievement level according to categories that emerged from the data. These categories were: (1) very easy; (2) average; and (3) very difficult. On the 92 tasks, 67% (N = 62) said very easy, 30% (N = 27) said average, and 3% (N = 3) said very difficult. Students judged the task to be very easy to average in difficulty 100% (N = 57) on simple tasks and 89% (N = 32) on complex tasks.

Question 6 asked, "How sure are you of doing well?" and was analyzed by three categories: (1) very sure; (2) somewhat sure; and (3) not sure. On the 92 tasks, 34% (N = 31) were very sure, 43% (N = 40) were somewhat sure, and 23% (N = 21) were not sure. The majority of students were at least somewhat sure of doing well on 77% (N = 71) of the tasks.

Question 7 asked, "What parts were most difficult?" and was analyzed by four categories: (1) no difficulty; (2) a skill; (3) a particular item; and (4) don't know. On the 92 tasks, 26% (N = 24) had no difficulty, 57 % (N = 52) had difficulty with a specific

skill, 12% (N = 11) had difficulty with a specific item in the task, and 5% (N = 5) did not know.

It will be recalled that students were coded as having high task expectations if they reported low to average difficulty level (question 5), sure to somewhat sure of success (question 6), and only a small part of the task as difficult (question 7). Students were coded as having low task expectations if they reported the task as very difficult, were not sure of doing well, and difficulty on most of the tasks. The analysis showed that five students had low task expectation on 10 tasks. Three students had a low task expectation on one of their tasks, one high achieving girl, one average achieving boy, and one low achieving girl. One average achieving girl had low expectations on three tasks and one low achieving girl on four tasks. No gender differences were found.

Task Value

The major focus and predictions of this study were based on task value. To facilitate clarity, the predictions are restated.

1. High achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex and simple tasks.
2. Average achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex tasks. On simple tasks, the dominant profile will be ego-social and/or work-avoidant.

3. Low achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant on simple tasks. On complex tasks, the dominant profile will be work-avoidant.

Questions 3 and 4 were task value questions. The answers to these questions were analyzed in two ways: (1) motivation goal orientation by teacher rated achievement level (see Table 6) and (2) motivation goal orientations by CAT achievement level, cognitive level, and literacy requirement (see Table 7).

For the first analysis of motivation goal orientation, question 3 asked, "Do you like doing this assignment?" and question 4 asked, "Are you interested in this assignment?" Information from both questions was combined to determine motivation goal orientations. Table 6 showed the results in percentages for motivation orientation goals on simple and complex tasks for high, average, and low achievers.

Of the original 93 tasks in 72 interviews, 56 simple tasks (61%) and 36 complex tasks (39%) were retained; that is, 92 tasks in 71 interviews. Motivation goal orientation categories include the original three of task-mastery, ego-social, and work-avoidant, and three other combination categories of task-mastery/work-avoidant, task-mastery/ego-social, and ego-social/work-avoidant that emerged from the data. Each of the last three represents a mixed orientation held by a student within the same task.

The table is read down the columns. In the total column on simple tasks, the most frequently stated orientation was work-avoidant

at 41% (N = 23). On complex tasks, the most frequently stated orientation was task-mastery at 64% (N = 23).

When the orientations on the 92 tasks were arranged by simple and complex tasks according to cognitive levels and literacy responses and by teacher ability rating, a clustering of orientation responses was demonstrated (see Table 7). The rationale for this presentation was its increased sensitivity to task differences.

When read across, each line of the table describes the motivation goal orientation of each student on at least two simple and two complex tasks. For example, Steve, a high achiever was interviewed on three simple tasks, one with a simple mark literacy response, one with a sentence fragment, and one with a sentence. He was also interviewed on two complex tasks both requiring paragraphs. Steve was work-avoidant on all three simple tasks regardless of literacy requirement. However, on complex, Steve was work-avoidant on one and task-mastery on the other.

The following is a discussion of the results for high achievers, average achievers, and low achievers of the results by prediction, motivation goal orientation clustering patterns, discrepancy from the patterns, and conclusions.

High achievers. Tables 6 and 7 demonstrated that the majority of high achiever responses were not only more work-avoidant on simple tasks and more task-mastery on complex tasks, but also showed a clustering of these patterns. Thus, the first prediction was partially supported (see Table 8).

Table 8

Predicted Versus Observed Motivation Goal Orientations

Achievement Level	Simple		Complex		Support
	Predicted	Observed	Predicted	Observed	
High	TM[a]	WA[a]	TM[a]	TM[a]	Partial Support
Average	ES/WA[a]	TM[a]	TM[a]	TM[a]	Partial Support
Low	TM[a]	WA[a]	WA[a]	TM[a]	Not Supported

[a]Majority of students.

TM = Task-Mastery; ES = Ego-Social; WA = Work-Avoidant

The first prediction stated that high achievers would demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex and simple tasks. The data in Table 6, however, demonstrates that on simple tasks, the most frequently stated reason was work-avoidance (65%, N = 13). For example, Lou, a high achiever said, "I don't really think it's fun, it's pretty boring." This was followed by mixed orientations (35%, N = 7). For example, Lynn at the ego-social/work avoidant category said, "I found it very easy . . . I feel superior because most of the kids did'nt know it . . . I just already knew it." On complex tasks, the most frequently stated was task-mastery (66%, N = 8). For example, Sara said, "It was sort of challenging . . . [and] fun to design things." This was followed by work-avoidant or task-mastery/ego-social (17%, N = 2). For example, Steve in the work-avoidant category

said, "It's just hard . . . we couldn't use certain words," while Kathy who was task-mastery/ego-social said she didn't like "the writing [because she wasn't good, but] it was just interesting to see what's gonna happen."

When the motivation goal orientation responses were arranged by simple and complex tasks according to cognitive level and literacy response (see Table 7), high achievers work-avoidant responses generally began to cluster at the complex task level. Thus, when a task required knowledge or comprehension of information and a written response of simple mark, letter, word, sentence fragment, or sentence, students were usually work-avoidant. When a task required application of information and a written response of paragraphs, students were usually task-mastery.

The data in Table 7 also illustrate that high achievers may show discrepancies on similar tasks; that is, they may be task-mastery on one task and another orientation on a similar type of task. For example, one of the complex task required students to write a description of eating an ice cream cone without using the words ice cream, cream, or cold. Both Steve and Sara were work-avoidant on this task. For example, Steve said, "It's just hard . . . we couldn't use certain words." However, when asked to design a product and write an advertisement, both students demonstrated a task-mastery orientation. For example, Sara said, "It was sort of challenging . . ." Of the other high achievers, Will, Lynn, and Lou were consistent with the patterns of clustering.

Kathy, though not consistent with the patterns, was consistent within herself. For example, she was work-avoidant or task-mastery/ego-social on simple tasks and task-mastery/ego-social on complex tasks.

In sum, high achievers in this sample generally demonstrated work-avoidance clustering on simple tasks and task-mastery clustering on complex tasks. However, some complex tasks, by their nature, may engender a work-avoidant tendency.

Average achievers. Tables 6 and 7 demonstrated that the majority of average achiever responses were not only task-mastery on both simple and complex tasks, but also showed a clustering pattern. Thus, the second prediction was partially supported (see Table 8).

The second prediction stated that average achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant motivation goal orientations on complex tasks. On simple tasks, the dominant profile will be ego-social and/or work-avoidant. The data in Table 6, however, demonstrate that on simple tasks, the most frequently stated reasons for average achievers was task-mastery on 53% (N = 10) of the tasks. For example, Rob, an average achiever said, "I thought it was sort of easy and everybody knew it. I don't know why she did it." Next came task-mastery/work-avoidant on 16% (N = 3). For example, when asked if he liked the task, John, an average achiever said no, "It's the compound words . . . I'm used to writing simple words . . . [but on the same task when asked his interest level] you gotta think on that and that's what I like." The

least stated orientation was ego-social at 5% (N = 1). For example, Dora said, "I'm not good in language arts . . . I have trouble." On complex tasks, the most frequently stated was task-mastery on 66% (N = 8) of the tasks. For example, Bobbie said, "You had to use your imagination and think up a lot of things . . .". This was followed by work-avoidant at 17% (N = 2). For example, Dave said, "I just don't like power writing . . ." The last category was task-mastery/work-avoidant at 17% (N = 2). For example, "I just like writing about people but I didn't like it because you had to really think, think, think."

When the motivation goal orientation responses were arranged by simple and complex tasks according to cognitive level and literacy response (see Table 7), average achievers task-mastery responses began to cluster at the simple task, comprehension, sentence fragment level. Below this level, that is, on lower level simple tasks, responses were mixed and did not demonstrate a pattern.

The data in Table 7 also illustrate that average achievers may show discrepancies on similar tasks; that is, they may be task-mastery on one task and another orientation on a similar type of task. Dave was consistently work-avoidant, including the complex task on ice cream, until the complex task involving an advertisement and invention. For example, on the ice cream task, he said, "It was hard to think of all those words . . . she said you couldn't use ice cream or cream or cold," whereas on the advertisement task, he said he liked "drawing . . . and inventing."

Dora demonstrated the pattern found in the high schievers, that is, predominantly work-avoidant on simple tasks and task-mastery on complex tasks. Ann was fairly consistent with task-mastery on all tasks. However, she was partially work-avoidant on a task that required students to think and talk through a dog's voice. For example, she said, "I like to write but I just like writing about people." John was consistently task-mastery/work-avoidant on all his tasks, except the complex task that asked students to think and talk through a dog's voice. He said, "I liked expressing my feelings [but] it's homework and you had to do it." Finally, both Rob and Bobbie were consistently task-mastery on all tasks.

In sum, average achievers in this sample demonstrated a clustering of task-mastery orientation at tasks that required at least comprehension and the writing of a sentence fragment. Below this level there is no clear pattern. Again, some complex tasks, by their nature may engender work-avoidance either because they are too difficult or because they are homework.

Low achievers. Tables 6 and 7 demonstrated that low achiever responses were mixed on simple tasks and task-mastery on complex tasks. Thus, the third prediction was not supported (see Table 8).

The third prediction stated that low achievers will demonstrate a majority of task-mastery and less ego-social or work-avoidant on simple tasks. On complex tasks, the dominant profile will be work-avoidant. The data in Table 6, however, demonstrates that on simple tasks, although not a majority, the most frequently stated reasons for

low achievers was task-mastery on 47% (N = 8) of the tasks. For example, Paul said he liked and had interest in a task because, "You got to change sentences around . . . to make them better." This was followed by work-avoidant 29% (N = 5). For example, Paul said, "Labeling . . . it's easier and you get it done fast so you can do something else." The next was ego-social 24% (N = 4). For example, Dora said, "I'm not that good in language arts . . . I have trouble." On complex tasks, the most frequently stated was task-mastery on 59% (N = 7) of the tasks. For example, Sue said, "Thinking . . . it's fun." This was followed by work-avoidant on 25% (N = 3). For example, Mike said it was, "Hard to come up with something about a dog." The least most frequently stated categories were ego-social or task-mastery/work-avoidant, 8% (N = 1) each. For an example of ego-social, Sheri said she prefers tasks, "When she [the teacher] doesn't grade them" and for an example of task-mastery/work-avoidant, Mike said he liked, "Making things up [but] it was hard to come up with something about dogs . . .".

When the motivation goal orientation responses were arranged by simple and complex tasks according to cognitive level and literacy response (see Table 7), low achievers were similar to average achievers in that task-mastery responses began to cluster at the simple task, comprehension, sentence fragment level. Below this level, that is, on lower level simple tasks, responses were mixed and did not demonstrate a pattern.

The data in Table 7 also illustrate that low achievers may also show discrepancies on similar tasks; that is, they may be task-mastery on one task and another orientation on a similar type of task. For example, Pete began to show a task-mastery orientation until given the ice cream task. He said, "I just don't like . . . having to describe eating an ice cream cone without using certain words." Sue was consistent with task-mastery clustering pattern at sentence fragment. Mike was consistently ego-social or work-avoidant on all tasks. However, one complex task was the ice cream task. On the other, he demonstrated a task-mastery/work-avoidant orientation as he liked, "Making things up [but] . . . it was hard to come up with something about dogs . . ." Sheri was work-avoidant on simple tasks but began to show task-mastery orientation at the complex level. However, on the task that asked students to talk through a dog's voice, she said she prefers tasks, "When she [teacher] doesn't grade them." Lil demonstrated the task-mastery pattern except for two tasks. First, she was work-avoidant on a simple task that required the rewriting a sentence correctly. For example, she said she didn't like, "Correcting the run-ons and fragments." Second, she was work-avoidant on a complex task that required her to illustrate the four types of sentences in a paragraph. For example, she said she didn't like, ". . . trying to think of questions." Finally, Paul fit the task-mastery pattern except for one simple task requiring a sentence fragment response. For example, he said, "Labeling . . . it's easier and you get it done fast so you can do something else."

In sum, low achievers in this sample demonstrated the same clustering patterns as average achievers, that is, a task-mastery orientation at tasks that required at least comprehension and the writing of a sentence fragment. Below this level there is no clear pattern. Again, some complex tasks, by their nature may engender work-avoidance.

Gender Differences

Although not a focus of this study, the final analysis centered around gender differences. This issue emerged in response to noticeable differences between answers some girls and boys gave during the interviews. A comparison of motivation goal orientation, task type, and ability level by gender differences is shown in Table 9.

Boys were task-mastery oriented on 39% (N = 18) of the tasks (seven simple and 11 complex). Girls were task-mastery on 50% (N = 23) of the tasks (11 simple and 12 complex).

When not task-mastery, high and average achieving boys were more work-avoidant on simple and complex tasks, while low achieving boys were ego-social on simple and work-avoidant on complex tasks. For example, on simple tasks (N = 56) high achieving boys were work-avoidant on 35% (N = 7) of the tasks; average achieving boys were work-avoidant, 16% (N = 3), and low achieving boys were ego-social, 18% (N = 3). On complex tasks (N = 36), high achieving boys were work-avoidant on 8% (N = 1) of the tasks; average achieving boys were work-avoidant, 17% (N = 2), and low achieving boys were work-avoidant, 17% (N = 2).

Table 9

Motivation Orientation: Gender Differences

Ability	Interviews	Motivation Orientation	Simple		Complex	
			Male	Female	Male	Female
High	N = 32	TM	0 (00%)	0 (00%)	5 (42%)	3 (25%)
	20 S	ES	0 (00%)	0 (00%)	0 (00%)	0 (00%)
	12 C	WA	7 (35%)	6 (30%)	1 (08%)	1 (08%)
		TM/WA	2 (10%)	0 (00%)	0 (00%)	0 (00%)
		TM/ES	0 (00%)	2 (10%)	0 (00%)	2 (17%)
		ES/WA	1 (05%)	2 (10%)	0 (00%)	0 (00%)
Average	N = 31	TM	4 (21%)	6 (31%)	3 (25%)	5 (42%)
	19 S	ES	0 (00%)	1 (05%)	0 (00%)	0 (00%)
	12 C	WA	3 (16%)	2 (11%)	2 (17%)	0 (00%)
		TM/WA	3 (16%)	0 (00%)	1 (08%)	1 (08%)
		TM/ES	0 (00%)	0 (00%)	0 (00%)	0 (00%)
		ES/WA	0 (00%)	0 (00%)	0 (00%)	0 (00%)
Low	N = 30	TM	3 (18%)	5 (29%)	3 (25%)	4 (34%)
	17 S	ES	3 (18%)	1 (06%)	0 (00%)	1 (08%)
	12C	WA	2 (11%)	3 (18%)	2 (17%)	1 (08%)
		TM/WA	0 (00%)	0 (00%)	1 (08%)	0 (00%)
		TM/ES	0 (00%)	0 (00%)	0 (00%)	0 (00%)
		ES/WA	0 (00%)	0 (00%)	0 (00%)	0 (00%)

TM = Task-Mastery; ES = Ego-Social; WA = Work-Avoidant
Number in parentheses equal cases in that category.
S = Simple; C = Complex

Girls show a slightly different pattern. At all ability levels they were work-avoidant on simple tasks. For example, high achievers were work-avoidant, 30% (N = 6), average achievers, 11% (N = 2), and low achievers, 18% (N = 3). On complex tasks, however, they were mixed. For example, high achievers were task-mastery/ego-social, 17% (N = 2), average achievers were task-mastery/work-avoidant, 8% (N = 1),

and low achievers were ego-social and work-avoidant, 8% (N = 1) each. The data suggests a pattern for low achieving boys on simple tasks and for girls at all ability levels on complex tasks. As some of the Ns were less than five, a chi-square test of significance would have resulted in data lower in value than in actuality (Glass & Hopkins, 1984). Hence, future research with larger samples is recommended.

Chapter Summary

The predictions were partially supported. High achievers generally were work-avoidant on simple tasks and task-mastery on complex tasks. Average achievers generally were task-mastery on simple and complex tasks, and low achievers were either ego-social or work-avoidant on simple tasks and task-mastery on complex ones. Thus, the relationship between ability level, task type, and motivation goal orientation was relatively more complex than proposed. Motivation goal orientation may be more associated with task complexity than student ability level. Two patterns suggested this relationship: (1) Based on cognitive level and literacy response, as the task progressed from simple to complex, the majority of students at all ability levels progressed towards task-mastery. High achievers clustered at task-mastery on complex tasks using paragraphs and average and low achievers clustered at task-mastery once the comprehension cognitive level and literacy response of sentence fragment were reached. Thus, orientation becomes more mastery oriented as literacy response increased, but this orientation occurred at one

point for high achievers and at a different point for average and low achievers; and (2) despite the task-mastery pattern on complex tasks, if a task involves parameters that limit creativity, students of all ability levels may become work-avoidant.

CHAPTER V

DISCUSSION AND IMPLICATIONS

Overview

The major focus of the study was task value. Task value, which results from the students' answers to task understanding and task expectation questions, engenders the students' needs, interpretations, and attitudes that are links to task behavior. Task behavior is defined within three main categories, task-mastery, ego-social, and work-avoidant motivation goal orientations and their combinations. The predictions were based on literature which suggests that these orientations are linked to ability level. The results of this study, which assumed an intraindividual approach however, suggested that the relationship between task types, ability level, and motivation goal orientations is more complex than proposed. The type of task may have been more influential on motivation goal orientation than was the ability level of the student. As the task progressed from simple to complex, the majority of students in all ability levels progressed towards a task-mastery approach. Thus, students were sensitive to the differences between simple and complex tasks. Additionally, tasks that are very simple or of extreme difficulty may result in a work-avoidant orientation in students of all ability levels.

These patterns were supported by a clustering of motivation goal orientations. This clustering suggested that students developed

a task-mastery orientation when challenged by a task. However, task challenge begins earlier for some students than for others. Moreover, gender differences in orientation were noted when students were unable to meet the challenge of a complex task.

This chapter is divided into discussion and implication sections. The discussion section will explore the patterns found in each ability level and then the similarities and differences on task value and motivation goal orientations between the findings in the study and the literature. The implications section will explore theoretical implications, classroom practice implications, suggested future research, the limitations of the study, and rival hypotheses.

Discussion

High Achievers

Generalities. The majority of high achievers were work-avoidant on simple tasks and task-mastery on complex tasks. Moreover, a clustering of these responses was noted. These results lead to a partial acceptance of the first prediction.

Prediction. High achieving students were expected to perform at the task-mastery orientation on both simple and complex tasks. This expectation was based on the assumption that high achievers engaged in learning to increase mastery, skills, and competence (Covington & Beery, 1976; Nicholls, 1984). They were expected to be success-oriented (Covington & Beery, 1976) and task-oriented (Nicholls, 1979a) and would demonstrate an approach profile on any type of classroom task.

Contrary to this expectation, the majority of high achievers in this study, although showing a pattern of task-mastery orientation on complex tasks, showed a pattern of work-avoidant tendency on simple tasks. Furthermore, these patterns clustered when motivation goal orientation were viewed by cognitive level and response format.

Clustering. High achievers appear to be unchallenged by tasks that require knowledge and comprehension of knowledge, and when asked to write in simple marks, coping, letters, words, sentence fraqments, a sentence, or sentences. Challenge appears to begin when tasks require them to apply knowledge and to write in paragraphs. It is at this point that they demonstrate a task-mastery orientation.

The discrepant events to this pattern involved tasks that limited the parameters on creativity, e.g., describing the eating of an ice cream cone without using words such as ice cream, cream, or cold. Such tasks may cause even high achievers to become work-avoidant.

Conclusions. The highest level of task complexity measured in this study may be the minimum difficulty level that challenges these students and promotes a task-mastery orientation. However, if the task excessively limits creativity, it may be viewed by students as too easy (simple) or too challenging (complex) and a work-avoidant orientation may be adopted.

Average Achievers

Generalities. The majority of average achievers were task-mastery on both simple and complex tasks. Moreover, a clustering of

responses was noted. These results lead to a partial acceptance of the second prediction.

Prediction. Average achieving students were expected to perform at ego-social or work-avoidant orientations on simple tasks and task-mastery on complex tasks. This expectation was based on the assumption that average students, although having limited opportunity in the classroom to engage in a complex task, were sensitive to them when they met them. That is, complex tasks promoted a task-mastery orientation (Miller & Hooper, 1989b; Miller et al., 1990). Aside from these studies, the literature is sparse on motivation goal orientations and average achieving students.

Contrary to this expectation, the majority of average achievers in this study, although showing a pattern of task-mastery on complex tasks, showed a pattern of task-mastery on simple tasks as well. However, the task-mastery pattern clustered when motivation goal orientation were viewed by cognitive level and response format.

Clustering. Average achievers appear to begin to be challenged and demonstrate a more concentrated task-mastery approach when tasks require them to comprehend knowledge and write in sentence fragments. Moreover, this pattern continues through the requirement to apply knowledge and write paragraphs. The discrepant events to this pattern involved the complex tasks involving eating an ice cream cone and requiring students to talk through a dog's voice.

Conclusions. Despite task-mastery on simple tasks, it may be that the higher level simple tasks are best suited to challenging

average achievers. That is, the comprehension/sentence fragment level of complexity may be the minimum difficulty level that promotes a task-mastery orientation for these students. However, if the task excessively limits creativity, it may be viewed by students as too easy (simple) or too challenging (complex) and a work-avoidant orientation may be adopted.

Low Achievers

Generalities. The majority of low achievers were mixed on simple tasks (e.g., task-mastery or ego-social or work-avoidant) and task-mastery on complex tasks. Moreover, a clustering of these responses was noted. These results lead to a rejection of the third prediction.

Prediction. Low achieving students were expected to perform at the task-mastery level on simple tasks and at ego-social or work-avoidant levels on complex tasks. This expectation was based on the assumption that low ability students are threatened by tasks that may reveal their low ability and, therefore, prefer easy tasks. They seek to avoid negative judgments and are failure-avoidant (Covington & Beery, 1976) and ego-oriented (Nicholls, 1979a). Therefore, they expend as little effort as possible on tasks that may result in a judgment of low ability (Covington & Omelich, 1979). Thus, low achievers would be expected to demonstrate a mastery profile to simple tasks and an avoidant one to complex tasks.

Contrary to this expectation, the majority of low achievers in this study showed a mixed pattern of orientations on simple tasks. On complex tasks, however, the majority of low achievers were task-mastery. Additionally, the task-mastery pattern clustered when motivation goal orientation was viewed by cognitive level and response format.

Clustering. As with the average achievers, low achievers appear to begin to be challenged and to demonstrate a more concentrated task-mastery approach when tasks require them to comprehend knowledge and write in sentence fragments. Moreover, this pattern continues through the requirement to apply knowledge and write paragraphs. The discrepant events to this pattern again involved the complex tasks involving eating an ice cream cone or requiring students to talk through a dog's voice.

Conclusions. It may be that minimum difficulty level that challenges these students and promotes a task-mastery orientation are tasks that require comprehension of knowledge and the writing in sentence fragments; a pattern that continues through the requirement to apply knowledge and write paragraphs. However, if the task excessively limits creativity, it may be viewed by students as too easy (simple) or too challenging (complex) and a work-avoidant orientation may be adopted.

Summary

This study suggested that high achievers were work-avoidant on simple tasks and task-mastery on complex tasks. Average and low achievers were task-mastery and a mixture of orientations, respectively, on simple tasks and task-mastery on complex tasks. These patterns were demonstrated in an analysis of orientation clustering. An analysis of discrepancies to these patterns suggested that students of any ability level may become work-avoidant when presented with tasks, simple or complex, that limits their creativity. Thus, the highest level of task complexity measured in this study may be the minimum difficulty level that challenges high achieving students and promotes a task-mastery orientation. For average and low achievers, the higher level simple tasks may be the minimum difficulty level of task complexity that challenges average and low achieving students and promotes a task-mastery orientation.

Suggested Future Research

Four future research projects are suggested by this study. They concern: (1) comparing these results with other current task-perspective/student motivation studies and replicating this study; (2) future research on the gender differences; and (3) research on teacher use of complex tasks with low ability students in a classroom; and (4) assessing student motivation when all classroom tasks are complex.

First, this study has suggested some interesting results at the middle-school level. However, comparison with the two other ongoing studies in grades three and four and with low achievers by the first author of the pilot study may begin to show a pattern of task influence on student motivation. To complete such a picture, research is needed in which these studies are replicated in grades K-3 and 7-8. Cross validation of all the studies mentioned here may offer a more complete picture of task type influence on motivation goal orientation as students progress in language arts through elementary and middle school.

Second, this study suggested gender differences in motivation by task type and ability level. Studies that concentrate on and replicate these gender differences in grades K-8 may suggest future guidance for classroom teachers on their motivational expectations of boys and girls.

Third, the data suggested that low achieving students can adopt a task-mastery orientation and learn through the use of complex tasks. Research that trains teachers to use complex tasks with low achievers and measures student perceptions of task expectations and value, and student achievement is needed to validate this teaching methodology, as well as teachers' task expectations of low achievers.

Finally, the data suggested that students at all ability levels become task-mastery when tasks are complex. However, it has been shown that students have a limited opportunity to complete complex tasks. Such tasks may constitute a novelty and thus promote task

mastery profile of behaviors. Research that longitudinally assesses student reaction to a complex task curriculum is needed to assess the motivational results of complex tasks.

Limitations of the Study

The study is meant to provide a preliminary description of the intraindividual interpretations and judgments that appear to influence motivation goal orientation and, consequently, task behavior. In an effort to compare the pilot study results over a wider ability range, and utilize face-to-face interviews as a measurement tool, it was necessary to limit the sample size.

Additionally, although the sample was carefully chosen, it does represent a population of primarily white (81%), middle-class students in the state of North Carolina. State-wide demographics show a 75% white population. Thus, a detailed demographic description of the school population and sample has been included to support transferability of results.

Second, as this study was completed by one person with limited sample size (N = 18) and sampling of the motivation goal orientation variable (N = 93), replication with larger sample and orientation numbers at each ability level with equal numbers of boys and girls, especially at middle schools in other states, would further strengthen the results. Such a goal might better be accomplished with a team of trained investigators rather than one person.

Third, variations in classroom grading procedures or different percents in types of tasks may suppress task-mastery orientations.

Fourth, Meece (in press) basically argued that if teachers do not present tasks in certain ways, motivation can be negatively affected despite good tasks. This study did not look at overall teacher presentation behaviors. Only the task context was considered.

Lastly, as in all studies based on interviewing, some degree of interviewer bias may have existed. Efforts were made to limit the bias by standardizing the questions and asking them in a standardized manner. However, the method of interviewing and interpreting the intentions of those interviewed may be biased. Although every effort was made to clarify student answers and gain an understanding of the meanings involved, it is not possible to exclude examiner bias.

Rival Hypotheses

Two rival hypotheses may be considered. The first is that students are more task-mastery on tasks when they do not have frequent exposure to them; that is, when the tasks are novel (Stipek, 1988). Such is the case for the complex tasks in this study. The second is that fourth through junior high students differentiate in intrinsic motivation (task-mastery) by subject (Gottfried, 1990). As this study concentrated on language arts, tasks in other subjects, e.g., arithmetic, may result in different patterns of motivation goal orientation. This section will address these rival arguments.

As to the first rival hypothesis, this study demonstrated that the majority of students at all ability levels were more task=mastery on complex tasks. However, students had the opportunity to complete complex tasks only 16% of the time. It could be argued that if students are not given complex tasks often enough, they become a novelty. Stipek (1988) presumes that if a task is a surprise, incongruent, complex, or discrepant from students expectations, pleasure and interest are aroused. Thus, novel or challenging tasks arouse intrinsic motivational tendencies and students are more prone to prefer them. Stipek's argument implies that when a task is repetitive, students may be more prone to react in ego-social or work-avoidant orientations.

Although intuitively sound, this study did not support this rival hypothesis. Whether students had previously experienced the type of task before had no relationship with task understanding. Similarly, students were not more prone to be task-mastery on new tasks whether simple or complex. For example, of the 23 times students who were task-mastery on complex tasks, 52% (N = 12) had the task before, and to 48% (N = 11) it was a novelty. The same was true for the 18 times students were task-mastery on simple tasks. Sixty-one percent (N = 11) had the task before, and to 39% (N = 7) it was a novelty.

Repetition of this pattern was found for students who were ego-social or work-avoidant on simple and complex tasks, except for work-avoidance on complex tasks. The one student who was ego-social

on a complex task had previous experience with the task type, 100% (N = 1). Of the five times students were ego-social on simple tasks, 100% (N = 5) had it before. Of the seven times students were work-avoidant on complex tasks, 57% (N = 4) were work-avoidant when the task was novel and work-avoidant, 43% (N = 3), when the task was not. However, of the 22 times students were work-avoidant on simple tasks, 91% (N = 20) had it before, and to 9% (N = 2) it was a novelty.

The reversal of pattern on work-avoidant for complex tasks cannot be explained by this study. The small number of cases (N = 7) was ruled out as ego-social samples were low (N = 1 complex and N = 5 simple) and still demonstrated the pattern. In this school, however, students have had more exposure to complex writing tasks since the introduction of the power writing concept in 1988. Power writing is a state mandated activity designed to improve student writing skills and is measured by essay on the state mandated test.

As to the second rival hypothesis, Gottfried (1990) found that students from grades four through junior high differentiated in intrinsic motivation (task-mastery) by subject. As this study and the pilot concentrated on language arts (reading, language, spelling, writing) results may be different with other subjects, e.g., arithmetic. The only other subject being considered in the literature is science (Meece, Blumenfeld, & Puro, 1989; Meece & Holt, 1989). These studies supported the positive effects of task-mastery (intrinsic motivation) on task behavior.

Implications

Overview

This section discussed and analyzed the similarities and differences between the results of the study and the literature. The organization followed the outline of Chapter II, Literature Review. The study's findings suggested that: (1) the motivational changes across school grades noted in the literature may be due in part to the type of tasks students are expected to complete; (2) task type may be a mediating factor between intrinsic motivation/self-worth and motivation goal orientation; and (3) there are minimum difficulty levels of task complexity that challenge high, average, and low achievers. The first two will be discussed in this section; the latter in the classroom practice implications section.

Methodological and Theoretical Implications

As explored in Chapter II, research has demonstrated that changes in student motivation occur across school years. As students proceed through elementary school grades, their self-concept, expectations for success, attitude towards school, and value for learning (motivation goal orientation) become more and more negative. This study suggested that such changes may be influenced by the opportunities students are given to complete different types of tasks. Both the classrooms involved in the pilot (grades 3 and 4) and dissertation studies (grade 6) utilized primarily low-level simple tasks. Despite the lower opportunity for students to encounter high-level

simple and complex tasks (8% in the pilot and 16% in the dissertation) students were sensitive to task differences when they found them. For example, in the dissertation study, at all ability levels, motivation to learn was low (mostly work-avoidant) on tasks requiring less than comprehension cognitive processes and the literacy level of sentence fragment for high, average, and low ability students. Conversely, motivation to learn steadily increased (became more task-mastery) on tasks requiring higher levels of cognition and literacy response for the same students. Similar results were found with average achievers in the pilot study.

One explanation for the differences between the decline found in the literature and the motivation goal orientation patterns found in this study may be differences in methodology. Researchers who noted a decline in motivation to learn across grade levels utilized global measures and/or asked about domains. For example, Harter (1980) used general measures of intrinsic and extrinsic orientation in classrooms in grades 3-9; Nicholls (1978) utilized measures of self-concept with grades K-8. Researchers who noted that the decline was primarily in the achievement domain used similar measurement tools. For example, Epstein and McPartland (1976) and Prawat, Grissom, and Parish (1979) measured domain changes (e.g., skill level, self-esteem, achievement) in grades 6-12 utilizing a self-report measure called Quality of School Life Scale. The scale measures attitudes toward school in general, commitment to school work, and attitudes toward teachers. Prawat et al. (1979), in grades 3-12, utilized

measures of locus of control, achievement motivation, and global self-esteem. All such measures were analyzed as to differences between students; that is, analysis was interindividual.

The dissertation study, however, utilized a task perspective and asked about tasks and motivation goal orientations instead of such global measures as domains and general self-concept. Furthermore, it not only asked about tasks but utilized more than one type of task. All such measures were analyzed as to differences within the same student on the different types of tasks. That is, analysis was intra-individual. The scope, the unit of analysis, and the configuration of the analysis differed.

It is possible, however, to find the motivational changes across school grades utilizing task perspective methodology. The dissertation study demonstrated that if students are given opportunities to practice only low-level simple tasks or complex tasks that confine creativity, they will become ego-social or work-avoidant; that is, extrinsically motivated or motivated to complete tasks quickly whether or not learning occurs. In other words, these types of tasks are salient in terms of their negative affects. Therefore, it could be argued that although students begin school with a natural desire towards mastery, continual use of a task structure as defined above may, in part, influence student decline in such areas as self-concept, expectations for success, attitude towards school, and value for learning (motivation goal orientation).

Additionally, Covington (1984) argued for causal links between ability and self-worth, effort and self-worth, and the links between ability and effort on performance which links to self-worth. In other words, success in valued activities is the main source of self-worth. Meece, Blumenfeld, and Hoyle (1988) defined self-confidence (self-worth) as part of intrinsic motivation. They found causal evidence that intrinsic motivation was mediated by motivation goal orientation and resulted in a level of cognitive involvement.

As this study suggested that motivation goal orientation can change within the same student when given different types of tasks, then it can be claimed that task types mediate between intrinsic motivation/self-worth and motivation goal orientation (see Figure 3). For example, successful tasks completion is linked to self-worth (Covington, 1984), task type results in motivation goal orientation, and motivation goal orientation mediates between intrinsic motivation/self-worth and the level of cognitive engagement of students. The type of task may be linked to the type of motivation goal orientation and the level of cognitive engagement and may be a way to promote task-mastery orientations in students of all ability levels.

Given the methodology used in the dissertation study, a broader perspective on what is occurring may have been effected. This methodology argues for an intraindividual approach versus an inter-individual one and reveals the interaction between tasks and ability levels.

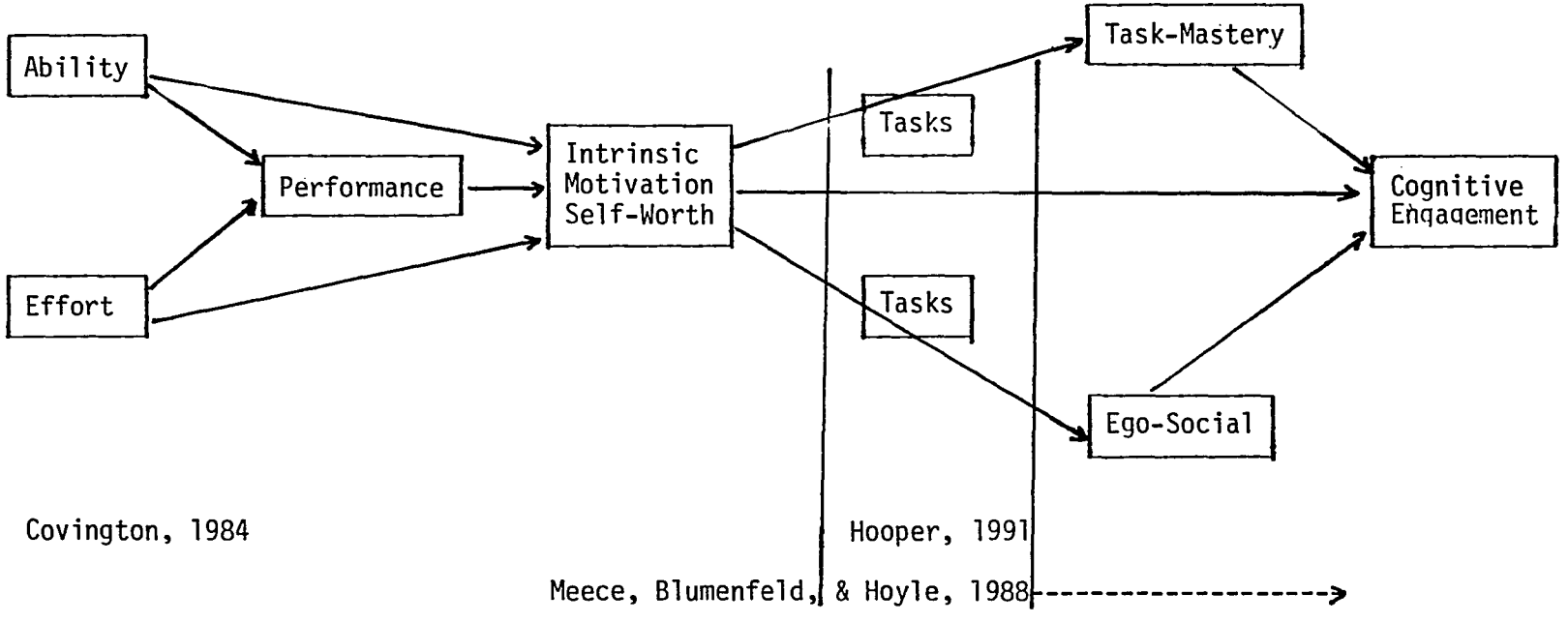

Figure 3. Hypothesized Influence of Tasks to Motivation Goal Orientation.

Gender differences. Although not a major focus on this dissertation, gender differences were reviewed. The literature (Veroff, 1969) has generally described boys as being more mastery oriented (task-mastery) than girls. When not mastery oriented, boys are more impulsive and defensively choose very hard tasks (ego-social/work-avoidant). Girls are less mastery oriented and more social comparison oriented than boys. Moreover, girls who are not mastery oriented are over cautious and choose easier tasks (work-avoidant). Thus, one could argue that when not task-mastery, both boys and girls are ego-social/work-avoidant but for different reasons.

One explanation offered by Veroff (1969) is that society, including parents, expect boys to be mastery oriented and thus prepare them early for such a role. When they are not able to live up to the expectations, they defensively choose tasks that are too difficult to complete, thereby demonstrating ego-social or work-avoidant orientations. Girls, however, are raised to believe that social comparison is more important. Because they fear both success and failure, they choose easier tasks in order to insure social approval. They become ego-social work-avoidant. Covington and Beery (1976) discussed these motivational approaches.

When Meece and Holt (1989) analyzed their data, they found contradictory results. In their study, 63% of the boys were work-avoidant and 59% of the girls were task-mastery. They did not directly address what orientations were held by boys and girls who were not task-mastery.

The dissertation data on students who were task-mastery partially supported Meece and Holt (1989). This was evident whether or not tasks were analyzed together or separately. For example, when the 92 tasks were combined, both girls and boys most frequently stated a task-mastery orientation. Although this study showed a higher percent of boys were task-mastery, more girls than boys fell into the category. That is, 50% (N = 23) of the girls and 39% (N = 18) of the boys were task-mastery. The next most frequently stated orientation was work-avoidant with girls 28% (N = 13) and boys 37% (N = 17). When simple tasks were considered separately, girls were task-mastery, 39% (N = 11) for girls and 25% (N = 7) for boys. When complex tasks were considered separately, girls were task-mastery, 67% (N = 12) for girls and 61% (N = 11) for boys.

One reason for the increase in task-mastery oriented boys may be due to the subject matter of the separate studies. Meece and Holt (1989) conducted their work with science tasks; the dissertation used language arts tasks. Many science tasks utilize a complex set of procedural steps to arrive at simple conclusions in laboratory experiments. Such tasks have been shown to decrease students' focus and cognitive involvement on content and increase it on procedures (Meece & Holt, 1989). Tasks of this type are not found in language arts. Science tasks may differ enough from language arts tasks to make comparison of motivation goal orientation response tenuous.

The dissertation data on orientations of students who were not task-mastery supported Veroff (1969), at least on complex tasks.

When not task-mastery, the boys are most frequently stated a work-avoidant orientation on simple and complex. For example, 43% (N = 12) on simple and 28% (N = 5) on complex tasks. Girls most frequently stated a work-avoidant orientation (39%, N = 11) on simple tasks but were mixed on complex (11%, N = 2 work-avoidant and 11%, N = 2 on task-mastery/ego-social combination). These variations suggested that the socialization differences described by Veroff (1969) may result in different motivation goal orientations on complex tasks for boys and girls when they are not mastery oriented. However, the limitation with the data on gender is that differences are small. Future research is needed to clarify this point.

Summary

This study extended the literature that supports a decline in motivation as students progress from early elementary through middle school. It was claimed that differences between this literature and the study results were based on methodological procedures. The literature primarily measured global issues and addressed domain concerns on an interindividual basis. The dissertation, however, utilized task and motivation goal orientation measures, including categorizing different types of tasks on an intraindividual basis.

Gender differences in responses to simple and complex tasks may be based on variations between science and language arts tasks. Similarities may indicate that boys and girls are still socialized differently. More research is needed on these points.

Classroom Practice Implications

Overview. The dissertation suggested that simple and complex tasks may result in different motivation goal orientations. The literature suggested that classroom tasks are both the basic units of teacher instructional planning (Doyle, 1980) and the result of teacher planning (Shavelson & Borko, 1981). Yet planning is not systematic (Shavelson & Borko, 1981), is content focused (Shavelson & Borko, 1981), relies heavily on simple tasks (Carter & Doyle, 1989), and become routinized (Yinger, 1979). Therefore, systematic, process focused tasks that promote a mastery orientation may be a viable model for teacher planning.

Such a model engenders implications involving the following questions: At what level do students become intrinsically motivated? How do teachers help students progress from one level to the next? The classroom practice implication section is organized around the two questions with a preface discussing possible reasons teachers appear to depend heavily on simple tasks.

Preface. Teachers appear to depend heavily on simple tasks (Blumenfeld et al., 1987; Carter & Doyle, 1989; Mergendollar, Marchman, Mitman, & Packer, 1988; Peterson, 1987). There are not only several reasons for this dependency but also several negative consequences.

As to the reasons, the first concerns the dominance of the behavioral perspective in education during the last 20 years. The model for planning in this perspective involves breaking down complex skills into a system of simple, discrete, sequential tasks that build to the larger skill. Students work primarily alone, produce products that are simple task oriented, and are usually tested by standardized tests to measure their achievement (Joyce & Weil, 1972). Second, teachers rely heavily upon the subject matter (Shavelson & Borko, 1981) in their textbooks for the tasks they select from kindergarten through grade 12 (Barr, 1975; Clark, 1983; Goodman et al., 1987). There is evidence that textbook tasks, at least in language arts, are primarily at low cognitive and literacy levels (Goodman, Freeman, Murphy, & Shannon, 1987; Miller & Hooper, 1989a). Third, teachers utilize simple tasks to establish and maintain social order (classroom management) while representing and enacting the curriculum (Carter & Doyle, 1989). When cognitively and procedurally simple tasks were implemented in the classroom: (1) teacher explanations were clear and precise, thus minimizing student misunderstanding; (2) students began work quickly and worked efficiently; (3) there was a high congruence between the stated work and the finished product; and (4) teacher evaluation procedures were consistent and rigorously applied. In contrast, when teachers utilized tasks that were cognitively and procedurally complex: (1) students were required to work with tasks that were novel and/or problem-solving, thus required them to make decisions; (2) teacher explanations were longer, thus student

misunderstanding or failure to grasp key points more frequent; (3) the work usually did not proceed quickly and efficiently and resulted in teachers becoming more and more specific, therby reducing student decision-making; (4) the finished product was less congruent with the stated work; and (5) teacher evaluation procedures were not as consistent and rigorously applied (Carter & Doyle, 1989). Fourth, teachers use simple tasks to meet the demands to complete the required textbooks within the time allowed and maintain high student standardized test scores (Miller & Hooper, 1989b; Miller et al., 1990; Strahan, 1990).

As to the negative consequences, first the simple task environment does not appear to provide what is necessary to maintain positive affect and motivation toward tasks. For example, "boring and repetitive tasks that hold little value for students' lives outside of school are likely to affect motivation . . ." (Meece, in press, p. 18). Neither elementary nor secondary students are achieving on academic tasks that require higher level thinking skills (Peterson, 1987). Therefore, as academic tasks become routinized and removed from children's lives, the applicability and meaning they do possess are obscured (Blumenfeld et al., 1987). Second, for teachers (and especially expert teachers), the predominant use of simple tasks may create frustration and a dilemma. Expert teachers tend to be student-centered (Strahan, 1987, 1989). The dilemma centers on how teachers can promote a student-centered, mastery atmosphere, while still meeting demands described above. The third negative consequence centers

on the premise that teachers do not follow any systematic model of instructional decision-making. It could be argued that present models do not fit classroom demands or experiences. The over use of simple tasks in the classroom does not meet the developmental demands of the students from early through middle grades. This process partially results in the motivational experiences teachers find frustrating.

Fourth, it could be said that the systematic motivational change found in the literature that results in middle-school extrinsic profiles may be the effect of simple task based curricula planning. For example, if the task form is primarily simple, students may become limited thinkers and workers (Blumenfeld et al., 1987). Such a form creates students who lose interest in the task and thus do the least possible to complete it. It deprives students of the opportunity to practice the tasks that train the higher-order thinking skills needed in more complex task forms (Blumenfeld et al., 1987). A diet of simple tasks from early to middle grades may, then, result in the apparent loss of motivation found in middle-school students because simple tasks fail to meet the developing competency needs of middle-school students. The dissertation study appeared to support this argument.

At What Level do Students Become Intrinsically Motivated?

An implication of this study is that middle-school students become intrinsically motivated, that is, mastery oriented, when tasks

reach a level that challenges thinking and writing skills. This implication supported literature which claimed that tasks which meet the needs of middle-school students' emerging sense of competence (Lee, 1979) and are challenging (Stipek, 1984a) result in intrinsically motivated students. Intrinsically motivated students are defined as enjoying school, having a mastery orientation, curious, persistent, and preferring tasks of challenging difficulty and novelty (Gottfried, 1990). Challenging tasks are those that stretch students' knowledge and skills (Vygotsky, 1962).

In this dissertation, the task level that promoted intrinsic or mastery motivation in thinking and writing skills began at different points for high achievers versus average and low achievers. For example, high achievers first demonstrated a challenge response on complex tasks that required application of knowledge in the form of written paragraphs, whereas average and low achieving students first demonstrated a challenge response on high-level simple tasks that required comprehension of knowledge in the form of written sentence fragments. However, average and low achieving students were further challenged by the complex tasks. Moreover, when either simple or complex tasks highly restricted creativity, high, average, and low achievers generally became primarily work-avoidant.

These results suggested that teachers who want to promote intrinsic mastery cognitions and behavior profiles in students could plan and present the same challenging complex language arts task to high, average, and low achievers in the classroom. It would be

expected that the product of high, average, and low achievers would not necessarily be of the same quality. However, the skills necessary to raise the quality could be incorporated in future complex assignments.

How do Teachers Help Students Progress From One From One Level to the Next?

This dissertation suggested that teachers may help students progress from one level to the next by looking at the task level children require for intrinsic motivation as well as the degree of overlap between children. It has been seen that the type of tasks that increases intrinsic motivation, however, is the least frequently occurring one in classroom environments. The dissertation results suggested that higher level tasks need to be given to all students. Such tasks would fulfill Vygotsky's (1962) zones of proximal development and help students progress from one level to the next. As mentioned in Meece (in press), this perspective is being described through a "scaffolding" metaphor (Corno & Rohrkemper, 1985). Children are presented tasks that are slightly above their capabilities to complete but that stretch their thinking and writing skills. Adults and more knowledgeable peers support students' mastery of the task. Promoting mastery may also involve the manner of presentation and support. Although not a focus of this study, some discussion of effective mastery producing teacher behaviors is warranted.

Teacher behaviors and student task behaviors may be interactive (Covington & Beery, 1976; Gottfried, 1990; Meece, in press). Teachers

who promote high mastery orientations in classrooms have students who demonstrate a task-mastery orientation in their work regardless of ability level (Meece, in press). A mastery orientation requires intrinsic motivation on the part of students. Therefore, teacher behaviors that promote intrinsically motivated, mastery oriented students are important.

Meece (in press) outlines instructional intentions and methodology utilized by high mastery teachers. First, these teachers provide the opportunity for students to develop cognitive skills. For example, they used learning activities at application, analysis, and evaluative cognitive levels. They present lessons in concrete ways, illustrating new material. The lessons are also presented in such a way as to relate to the students' present knowledge and emphasized learning and mastery. Second, they provide the opportunity for self-directed learning. For example, during instruction supports such as problem-solving with students and the inherent feedback of the work are utilized. Third, they placed emphasis on peer cooperation and collaboration. For example, they emphasized these in small group and whole class work and required a group product rather than individual worksheets and products. Fourth, they emphasized intrinsic learning. For example, they related to the student's life and adopted tasks to the student's interests. They utilized questions as springboards to discussion, use fantasy and the creativity of the student, and stressed the value of the subject in the students' lives. In these ways, high mastery teachers were problem-oriented in teaching approach;

expected students to understand, apply, make sense of the task; used developmentally appropriate materials which were modified to have personal relevance; supported students' independent learning; did not use grades to motivate; held students accountable for what they learned; and utilized questions and written work that demanded more than simple recall. In other words, they were student-centered and process-focused. As a result, their students were presented with opportunities to develop their competence and demonstrated higher achievement scores than teachers in the study who were low-mastery focused (Meece, in press).

Summary

An implication of this study is that tasks interact with student needs to produce a motivation goal orientation (Eccles & Wigfield, 1985). Careful selection of tasks in planning and the way the tasks are implemented can make a difference in student motivation. Selection of tasks that promote a mastery-focused and implementation with a mastery-focused teacher behaviors may provide students with the needed environment for growth and teachers with a model of instructional decision-making that fits classroom demands and experiences especially in classrooms whose students vary widely in ability level. Students need to perceive the importance of doing well on a task and the enjoyment of doing the task, as well as how the task will enable them to reach short- and long-term goals, gain the necessary knowledge base, and apply that knowledge base through the use of higher-order thinking and writing skills to real life situations.

Conclusions

This study began by raising the question of why students appear to lose motivation as they progress from early elementary to middle grades. The results of this study suggested that the type of classroom tasks may influence the motivational change. As teachers and curriculum developers attempt to improve instruction, they need to address recent educational goals involving restructuring of curricula to provide high-order thinking skills so that students have the opportunities they need to learn to read, write, think, communicate, work independently, and get along with others (Turning Points, 1989). As this mastery profile is present in early elementary students (Stipek, 1984a), the challenge, then, is to devise tasks that maintain this profile throughout all school years. The use of high level simple and complex tasks in planning and the promotion of a mastery orientation in implementation of those tasks may create the atmosphere in which the mastery profile may be maintained throughout the school years for most students. To the extent that teachers want students to develop basic knowledge, apply that knowledge, and develop literacy skills, such a task taxonomy may be useful.

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APPENDIX A

Task Coding Format

Teacher: _____

Subject: _____

Day	Task No.	Cognitive	Literacy	Graded	By	Topic	Page

APPENDIX B

Samples of Simple and Complex Reading Tasks
Grade 6

I. SIMPLE TASK

A. Requires comprehension cognitive skills and simple mark literacy.

Instructions: Read each paragraph. Circle next to the sentence that best tells what will probably happen next.*

1. Tony's mother went into town, where there are two bookstores. She wanted to surprise Tony by bringing him a book about horses. When she arrived at the first bookstore, it was closed. She stood outside the store for a while. Then she had a good idea.

   What do you think will probably happen next?

   a. Tony's mother will go home.
   b. Tony's mother will find the person who owns the store.
   c. Tony's mother will go to the other bookstore.
   d. Tony's mother will continue to wait.

B. Requires comprehension cognitive skills and word literacy.

Instructions: Write the correct verb.**

1. Last week Leslie (sit/sat) in front of me.
2. Now the bird (took/takes) a sunflower seed.

II. COMPLEX TASK

A. Requires application cognitive skills and paragraphs literacy.

1. Write a short story. Make sure your story beginning has a setting. Describe a problem the characters have. Tell how the problem is solved. Give your story a title.**

*From Ginn Reading Program II: "How the Spider Came to Be" story.
**From Ginn Reading Unit 6 Test.

APPENDIX C

Student Interview Questions: Data Collection

Content: Cognitive

1. What did your teacher want you to learn?

Content: Subject Matter

2. Have you had this assignment type before?
3. Do you like doing this assignment?
4. Are you interested in this assignment?
5. How difficult was this assignment for you?
6. How sure are you of doing well?
7. What parts were most difficult?
8. How long did it take to do this assignment?
9. What and how much did you learn?

Form: Products

10. What did your teacher say about why this assignment was important?
11. What did your teacher say happens if you make mistakes?

Form: Activities

12. Will you be able to use this information in other subjects?
13. Will you be able to use this information when you are older?
14. Will you be able to use this information outside of school?

APPENDIX D

Student Interview Questions: Data Analysis

I. Learning

A. Task Understanding (6 Questions)

1. What did your teacher want you to learn?
2. Have you had this assignment type before?
3. How long did it take to do this assignment?
4. What and how much did you learn?
5. What did your teacher say about why this assignment was important?
6. What did your teacher say happens if you make mistakes?

II. Motivation

A. Task Expectations (3 Questions)

7. How difficult was this assignment for you?
8. What parts were most difficult?
9. How sure are you of doing well?

B. Task Value (5 Questions)

10. Do you like doing this assignment?
11. Are you interested in this assignment?
12. Will you be able to use this information in other subjects?
13. Will you be able to use this information when you are older?
14. Will you be able to use this information outside school?

APPENDIX E

Task Collection Form

Teacher: _____

Subject: LANGUAGE

Date	Task Topic	Text	Pages	Graded?	By
EXAMPLE 3-24	NOUNS	WORKBOOK? TEXT?	24 PART A.B.	Y = YES	T = TEACHER

Subject: SPELLING

Date	Task Topic	Text	Pages	Graded?	By

Subject: READING

Date	Task Topic	Text	Pages	Graded?	By