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I am submitting herewith a dissertation written by Laura Yvonne Malone entitled "Developing an Instrument to Measure Middle School Children's Perceptions of the Relationship between School-Related Behaviors and Adult Opportunities." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Education.

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**DEVELOPING AN INSTRUMENT TO MEASURE
MIDDLE SCHOOL CHILDREN'S PERCEPTIONS OF THE RELATIONSHIP
BETWEEN SCHOOL-RELATED BEHAVIORS AND ADULT OPPORTUNITIES**

**A Dissertation
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Abstract

The purpose of the study was to develop a brief instrument to assess middle school students' perceptions of the relationship between school-related activities and success in adulthood. The research was part of a larger study to measure work ethics of 6th, 7th, and 8th grade children. One thousand two hundred thirty nine students responded "yes" or "no" to school-valuing questions embedded in a larger Middle School Survey, which also included a measure of social desirability (SD). The students were from three public schools: School 1 was in a northeastern suburb ($n=341$) and the other two were in a southeastern city of the United States. School 2 was in an urban area ($n=254$) and School 3 was in a suburban neighborhood ($n=644$) within the same metropolitan area. Teachers were asked to rate all students on academic performance as "poor," "average," or "outstanding," and to rate on a 5-point scale 20 work habits of two students deemed to have the best and two judged to have the poorest work habits in each class. These teacher ratings were used in assessing the validity of the School Valuing (SV) scale. The school-valuing scores were also compared across demographic groups based on gender, grade level, and ethnicity.

The average SV score for the total sample was 8.72, which is near the upper end of the 0 to 12 scale. Girls obtained a significantly higher mean than did boys, but grade-level differences were not significant. For the three ethnic groups having large enough n s to justify statistical comparisons, Caucasians scored significantly higher than both African Americans and Hispanics, who did not differ significantly.

An item-analysis using both classical item statistics and item response theory showed that the items were moderately related to the total SV scores. Positively worded items were more likely to yield responses consistent with school valuing than were the negatively worded items. A test of internal consistency showed that the SV scale was acceptably reliable (.74), with all items contributing similarly to the internal consistency of the scale. Both criterion-related and construct-related validity of the SV were assessed. To provide data for assessing criterion-related validity, teachers were asked to rate students on academic performance and work habits. Concurrent and known groups validity assessment showed evidence of criterion-related validity. Construct-related validity was assessed via a series of exploratory and confirmatory factor analyses. This analysis indicated that the instrument is best represented as a two-factor scale, one factor composed of positive items and the other of negative items.

Some differences in trends were noted across schools. School 1's SV scores were lowest in its 7th graders, whereas school 2's 7th graders obtained the highest SV score and school 3's SV scores were equivalent across the grades. School 2 had the lowest SV mean of the schools, the lowest internal consistency score on the SV scale, and the highest mean on the SD scale. These findings suggest that more students at this school (an urban school whose population was predominantly African American) failed to recognize the relevance of school, that they either did not take the survey seriously or may have misunderstood some of the items, and that they may have answered the statement in a manner they thought was socially desirable. At School 2, where ethnic groups were represented by similar socioeconomic backgrounds, African American students scored

higher on the SV scale than Caucasians. School 3, a suburban school, yielded the highest internal consistency on the SV scale, the highest mean on the SV scale, and the lowest SD mean of any school.

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CHAPTER 1

INTRODUCTION

School plays an important role in shaping young people's work habits and achievement-oriented behaviors. Patterns established during the first eight years of school likely affect students' efforts in high school, college, and the workplace. It is assumed that students who are capable of making a connection between present behavior and future outcomes will be better equipped for career success as adults (Entwisle, 1990; Fine, Mortimer, & Roberts, 1990).

Rationale for the Study

The lack of an instrument to measure middle school students' perceptions of the contribution of current educational activities to future success creates a dilemma for educators interested in promoting the relevancy of school. Although there are numerous instruments that measure children's attitudes toward school, students' educational values and their educational motivation, no survey is available that attempts to measure the future time value that students attach to school activities. (See Orval G. Johnson, 1976, and Keyser & Sweetland, Eds., 1985 for examples of instruments in the former categories.) Some research has also been done to ascertain children's expectations for their future (e.g., Hart, Fegley, & Brengelman, 1993; Nurmi, Poole, & Kalakoski, 1994), but the focus has not been on measuring middle-schoolers' school valuing as it relates to their future success.

The reason for developing a self-report instrument that measures this concept is that the perceived relationship between success in school and adult achievement will

likely affect the career opportunities of many students. It is likely that many adults are handicapped because they failed to equip themselves with necessary skills to fulfill vocational roles (Smith & Rojewski, 1993; Toepfer, 1994). Perceptions and expectations of adult life during early adolescence are often unrealistic and idealized (Caissy, 1994). While young persons see the independence and freedom of adulthood appealing, they often overlook the resulting responsibilities and decisions.

Media portrayals of adult work roles are often glamorous and unrealistic (Signorielli, 1993), and vulnerability to this influence peaks during early adolescence (Caissy, 1994). While focusing on the exciting aspects of adulthood, adolescents may not realize the importance that preparation plays in getting a job, supporting themselves, and making difficult decisions. Therefore, making the connection between current actions and future outcomes enables individuals to exhibit planful actions and exercise personal control over their lives.

Statement of the Problem

Hamilton (1993) wrote that the ability to perceive relationships between present behavior and the achievement of long-term goals is the most important motivator for school performance in adolescence. Consequently, educators need a psychometrically sound measure of this perceived relationship. However, no psychometrically sound instrument measuring perceptions of school valuing and future success has been developed. Therefore, the current study was directed toward filling this research void.

Definition of Terms

School valuing - The extent to which individuals perceive the activities and behaviors required in school as preparation for adult life.

Future orientation - Reflection on the future involving formulation of future goals and plans for reaching them.

Attainment value - “. . . the importance to the individual of achievement in a given task [which] should determine the length of his persistence in working at it” (Battle, 1965, p. 209).

Intrinsic value - “. . . the enjoyment the individual gets from performing the activity, or the subjective interest the individual has in the subject” (Wigfield & Eccles, 1992, p. 280).

Utility value - How a task relates to future goals, i.e., performing a task will enable one to reach a future goal (Wigfield & Eccles, 1992).

Cost - The negative aspects of engaging in a task (Wigfield & Eccles, 1992).

Task goals - “Engaging in academic work to improve one’s competency, or for the intrinsic satisfaction that comes with learning” (Anderman & Midgley, 1996, p. 4).

Performance goals - “Engaging in academic work to demonstrate or prove one’s competency, or to avoid the appearance of lack of ability relative to others” (Anderman & Midgley, 1996, p. 4).

Success-oriented individuals - Those who have a high incentive for success and a low incentive for failure (Halvari, 1991).

Failure-oriented individuals - Those who have a low incentive for success and a high incentive for failure (Halvari, 1991).

Assumptions of the Study

This study is based upon the following assumptions:

1. School valuing is important to adult success.
2. Students are able and willing to report the future value they see in school activities.
3. The sample is adequate for initial study of the school-valuing construct.

Limitations

The researcher acknowledges the following limitations of the study:

1. Because the self-report instrument was not administered by the researchers, it was necessary to rely on teachers and counselors to interpret the instructions and match student identity on the survey and teacher ratings.
2. Time constraints for the dissertation prohibit a longitudinal study that would verify whether those students who value school are more successful in adulthood than those who fail to make the connection.
3. The students who participated in this study were not randomly selected.
4. The students selected are not a representative sample of middle schoolers in the U.S.

5. The reading level of the subjects was not determined. It is possible that some ethnic groups may be at a disadvantage in understanding the content of the survey.

Theoretical Foundation

This study is based on the theoretical foundations of social cognitive theory and expectancy value theory. Social cognitive theory combines the influences of socialization processes with the internal mechanisms that interpret those experiences to explain how we learn behaviors and values. Expectancy value theory interprets motivation as the expectation that certain actions will lead to expected valued outcomes.

Social Cognitive Theory

Social cognitive theory (SCT) explains learning through a combination of interaction with the social environment and internal cognitive processes such as memory, language, and evaluation and anticipation of consequences (Bandura, 1986, 1989). The major tenets of the theory include symbolizing capability, vicarious capability, self-regulatory capability, self-reflective capability, and forethought capability.

Symbolizing capability. The ability to use symbols allows individuals to imagine a solution to a problem, follow it to a logical conclusion, and discard or retain it without actually carrying each option to a conclusion and suffering the consequences. People use symbols to “. . . process and transform transient experiences into internal models that serve as guides for future action” (Bandura, 1986, p. 18).

Vicarious capability. This concept is essential for learning complex behaviors such as language acquisition (Bandura, 1986). It is a form of learning that occurs through

watching others' actions and the consequences of those actions. In large part it is by emulating others that we acquire our values and behaviors.

Forethought capability. Purposeful behavior is regulated by forethought (Bandura, 1986), which allows individuals to go beyond imagining an occupation to actually preparing for a career. Forethought activity involves cognitive anticipation of consequences and is an integral part of the motivational process. It is synonymous with future time perspective and SCT proposes that the ability to imagine what might happen should certain things occur increasingly regulates behavior as people age (Muuss, 1996).

The process of value acquisition and the internalization process that allows individuals to connect future goals with present behaviors is referred to as future time perspective (FTP), and it is a necessary development before individuals can plan for the future and understand how current actions influence future outcomes. FTP is an ability that has connections to cognitive development, because it appears to fully evolve during the formal operations stage (Piaget, 1972).

This reflection on the future is referred to as future orientation, “. . .an aspect of time perspective which - according to Lewin (1948) - comprises plans, aspirations, expectations and fears concerning events and actions realistically possible in the near or distant future” (Trommsdorff, Burger, & Fuchsle, 1982, p. 167). Future orientation increases successful outcomes, because it leads to formulation of future goals and plans for reaching them (Bandura, 1986; Nurmi, 1989a). It involves a structuring of the future that is based on cognitive and motivational processes (Trommsdorff et al., p. 171), which researchers have recognized as significant in exploring the emergence of adolescents'

ability to think and plan for the future (Blinn & Pike, 1989; Greene, 1986; Nurmi, 1987, 1989b, 1989c; Nurmi et al., 1994). Lessing (1972) refers to future orientation as an “adaptive behavior pattern” that is a measure of emotional maturity. It goes beyond the fantasies of childhood, because it is more reality-based and makes possible such ego functions as planning activities and delaying gratification (Lessing, 1972). Some researchers view future orientation as a function of the culture, and they attribute the differences found in grade level (and implicitly in age) to experiences within the social context rather than to developmental changes (Greene, 1986; Haan, Weiss, & Johnson, 1982).

Nuttin (1984) describes future orientation as a three-stage process that includes motivation, planning activity, and evaluation. Nurmi (1989b) expands on this model by tying together individuals’ schemata of the future with their anticipated life-span development. Cultural knowledge concerning expected life-span development (i.e., at what age certain goals should be realized) allows individuals to compare their hopes and values with anticipated self-development and to generate life-goals (Nurmi, 1989a). Motivation, then, refers to future interests that are based on personal motives and values and the knowledge of expected life-span development. Nurmi’s (1989a) study found that young adolescents expected to finish their education first (18 years), then to get a job (22.5 years), thirdly, to get married (25 years), and, finally, to build up a material basis for later life (25.2 years).

The second phase of future orientation, planning activity, involves the development of strategies for realizing goals. A basis for this planning requires

knowledge about the expected life-span development to plan future activities within this context (Nurmi, 1989b). Evaluation, the third stage of future orientation, requires individuals to examine their goals and appraise existing plans to reach the goals (Nurmi, 1989b). Using expected life-span development, they can first estimate whether the goals, strategies, and timeframe for achievement are realistic, and then make adjustments based on the evaluation.

“Orientation to the future is a complex, multidimensional and multi-stage phenomenon” according to Nurmi (1989b, p. 14). It is influenced by several factors such as cultural context and rules, socio-economic status, interpersonal interactions (including parent-adolescent relations), and intrapersonal components such as motivation, self-concept, and locus of control (Nurmi, 1989b).

Self-regulatory capability. It is hoped that as children age, they will develop internal regulations that will take the place of the modeling and instruction previously done by parents and teachers. This transition allows individuals to judge their actions by internal standards and to change them when there is a discrepancy between the action and the standard (Bandura, 1986).

Without the ability to monitor and adjust behavior based on external and internal cues, individuals would be powerless to change and adapt. Self-regulation facilitates learning through its impact on cognitive processes. In order to learn and achieve academically, students must be able to evaluate their grasp of material and use attentional and learning strategies to increase their knowledge (Sink, Barnett, & Hixon, 1991).

Self-reflective capability. Bandura (1986) refers to this characteristic as “reflective self-consciousness” (p. 21). Self-reflection refers to the cognitive function of judging personal behaviors and imagining outcomes of future actions. It allows individuals to imagine which alternative would be best for reaching a goal, compare actual performance with their ideal, and compare methods for reaching their goals in view of the social and moral consequences of each one (Ford & Lerner, 1992). This ability to judge and evaluate their school performance enables students to make the necessary adjustments that lead to academic success.

Expectancy Value Theory

The explanation of why people are motivated to set goals and perform activities that they believe will lead to the fulfillment of these goals is explained by expectancy value theory. This theory proposes that the extent to which individuals are motivated to perform certain actions is governed jointly by the expectation that those actions will lead to certain outcomes and by the value placed on the outcomes (Ajzen & Fishbein, 1980; Atkinson, 1964; Feather, 1982). One of the affective domains in learning is the ability to derive value from what is learned (Sink et al., 1991). Expectancy value theorists argue that a task’s intrinsic value is a determinant in whether individuals choose to do the task (positive value) or avoid it (negative value) (Atkinson, 1966; Eccles, 1983; Feather, 1982).

The initial expectancy value model was posited by Atkinson (1957; 1964; 1966) to explain people’s behavior in achievement situations (Wigfield & Eccles, 1992). He focused on three factors that he believed determines achievement-related behavior:

individuals' achievement motives (e.g., choice of tasks, striving for success, and persistence on tasks), expectancies for success, and incentive values, which he defined as "the relative attractiveness of succeeding on a given achievement task" (Wigfield & Eccles, p. 267). Although Atkinson admits that the role of values in motivation has not been given much attention in research (Atkinson, 1966), he does little to expand on that variable (Wigfield & Eccles).

Two different approaches to the study of values include focusing on the nature of achievement task values versus concentrating on "values as broad-based, general psychological characteristics of the individual" and surmising how these personal values may influence choices (Wigfield & Eccles, 1992, p. 273). Researchers who fall into the first category are interested in how people perform tasks to meet different needs; two examples are utility value tasks and attainment value tasks. Tasks that have *utility value* are those that relate to a future goal, e.g., taking certain classes to obtain a desired degree. These tasks might be said to be extrinsically rewarding, because they are not performed for their own sake, but as a means to an end (Wigfield & Eccles).

Attainment values influence individuals to undertake a task for the sake of doing well and they allow individuals to confirm or demonstrate aspects of their self-schema, e.g., masculinity or femininity, or competence in different areas. Individuals will be motivated to do tasks that have higher attainment values, i.e., those that allow them to confirm salient features of their self-schema (Wigfield & Eccles, 1992). In addition, Eccles (1983) defines two other aspects of achievement task values that can influence achievement behavior. *Intrinsic value* refers to the enjoyment that comes from doing a

task, or the subjective interest individuals have in the subject. Eccles defines the *cost* of a task as the negative features associated with undertaking a task, including affective components (e.g., performance anxiety and fear of success or failure), and the amount of effort that must be expended to accomplish the task (Wigfield & Eccles, 1992).

In their 1995 study of middle-class adolescents in grades 5-12, Eccles and Wigfield found that individuals place the most value on tasks at which they believe they have a good chance of succeeding. The researchers speculate that success is necessary for maintaining self esteem, and that adolescents will devalue a task if they believe they cannot master it.

The other method of defining values is represented by Rokeach (1979), who represented values as standards that guide behavior and “. . . judgment, choice, attitude, evaluation, argument, exhortation, rationalization, and one might add, attribution of causality” (p. 2). According to Rokeach, there are two types of values: terminal (beliefs about life’s ultimate goals) and instrumental (preferred behavior that enables people to attain the terminal values).

Rokeach’s theory proposes that values are stable traits that provide meaning to individuals’ behavior; and they are universal--that is, they vary across cultures to the extent that each culture emphasizes them. He also proposed that values, attitudes and behaviors are arranged hierarchically, with values at the top, influencing the other two (Wigfield & Eccles, 1992). Although his theory may have overestimated the stability of values across cultures, theorists acknowledge his contribution in identifying the general importance of values in motivating behavior (Wigfield & Eccles).

This study seeks to determine the extent to which middle school students value academic activities' contribution to future success. This aspect of motivation relates to the utility value of a task, i.e., how does the task relate to future goals. Utility value is often seen as a form of extrinsic reinforcement, because the task is regarded more as a means to an end than as enjoyable in itself (Wigfield & Eccles, 1992). While utility value is tied to future rewards, what stimulates individuals to persist at a task is usually a combination of intrinsic and extrinsic factors.

Without reinforcement from the environment or internal valuing to reward individuals for a behavior, it is unlikely that the behavior will be executed. Intrinsic motivation occurs when individuals feel satisfaction from completing a difficult task, when they set and achieve high standards, and when they feel they are skilled and competent (Bandura, 1986). While it is hoped that students will value school because of internal motivation, Bandura (1986) believes that this concept is a "highly appealing but elusive construct" (p. 243) and that what appears to be the result of intrinsic valuing, such as studying or taking difficult courses, may, in fact, be a striving for future rewards (e.g., an effort to get into a good college or hopes of achieving a good-paying job) (Muuss, 1996).

Components of SCT and expectancy value theory help to explain how individuals form values, goals and anticipations for the future. Parental values and expectations for their children are influential in molding the childrens' beliefs and attitudes through vicarious learning. Against this background, as children become independent, other social cognitive processes emerge that allow them to self-regulate their behavior in ways that

include planning for the future, gaining self-efficacy through achievements, reinforcing themselves for successful performance, and reflecting on their personal actions in order to make corrective adjustments. Progressively, as adolescence approaches, these processes permit individuals to comprehend how current actions impact future plans. It is anticipated that individuals who have been socialized to value education will be better equipped to apply these emerging cognitive abilities than individuals who have not been taught the merit of the educational process. The motivational component of achievement is interpreted by expectancy value theorists as the driving force that enables individuals to take action and fulfill needs that are influenced by their values. Therefore, the assumption is that when societal influences have convinced students that education is a valuable contributor to adult success, they will engage in behaviors that facilitate educational achievement.

Conclusion

Past research has focused on factors that help or hinder aspirations of adolescents related to present academic achievement. The current study was undertaken to fill the void that exists in the literature linking present academic valuing and success with future ambitions. Elements that impact student outcomes include temperament, intelligence, school attitudes, peer group influences, and family influences (Anderson, 1980; Eccles & Harold, 1993; Marjoribanks, 1986), including parenting practices (Brier, 1995) and parents' educational level and socioeconomic status (Wilson & Wilson, 1992). Other researchers have examined psychological variables (Goodenow, 1993; Winefield & Tiggemann, 1993), sociocultural influences (Nurmi et al., 1994), ethnicity (Moerk, 1974;

Taylor, Casten, Flickinger, Roberts, & Fulmore, 1994), and student attitudes (Rosseel, 1989), all of which contribute to success or failure experiences during the school years. This study seeks to assess the connection middle schoolers perceive between school activities and adult success.

Research Questions

The study seeks to answer the following questions:

1. Does school valuing differ by gender, ethnic and/or grade level?
2. Do item analysis models support the inclusion of the current items in the SV scale?
3. Is the criterion-related validity of the SV scale supported by concurrent and known groups validity assessment?
4. Do appropriate exploratory and confirmatory factor analysis point to a unitary factor structure or a multiple-factor structure?

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to develop a psychometrically sound instrument for measuring the relationships between middle school students' perception of the long-term value of school activities and teacher ratings of their work habits and academic achievement. This chapter presents a review of the literature and research related to this study. Because social cognitive theory assumes that individuals learn their values from social interaction with others, the first section examines relationships that lead to the acquisition of educational values and the second section explores the influence of the social environment on young people's future orientation. The third, fourth, and fifth sections of this chapter investigate the influence of the demographic variables examined in the study (i.e., gender, grade level and ethnicity) on pre-adolescents' future orientation and school valuing. The sixth section looks at research about the validity of teacher judgments of students' school-related behaviors and achievement. Finally, the seventh segment reviews self-report measures of constructs similar to the ones targeted in this study.

Acquisition of Educational Values

The family is usually the pivotal model for children's educational values before and during the middle school period. Wlodkowski and Jaynes (1990) observe that parents are the first and most important teachers for children. The importance that parents place on education is transmitted through the opportunities they provide the children. This is often done through direct participation, such as helping children with homework, reading

to them, maintaining contact with teachers, and playing educational games with them. This environment provides children access to opportunities and resources that increase their chances for academic success. For example, parents may foster activities such as educational trips to museums and libraries, encourage educational television viewing, and furnish children with a quiet place to study with a supportive atmosphere. Parents convey the value they attach to schooling when they save money for their children's college education and when they share their own experiences of how previous educational achievements have resulted in rewards. The socioeconomic level of the family also creates an advantage when it allows children to attend schools that are better equipped and have extracurricular activities that enhance the educational experience (Wentzel, 1994).

Nurmi (1989c) contends that when parents are consistent across situations in their tutoring styles (e.g., setting realistic demands that fit their children's current interests and skills, and ensuring that children are persistent in realizing goals), it "... influence(s) children's later tendencies to set goals, to use certain types of problem-solving and coping strategies, and to evaluate their future opportunities" (p. 32). In a study that looked at parental influence, Parsons, Kaczala, & Meece (1982) found that parents' beliefs about their children's competencies (grades 5-11) had a greater impact on the children's own beliefs than either parental modeling of activities or the children's own school grades. In a 1983 study of children in grades 5-12, Eccles determined that parents exerted a stronger influence on children by transmitting their beliefs and attitudes about achievement than by serving as role models. Further, Eccles concluded that mothers in particular influenced

children's achievement-related beliefs to a greater extent than teachers did. Parents transmit their achievement values and expectations to children in a variety of ways, some of which are very effective for children in the pre-adolescent and adolescent stages of development.

The family may contribute in more important, although less direct, ways to children's motivation for long-term achievement. Many parenting practices correlate positively with their children's educational motivation, academic persistence, and school success (Powell, 1990; Wentzel, 1994). Reading often to children, responding verbally to children's observations and requests, asking children to make verbal responses to learning tasks, and helping children contemplate future actions and outcomes, imagine alternatives, and make inferences illustrate successful verbal interactions between parents and children (Powell, 1990). Several researchers point to evidence that authoritative parenting practices such as warmth, reason, non-punitive measures, and firmness contribute to children's autonomy, motivation, and achievement (Kurdek, Fine, & Sinclair, 1995; Murphey, 1992; Powell, 1990; Ryan & Stiller, 1991).

One variable that correlates even greater than parenting styles with children's educational achievement and aspirations is the amount of parental involvement in their school activities (DuBois, Eitel, & Felner, 1994; Marjoribanks, 1986; Paulson, 1994). Parental support involves the crucial task of setting the stage for achievement motivation and expectations for children's success (Eccles & Harold, 1993; Marjoribanks, 1986, 1987; Wilson & Wilson, 1992). Parents who have effective coping strategies, a support network, and confidence in themselves to help their children with homework and to

participate in school governance are more likely to concern themselves with school affairs than do parents not having these characteristics (Eccles & Harold, 1993). The researchers contend that parental involvement in children's education can be especially critical in early adolescence even though it is traditionally a time when family involvement at school decreases.

There are numerous reasons for this decline in parental involvement at school, including a lack of time or energy, a failure to understand the role that parents can play, or previous negative interactions that have resulted in parents feeling disillusioned and disconnected from their children's schools (Eccles & Harold, 1993). Teachers can facilitate parents' involvement by using good reporting methods, by understanding how to effectively involve parents, and by believing that parents should have a role in their child's school (Eccles & Harold).

School is likely the second largest influence (after parents) on children's motivation to learn and it affects individuals for years in areas such as self-confidence, ambition, and interests (Ryan & Stiller, 1991). Wilson and Wilson (1992) note that not enough emphasis has been placed on the school's contribution to young people's school motivation, citing evidence of the effect of schools on adolescents' educational goals. Specifically, when students perceive that their teachers are supportive and that the school environment is conducive to work, they are more likely to have high educational aspirations and to pursue them. Modeling, imitating and identifying with significant adults who value the educational process helps pre-adolescents understand the merit of excelling in school.

Social Context and Children's Future Time Perspective

Socioeconomic status has a mediating effect on children's future orientation and, consequently, on their ability to plan for adult life. Lower class adolescents list more occupational concerns than middle class adolescents; that is, they can structure these concerns to a greater degree than adolescents from higher social classes (Nurmi, 1987; Trommsdorff, Lamm & Schmidt, 1979), but subjects from higher social classes are able to project plans and hopes for the future to a greater extent than those from the lower classes (Nurmi, 1987). One explanation for this discrepancy in future orientation is that lower class adolescents seek employment sooner than their affluent peers, who will likely attend college. Trommsdorff et al. believe the more detailed structuring of their occupational future by lower adolescents indicates that middle class adolescents' better schooling does not necessarily help them structure their future in a more realistic way. However, this explanation does not explain another finding by Lamm, Schmidt, and Trommsdorff (1976) that lower-class adolescents believe they exert less control over their future than do young people from higher classes. Another difference that can be attributed to social standing is that lower-class children do not organize future events as well as their middle-class counterparts (Kastenbaum, 1961).

Nurmi (1987, 1991) found that family interactions affect adolescents' planning activities in distinct ways at different stages of development. (Variations in age and gender will be discussed in later sections.) One finding that held up regardless of age and gender is that adolescents who report a negative family atmosphere, including a low level

of family discussion, have diminished educational aspirations. Trommsdorff et al. (1982) observed that family support is a crucial element in adolescents' perception of personal control over their future and in their feelings of optimism about their future.

Gender Influences on Future Orientation and School Valuing

As part of its descriptive analysis, this study examined the relationships between several demographic variables and middle schoolers' perceptions of the contribution of school activities to adult success. Gender was one of the demographic variables examined. In this section, a review of the research concerning gender influences on middle school students' future orientation and school valuing is discussed.

Gender and Future Orientation

Researchers have found variability in gender differences in future orientation. Oppenheimer and Van der Wilk (1987) reported findings that gender differences occur as early as five years of age. One trend that has held up across several studies is that boys are more interested in the occupational and material aspects of their lives, while girls focus more on their future family (Cartron-Guerin & Levy, 1982; Gillispie & Allport, 1955; Lamm, et al., 1976; Solantaus, 1987). Trommsdorff et al. (1979) found that these gender differences influenced the formation of interests in these respective areas, i.e., girls were more structured in their hopes for family life, while boys showed more structured hopes for material domains. The conclusion drawn from this finding could be that boys may value the educational process more than girls, if they view it as a means to obtaining economic success. Findings by Klineberg (1967) of French youngsters between the ages of 10-17 seem to support this concept in that the researcher found that boys were more

interested in school and vocational pursuits, while girls were more focused on marriage and family life.

While several researchers have reported greater time extension and differentiation in future thinking among males than females (Cottle & Klineberg, 1974; Cottle & Pleck, 1969; Moerk & Becker, 1971; Von Wright & Von Wright, 1977), others report that females exhibit greater planfulness (realism) and a future centered around relationships, rather than one that is focused on career or achievement (Blinn & Pike, 1989; Moerk, 1974; Verstraaten, 1980). Results on gender differences in time extension are also mixed; some researchers report that boys' thinking extends further into the future than girls (Cartron-Guerin & Levy, 1982; Trommsdorff, et al., 1979), while others (e.g., Gorman & Wessman, 1977; Greene, 1986; Nurmi, 1987) found no gender differences in extension. Von Wright and Von Wright (1977) note that among both sexes, global time extension is greater than personal time extension, suggesting that social issues such as pollution and war are given more attention than personal planning.

In Trommsdorff's longitudinal study of adolescents aged between 14-16 years at the time of the first measurement, with the second measurement taking place two years later, ". . . girls had a less extended future orientation in the occupational domain than boys at the first and second measurements" (Trommsdorff et al., 1979, p. 144). Girls were found to think of the future more in terms of family planning than boys did at both testing times, indicating gender-related differences in future time orientation. Adolescent girls also acknowledge the necessity of delaying career aspirations to fulfill their familial role, according to Greene (1990).

In an extensive review of the research on future orientation, Nurmi (1989c) cites findings that boys increase in internality and optimism concerning the future as they age to a greater extent than do girls. However, overall gender differences in future orientation may not be as important as other factors such as cultural and social influences. Nurmi notes that as the culture becomes more urban, gender differences lessen.

Gender and School Valuing

Gender differences in educational valuing can be analyzed through the model of expectancy value theory and an accompanying model of achievement choice (Eccles, 1984), which involves the variables of attainment value, intrinsic value, utility value and cost. (See Chapter 1 for a discussion of these factors.) Gender differences in achievement have been documented by many studies: girls often get better grades in elementary school than boys, particularly in verbal subjects, and their math ability equals that of boys. As they reach adolescence, however, girls' achievement in math and science begins to decline, a phenomenon that is particularly true for the brightest females (Henderson & Dweck, 1990). The researchers hypothesize that the difference may be what is required for learning math skills vs. those required for nonmath subjects. Math dictates learning new concepts and skills, while verbal subjects entails applying initially learned skills to increasingly difficult material. Girls may choose subjects that allow them to maintain confidence in their abilities which led to success in the elementary years. When they are confronted with negative feedback in the adolescent years, they may interpret it as a judgment of their abilities, rather than the critique of performance that it was intended to be (Henderson & Dweck).

Gender differences in attributional style also exist, as reported by Eccles, Adler, and Meece (1984). In their study of students in grades 8-10, the researchers observed that males “tend to attribute their success to internal, stable causes and their failures to external or unstable causes, whereas females tend to reverse this pattern, taking personal responsibility for their failures but not for their successes” (p. 27). The authors note, however, that these findings are not as clearcut in other studies, and suggest that the results may be more definitive in sex-typed achievement tasks such as math and verbal subjects.

In a cross-sectional and longitudinal study of math achievement in fifth through twelfth grade students, Eccles (1983) discovered that females had less confidence in their abilities than did males, and they believed that math was more difficult and less valuable than the males did. The researcher speculated that the combination of parents’ beliefs about the difficulty of math for their child and the newly discovered friction between the female role (i.e., wife/mother) and achievement expectations could contribute to these gender differences. Past research has shown that female students perceive their parents to have lower expectations for their success in math than do male students. In other research conducted by Eccles and Blumfield (1985), the researchers confirm that boys and girls enter school with stereotyped beliefs about sex roles that teachers passively reinforce by not confronting and challenging the assumptions. However, math notwithstanding, in a study of cultural and racial differences in middle school students, Mau (1995) found that female students had significantly higher educational aspirations and higher perceived parental expectations than did males for each racial-ethnic group included in the study.

Gender differences in achievement values were found in a study of African American adolescents (Taylor, Lysaght, & Graham, 1996). The researchers found that females in this racial-ethnic group valued high achieving characteristics in other girls, but not in boys. Boys also valued high achievement in females, but not in other males. The researchers believed that other characteristics such as personality and athletic ability may be more valued by males of this age; likewise, the researchers were unable to determine whether this tendency is strictly a racial-ethnic difference, or if the same trend exists in adolescent boys of other racial groups.

Crandall, Katkovsky, and Preston (1962) conducted a study of elementary students in which they concluded that boys' choice of activities were influenced by their expectancies for success, whereas girls based their decisions on the value of the task itself. The researchers speculated that boys may choose tasks they are confident they can master, while girls may attach less importance to the expectation of success in their selection of a task. This tendency to make academic choices and career decisions based upon subjective task value underscores the sex-role conflicts that females experience to a greater extent than do males. The conflict that girls experience between career goals and marriage/family goals results in a decline in their career aspirations over time (Marini, 1978). Eccles (1984) cites research that females do not advance to higher educational degrees to the same extent as males, that they advance slower and to a lesser degree than males in careers (even in traditionally female-stereotyped ones), and that males exceed females in devotion to a career. According to Eccles, these issues illustrate that "values

(serve) as mediators of achievement choices” (p. 104). See Eccles for research citations regarding the above findings.

Gender roles influence task values in several ways. Being socialized to behave in gender-specific ways causes males and females to establish different value hierarchies that enable them to fulfill appropriate roles. For example, females may see the parenting role as being of higher value than a career role, and may make decisions based on that preference (Eccles, 1984). Eccles also mentions a gender difference in density of goals, or what she describes as a single-minded commitment that seems to be more prevalent among males than females. This single-mindedness may make it easier for men to give up other goals in pursuit of one important goal. Gender roles dictate the activities that are essential to defining oneself as male or female. If it is important to individuals to be successful in their gender role; activities that conform to the role will have high value for them, and those activities that do not fit with the self schema of the gender role will have lower value (Eccles, 1984).

Female gender roles have been found to be more in compliance with behaviors that are classroom norms than are male roles (Brophy, 1985; Brophy & Good, 1974). This finding suggests that female middle schoolers might show greater concern about academic activities such as staying on task and listening to the teacher than do males. Support for this expectation is suggested by Eccles and Blumenfield’s (1985) finding that girls reported feeling worse about violating procedural norms than boys did.

Grade Level (Age) Influences on Future Orientation and School Valuing

Pre-adolescence is an important period to begin thinking in terms of future plans and goal setting. It is also meaningful with respect to school performance, as success during this period is indicative of future achievement (Wentzel, 1988). This section reviews research on grade level differences in planning for the future and how young people value educational experiences as they transition across the middle school years.

Grade Level and Future Orientation

Future orientation has been found to vary across the childhood and adolescent years. Nurmi's (1989a) study showed that eleven-year-olds could extend their hopes and fears into the future to the same extent as fifteen-year-olds. The majority of their interests related to occupation and education, with this interest growing over a four-year period. The same study looked at other important aspects of future orientation, i.e., complexity of plans for achieving future goals, extent to which individuals expect goals to be realized, degree to which they believe they can exert control over future realization of hopes and fears (also called internality), and amount of relevant knowledge needed to realize future goals. These components (unlike extension) were found to increase as adolescents aged. In another study of 11- and 15-year olds, Nurmi (1991) found that "...non-controlling discipline at the age of 11, and active parent-adolescent interaction at the age of 15 seem to provide a basis for an optimistic outlook for the future" (p. 48).

Greene (1986) found that adolescents' expectations of the future are based on present life events and that high school students are more likely than younger ones to concentrate on the effect of schooling on career plans, presumably because of high

schoolers' increased cognitive abilities to think about the future in planful ways. Greene compared 9th and 12th graders with each other and with college sophomores for four future event categories. The events measured were achievements (attainment of a goal, status, or privilege, such as success in a career); relational events (future interpersonal relationships, such as marriage and a family); experiential events (the occurrence of a new experience or change in life style, such as traveling or moving to a new city); and existential events (a change in one's inner state of being, such as contentment or wisdom).

Younger (9th grade) adolescents envisioned the occurrence of experiential events to a significantly greater extent than did older adolescents (32% for 9th graders vs. 19% for 12th graders vs. 14% for college sophomores). Younger adolescents also showed greater concern for future peer relationships (44% of 9th graders vs. 35% of 12th graders vs. 35% of college sophomores). Older adolescents anticipated internal, existential experiences, rather than externally focused ones, while 9th and 12th graders expected fewer internal or self-related changes in the future. More than the other two groups, twelfth graders showed concern for future achievements (Greene, 1986). In its focus on pre-adolescents, the current study seeks to appraise younger individuals' capabilities to think in terms of future adult success.

Numerous researchers (Klineberg, 1967; Piaget, 1972; Wessman & Gorman, 1977) "...have attributed shifts in adolescent temporal perspective to the emergence of new, variously defined, cognitive abilities. . ." (Greene, 1986, p. 101), i.e., formal operations reasoning. According to this concept, adolescents expand and construct their future spontaneously when these cognitive factors emerge. But Greene found that social

and educational experiences play a formative role in adolescents' conceptualizations of the future. The result is a personal narrative where people see themselves in various time periods and, consequently, construct expectations that provide congruency in their past, present and future. For example, 9th graders are experiencing changes related to school and relationships, which would account for their focus on experiential and relational events in the future. As twelfth graders approach graduation, they become increasingly concerned about achievement events related to work or college.

Trommsdorff et al. (1979) and Nurmi (1987) found that older adolescents actually had a shorter future time extension than younger adolescents. The researchers hypothesize that this may indicate the increasing importance of problems in the near future. Older adolescents may limit themselves to short-term planning, because "...the developmental tasks linked to the aims and aspirations become closer in time" (Nurmi, p. 988). Greene (1986) believes that the need for congruency in the life story may motivate people to seek consistency in the past, present and future, leading individuals to reconstruct past events in order to achieve this consistency. Adolescents may project into the future the same kinds of events and experiences they are currently experiencing, resulting in concerns and interests about the future similar to one's current life situation. A study by Hart et al. (1993) of adolescents between the ages of 13-17 describes them as "...developmentalists who see the recent life course as characterized by change that is both desirable and beneficial" (p. 278) and who anticipate a greater decline in their negative characteristics in the future than they realized in the transition from past to present.

Inasmuch as Nurmi (1989a) found that children as young as eleven years are capable of projecting their expectations into the future and Oppenheimer (1987) found that children at this age can effectively plan and reach "simple social goals," it is appropriate to establish whether students in the middle grades perceive that school-related activities prepare them for success in the workplace. The relationship between future orientation and academic success is such that, "Among both boys and girls, success-oriented individuals have the highest scores on future-time orientation, and failure-oriented individuals have the lowest scores" (Halvari, 1991, p. 695). There is a void in the literature concerning younger students' abilities to connect academic performance with adult success. When researchers have looked at the relationship between school success and achievement in adulthood, the focus has been on late adolescence (Marjoribanks, 1986; Rosseel, 1989; Taylor et al., 1994; Trommsdorff et al., 1979; Wallace-Broschious, Serafica, & Osipow, 1994; Wilson & Wilson, 1992). These studies suggest that late adolescence is a suitable time to investigate the school-career relationship.

Toepfer (1994), however, disagrees with the notion that it is best to wait until late adolescence to investigate the school-career relationship and suggests instead that middle school is an appropriate place to incorporate exploratory vocational experiences, because this is a time of life when individuals build upon their childhood experiences to construct attitudes about learning, work, and other adult values. Toepfer believes that most individuals do not substantially change these traits after this period. He envisions three areas for concentration during middle school: academic skills (a basic foundation for a person to get, keep, and progress on a job); personal skills (developing attitudes and

behaviors required to get, keep, and progress on a job); and teamwork skills (needed to work with others on a job). Toepfer proposes that young adolescents typically want to know *why* they must learn certain things. Using vocational/career/occupational exploratory programs can help students connect their "here-and-now" interests to possible future employment interests.

Other researchers also advocate exploring and defining career interests at the middle school level, suggesting the importance of making younger students aware of planning for adulthood (Cole, 1982; Smith & Rojewski, 1993; Stemmer, Brown & Smith, 1992; Toepfer, 1994). Nurmi (1989a) cites a study by Oppenheimer and Van der Wilk (1987) showing that between the ages of eight and eleven, children begin to turn their interests from imaginary hero play to more realistic play involving work and professional goals. This indicates a shift from concerns about play to work (Nurmi). Lessing (1972) speculates that children's reality-based future orientation develops as they become increasingly aware of the "cultural timetable" when events occur during a normal lifespan.

The evidence provided by the literature suggests that children of middle school age can think about current actions in terms of future consequences. The influence of age indicates that individuals become more realistic in thinking about and planning their future as they progress through adolescence.

Grade Level and School Valuing

Children's beliefs about ability and effort change from one of positive correlation (e.g., smart people study hard) to one of inverse relationship (e.g., smart people don't have to study hard) during early adolescence. As this realization occurs, students begin to represent themselves to their popular peers as less diligent than they are in an effort to gain social approval. It is thought that this shift in attitude takes place because individuals at this age often resist the norms and values set by adults, and in an effort to appear autonomous to their peers, they challenge the "importance of effort" (Juvonen & Murdock, 1995).

Related to this change in attitude, students in the middle school years may use self-handicapping strategies (e.g., procrastinating, allowing others to deter them from studying, and intentionally not trying to excel in school) in an effort to attribute poor academic performance to circumstances rather than to ability. In a study of eighth-grade students, Midgley and Urdan (1995) found that the use of these motivational strategies are positively correlated with characteristics such as an orientation toward extrinsic goals (e.g., seeking to please adults instead of having personal task goals), poor performance in school, and association with peers who hold a negative attitude toward academic achievement. The researchers determined that when students hold relative ability goals, or "perceive they are being evaluated on the basis of their ability relative to the ability of others, they may be more likely to use those strategies than when they perceive they are being evaluated in terms of their effort, improvement, and mastery of the work" (p. 391). This finding is in concordance with Dweck's (1986) study which posited that "...an

orientation to demonstrating one's ability relative to others is associated with negative outcomes, particularly for lower achieving students" (Anderman & Midgley, 1996).

When declines in achievement do occur after the transition to middle school, it may be attributable to a combination of factors: children value academic tasks less as they get older (Wigfield & Eccles, 1992) and there is a corresponding shift in grading criteria from task valuing (where effort and improvement play a role in the assignment of grades) used in grading procedures in the elementary years to ability valuing (where grades are assigned strictly on performance), which is prevalent in the grading processes in middle school and beyond (Anderman & Midgley, 1996). This change is unfortunate for lower ability students who may be exerting the same effort in middle school as they did in the elementary grades but are no longer seeing these factors reflected in their grades. Without awareness of the shift in grading emphasis from task valuing to ability valuing, they are especially vulnerable to motivational and academic engagement declines (Anderman & Midgley). The researchers note that these students experience a sharp decline in grades one year after the transition to middle school.

Wigfield and Eccles (1992) found that by the fifth grade students are capable of differentiating among the different aspects of task value; for example, they can identify components of an activity that have attainment value, intrinsic value, and future value (utility value) to them. This finding provides support for the hypothesis of this study that children of middle school years will be able to perceive the utility value of school-related activities.

Other trends in Anderman and Midgley's (1996) longitudinal study, which looked at students in their last year of elementary school and followed them through their second year of middle school, are as follows: Task value declined for students across the three grades, perceptions of classrooms as being more ability focused increased from fifth to sixth grade, then decreased slightly between grades six and seven; and females' grades increased across the transition from fifth to sixth, then decreased between grades six and seven, while males' grades declined across all three grades. These findings suggest that students are aware of the shift in grading emphasis from task valuing to ability valuing and that they react negatively to it, modifying their responses as they adapt to middle school. The finding that task value declined across the three grades may help explain the subsequent decline in grades; as students perceive that task value is less important in the grading process, they may lose motivation to improve their competency.

Based on future orientation research, pre-adolescents are contemplating educational and occupational concerns and these interests increase with age. While this is partially due to cognitive development, social and educational experiences contribute to young people's capacity for thinking and planning for their future. Grade level differences in school valuing may occur because of shifts in students' valuing and a change in grading that deemphasizes improvement and effort to one that focuses strictly on performance. Understanding grade level differences underscores the significance of helping pre-adolescents make the connection between school valuing and adult success.

Racial and Ethnic Influences on Future Orientation and School Valuing

Although there is less material in the research about the effects of ethnicity on future orientation and school valuing in young people, some studies have looked at the role of this variable. This section contains the findings of those studies.

Race/Ethnicity and Future Orientation

Very little has been written about the effects of ethnicity on future orientation. Researchers have focused more on cultural and socioeconomic influences, but some inferences regarding ethnicity may be drawn from these studies. For example, cross-cultural researchers point to the following differences in time perspective:

. . . adolescents from Anglo-American cultures are relatively more interested in leisure activities and personal happiness, adolescents from countries with a high rate of urbanization seem to be relatively more interested in future education and career, whereas adolescents from traditional cultures are most concerned about topics related to their parents' family. Interestingly also, in traditional societies such as India and Mexico, parents and family participate in the planning of adolescents' future to a relatively greater extent than in Anglo-American cultures (Nurmi, 1989c, p. 31).

Studies that have examined the effects of social class on future orientation have found that adolescents from middle-class families project further into the future and believe that their success is more dependent on internal effort than do adolescents from lower-class families (Lamm et al., 1976). Nurmi (1987) speculates that the further time extension of adolescents in middle-class families may relate to the fact that individuals in

higher social classes can expect to realize developmental tasks at a later stage of life than individuals from lower classes.

Moerk (1974) conducted a study of future aspirations of Caucasian, African American, and Mexican American adolescents aged twelve and fifteen. He found that 70%-100% of males in all three groups hoped to graduate from college. Mexican American girls, however, had lower educational expectations than girls in the other two groups. Occupationally, Caucasian males chose a higher level of aspirations than males in the other two groups. African American girls scored higher on educational expectations and chose higher occupational levels than Caucasian or Mexican American girls. With the exception of African American girls, all minority group subjects showed a decline in their educational aspirations as they aged. In contrast, Caucasian subjects did not change their educational hopes. Unfortunately, the decrease in educational aspirations may reflect the more reality-based perceptions that occur as young people age. Garrison (1982) reported that in 1967, Caucasian high school students had higher ambitions than African American students. In a 1976 study, however, he found that Caucasians' hopes for the future had fallen to the same level as African American adolescents.

Although research regarding ethnic differences in future orientation is sparse, studies that have looked at these disparities show that ethnicity does contribute to young people's anticipations for future educational and occupational opportunities. One important factor that has not been addressed in the literature is whether ethnicity contributes to the abilities of pre-adolescents to plan for future accomplishment by capitalizing on present school experiences.

Race/Ethnicity and School Valuing

Although some research suggests that ethnicity plays a role in school valuing, it is difficult to separate cultural influences from ethnic factors. Cultural values are often reflected in parenting values as evidenced in research by Okagaki and Sternberg (1993), which compared beliefs of immigrant parents from Cambodia, Mexico, the Philippines, and Vietnam, with native-born Anglo-American and Mexican American parents. The researchers were interested in cultural differences in beliefs about child rearing, intelligence, and education. While the immigrant parents placed the most emphasis on conforming to external standards, American-born parents believed that autonomy was more important. Parents from the Anglo-American group were the only ones who did not rate noncognitive characteristics (e.g., motivation for school, self-management skills, and social skills) as equally important, or more important, than cognitive characteristics (e.g., problem-solving skills, verbal ability, and creative ability) in describing an intelligent child.

A study by Keith and Lichtman (1992) looked at parental involvement (e.g., discussing school activities with their children and having high educational aspirations for them) in the academic achievement of eighth-grade Mexican American students and found a positive effect on their grades. The researchers determined that students' previous academic achievement (grades) and parents' SES were other salient indicators of children's success in school.

While it is evident that parents play a decisive role in their children's long-term educational plans, a study of high school students found that it is their peers who

influence daily behaviors such as time spent on homework, class attendance, and classroom conduct (Steinberg, Dornbusch, & Brown, 1992). The same study found that Asian American and Caucasian adolescents enjoy support for academics from parents and friends that is complementary to a greater extent than that of Hispanic and African American adolescents. "In comparison with White youngsters, minority youngsters are more influenced by their peers, and less by their parents, in matters of academic achievement" (p. 727).

A comparison of Asian American and Caucasian middle school children's achievement motivation found that Asian Americans' achievement motivation was significantly higher than Caucasians'. The researchers also reported differences in gender (i.e., girls scored significantly higher on achievement motivation) and grade level (sixth grade students reported greater achievement motivation than either seventh or eighth graders) in both ethnic groups (Huang & Waxman, 1994).

Research that seeks to explain the performance of minorities has produced inconsistent findings. Some researchers (e.g., Fordham & Ogbu, 1986; Taylor et al., 1994) point to the "castelike status" of minorities and suggest that the perception of a discriminatory "job ceiling" negatively affects the school performance of African American adolescents. Taylor et al. maintain that to the extent these high school students believe their future is limited, the less importance they will place on schooling. But Dornbusch and Steinberg (1990) found no evidence that African Americans and Hispanics "...were more skeptical about the value of schooling for their future than were other students who were not members of caste groups" (Taylor et al., p. 24). In another

study by Steinberg et al. (1992), the researchers cautioned that this optimism may be unjustified because “African American youngsters diminish the implications of doing poorly in school and maintain the belief that their occupational futures will not be harmed by school failure” (p. 728). Taylor et al. (1994) reported that African Americans who had a strong ethnic identity “. . . were more likely to report that they engaged in behaviors conducive to school achievement, and they had better grades” (p. 39). Yet, Steinberg et al. found that because of a lack of support for succeeding academically among their peers, many high achieving African American adolescents choose to forego affiliation with peers of their own ethnic group and instead, associate with young people of racial groups other than their own.

Steinberg et al.’s (1992) research looked at high school students’ beliefs about the occupational rewards of succeeding academically. Their findings revealed that:

. . . the extent to which students believe that there are *negative* consequences of school failure is a better predictor of their school performance and engagement than the extent to which they believe that there are positive consequences of school success. That is, across ethnic groups, the more youngsters believe that not getting a good education hurts their chances, the better they do in school. . . .

Much more than other groups, Asian American adolescents believe that it is unlikely that a good job can follow a bad education. Hispanic and African American students are the most optimistic. In other words, what distinguishes Asian American students from others is not so much their stronger belief that educational success pays off, but their stronger fear that educational failure will

have negative consequences. Conversely, unwarranted optimism, rather than excessive pessimism, may be limiting African American and Hispanic students' school performance (p. 726).

A study that looked at ethnic differences in educational aspirations and academic achievement of middle school students found that Asian American students had significantly higher educational aspirations and higher perceived parental expectations than any other racial-ethnic group, and Native American students had significantly lower aspirations and perceived parental expectations than did any other group. African American and Caucasian students had significantly higher aspirations than did Hispanic and Native American students. In addition, African American students were found to take a more active role in their educational and vocational planning than any other group (Mau, 1995).

The Validity of Teacher Ratings of Student Performance

Hoge and Coladarci (1989) conducted a meta-analysis on sixteen studies that used either direct or indirect assessments of students by teachers. Indirect evaluations ask teachers to rate specific academic performance in various subjects, and the researchers then compare these ratings to scores on standardized achievement tests. Direct judgments require teachers to predict their students' performances on a concurrently administered achievement test; then performances and teacher estimations are subsequently compared. The median correlation of these studies was 0.66, suggesting "...a moderate to strong correspondence between teacher judgments and student achievement" (p. 303). There was no significant difference in the efficacy of the two methods; direct evaluations had a

median correlation of 0.69, while the indirect method had a correlation of 0.62. Another meta-analysis by Follman (1990) of 42 studies that used teacher estimates of students' academic achievement and actual performance on standardized achievement tests found a somewhat smaller median correlation of .50. However, Follman agrees that teacher judgments and students' academic achievement have "considerable congruence."

The researchers also identified five levels of specificity of teacher judgments (from low to high): (1) ratings of students according to their academic ability (e.g., place each student on a scale of one to five); (2) rank ordering students by academic ability; (3) grade equivalency placement, where teachers estimate "...in the grade equivalent metric, each student's likely performance on a concurrently administered achievement test" (p. 300); (4) number correct, where teachers estimate how many questions students will answer correctly on a concurrently administered achievement test; and (5) the highest specificity level, item responses which require that teachers indicate for each item on an achievement test whether students will answer correctly. The ratings method is the one used most frequently in teacher judgments; in the meta-analysis, median correlation for teacher ratings and students' academic achievement was 0.61. Median correlations for the other methods were 0.76 (rankings), 0.70 (grade equivalency), 0.67 (number correct - single study), and 0.70 (item judgments). The lower correlation of the ratings methods is likely due to teachers' hesitation to use the full range of categories, thereby lessening the variability of the ratings (Hoge & Coladarci, 1989).

One other distinction that can be made in teacher judgments is whether the evaluation is norm referenced or peer independent. The former includes ratings, rankings

and grade equivalency, all of which require comparisons with other students. In contrast, peer independent evaluations entail the use of number correct and item judgments. Hoge and Coladarci (1989) found that the median correlation of judgment and criterion was not appreciably affected by the choice of either method; the median correlation of norm-referenced judgments was 0.64 and that of peer-independent evaluations was 0.68.

Researchers acknowledge that the accuracy of judgments are affected by individual differences of the teachers. Hoge and Coladarci (1989) cite various studies where within-class judgment/criterion correlations ranged from 0.03 to 0.90. While these researchers found no gender differences in the three studies that examined this factor, four of the twelve teachers overestimated the performance of students with high IQs, suggesting that “. . .students’ academic ability may influence the accuracy with which teachers judge student achievement” (p. 308).

Teacher judgments about students’ strengths and weaknesses have been found to be correct to a greater extent than students own judgments about themselves (Wentzel, Weinberger, Ford & Feldman, 1990). These researchers found that “. . .student reports of interest in school activities. . . were only related indirectly to classroom grades. . . (while) teacher perceptions of student motivation manifested a strong, direct relationship with grades (p. 189). Teacher evaluations of student work habits have been found to be the most important predictor variable of coursework mastery (Farkas, Grobe, Sheehan, and Shuan, 1990).

Self-Report Instruments That Measure Constructs

Similar to Those in the Current Study

Numerous researchers have used self-report instruments to measure future orientation and to assess motivation, attitudes, and behaviors affecting school performance. This section describes a sampling of instruments that seek to measure constructs similar to those targeted in this study.

Survey of School Attitudes (SSA)

The SSA is “. . . a group-administered attitude test instrument designed to measure whether students like, dislike, or are neutral toward. . .” (Drummond, 1985, p. 633) school activities (e.g., working math problems, identifying continents) that are commonly found in Grades 1-8. There are two versions of the SSA, a primary level for grades 1-4 and an intermediate level for grades 5-8. It contains four scales: Math, Reading/Language, Science, and Social Studies. Time to take the survey varies from one 40-minute session or two 20-minute sessions for the primary version, and one 30-minute session for the intermediate level. The survey was “. . . administered to a sample of 13,500 students who approximated the natural school population on the variables of geographic region, socioeconomic variables, minority populations, and community size” (p. 633). The instrument’s reliability was established by using the split-half method and Cronbach’s alpha, which yielded correlations ranging from .77 to .91. An administration of an alternate form of the survey resulted in correlations ranging from .52 to .65 for the Primary Level and from .74 to .83 for the Intermediate Level. Concurrent validity correlations, using subtest scores of the Metropolitan Achievement Test and the Stanford

Achievement Test as the criterion measures, ranged from -.06 to .38. The median correlation was .16.

Attitude Toward School Inventory (ATSI)

This ATSI uses a five-point Likert format to assess students' attitudes (Grades 4-6) toward school work, teachers, and school in general. It was administered to over 1,000 students in the fourth, fifth, and sixth grades in two schools that included subjects from urban and rural districts. One-week test-retest reliabilities ranged from .79 to .83 on the subscales, with the total scale's reliability being .85. A Cronbach's alpha analysis produced coefficients from .83 to .89 on the subscales and .94 for the total scale. Predictive validity was established by correlating scores on the ATSI with teachers' ratings of students' attitudes toward school, resulting in validity correlations of .69 for grade 4, .60 for grade 5, and .66 for grade 6. Choices on the ATSI range from "strongly agree" to "strongly disagree," with "agree," "not sure," and "disagree" in the middle portion of the scale. It consists of 45 statements (e.g., "I see no use for what we study in school") pertaining to the abovementioned topics and can be administered in 30 minutes or less (Meier & McDaniel, 1974).

Home and School Values Inventory

This instrument is designed for students in grade 6, parents, and school personnel to assess school-related values across different ethnic, socioeconomic, and occupational groups. The inventory includes 17 scales (e.g., persistence, success, materialism) with a total of 168 items, and two response categories of "agree" and "disagree." Average alpha coefficients for the three groups of children, parents, and school personnel were .56, .64,

and .69, respectively. An example of a statement in the category of persistence is “You should not quit a disagreeable task until it is finished” (Johnson, 1976).

Motive-Attitude Intensity Scales

This questionnaire consists of 140 items with a three-point Likert scale consisting of “agree,” “disagree,” and “uncertain.” Test-retest reliability was reported to be .91 for the total scale. Although validity coefficients were not given, the author reported there were “. . .significant relationships between total score and social class, home background achievement scores. . .” (Johnson, 1976, p. 1013). This instrument is designed for adolescents between the years of 12 and 17, and it measures seven classes of educational attitude and five classes of educational motivation. Referents in the attitude portion of the scale are classified as parents, teachers, friends, self, curriculum, organization, and material; motives are classified as reward, self-realization, intellectual stimulation, enjoyment and social conformity. “Items incorporate both motive and attitude referent and are pitched at registering four levels of intensity, designated as receiving, responding, valuing, and commitment” (p. 1013). A sample question on the Motive-Attitude Intensity Scale is, “My parents expect me to use all my ability at school.”

Questionnaire of School-Related Attitudes and Motivation

This instrument is appropriate for use with junior high students; it consists of 122 items designed to measure attitude toward education and teachers, study habits, achievement motivation, need achievement, and achievement anxiety. Internal consistency of items range from .84 to .95, and multiple correlations with scores on subtests of the Metropolitan Achievement Test in grade 9 and an achievement test taken

in grade 12 ranged from .48 to .59 for males and .63 to .69 for females. Students indicate whether such statements as "Whether I like a subject or not, I still work hard to make a good grade" are "rarely true," "sometimes true," "frequently true," "generally true," or "almost always true" for them. The above statement reflects the category of academic motivation. This scale contains both positively and negatively worded items (Johnson, 1976).

The Future Time Orientation Scale

This scale was developed by Gjesme (1979) to assess the degree of general concern and occupational interests as related to future endeavors. Examples of the items include "I have been thinking a lot about what I am going to do in the future" and "The future seems very vague and uncertain to me." This scale was reformulated by Halvari (1991) in a study of 11- and 13-year-olds to include the evaluation of perceived intrinsic instrumentality of physical activity (e.g., "In physical education I learn things which can be useful later in life"). Halvari does not provide validity or reliability correlations for this instrument, but does indicate that future-time orientation is highest among success-oriented individuals and lowest among failure-oriented individuals.

While several of the instruments described in this section measure the valuing construct or future orientation of youngsters, none appears to combine the two concepts in a manner similar to this study. Thus, the current study developed a questionnaire for use with sixth, seventh, and eighth graders that measures their perceptions of the relationship between school-related activities and adult success. Scores on the instrument were compared to teacher ratings of work habits and academic achievement.

CHAPTER III

METHODOLOGY

The principal purpose of the study was to develop an inventory that would assess middle schoolers' perceptions of the contribution of school activities to preparation for adult life. This study was part of a larger study to measure the work ethic of middle-school students and to examine differences related to ethnic origin, gender and school grade. Academic and social endeavors such as completing in-class assignments and homework, attending to the teacher, and cooperating with peers are behaviors that are included under the category of school activities. It was expected that students who perceive a connection between school-related behaviors and success in adult life would be rated by their teachers as more on-task and higher achievers than were students who see little value in school. In related research, teacher ratings of high school students' work habits have been found to accurately predict work performance on the job (Brenner, 1968). However, correlations between achievement ratings at the high school and college levels and accomplishment in adulthood are low (Baird, 1985), with one government study for the Office of Personnel Management reporting an average correlation of .17 (O'Leary, 1980). While it is true that academic achievement is a prerequisite for entering many college programs and upper level jobs, it would be incorrect to say that academic achievement can predict professional performance.

This chapter describes the procedures used to develop the school-value scale as one part of the Middle-School Survey. The first section includes background of the questionnaire development, section two describes selection of the sample (including

demographics), section three describes the instrument itself, section four reviews procedures for administering the instrument, and section five describes how the data were analyzed.

Background of the Questionnaire Development

An instrument called the Middle-School Survey (MSS) was first administered in the spring of 1996. It included two scales that were designed to measure work ethic and school valuing (Appendix A). Before the first administration of the MSS, items were shown to five middle school children, and they were asked to look over the wording of items to see if they understood what the questions meant. This was done so that the researchers could clarify any words or constructs that were unclear to children of this age.

In the first stage of instrument development, the researchers examined the relationship between school valuing and some corollary dimensions not included in the current study. Children who were mainstreamed, handicapped, received free or reduced lunch, and/or had disciplinary problems were compared with students not presenting these characteristics. In addition, the initial study determined students' grade point average (GPA) and attendance history. This information was gathered from school records by the school counselors. For the current study, the researchers limited corollary variables to data reported by the participants and their teachers.

The original survey consisted of 40 statements (15 of which pertained to school valuing) to which respondents agreed or disagreed on a five-point Likert scale. In the spring of 1996, the survey was administered by guidance counselors to 613 mostly White students in the 6th, 7th and 8th grades in two middle schools. One month later, the survey

was given a second time to the same students in order to determine its test-retest reliability.

Descriptive data from the analysis revealed that the following categories of students scored lower than their counterparts on both administrations of the instrument: handicapped students, those pulled out of the regular class for a portion of the school day for specialized instruction, those who received free or reduced lunches, those who had moderate or substantial disciplinary histories, and those with lower grades. More of these differences were statistically significant ($p < .05$) for females than for males. Because there was no ethnic diversity in this sample, the data did not permit comparisons by ethnicity. However, some gender differences were apparent, particularly when they were examined within the classifications mentioned above. For example, females in the regular lunch group scored significantly higher than males in the same category. And females scored significantly higher ($p < .05$) on school valuing than males with the same GPA standing. The same trend was present (on the post-test only) for females who had minimal or no disciplinary history.

A general school-valuing factor emerged from the component analysis of the original data. Six items accounted for more of the variance (approximately 90%) in the school-valuing portion of the survey than did the remaining factors combined. Those six items loaded heavily on that general factor for both the pre-test and the post-test administrations, with loadings ranging from .48 to .69. The researchers kept these six items and eliminated the other nine. Cronbach's alpha computed for the shortened form

(the six items retained) was similar to that for the original 15-item scale (.77 compared to .81).

The six items selected for the school-valuing portion of the scale were all positively stated (e.g., "Having good work habits now will help me be successful as an adult"). To potentially strengthen the internal consistency of the inventory, a complementary negatively worded item was added for each positive statement, for example, "Having good work habits doesn't mean I will be successful as an adult." The result is that the current school-valuing portion of the survey has twelve items. In addition, to simplify the response format, "agree" and "disagree" answers replaced the five-point Likert scale.

Selection/Demographics of the Sample

A total of 1,239 participants from three middle schools (grades six, seven, and eight) took part in the project. The makeup of the composite sample was as follows: 447 6th graders, 358 7th graders, and 432 8th graders; 656 females and 580 males; and 557 Caucasian, 374 African American, 153 Hispanic, 43 Asian American, 23 Native American, and 82 Other. (Because several participants partially filled out demographic information, numbers included in tables may not add up to the total number of the sample.)

School 1 ($n=341$) is located in a northeastern U.S. city with a population of 54,780, and Schools 2 and 3 are located in a southeastern U.S. city with a population of approximately 150,000. Of the two schools in the southeast, School 2 is an urban school ($n=254$) and School 3 is located in a suburban area ($n=644$). Table 1 provides the

Table 1

Demographics for Individual Schools

	School 1 (n=341)	School 2 (n=254)	School 3 (n=644)
Gender			
Males	160	105	314
Females	180	148	323
Grade Level			
6th	135	99	213
7th	63	93	202
8th	143	62	227
Ethnic Group			
Native American	0	0	11
African American	63	185	124
Asian American	4	8	31
Hispanic	145	1	7
Caucasian	79	43	435
Other	45	8	29

demographic information by school. The ethnic makeup of School 1 included 145 Hispanic American, 79 Caucasian, 63 African American, 45 Other, and 4 Asian American. Grade level representations included 135 sixth graders, 63 seventh graders, and 143 eighth graders. There were 160 males and 180 females who participated.

School 2 consisted of 185 African American, 43 Caucasian, 8 Asian American, 8 Other, and 1 Hispanic. This school had 99 sixth graders, 93 seventh graders, and 62 eighth graders. Males numbered 105 and females 148.

The third school's ethnic breakdown was 435 Caucasian, 124 African American, 31 Asian American, 20 Other, and 7 Hispanic. There were 213 sixth graders, 202 seventh graders, 227 eighth graders, with gender divisions totaling 314 males and 323 females.

Instruments Used in the Current Study

Students were asked to fill out one questionnaire, and teachers were requested to evaluate students' academic achievement and to rate an additional four students (two on each end of the spectrum) according to their work habits.

School-Valuing Scale

The current Middle School Survey contains three separate scales: a work-ethic scale, a measure of the perceived connection between school and adult opportunities, and a measure of social desirability. The School-Valuing Scale -- the focus of this study -- is intended to measure the perceived connection between school activities and the quality of adult life.

The Middle School Survey consists of 30 items to which respondents answer "yes" or "no" (Appendix B). The first two questions are "fillers" to acquaint the students

with the scale; questions 3-14 pertain to work ethic; and questions 15-26 deal with school valuing. The School-Valuing Scale contains six items stated positively and six stated negatively, with the negative items intended to measure the same beliefs as the positive items. Questions 27-30 relate to social desirability.

Teacher Rating Form

The teachers were asked to rate students who took the School-Valuing Scale on academic achievement (Appendix C). Teachers used their roll book to rate the corresponding students on the form according to students' academic achievement for the year (i.e., "poor," "average," or "outstanding"). For example, student No. 1 who took the survey would be entered on the rating form in the slot designated No. 1. Teachers were asked not to use names to protect student identity.

Student Work Habits

This scale was used by teachers to rate two students whom the teachers judged to have the best work habits and two students judged to have the poorest work habits in each class (Appendix D). Each participating teacher was given four forms and asked to identify these students (again by class number). There are twenty items describing work-related behaviors, such as "Takes good care of books and other classroom materials" and "Makes good use of teacher feedback." Teachers were asked to use a five-point Likert scale to characterize whether the behavior is "a lot like this student," "somewhat like this student," "neither like nor unlike this student," "somewhat unlike this student," or "very unlike this student."

Procedures for Administering the Survey

The researchers requested permission from the principals to administer the survey as a service to the schools. The principals reserved the right to deny use of the results to the researchers for research purposes. Because of the service nature of the project, the researchers offered to assist the school administration, if it chooses, in developing an intervention based on the survey results. Following the collection and analysis of the data, all the participating principals granted written permission to use the findings for research purposes.

The questionnaire was designed so that subjects will remain anonymous to the researchers. This was accomplished by asking participants to identify themselves only by number according to the teacher's roll book. Also on the answer sheet (Appendix E) the students were asked to identify themselves according to the categories "school number," "class number," "sex," "ethnic identity," and "grade level." Participants were asked to copy down school and class number from the board, where the teacher had written them. They were asked to blacken in the circle under each category that best describes them.

Students were assessed in social studies classes, because the theme of the questionnaire is compatible with this subject (i.e., work and career success). The questionnaire was administered by the regular teachers via overhead projectors. Teachers were instructed to read the instructions (from a transparency), to uncover one question at a time, to read each question, and then pause while students respond by filling in either the "yes" or "no" circle with a pencil on a scan sheet developed by the researchers. At the end of the assessment, answer sheets were collected according to student number.

Procedures for Analyzing the Data

The answer sheets were read by an electronic scanner. The psychometric analyses consisted of an item analysis using both classical item statistics and item response theory, an assessment of internal consistency, an assessment of criterion-related validity using both concurrent and known groups methods, and an assessment of construct-related validity using both exploratory and confirmatory factor analysis.

The internal consistency of the scale was determined by computation of Kuder-Richardson 20. The criterion-related validity of the instrument was determined by correlating it with teacher ratings and by contrasting the school-valuing scores of the three achievement groups and the two work habit groups via one-way analysis of variance and t-tests. Cross-validation factor analyses were used to reveal whether the scale was still a one factor scale, or if other factors had emerged as a result of adding negatively worded items. These factor analytic models included principal factor analysis, maximum likelihood factor analysis, rotated factor analysis, and confirmatory factor analysis. The social-desirability scale was correlated with the School-Valuing Scale to determine how much school-valuing answers might be linked to the tendency to give socially approved responses. Demographic comparisons were made among the groups by using analysis of variance and t-tests.

CHAPTER IV

FINDINGS/ANALYSIS OF DATA

This chapter provides the results of the School-Valuing (SV) portion of the Middle School Survey and the related forms filled out by teachers. The findings are first presented for the total sample and then for each school separately, with special emphasis given to differences in findings across schools. The school-valuing items on the MSS are presented in Table 2.

Composite Findings

The composite findings include SV descriptive data for the demographic groups, internal consistency measures for the SV scale, factor analysis patterns for the scale, validity assessment of the SV scale, relationship of SV scores to social desirability measures, and individual item analysis for the SV scale.

Descriptive Data

The average SV score for the total sample was 8.72. This is near the high end of the 0 to 12 scale, which suggests that students generally perceived a linkage between activities in school and the opportunities they would have as adults. A standard deviation of 3.60 in combination with the high mean score suggests that the scale can more adequately differentiate levels of school valuing at the low end than at the high end of the scale.

Table 3 presents the means and standard deviations for the SV scale by demographic group. The SV means for gender were significantly different ($p < .0001$), with girls reporting a stronger perceived connection between school activities and adult

Table 2

School-Valuing Items in the Middle School Survey

<u>Number</u>	<u>Item</u>
1	Learning to get along with my classmates will help me know how to get along with others when I become an adult.
2	Listening to my teachers won't affect my chances for a good job as an adult.
3	Doing my homework is a good way to develop skills that will help me as an adult.
4	What I'm learning in school won't help me be successful as an adult.
5	Getting along with my classmates won't affect how I get along with others as an adult.
6	When I don't do my assignments at school, I am hurting my chances of being successful as an adult.
7	Homework is unrelated to the skills I will need as an adult.
8	Paying attention to my teachers will increase my chances for having a good job as an adult.
9	Fighting in school will have no effect on whether I have a good life as an adult.
10	Much of what I learn at school will make my life better as an adult.
11	My success as an adult is not related to completing my assignments in school.
12	Getting in fights at school will hurt my chances of having a good life as an adult.

Table 3

Descriptive Data for Composite Sample

Demographic variable ^a	Quantitative variables					
	SV	SV	SV	SD ^c	Ach.	Wk. hab. ^d
	Mean	<u>SD</u> ^b	K-R 20	Mean	Mean	Mean
Gender						
Males (<u>n</u> = 580)	8.40	2.73	.70	1.40	1.80	62.08
Females (<u>n</u> = 656)	9.02	2.54	.69	1.41	2.10	81.70
Grade Level						
6th (<u>n</u> = 447)	8.68	2.55	.71	1.45	1.97	72.51
7th (<u>n</u> = 358)	8.78	2.67	.75	1.51	1.87	69.01
8th (<u>n</u> = 432)	8.72	2.74	.76	1.26	2.04	73.75
Ethnic Group						
Native American (<u>n</u> = 23)	8.35	3.14	.80	1.57	1.73	50.50
African American (<u>n</u> = 374)	8.20	2.35	.62	1.86	1.94	70.41
Asian American (<u>n</u> = 43)	9.35	2.50	.75	1.53	2.37	92.50
Hispanics (<u>n</u> = 153)	8.30	2.36	.63	1.65	1.72	60.89
Caucasian (<u>n</u> = 557)	9.27	2.73	.79	1.01	2.04	72.00
Other (<u>n</u> = 82)	8.11	3.06	.80	1.46	1.83	65.00

^aSample totals for the various demographic groups do not total 1239 because of missing demographic information from some students.

^bStandard Deviation.

^cSocial Desirability.

^dWork Habits.

opportunities than did boys. Differences in raw score means for the three grade levels were not significant.

In absolute terms, Asian American students obtained the highest SV mean (9.35) and African Americans the lowest (8.20). Because some of the ethnic groups had small sample sizes, it was not appropriate to test for significant differences across all the groups. Caucasians ($n=557$), African Americans ($n=374$), and Hispanics ($n=153$), however, had large enough n s to warrant statistical comparisons across these groups. Caucasians scored significantly higher (mean = 9.27, $p<.05$) than both African Americans (8.20) and Hispanics (8.30). The last two groups did not differ significantly.

Item Analysis

To evaluate their inclusion in the SV scale, items were examined via both classical item statistics and item response theory (see Table 4). Prior to doing the analyses summarized in Table 4, the experimenters correlated item responses with social desirability scores (SD). These correlations ranged from $-.23$ to $.07$, suggesting that social desirability tendencies did not contribute to pro-valuing responses. Because none of these correlations accounted for more than 5 percent of the variance in the relationship between SD and SV item responses, all SV items were considered appropriate for the analyses described in Table 4. The classical item statistics indicated that all items were moderately correlated with scores on the SV scale; however, the range of p -values across the items ($.580$ to $.883$) showed that most items tended to produce responses consistent with school valuing. These relatively high p values suggest that the SV items--although not measures of ability or achievement--were easy to answer (i.e., producing yes

Table 4

Classical Item Statistics and IRT Item Parameter Estimates for SV

Item	Classical item statistics				IRT item parameter estimates				
	p-value ^a	Correlation		KR-20 ^d = .74 KR-20 if item deleted	One Pl ^e		Two Pl ^f		
		Point	Item		<u>b</u> (difficulty)	Resid- uals ^f	<u>b</u> (difficulty)	<u>a</u> (slope)	Resid- uals ^f
		biserial ^b	remainder ^c						
1 (Pos.)	0.850	0.38	0.38	0.72	-1.730	1.6	-1.580	0.87	0.6
2 (Neg.)	0.624	0.33	0.32	0.73	-0.530	2.9	-0.650	0.54	2.2
3 (Pos.)	0.830	0.37	0.36	0.72	-1.590	1.5	-1.440	0.89	1.3
4 (Neg.)	0.759	0.37	0.36	0.72	-1.170	3.9	-1.200	0.73	4.0
5 (Neg.)	0.644	0.30	0.29	0.73	-0.620	4.1	-0.810	0.50	3.7
6 (Pos.)	0.802	0.40	0.40	0.72	-1.420	1.5	-1.267	0.91	0.6
7 (Neg.)	0.672	0.47	0.46	0.71	-0.740	3.3	-0.640	1.00	2.0
8 (Pos.)	0.818	0.42	0.41	0.72	-1.510	2.3	-1.272	1.02	0.8
9 (Neg.)	0.580	0.31	0.30	0.73	-0.340	3.5	-0.423	0.54	2.3
10 (Pos.)	0.883	0.40	0.39	0.72	-2.010	3.0	-1.610	1.11	1.3
11 (Neg.)	0.668	0.43	0.42	0.72	-0.730	2.5	-0.710	0.79	2.3
12 (Pos.)	0.599	0.39	0.39	0.72	-0.420	1.5	-0.419	0.76	1.1

^aThe p-value is a proportion of examinees who responded "yes" to a positive item or "no" to a negative item.

^bPoint biserial correlation is a popular item discrimination index, a computationally simplified Pearson's r between the dichotomously scored item and the total score.

^cItem-remainder coefficient is the correlation of an item with the sum of the remaining items.

^dKuder-Richardson 20.

^eOne-parameter logistic or Rasch model.

^fTwo-parameter logistic model.

^gA root mean square standard posterior residual greater than 2.5 may be taken as an indication of a problem in fit.

responses to the positive items and no responses to the negative items). In general, the positively worded items yielded higher p-values than the negatively worded items. Table 4 also indicates that most items affected internal consistency of the scale to a similar degree.

Because item responses were dichotomous, the feasibility of applying item response theory (IRT) was explored. The BILOG 3 (Mislevy & Bock, 1990) was employed for the IRT approach. In the two-parameter logistic model both difficulty and slope were examined, whereas in the one-parameter model only difficulty was included. Difficulty values typically vary from about -2.0 to +2.0, with values close to -2.0 representing easier items and values close to +2.0 harder items (Hambleton, Swaminathan, & Rogers, 1991). The typical range for slope is 0 to 2, with items having a steeper slope being "more useful for separating examinees into different ability levels than are items with less steep slopes" (Hambleton et al., 1991, p. 15).

As expected, a two-parameter model performed better than a one-parameter model. This conclusion is based primarily on the root mean square posterior residual values for the one-parameter logistic and the two-parameter logistic model. Ordinarily, residual values above 2.5 may suggest a problem in model-data fit. For the one-parameter model, 7 items (all 6 negative and 1 positive) exceeded this value; whereas in the two-parameter model, only 2 negative items (items 4 and 5) may not fit. Like the classical item analysis, the IRT analysis suggested that all the items tend to yield responses indicative of school valuing. This conclusion is based primarily on the range of difficulty

values for both the one-parameter and the two-parameter models (-2.010 to -.340 for the one-factor model and -1.580 to -.420 for the two-factor model).

Reliability

The internal consistency of the SV scale was computed using Kuder-Richardson 20 (K-R 20). An obtained coefficient of .74 was above the minimum level of .70 recommended by Nunally (1978) for acceptable internal consistency. The K-R 20 coefficients were different for the three major ethnic groups. Caucasians obtained a higher coefficient (.79) than both African Americans (.62) and Hispanics (.63). The internal consistency coefficient was similar across gender and grade level groups.

Validity Assessment

Two major types of validity for the SV scale were assessed: criterion-related and construct-related. Assessment of criterion-related validity used both a concurrent validity and a known groups procedure. The construct-related validity was established via a series of factor analyses, including both exploratory and confirmatory factor analysis.

Criterion-related validity. The concurrent validity assessment involved correlating the SV scores with the two major criterion variables: academic achievement ratings and work habits ratings. The correlation with achievement ratings was .19 ($p < .0001$) and the correlation with work habits rating .32 ($p < .0001$). Because the item analysis suggested that positively worded items on the SV were more likely to produce pro-valuing responses than were the negatively worded items, SV scores computed separately for the positive and negative items were correlated with the criterion measures. For both achievement ratings and work habits ratings, composite scores for the negative items were more highly correlated (.19 and .31, respectively) with the criterion measures than

were the scores for the positive items, (.13 and .22, respectively). This comparison represents correlation differences of .06 and .09 for the positive and negative items.

Criterion-related validity was also examined by contrasting the SV scores of known groups (i.e., the three achievement groups and the two work habits groups). Ratings of student achievement produced an approximate normal distribution: 368 students were rated as poor achievers, 537 as average achievers, and 323 as outstanding achievers. The average achievement rating for all students was 1.96, which was slightly above the midpoint of the 1 to 3 achievement scale. The SV means for the three achievement groups were 8.26 for the poor group, 8.54 for the average group, and 9.62 for the outstanding group. The mean for the outstanding group was significantly higher ($p < .05$) than the means for the other groups, which did not differ significantly.

The SV means were then contrasted for the groups judged to have the best and poorest work habits. This comparison was based on SV scores for 108 students judged to have poor work habits and 130 students rated to have exceptional work habits. The SV means for the high (9.49) and low groups (8.19) were statistically different at the .0001 level.

Construct-related validity. A series of factor analyses were computed to determine whether the SV scale is best represented as a one-factor or two-factor scale. This assessment first included an exploratory factor analysis using adjusted squared multiple correlations rather than squared multiple correlations as prior communality estimates. If squared multiple correlations had been used, then the first factor would have accounted

for 101.47% of the common variance--suggesting that the prior communality estimates were not perfectly accurate.

In the principal factor analysis, the sample was first randomly split into two samples of approximately equal size (see Table 5). This cross-validation analysis showed that the two subsamples produced a comparable factor pattern, with the item loadings similar across the two groups. The total sample produced factor loadings consistent with those of the subsamples. All items loaded .30 and above on the general factor for the two subsamples and the composite sample. Also, the common variance explained by this one-factor model was similar (65 to 67%) for the cross-validation samples and the composite sample. However, a scree test indicated the possibility of a secondary factor, as well as the primary factor.

A maximum likelihood factor analysis was then done to determine if the one-factor model adequately represented the data. The splitting of the sample produced item loadings highly consistent with those of the principal factor analysis, with the primary factor explaining from 66% to 68% of the variance in the subsamples and the composite sample. However, the high chi-square values, all significant at the .0001 level, showed that the one-factor model did not adequately represent the three data sets. Furthermore, the Tucker and Lewis (1973) reliability coefficient, which indicates the magnitude of fit between the data sets and the one-factor model, yielded coefficients in the .76 to .77 range. The recommended value for the Tucker and Lewis index is .90 and above.

Because of the possibility that a two-factor model would represent the data better than a one-factor model, a rotated factor analysis (oblique rotation) was next done (see

Table 5

Factor Pattern for SV Scale: One-Factor Solution From the Three Sets of Data

Item	Principal factor analysis			Maximum likelihood		
	factor pattern			factor pattern		
	Analysis ^a	Validation ^b	Total ^c	Analysis ^a	Validation ^b	Total ^c
	Factor 1	Factor 1	Factor 1	Factor 1	Factor 1	Factor 1
1 (Pos.)	0.44	0.45	0.46	0.42	0.45	0.45
2 (Neg.)	0.36	0.38	0.36	0.33	0.36	0.34
3 (Pos.)	0.48	0.51	0.48	0.47	0.51	0.48
4 (Neg.)	0.35	0.40	0.42	0.34	0.38	0.41
5 (Neg.)	0.31	0.30	0.33	0.28	0.27	0.31
6 (Pos.)	0.55	0.55	0.50	0.55	0.55	0.50
7 (Neg.)	0.52	0.59	0.56	0.51	0.57	0.54
8 (Pos.)	0.55	0.55	0.52	0.55	0.55	0.52
9 (Neg.)	0.38	0.34	0.36	0.37	0.33	0.35
10 (Pos.)	0.55	0.49	0.49	0.55	0.49	0.49
11 (Neg.)	0.49	0.48	0.48	0.46	0.45	0.45
12 (Pos.)	0.54	0.50	0.50	0.53	0.50	0.48
<i>n</i>	615	594	1209	615	594	1209
Exp. var. ^d	66%	65%	67%	67%	66%	68%
χ^2 Test ^e	NA	NA	NA	244.7*	253.9*	430.3*
Tucker & Lewis ^f	NA	NA	NA	0.77	0.76	0.77

^aThe analysis data set was randomly selected from the total data set.

^bThe validation data set was remainder of random selection for the analysis data set. This data set was used for the cross-validation study.

^cThe total data set consists of all subjects with complete information.

^dExplained variance.

^eThis χ^2 test results from the maximum likelihood analysis. Ho: One factor is sufficient.

^fTucker and Lewis's Reliability Coefficient.

*Significant at $p < .0001$.

Table 6). The same cross-validation procedure used in the initial factor analysis was used in the rotated factor analysis. The loadings for the rotated principal factor analysis are listed in the top half of Table 6. Because they closely approximate the loadings for the principal factor analysis, the loadings for the rotated maximum likelihood factor analysis are not listed in Table 6. The rotated analysis indicated that factor one explained from 63 to 68% of the common variance across the various samples, whereas factor two explained from 17 to 19% of the common variance. Factor one was comprised of all positive items; whereas factor two was comprised of all negative items. One item did not load adequately on either factor. Although the chi-square values in the maximum likelihood solution showed a rejection of the two-factor model, the Tucker and Lewis index was close to .90 for all three data sets.

Because the two-factor solution looked promising in the rotated factor pattern and structure, a confirmatory factor analysis was then done (see Table 7). This analysis used PRELIS2 (Joreskog & Sorbom, 1993a) for calculating tetrachoric correlations and asymptotic covariances. LISREL8 (Joreskog & Sorbom, 1993b) was used for confirmatory factor analysis. Again, a cross-validation procedure was used, but the two subsamples were not the same as those used in the exploratory factor analysis.

Most of the model fit indexes (i.e., RMSEA, GFI, AGFI, PGFI, and CFI) yielded slightly better values for a two-factor than a one-factor model, suggesting that the two-factor model more adequately represented the data. For the RMSEA index, values below .05 suggest a good fit; whereas for GFI, AGFI, and CFI, values greater than .90 generally indicate a good fit. In addition to these indexes, the analysis included PGFI to aid in

Table 6

Rotated Factor Pattern and Structure for SV: Two-Factor Solution From the Three Sets of Data

Item	Factor pattern (structure ^a)					
	Analysis data		Cross validation		Total	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
1 (Pos.)	0.49(.51)	0.04(.28)	0.44(.48)	0.07(.28)	0.42(.47)	0.09(.30)
2 (Neg.)	-0.05(.18)	0.47(.44)	-0.04(.21)	0.52(.50)	-0.04(.21)	0.49(.47)
3 (Pos.)	0.55(.57)	0.04(.31)	0.55(.51)	-0.09(.17)	0.57(.55)	-0.05(.24)
4 (Neg.)	0.00(.27)	0.55(.55)	0.06(.26)	0.41(.44)	0.06(.29)	0.45(.48)
5 (Neg.)	-0.04(.19)	0.47(.45)	-0.06(.18)	0.51(.48)	-0.07(.18)	0.48(.45)
6 (Pos.)	0.56(.55)	-0.03(.24)	0.51(.50)	-0.01(.23)	0.57(.56)	-0.02(.27)
7 (Neg.)	0.14(.12)	0.55(.48)	0.27(.47)	0.43(.56)	0.22(.44)	0.45(.56)
8 (Pos.)	0.57(.57)	0.00(.28)	0.51(.56)	0.09(.34)	0.53(.55)	0.04(.31)
9 (Neg.)	0.25(.31)	0.12(.25)	0.15(.27)	0.25(.32)	0.19(.31)	0.23(.33)
10 (Pos.)	0.53(.53)	0.00(.26)	0.48(.49)	0.03(.26)	0.53(.53)	0.01(.28)
11 (Neg.)	0.03(.30)	0.55(.57)	-0.04(.27)	0.65(.63)	0.00(.30)	0.59(.59)
12 (Pos.)	0.52(.50)	-0.05(.21)	0.53(.53)	-0.01(.25)	0.54(.54)	0.00(.28)
n	615		594		1209	
Over-all MSA ^b	0.82		0.80		0.82	
Inter-factor r	0.49		0.48		0.51	
Exp. var. ^c	64%	19%	63%	18%	67%	17%
Maximum Likelihood Solution						
Inter-factor r	0.51		0.48		0.52	
Exp. var. ^c	65%	19%	64%	18%	68%	17%
χ^2 Test	$\chi^2(43) = 105.1, p < .0001$		$\chi^2(43) = 148.9, p < .0001$		$\chi^2(43) = 202.2, p < .0001$	
Tucker & Lewis	0.90		0.83		0.88	

^aThe factor structure is the matrix of correlations between items (or variables) and common factors. If the common factors are uncorrelated, the factor structure is equal to factor pattern.

^bKaiser's measure of sampling adequacy (MSA) is a summary of how small the partial correlations are relative to the ordinary correlations; values greater than .8 can be considered good.

^cExplained common variance.

Table 7

Summary Results of Confirmatory Factor Analyses of 12 SV Items

Item	Analysis data (n = 608)						Validation data (n = 608)						Total (N = 1218)			
	Model 1-1		Model 1-2		Model 2-1		Model 1-2		Model 2-2		Model 1-2		Model 1-2		Model 2-2	
	FI	F1	FI	F1	FI	F2	FI	F1	FI	F2	FI	F1	FI	F1	FI	F2
1 (Pos.)	0.958	0.967	0.947	0.947	1.000	1.000	0.895	1.009	0.895	1.000	0.976	1.046	0.976	1.046	1.000	1.000
2 (Neg.)	0.693	0.711	0.920	0.920	1.155	1.185	0.637	0.906	0.637	0.968	0.704	0.995	0.704	0.995	0.995	0.995
3 (Pos.)	0.934	0.925	0.920	0.920	1.155	1.185	0.880	0.906	0.880	0.968	0.935	0.995	0.935	0.995	1.107	1.107
4 (Neg.)	0.829	0.835	0.920	0.920	1.155	1.185	0.882	0.906	0.882	0.968	0.779	0.995	0.779	0.995	0.951	0.951
5 (Neg.)	0.614	0.615	0.920	0.920	1.155	1.185	0.491	0.906	0.491	0.968	0.645	0.995	0.645	0.995	0.951	0.951
6 (Pos.)	1.066	1.069	1.027	1.027	1.403	1.341	0.878	1.025	0.878	0.947	0.935	0.972	0.935	0.972	1.367	1.367
7 (Neg.)	1.000	1.000	1.000	1.000	1.403	1.341	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
8 (Pos.)	1.058	1.059	1.000	1.000	1.403	1.341	0.947	1.000	0.947	1.000	1.005	1.000	1.005	1.000	0.818	0.818
9 (Neg.)	0.851	0.755	1.000	1.000	1.149	0.954	0.602	0.957	0.602	0.824	0.676	1.036	0.676	1.036	1.293	1.293
10 (Pos.)	1.017	0.999	0.980	0.980	1.410	1.364	0.903	0.957	0.903	0.971	1.015	1.036	1.015	1.036	1.293	1.293
11 (Neg.)	1.003	1.008	0.980	0.980	1.410	1.364	0.905	0.957	0.905	0.971	0.937	1.036	0.937	1.036	1.293	1.293
12 (Pos.)	0.911	0.829	0.868	0.868	0.868	0.784	0.759	0.802	0.759	0.802	0.855	0.875	0.855	0.875	0.875	0.875
Model description	One-factor	One-factor free	Two-factor	Two-factor free	Two-factor	Two-factor free	One-factor	One-factor free	Two-factor	Two-factor free	One-factor	One-factor free	Two-factor	Two-factor free	Two-factor	Two-factor free
Factor I	NA	NA	0.785	0.785	0.785	0.750	NA	NA	NA	0.752	NA	NA	NA	NA	0.705	0.705
χ^2 Test	149.3*	133.8*	118.0*	118.0*	118.0*	93.4*	158.6*	117.3*	158.6*	117.3*	239.5*	151.4*	239.5*	151.4*	151.4*	151.4*
	(df = 54)	(df = 53)	(df = 53)	(df = 53)	(df = 53)	(df = 52)	(df = 53)	(df = 51)	(df = 53)	(df = 51)	(df = 53)	(df = 51)	(df = 53)	(df = 51)	(df = 51)	(df = 51)
RMSEA ^a	0.054	0.050	0.045	0.045	0.045	0.036	0.057	0.046	0.057	0.046	0.054	0.040	0.054	0.040	0.040	0.040
GFI ^b	0.966	0.970	0.973	0.973	0.973	0.979	0.965	0.974	0.965	0.974	0.972	0.982	0.972	0.982	0.982	0.982
AGFI ^c	0.951	0.956	0.961	0.961	0.961	0.968	0.949	0.961	0.949	0.961	0.959	0.974	0.959	0.974	0.974	0.974
PGFI ^d	0.669	0.659	0.661	0.661	0.661	0.653	0.656	0.641	0.656	0.641	0.661	0.655	0.661	0.655	0.655	0.655
CFI ^e	0.869	0.889	0.911	0.911	0.911	0.943	0.875	0.923	0.875	0.923	0.848	0.919	0.848	0.919	0.919	0.919

Note. The analysis and cross-validation data sets are not the same data sets used for exploratory factor analyses. This study employed weighted least squares with tetrahedric correlations and asymptotic covariance matrix.

^aRMSEA = Root Mean Square Error of Approximation, as a measure of discrepancy per degree of freedom.

^bGFI = Goodness of Fit Index, measuring how much better the model fits compared with no model at all.

^cAGFI = Adjusted Goodness of Fit Index, adjusting GFI to incorporate a penalty function for the inclusion of additional parameters.

^dPGFI = Parsimonious Goodness of Fit Index, a single index that simultaneously reflects both the fit and the parsimony of the model.

^eCFI = Comparative Fit Index, measuring the proportionate improvement in fit by comparing a target model with a more restricted, nested baseline model.

*Significant at $p < .0001$.

choosing a superior model. The fit indexes for the two-factor model with measurement error for items 12 and 9 correlated were superior to the fit indexes for the one-factor model (Table 7). This two-factor model was cleanly differentiated along the lines of positive vs. negative items.

Related Findings

Other findings that may be useful in evaluating the potential of the SV scale are (1) the relationship between SV scores and social desirability, and (2) determination of which performance and demographic variables best predict SV scores.

Relationship of SV Scores to Social Desirability. The social-desirability (SD) data indicate the students were relatively conservative in describing their positive characteristics; the average score on these items was 1.40 (out of a possible 4). A majority of the students answered “no” to all of the SD items except the item “I always wash my hands before every meal,” to which slightly more than half of the students answered “yes.” Correlational analysis also suggested a minimal relationship between responses to the SD and SV scales ($r = -.10$).

Students rated as poor achievers and those judged to have poor work habits scored higher on the SD scale than students rated higher in these two areas. For the achievement groups, the SD means were 1.53 for the poor group, 1.36 for the average group, and 1.27 for the outstanding group, with a statistically significant difference ($p < .05$) between the poor and outstanding groups. Although the SD means were 1.63 and 1.43 for the low and high work-habits groups, respectively, the means were not significantly different. In general, these means suggest that students with low achievement and poor work habits

may have had a greater tendency to overstate their positive characteristics than did students with better achievement and work habits.

Multiple regression analysis. Group analyses described earlier indicated that SV scores differed by achievement group (high versus average and low), work habits group, gender, and ethnicity (Caucasian versus African American). In a multiple regression analysis using these group dimensions as predictor variables for SV scores, achievement levels emerged as the only significant predictor. Table 8 shows that only achievement level displayed a significant beta weight and a significant uniqueness index. However, the equation containing the four predictor variables accounted for only 11% of the variance in the SV scores, with achievement levels accounting for 2% more of the variance than that accounted for by the other three predictors.

Findings in Separate Schools

This section highlights major findings within each school and identifies deviations from patterns in the total sample and in the other schools (see Table 9). School valuing differed across schools, with the SV mean for school 3 students significantly higher ($p < .05$) than means in both of the other schools. Additionally, the SV mean for school 1 subjects was significantly higher than the mean for students in school 2. The pattern suggests that students in the suburban school (school 3) valued school activities the most and students in the urban school (school 2) valued school the least.

Findings for School 1

On three major psychometric dimensions (internal consistency, SD mean, and SV mean), findings in school 1 are similar to those of the total sample (See Table 10).

Table 8

Beta Weights and Uniqueness Indices Obtained in Multiple Regression Analyses Predicting School Valuing Scores

Predictor	<u>Beta weights^a</u>		<u>Uniqueness indices^b</u>	
	Beta	<u>t</u> ^c	Unique index	<u>F</u> ^d
1. ACHIEVEMENT	-0.272	-2.152*	0.0202	4.698*
2. ETHNIC	-0.124	-1.819	0.0144	3.349
3. GENDER	-0.039	-0.551	0.0014	0.326
4. WORK HABITS	-0.006	-0.045	0.0001	0.023

^aBeta weights are standardized multiple regression coefficients obtained when SV was regressed on all four predictors.

^bUniqueness indices indicate the ratio of variance in SV scores accounted for by a given predictor variable beyond the variance accounted for by the other three predictors.

^cFor t tests that tested the significance of the beta weights df = 204.

^dFor F test that tested the significance of the uniqueness indices df = 1, 204.

*p < .05

Table 9

Descriptive Data for Separate Schools

			<u>Comparative variables</u>			
	Sample		SD	SV	Achieve	Work Habits
<u>School</u>	<u>Size</u>	<u>K-R 20</u>	<u>Mean</u>	<u>Mean</u>	<u>Mean</u>	<u>Mean</u>
1	341	.72	1.52	8.31	1.86	68.35
2	254	.63	2.22	7.69	1.98	72.91
3	644	.76	1.02	9.36	2.01	73.58

Table 10

Descriptive Data for Demographic Groups in School 1 (n=341)

Comparative Variables					
Demographic Groups	Sample Size	SD Mean	SV Mean	Ach. Mean	Work Habits Mean
Ethnic Group					
Native American	4	1.25	8.25	1.75	---
African American	63	1.68	8.41	1.87	68.43
Asian American	4	3.00	10.75	2.00	79.00
Hispanic	145	1.66	8.26	1.72	60.89
Caucasian	79	1.16	8.54	2.09	85.65
Other	45	1.42	7.78	1.87	71.10
Gender					
Male	168	1.53	8.13	1.75	67.08
Female	180	1.52	8.49	1.94	71.62
Grade Level					
6th	135	1.55	8.81	1.94	67.56
7th	63	1.86	7.54	1.82	65.93
8th	143	1.35	8.18	1.79	69.97
Achievement Level					
Low	103	1.74	8.42	---	45.87
Average	181	1.46	8.03	---	75.38
High	54	1.30	9.17	---	93.40
Work Habits					
Low	34	1.76	8.41	1.12	---
High	37	1.41	8.70	2.68	---

Participants from school 1 had an internal consistency coefficient (.72) only slightly below the coefficient for the total sample (.74). The social desirability mean for students in this school (1.52) was slightly higher than the mean for the total sample (1.40), and the mean on the SV scale (8.31) was slightly lower than the mean for the total sample (8.72). None of these differences were statistically significant.

The ethnic composition of school 1 differed from that of the composite sample because of its disproportionate representation of Hispanics (i.e., 90% of the Hispanics in the total sample came from this school). Inasmuch as the Hispanic SV mean (8.30) was among the lowest of the ethnic groups in the total sample, the heavy representation of Hispanics in school 1 may have decreased its SV mean.

The ethnic comparisons for the three major ethnic groups in school 1 yielded SV means that slightly favored Caucasians over African Americans and Hispanics: Caucasians = 8.54, African Americans = 8.41, and Hispanics = 8.26. Unlike the differences in means for the total sample (where Caucasians were significantly higher than both African Americans and Hispanics), none of the differences in ethnic means for SV at this school were statistically significant.

With respect to gender, patterns in school 1 were similar to those in the total sample, although gender differences were not significant in school 1. Females in this school scored higher (8.49) than males (8.13) on the SV. (In the total sample, the gender difference in SV means was statistically significant, with an SV mean of 9.02 for females and 8.40 for males).

The SV grade-level means were nearly equivalent (8.62, 8.78, and 8.72) in the total sample, but somewhat different in school 1 (6th = 8.81, 7th = 7.54, 8th = 8.18). The only significant grade-level difference in school 1, however, was between the 6th and 7th grade means, and even that difference accounted for a small portion (.03) of the variance.

Teacher ratings of academic performance in school 1 produced a distribution similar to that obtained in the total sample. In this school 103 students were classified as poor achievers, 181 as average achievers, and 54 as outstanding achievers. Although this distribution was slightly more skewed toward the low end than was the case for the total sample, it is generally consistent with a normal curve.

Findings from school 1 indicate that students in the top achievement group had a significantly ($p < .05$) higher SV mean (9.17) than did students in the average group (8.03), which did not differ significantly from the poor group (8.42). This significant difference was similar to the pattern in the total sample.

The other major validity criterion used in this study, teacher rating of student work habits, showed that the pattern in school 1 was in the same direction as that for the composite sample. The SV difference between the high (8.70) and low (8.41) work habits groups in school 1, however, was less pronounced (.29) than that in the total sample (1.30), where the means were 9.49 for the high group and 8.19 for the low group. Unlike the total sample where there was a statistically significant difference at the $p < .0001$ level, the difference in SV means for the work habits groups in school 1 was not significant.

Findings for School 2

School 2 had the highest percentage of African Americans (73%) of any school participating in the study. Caucasians made up 17% of the sample, and all other ethnic groups were negligibly represented. Table 11 presents the descriptive data for school 2.

Two features of the data from school 2 suggest caution in projecting trends from this school. School 2 had the lowest K-R 20 coefficient (.63) of any school (.72 for school 1 and .76 for school 3) for the SV scale. The lower internal consistency coefficient for school 2 suggests that more students may have misunderstood the items or responded carelessly than in the other schools. It is also possible that students from ethnic groups that scored low in internal consistency may value some aspects of school (e.g., social activities), but not others (e.g., academic). A second concern about the interpretation of the data from school 2 is that this school obtained the highest SD mean (2.22) of any school (1.52 for school 1 and 1.02 for school 3). This raises the possibility that students in school 2 may have inflated their responses to the SV scale to a greater degree than students in the other schools.

Despite the higher SD mean for students in school 2, this school yielded the lowest SV mean (7.69) of any school (8.31 for school 1 and 9.36 for school 2). These school differences on the SV scale were all statistically significant ($p < .05$). Thus, subjects in school 2 saw less linkage between school activities and adult opportunities than did students in the other schools.

Compared to other schools, results from school 2 provided the clearest contrast between African American and Caucasian students from a similar socioeconomic

Table 11

Descriptive Data for Demographic Groups in School 2 (n=254)

Demographic Groups	Comparative Variables				
	Sample Size	SD Mean	SV Mean	Ach. Mean	Work Habits Mean
Ethnic Group					
Native American	8	1.88	8.13	1.38	44.00
African American	185	2.24	7.90	2.03	77.03
Asian American	8	2.13	6.63	2.00	74.00
Hispanic	1	2.00	12.00	2.00	---
Caucasian	43	2.23	6.91	1.95	63.82
Other	8	1.89	7.00	1.75	35.00
Gender					
Male	105	2.21	7.68	1.75	56.57
Female	148	2.22	7.69	2.15	84.66
Grade Level					
6th	99	2.61	6.73	1.85	78.18
7th	93	1.85	8.66	1.77	66.88
8th	62	2.16	7.66	2.52	76.86
Achievement Level					
Low	81	2.19	7.25	---	46.48
Average	88	2.07	8.01	---	82.80
High	78	2.35	7.85	---	90.34
Work Habits					
Low	24	2.13	7.13	1.17	---
High	31	2.45	8.32	2.90	---

background. This is a particularly salient comparison, because the SD means for these two ethnic groups in school 2 were practically identical. Thus, we can place equal confidence in their responses on the SV scale. This equivalence in SD means is different from the pattern in the total sample, where African American students scored higher on the SD scale than did Caucasian students.

With social desirability tendencies equivalent for African American and Caucasian students in school 2, African Americans scored significantly higher ($p < .05$) on the SV scale (mean = 7.90) than did Caucasian students (mean = 6.91). This finding is different from the trend in the total sample, where Caucasian students obtained a significantly higher ($p < .05$) SV mean than did African American students. In making ethnic comparisons of this nature, it is crucial to separate economic effects from ethnocultural effects. It appears that when economic factors were similar, the culture of the African American students in school 2 may have provided greater support for school activities than the culture of the Caucasian students.

SV patterns for other demographic variables in school 2 also differed from the pattern in the total sample and in the other schools. For example, the gender means were practically identical in school 2 (7.69 for girls vs. 7.68 for boys), whereas the other schools' and the total sample's gender means had larger differences. (School 3 and the total sample had statistically significant differences in gender means.) Also, school 2's grade level pattern was the opposite of that in school 1. In school 2, 8th graders obtained a significantly higher SV mean (7.76) than 6th graders (6.73), while the 7th grade SV mean (8.66) was significantly higher than both the 6th and 8th grade means. In contrast to

school 1, where 7th graders obtained the lowest SV mean, 7th graders in school 2 obtained the highest SV mean.

Teacher ratings of achievement for school 2 produced a flatter distribution than that of the composite sample, with about the same number of students (81, 88, and 78) classified in each of the three categories. The pattern of SV means for the three achievement groups in school 2 was also different from that in the composite sample, with less difference in the means of the three groups than that of the total sample. In addition, students in the "average" achievement group obtained a slightly higher SV mean (8.01) than those in both the "high" (7.85) and low achievement group (7.25). None of the SV differences between the achievement groups in school 2 were statistically significant.

The work habits-SV pattern for School 2 was similar to that in the total sample, with the mean of the low groups being 7.13 and of the high group 8.32, resulting in a significant difference at the .05 level. Thus, students rated as having the best work habits reported greater valuing of school activities than did students rated as having the worst work habits.

Although the findings from school 2 are somewhat consistent with those from the total sample, some differences are worth remembering. This school had the highest representation of African American students of any school, higher SV scores for African Americans than for Caucasians, no gender difference on SV scores, a flatter achievement distribution and smaller SV differences for the achievement groups than the total sample, and the highest SD mean and the lowest internal consistency on the SV scale of any school.

Findings for School 3

Slightly more than half of the students ($n = 644$) in the total sample came from school 3. Although all ethnic groups were represented in this school, a majority of the students (435) were Caucasians. However, 124 African Americans were also included in the sample. Descriptive data for school 3 are presented in Table 12.

In two major respects, we can place more confidence in the data from this school than from any other school included in the total sample. School 3 had the highest internal consistency (.76) on the SV scale of any school and the lowest SD mean (1.02). These findings suggest that the students' responses to the questionnaire reflect a true valuing of school activities. The SV mean for school 3 (9.36) was significantly higher than those of the other schools.

Because only two ethnic groups (Caucasians and African Americans) in school 3 had sufficient samples to warrant statistical comparisons, the SV difference between those two groups should be noted. In contrast to the same ethnic comparison in school 2, Caucasian students in school 3 obtained a significantly ($p < .0001$) higher SV mean (9.64) than African American students (8.56). Because students from School 3 came from a larger area of the city than did the students in school 2, it is unlikely that Caucasian and African American students in school 3 came from similar socioeconomic backgrounds.

The SV gender differences in school 3 were consistent with those in the composite sample, with the female SV mean of 9.95 significantly higher ($p < .0001$) than the male SV mean of 8.79. The SD means at this school were similar for males and

Table 12

Descriptive Data for Demographic Groups in School 3 (n=637)

Demographic Groups	Comparative Variables				
	Sample Size	SD Mean	SV Mean	Ach. Mean	Work Habits Mean
Ethnic Group					
Native American	11	1.45	8.55	2.00	57.00
African American	124	1.39	8.56	1.85	55.65
Asian American	31	1.19	9.87	2.52	98.11
Hispanic	7	1.43	8.71	.76	---
Caucasian	435	.86	9.64	2.04	75.63
Other	29	1.41	8.93	1.79	57.25
Gender					
Male	314	1.06	8.79	1.85	62.08
Female	323	.98	9.95	2.17	86.38
Grade Level					
6th	213	.86	9.51	2.05	73.32
7th	202	1.25	9.23	1.92	71.50
8th	227	.96	9.32	2.07	75.78
Achievement Level					
Low	181	1.11	8.60	---	43.65
Average	264	1.08	9.10	---	83.50
High	189	.85	10.57	---	96.87
Work Habits					
Low	50	1.32	8.56	1.06	---
High	62	.94	10.55	2.95	---

females, and, in fact, the female SD mean of .98 was among the lowest of any subgroup in the sample. In contrast to the clear gender differences in school 3, the grade level SV means were similar (6th = 9.51, 7th = 9.23, 8th = 9.32). Teacher ratings of student achievement produced an approximate normal distribution of 181 students in the “poor” category, 264 in the “average” range, and 189 in the “outstanding” category. Achievement classification proved highly predictive of SV means: 8.60 for poor achievers, 9.10 for average achievers, and 10.57 for outstanding achievers. With the exception of the difference in the SV means for the poor and average achievers, differences in SV means for the achievement groups were all significant ($p < .05$). A similar distinction was manifested for the work habits groups: 8.56 for the low group and 10.55 for the high group. This SV difference was significant at the .0001 level. Thus, the data from school 3 strongly support the predictive validity of the SV scale.

CHAPTER V

DISCUSSION

The primary purpose of this study was to develop a psychometrically sound instrument to measure middle school students' valuing of school activities. Such an instrument would be a valuable tool to researchers and educators, because skills attained during the first eight years of school will likely affect success in adulthood. A devaluing of school activities may preempt the development of skills that are necessary for occupational success. It is assumed that students who perceive a connection between school activities and adult opportunities will work harder in school and take greater advantage of learning opportunities than those who see little purpose in school.

Psychometric Adequacy of the School-Valuing Scale

Because all of the items were minimally correlated with the measure of social desirability, all were considered acceptable for further analysis. Responses to all items were moderately correlated with the total SV score, and all items contributed to a similar degree to the internal consistency of the scale. However, additional item analysis suggested that the items, especially the positive items, were likely to elicit responses reflective of school valuing. Consequently, the stringency of the items may need to be increased. This could perhaps best be accomplished by changing the wording of items to make it more difficult to say yes to positively worded items and no to negatively worded items. For example, the wording of the item "paying attention to my teachers will increase my chances for having a good job as an adult" could be changed to the stronger

wording "paying close attention to my teachers is necessary for me to have a good job as an adult."

The internal consistency of the SV scale (.74) was marginally acceptable. Hence, our research team is working to improve this aspect of the scale by clarifying the wording of some items and by using a Likert-type answer format that allows for greater variability in responses. Clearer wording may be especially helpful with certain ethnic groups, such as African Americans and Hispanics, who had a much lower internal consistency coefficient than did Caucasians. Using a 4-point Likert scale to increase the range of scores will likely also elevate internal consistency.

The assessment of validity involved both criterion-related and construct-related validity. Criterion-related validity assessment included both concurrent and known groups validity. The concurrent validity yielded significant correlations between the SV scores and teacher performance ratings. Although significant, these correlations would be considered low to moderate. To provide a more precise assessment of the concurrent validity of the instrument, the researchers intend to substitute students' numerical grades for the three-category achievement ratings used in this study. This change will increase the variability of achievement ratings, will be a more objective measure of student achievement, and will eliminate the need for teachers to rate each student on academic achievement.

In the analysis of known groups validity, a comparison of the three achievement groups indicated that the SV mean for the outstanding group was significantly higher than the means for the other two groups. Thus, at the very least, the SV scale appears to

distinguish students with outstanding achievement ratings from those with lower achievement ratings . Similarly, the SV scores for students judged to have the best and poorest work habits were also significantly different. While direct observation of student work habits would be a stronger method of assessing this variable, it should be noted that the internal consistency of the work-habits rating scale was very high (.975).

The series of factor analyses conducted in this study point to two possible factor patterns: (a) a general factor with all items loading acceptably on that factor; (b) a two-factor pattern, with a primary factor and a secondary factor. Although the cross-validation procedure used in both the principal factor analysis and the maximum likelihood factor analysis yielded consistently strong loadings on a general factor, both the chi-square test and the Tucker and Lewis reliability coefficient indicated a problem with factor-data fit for the one-factor solution. Subsequent factor analysis pointed to two factors, one composed of positive items and the other of negative items. The positive factor accounted for substantially more of the variance than did the negative factor. The positive factor might be considered an acknowledgment of the connection between behaviors in school and levels of adult success (i.e., good things will happen in adulthood if one takes advantage of opportunities in school), whereas the negative factor might represent more of a perception of disconnection between behaviors in school and adult success (that is, what happens in school will not affect the quality of my adult life).

In evaluating the importance of the primary and secondary factors, one should consider two additional findings: (a) positive items were more likely than negative items to elicit pro-valuing responses, with the composite SV mean for the positive items being

4.79 and the composite mean for the negative items being 3.95; (b) the assessment of the criterion-related validity showed that negative items were more highly correlated with performance ratings than were positive items. Although the positive items may account for more of the variance in the SV scale, the negative items may prove to be more useful in predicting performance measures.

In future development of the scale, it would be advisable to extend both the item pool and participant pool. More negatively worded items (i.e., no connection between school and the future) are especially needed. In fact, a scale composed entirely of negatively worded items may better predict performance measures than would a scale composed of both positive and negative items.

At least two ethnic groups, Native Americans and Asian Americans, were under-represented in this study. Past evidence (Mau, 1995) suggests that these two groups may represent the extremes of the school valuing continuum. Unfortunately, in the current research we could not get access to schools having large numbers of Native Americans and Asian Americans.

The School-Valuing Scale is considered a work in progress. Its principal weakness is its low to moderate concurrent validity. More precise criterion measures of academic performance may help build a stronger case for the criterion-related validity of the scale. The criterion-related validity may also be strengthened by extending the item pool of the SV, especially including more items that reflect a disconnection between school and opportunities for adult success. In its present state of development, the SV

scale is suitable for use as a research instrument, but not as a clinical tool with diagnostic and prescriptive utility.

Linkage of the School-Valuing Scale to Demographic Groups

Although not the central focus of this study, school-valuing scores were contrasted across demographic groups. Those differences will now be considered in the context of available research contrasting demographic groups similar to those included in this study.

Gender Findings of the Study

Most of the previous research has focused specifically on the ability of children to think about future career aspirations, rather than on how they perceive the relationship between current academic performance and future career goals. While other studies have found that boys value career goals more than girls (e.g., Lamm et al., 1976; Solantaus, 1987), those studies used slightly older adolescents (14-16 years and 11-15 years, respectively) than did the current study (11-13 years). The results of the current study showed a significantly higher mean in school valuing for girls than for boys, indicating that girls appear to have a better conception of school's contribution to future career success than do boys. A study by Huang and Waxman (1994) found significantly higher scores in academic motivation for girls than for boys, a variable that may correspond more closely to school valuing than does the career aspirations variable.

Greene's (1990) conclusion that females perceive a need to postpone career plans for familial roles as they progress further into adolescence may explain the differences found between this and the previous studies. Eccles (1984) also determined that females

experience gender role conflict between career goals and marriage/family goals as they get older, inhibiting them from having the single-minded career focus that males possess. Whether this phenomenon results in a devaluing of school activities by females could be determined by extending the current research to older adolescents.

Grade Level (Age) Findings of the Study

The findings of this study adds to Nurmi's (1989a) finding that younger adolescents (11 year olds) could extend their occupational and educational interests into the future to about the age of twenty. The current study extended the future time perspective factor to adult opportunities (i.e., understanding that excelling academically will enhance one's ability to succeed in the workplace).

Greene's (1986) study on future time perspective of older adolescents (9th, 12th, and 14th grades) found that adolescents' ability to make the connection between school activities and planning for career success increases as they age. The current study found no significant differences in school valuing across the three grade levels (6th, 7th, and 8th). This pattern is inconsistent with trends in Wigfield and Eccles' (1992) study, which indicated that children value academic tasks less as they get older. Anderman and Midgley's (1996) longitudinal study of 5th, 6th and 7th graders also found declines in task value across grades. The current study found no evidence to support this pattern.

Racial/Ethnic Findings of the Study

The three ethnic groups that were large enough to justify statistical comparisons were Caucasian ($n=557$), African American ($n=372$), and Hispanic ($n=153$). The SV mean for Caucasians was significantly higher than the means for the other two groups,

which did not differ significantly. Another statistic that varied across ethnic groups was the internal consistency of the SV scale. The internal consistency coefficient for the Caucasian group was significantly higher than for the other groups, suggesting that Caucasian students gave closer scrutiny to their responses than did the other students or that Caucasian students have a more coherent perspective of the long-term value of school than do the other groups.

Previous research that most closely approximates the ethnic comparisons of the current study is Moerk's (1974) examination of the future aspirations of Caucasian, African American and Mexican American 12- and 15-year-olds. His study found gender differences within racial groups, but some of his findings across racial groups are similar to the findings of the current study. For example, he found that Caucasian males had higher levels of educational aspirations than either African American or Hispanic males. And, with the exception of African American girls, all minority groups experienced a decline in educational goals as they aged.

One explanation for the lower school-valuing scores among minority groups has been offered by Taylor et al. (1994), who suggested that the perception of a discriminatory "job ceiling" lessens the importance African Americans place on education. While Taylor et al.'s study was limited to African Americans, it can be presumed that the same perception of discrimination extends to Hispanics, affecting their beliefs in the long-term efficacy of education. Taylor et al. also found a significant effect for social class on the perception of a discriminatory job ceiling, with lower class adolescents perceiving the discrimination to a greater extent than higher class

adolescents, and on school engagement, with higher class students reporting greater school engagement than lower class students. (This finding is relevant to the results obtained in school 2 and will be discussed in that section of the chapter.)

Another reason for the difference in school valuing among ethnic groups may be parental involvement in their children's educational aspirations. Keith and Lichtman's (1992) study found a positive impact on grades when parents discussed school activities with their children and had high expectations for their success. Huang and Waxman's (1994) comparison of Asian American and Caucasian middle school mathematics students found that Asian Americans' achievement motivation, academic involvement, satisfaction, and parental investment were significantly higher than those for Caucasians. This parental investment results in less socialization time for Asian American adolescents, more time spent on homework, and more time spent in additional reading than for Caucasian students. In other words, involved parents exert influences that result in their children spending more time on their educational pursuits. Increasing participation from some ethnic groups (such as Native Americans and Asian Americans) in future administrations of the SV scale will allow the researchers to compare ethnic differences in school valuing across more groups.

Baird's study indicates that scales such as the SV scale do not predict which individuals will be high achievers in specific adult roles (e.g., management, leadership, scientific research, artistic work, community service). Findings from these studies suggest that it might be more useful to focus the SV scale on groups presumed to be at the low end of the school valuing continuum (such as Native Americans) than groups thought to

be at the high end (such as Asian Americans). It would also be worthwhile to explore the connection between school valuing and time spent on academic activities outside the classroom, as well as to investigate the relationship between school valuing and students' perceptions of parental involvement and expectations.

Findings in Individual Schools

Demographic composition of School 1 differed from that of the other two schools because of a large population of Hispanic students. Inasmuch as this group's SV scores were among the lowest of the ethnic groups, it is likely that the school's overall SV scores were depressed by the heavy representation of this ethnic group. Students in the average achievement group in school 1 obtained lower SV scores than students in the low achievement groups of the other schools. Also in this school, the SV difference between students with high and low work habits was less pronounced than in the total sample.

The results of grade level comparisons for SV scores in school 1 differed from the total sample in that its 7th graders scored lower in school valuing than the other two grades, whereas 7th graders in school 2 obtained the highest SV score and students' SV scores in school 3 were equivalent across the grades. The reason for these differences are not clear. School 1 had a high percentage of Hispanic students and school 2 a high percentage of African Americans. However, ethnic groupings at the various grade levels appeared not to account for the differences in grade-level patterns of SV means.

Located in an urban area, students in school 2 had the lowest internal consistency scores on the SV scale of any school, indicating that school 2 students may not have understood some of the items or may not have taken the statements and their answers

seriously. Also, school 2 students had the lowest SV mean of the schools, which implies that more students at this school failed to recognize the relevance of school. African American and Caucasian groups in school 2 both had the highest SD scores of the ethnic groups in any of the schools, an indication that both groups may have answered the school-valuing statements in a way they thought would be socially desirable. In contrast to patterns in the total sample, African Americans in school 2 scored higher on school valuing than Caucasians. This result suggests that ethnic and socioeconomic factors may interact in their effects on school valuing.

School 3, a suburban school, yielded the highest internal consistency on the SV scale, the highest mean on the SV scale, and the lowest SD mean of any school. Taken together, these three findings suggest that the students responded to the instrument in a thoughtful manner, that they recognize the value of school, and that they did not inflate the importance they place on school activities. As with school 2, the socioeconomic status of the school's population may have contributed to their SV scores, because past research has noted that parents with more resources are likely to emphasize the value of school (Wentzel, 1994; Wlodkowski & Jaynes, 1990).

The Role of the SV Scale in Future Educational Practice and Research

Caution must be taken when assuming that any instrument given at the middle school, high school, or college level can predict adult success. In particular, Baird (1985) cites research showing that grades and tests do not adequately predict "high-level (accomplishment) or creative accomplishment" (p.3). (See the above mentioned article for a discussion of this literature.) Baird points to several reasons for the lack of

predictability of adult success, including the “. . . sheer diversity and specificity of human activities” (p. 5), the specifics of the situation, length of time between the academic assessment and the assessment of the accomplishment, intervening variables (e.g., emotional and social skills), and, ultimately, the “complex, multifaceted” (p. 5) aspect of accomplishment. It would be foolish to predict with any certainty that because individuals value school, career success and high-level achievement in life will necessarily follow.

It is helpful to remember that in this study we are trying to target students at the low end of the achievement/school valuing spectrum (and the SV scale does appear to discriminate better on that end). The main objective of this research is not to predict who will be successful as an adult, but to identify students who may need help in valuing school. By appreciating the opportunities provided by school, they will be more likely to avail themselves of academic resources and, thereby, develop skills that will increase their opportunities for adult success.

Because only three groups were sufficiently represented to allow statistical comparisons, it would be helpful to increase the sample of other ethnic groups (e.g., Asian American and Native American) to determine whether their school valuing differs significantly from the groups that were compared in this study. Mau's (1995) study found that Native Americans had significantly lower educational aspirations and lower perceived parental expectations than any other ethnic group. The sample used in the current study should be expanded to include an adequate representation of Asian Americans and Native Americans, thus broadening the ethnic base for the school-valuing norms.

Some of the factors that have been identified by previous research as impacting school valuing were not measured in the current study. One crucial influence appears to be parental valuing of education and the parents' expectations for their children's academic success (Eccles & Harold, 1993). Understanding the influence of parents on their children's school valuing could help researchers and educators develop interventions that include parents as well as students. A related variable is the socioeconomic status of the family; lower classes may not value education and have the same opportunities, privileges, and educational or career goals as families of higher SES (Keith & Lichtman, 1992). One role of interventions would be to sensitize parents and students to the importance of educational success.

Assessing school valuing is a crucial element in educational planning. Numerous researchers have documented the necessity of promoting the relevancy of school to children and their parents (Hamilton, 1993; Powell, 1990; Toepfer, 1994; Wentzel, 1994; Wlodkowski & Jaynes, 1990). Children who are at highest risk for dropping out of school tend to have the following characteristics: being Hispanic or African American; being two or more years older than others in their grade because of repeating one or more grades; being suspended from school because of behavioral problems; having families that have moved from place to place; attending three or more schools; being poor readers; and having a high rate of absences, i.e., over 18 days during the school year (University of Miami, 1988). If students with these characteristics could be identified in future administrations of the scale, it would allow interventions to be designed specifically for these individuals. Ruben (1989) recommended sessions that include discussing how role

models (particularly those of the same ethnicity as the students) attained their success through education, teaching students the meaning of responsible behavior, practicing listening skills, teaching students to ask teachers for help, and practicing cooperation with their peers.

Without an emphasis on current actions and the relationship of those actions to future goals, it is possible that students of middle school age will devalue the educational experience and fail to make use of current opportunities. An assessment of middle school students' school valuing can be a first step in developing interventions that increase awareness of the connection between school and adult success. Where to begin in strengthening school valuing and what interventions will be most successful in accomplishing this goal are yet to be determined. What is clearer is the need for a reliable and valid measure of school valuing to help educators evaluate the efficacy of whatever interventions are attempted.

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APPENDICES

APPENDIX A
ORIGINAL MIDDLE SCHOOL SURVEY

MIDDLE-SCHOOL SURVEY

Instructions: This is not a test. There are no right or wrong answers. We simply want to know how you feel about certain work and school activities. Your opinions are really important in helping us find ways to make school more enjoyable and useful to you. We request that you put your answers on an answer sheet so we can computer score your responses. You will first need to understand each item on the survey and then indicate on the answer sheet how strongly you agree or disagree with that statement. Please use the following scale in marking your response to each item:

1 = Totally agree, 2 = Agree more than disagree, 3 = Don't agree or disagree, 4 = Disagree more than agree, 5 = Totally disagree.

Before starting with the survey, you need to provide certain information about yourself. You need not provide your name, but we do need to have you mark your sex on the answer sheet. At the top, middle part of the answer sheet, find the little box that says SEX and darken in the circle with an M if you are a male and the circle with an F if you are a female. We have put an ID number on the board that you should copy and bubble in under columns A through G under the Identification Number on the answer sheet. Add to that number your personal number under columns H and I. If you respond to this survey again in a few weeks, we will use this same ID number for you. In scoring and recording your responses to the survey, we will not use your name.

You can help us most by indicating how you really feel about each of the statements on this survey. We will read the statements together. If any statement is unclear to you, raise your hand and I will explain it to you. Before marking your response to each statement, be sure that the item number on the answer sheet is the same as the number of the statement on the survey. Answer each item 1 through 5.

1 = Totally agree, 2 = Agree more than disagree, 3 = Don't agree or disagree, 4 = Disagree more than agree, 5 = Totally disagree.

Examples:

- a. Lunch time is one of the most enjoyable parts of the school day.
- b. School starts too early in the morning.
- c. Our school building is really nice.
- d. I like math more than any subject.

1 = Totally agree, 2 = Agree more than disagree, 3 = Don't agree or disagree, 4 = Disagree more than agree, 5 = Totally disagree.

1. Most things that are taught at school will not help me be successful as an adult.
2. Learning to get along with my classmates will help me know how to get along with others when I become an adult.
3. Paying attention to my teachers will increase my chances for having a good job as an adult.
4. Getting in trouble at school has nothing to do with what kind of life I am likely to have as an adult.
5. Much of what I learn at school will make my life better as an adult.
6. Pestering other students has nothing to do with how successful I am likely to be as an adult.
7. Doing my homework is a good way to develop skills that will help me as an adult.
8. Missing school will hurt my chances of getting what I want as an adult.
9. When I don't do my assignments at school, I am hurting my chances of being successful as an adult.
10. How well I learn to read and write will not have much effect on how far I will go as an adult.
11. Sleeping in class has nothing to do with what I will accomplish as an adult.

1 = Totally agree, 2 = Agree more than disagree, 3 = Don't agree or disagree, 4 = Disagree more than agree, 5 = Totally disagree.

12. Getting in fights at school will hurt my chances of having a good life as an adult.
13. Quitting school as soon as I can is the best thing for me to do.
14. Doing well in school will greatly increase my chances for success as an adult.
15. Talking to classmates instead of doing my school work will decrease my opportunities for success as an adult.
16. I really enjoy doing a good job on a task.
17. Having to put forth a lot of effort to get a job done is a real pain.
18. Having good work habits doesn't mean I will be successful.
19. Being a skilled worker is one way to make a better life for myself.
20. Most every problem can be overcome if I don't give up.
21. Having to work hard to complete a task depresses me.
22. Nothing is impossible if I keep working at it.
23. Receiving a welfare check is a better way of getting money than working would be.
24. Many problems can't be solved no matter how hard I try.
25. Success comes more from luck than from effort.

1 = Totally agree, 2 = Agree more than disagree, 3 = Don't agree or disagree, 4 = Disagree more than agree, 5 = Totally disagree.

26. Healthy people who don't try hard to get and keep a job are hurting society.
27. The best job is one where I could take it easy.
28. When I get through with one task, I usually look for another task to do.
29. I try to do my work very carefully.
30. Having a good job is the best way for an adult to stay off welfare.
31. It is good to work no matter what the job is.
32. I want people to know that I am a good worker.
33. If everyone worked, we could have a better society.
34. One should avoid work whenever possible.
35. I don't like to work.
36. I always wash my hands before every meal.
37. I have never said unkind things to someone else.
38. I sometimes feel angry when I don't get my way.
39. I never forget to say "please" and "thank you."
40. When I make a mistake, I always admit it.

CHECK YOUR ANSWER SHEET TO BE SURE YOU HAVE PROVIDED ALL THE INFORMATION REQUESTED AND HAVE ANSWERED ALL 40 ITEMS. IF YOU USED ONE OF OUR PENCILS, PLEASE TURN IT IN WITH THE ANSWER SHEET.

APPENDIX B
CURRENT MIDDLE SCHOOL SURVEY

MIDDLE-SCHOOL SURVEY

Instructions: Before you begin responding to the statements on this survey, indicate at the top of the answer sheet your school number, class number, student number, gender, grade level, and ethnic origin. The school number and class number have been written on the board. I will give you instructions regarding your student number.

In responding to each statement in the survey, fill in the circle in the yes column if you agree and in the no column if you disagree with that statement. There are no right or wrong answers. Indicating your honest opinion will help the school determine how best to serve your needs. Be sure to erase all stray marks or changes in answers before you turn in your answer sheet. Also be sure you have given only one answer to each item.

1. Lunch time is the most enjoyable part of the school day.
2. School starts too early in the morning.
3. Having to put forth a lot of effort to get a job done is a real pain.
4. Having good work habits increases my chances of being successful.
5. Many problems can't be solved no matter how hard I try.
6. I enjoy a task that requires a lot of effort.
7. Success comes more from luck than from effort.

8. I feel good when I work hard to complete a task.
9. Having good work habits doesn't mean I will be successful.
10. Many problems can be solved if I keep trying.
11. The best job is one where I could take it easy.
12. Good outcomes result more from effort than from luck.
13. Having to work hard to complete a task discourages me.
14. I like a job where I can work hard to achieve goals.
15. Learning to get along with my classmates will help me know how to get along with others when I become an adult.
16. Listening to my teachers won't affect my chances for a good job as an adult.
17. Doing my homework is a good way to develop skills that will help me as an adult.
18. What I'm learning in school won't help me be successful as an adult.
19. Getting along with my classmates won't affect how I get along with others as an adult.
20. When I don't do my assignments at school, I am hurting my chances of being successful as an adult.

21. Homework is unrelated to the skills I will need as an adult.
22. Paying attention to my teachers will increase my chances for having a good job as an adult.
23. Fighting in school will have no effect on whether I have a good life as an adult.
24. Much of what I learn at school will make my life better as an adult.
25. My success as an adult is not related to completing my assignments at school.
26. Getting in fights at school will hurt my chances of having a good life as an adult.
27. I always wash my hands before every meal.
28. I have never said unkind things to someone else.
29. I never forget to say "please" and "thank you."
30. When I make a mistake, I always admit it.

Before you turn in your answer sheet, check to be sure you have indicated your school number, class number, student number, gender, grade level, and ethnic origin. Also be sure that you have left no question unanswered and that you have given only one answer to each question. If you have changed any of your answers, be sure that your old answers are completely erased. Thank you for taking your time to give us your opinions.

APPENDIX C
TEACHER RATING FORM

SCHOOL NUMBER_____ GRADE LEVEL_____ CLASS NUMBER_____

TEACHER RATING FORM

INSTRUCTIONS: Using the corresponding number in your roll book to identify each student, please rate each student on the basis of that student's past academic performance in your class. Check the column below that best describes the academic performance of each student. Rate all the students in each class, even those who do not take the Middle-School Survey. However, for those who do take the Middle-School Survey, be sure that their number on this rating form is consistent with the number on the student answer sheet.

Student Number	Poor Performance	Average Performance	Outstanding Performance
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____
13.	_____	_____	_____
14.	_____	_____	_____
15.	_____	_____	_____

Student Number	Poor Performance	Average Performance	Outstanding Performance
16.	_____	_____	_____
17.	_____	_____	_____
18.	_____	_____	_____
19.	_____	_____	_____
20.	_____	_____	_____
21.	_____	_____	_____
22.	_____	_____	_____
23.	_____	_____	_____
24.	_____	_____	_____
25.	_____	_____	_____
26.	_____	_____	_____
27.	_____	_____	_____
28.	_____	_____	_____
29.	_____	_____	_____
30.	_____	_____	_____
31.	_____	_____	_____
32.	_____	_____	_____
33.	_____	_____	_____
34.	_____	_____	_____
35.	_____	_____	_____
36.	_____	_____	_____
37.	_____	_____	_____
38.	_____	_____	_____

APPENDIX D
STUDENT WORK HABITS FORM

School Number_____Grade Level_____Class Number_____Student Number_____

Check One: Best Work Habits_____Or Worst Work Habits_____

INSTRUCTIONS: For the student identified above, please rate that student on each of the characteristics listed below. To help us understand how student work habits may be linked to attitudes and performance, you should be very candid in rating the work habits of this student. To do this, think of a typical day for the student and indicate whether the work habit in question is (1) a lot like this student, (2) somewhat like this student, (3) neither like nor unlike this student, (4) somewhat unlike this student, or (5) very unlike this student. Please put your rating number in the blank prior to each statement.

- _____1. Follows rules regarding classroom behavior.
- _____2. Cooperates with other students.
- _____3. Needs much supervision.
- _____4. Arrives at class on time.
- _____5. Easily gets upset.
- _____6. Adapts easily to different kinds of school work.
- _____7. Keeps promises.
- _____8. Expresses needs clearly and comfortably.
- _____9. Takes good care of books and other classroom materials.
- _____10. Addresses teachers in a respectful fashion.
- _____11. Practices good attendance.
- _____12. Keeps work space well organized.
- _____13. Expresses enthusiasm about school work.
- _____14. Takes initiative to keep busy.
- _____15. Pestern other students.
- _____16. Makes good use of teacher feedback.
- _____17. Does good quality work.
- _____18. Follows instructions well.
- _____19. Works at a steady pace.
- _____20. Is easily distracted.

APPENDIX E
SCAN FORM

VITA

VITA

Yvonne Malone was born in Oak Ridge, Tennessee. She attended public schools in Clinton, Oliver Springs, and Crossville, Tennessee. She earned a Bachelor of Science degree in Elementary Education at Carson-Newman College in Jefferson City, Tennessee. After graduating, she moved to Columbus, Ohio where she worked for two years before moving to Atlanta, Georgia. In 1992, she returned to Tennessee where she earned the Masters and Ed.S. degrees in Counselor Education and Counseling Psychology. Upon completion of these degrees, she moved to Knoxville to attend the University of Tennessee to earn the doctoral degree in Education which was received August 1998.

She is presently raising her 10-year-old son, Joshua, working as an adjunct instructor at Pellissippi State Technical Community College in Knoxville, and looking for a full-time job.