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SCHOOL-AGE CHILDREN'S
IMPLICIT THEORIES OF INTELLIGENCE
AND
COMPETENCE PERCEPTION
AND THEIR RELATION TO
MOTIVATION FOR LEARNING

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino


In Partial Fulfillment
of the Requirement for the Degree
Master of Arts
in
Psychology

by
Irena Vagner
September 1994

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by
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June 1994
Approved by:




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ABSTRACT

The purpose of this study was to demonstrate how a child's implicit theory of intelligence and perceived competence in self-concept domains deemed important to the child could predict the locus (intrinsic or extrinsic) of that child's motivation to learn.

Traditional measures for assessing learning motivation have proved to be poor predictors of children's performance in specific behavioral domains. To achieve greater accuracy in predicting children's motivation to learn, this study focused on two major predictors;

(1) children's belief their intellectual ability, using Dweck's (1992) Measure of Implicit Theories of Intelligence, and (2) children's perceived competencies, using Harter's Self-Perception Profile for Children and Dweck's Confidence in Intelligence Measure. Additional predictors included age and gender. Learning motivation was assessed using Harter's (1985) Intrinsic Versus Extrinsic Orientation in the Classroom Scale.

Items comprising the above measures were scored on three-, four- and six-point scales indicating how much they agreed with the statements. The collected data were analyzed via factorial design.

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INTRODUCTION

Because of the influx of students from all over the world, the Los Angeles county school district is overwhelmed by the needs of a constantly changing and diverse student body. A major concern for educators is the variation in readiness level that these students bring to the standardized age-specific curriculum. Even though many educators, evaluators, and teachers understand that traditional assessments don't reveal an accurate picture of children's intelligence, abilities, and motivation, standardized testing is still the norm for most school systems. An alternative evaluation model that would give a more accurate profile of children's perceived abilities and competencies as well as a better prediction of children's motivation to learn may be derived from a combination of Dweck's (1990) and Harter's (1985) assessment techniques.

Factors influencing children's perception of their competencies have long been a matter of interest among educators, psychologists, and counselors. The relation of ability perceptions to academic achievement has been a focus for virtually every cognitive theory of achievement and motivation, including attribution

theory (Dweck & Bery, 1976), self-efficacy theory (Bandura, 1982) and self-worth theory (Covington & Bery, 1976). In all these theories, ability perceptions are assumed to affect behavior, learning, and achievement motivation. However, the question of why children of equal ability have different levels of motivation for learning and differential persistence in academic tasks is still unanswered.

Attribution theory proposes that children's motivation and achievement behaviors are mediated by ability perceptions. These perceptions are based on children's explanations about the causes of their success and failure. Weiner et al. (1971) concluded that the individual's interpretation of the causes for success and failure (not success or failure alone) affect future task performance.

In explaining why individuals of equal ability would show differences in motivation and performance, Dweck & Leggett (1988) conceptualized two types of goals: performance goals (in which individuals are concerned with gaining favorable judgments of their competence) and learning goals (in which individuals are concerned with increasing their competence). The goals that individuals pursue provide a framework within which they interpret and react to events. Dweck & Leggett (1988) also argue that children who

believe intelligence is an uncontrollable trait or fixed entity are more likely to pursue the performance goal of securing positive judgments of competence or preventing negative judgments of it. Those who view their intelligence as a malleable, controllable, incremental quality, pursue learning goals such as increasing competence, and improving over past performance as tasks are mastered through practice and effort. Thus Dweck (1991) developed a scale for assessing an individual's interrelated beliefs about intelligence ("The Implicit Intelligence Theory Measure").

Hong & Dweck (1992) further suggest that one's goal orientation and implicit theory of intelligence interact with one's confidence in intelligence in determining achievement behaviors that are either adaptive or maladaptive. Dweck & Chiu's (1992) "Confidence in Intelligence Measure" determines whether children believe they are smart enough to be successful or to learn new material. According to these researchers, performance oriented, entity theorists, who have high confidence in their present ability may demonstrate mastery-oriented behavior such as high persistence and seeking challenges that foster learning. However, when entity theorists have low confidence in their present ability, or face failure,

they may demonstrate helpless behavior such as low persistence and avoidance of challenge, thus sidestepping judgments of incompetence.

On the other hand, learning-oriented incremental theorists view academic tasks as opportunities to improve, whatever their current ability level. Thus learning-oriented children are expected to be mastery-oriented, regardless of their level of confidence.

In this vein, Harter (1978) developed a theoretical model of learning motivation, taking Robert White's model of "effectance motivation" as a point of departure. In 1959, White proposed that children are impelled to engage in mastery attempts. He viewed this need to deal effectively with the environment as "intrinsic," postulating that its gratification produced inherent pleasure. Thus Harter addressed the following question: To what degree is a child's motivation for classroom learning determined by intrinsic factors such as an inherent interest in learning and mastery, curiosity, and preference for challenge in contrast to more extrinsic factors such as obtaining teacher approval and/or grades? With this as a framework, in her "Scale of Intrinsic Versus Extrinsic Orientation in the Classroom" she delineated five dimensions of classroom learning which could be

characterized as having both an intrinsic and extrinsic dimension.

The five dimensions contain:

(A) - **three motivational** and

(B) - **two cognitive-informational** subscales.

The motivational dimension is comprised of:

1) challenge, 2) curiosity, and 3) mastery subscales with distinctive item content tapping what the child wants to do, likes to do, prefers. A child scoring high on these subscales demonstrates intrinsic motivation to learn and to engage in a mastery process.

The cognitive-informational dimension contains:

1) independent judgment, and 2) internal criteria subscales with an item content tapping what the child knows, on what basis the child makes decisions, and how much the child has learned about the school rules.

The primary focus of this study is on the motivational subscales in order to define how the child's motivation to learn is affected by his implicit theory of intelligence and his competence perception.

There would seem to be significant overlap between Dweck & Leggett's (1988) conceptualization of types of goal orientation (performance, learning) and Harter's notion of learning motivation (extrinsic vs. intrinsic). Performance goals involve gaining favorable judgments of one's competence. Confirmation of one's

capabilities requires tangible evidence of success on academic tasks. Dependence on success amounts to a state of extrinsic motivation. On the other hand, learning goals as well as intrinsic motivation are concerned not with success per se, but rather with increasing competence.

Consequently, children's beliefs about the nature of their intelligence and their goal orientation for academic tasks may be expected to predict the locus of their learning motivation (Harter, 1985). Incremental theorists are likely to be intrinsically motivated - curious and showing a preference for challenge. Entity theorists are likely to be either extrinsic (being dependent on and seeking to please the teacher and preferring easy work) or moderately intrinsic (seeking some challenge and mastery), depending on their level of confidence. Children who are seeking to gain positive judgments of their ability (performance orientation) but who have little confidence in their ability and thus expect to fail will require easy tasks or clear external rewards (teacher approval) before risking an unfavorable judgment. Children (performance oriented) who are confident of their ability will believe that moderately difficult tasks should result in positive judgments of their ability and will thus show some preference for challenge though will not

likely persist in the face of failure, attributing high effort failures to low ability (and doubting their ability after high effort success (Dinner & Dweck, 1980). Children pursuing learning goals will be highly intrinsic regardless of their confidence level and will persist in the face of failure, focusing on effort when challenged. Performance goals create a context in which outcomes (such as failures) and input (such as high effort) are interpreted in terms of their implications for ability and its adequacy. In contrast, learning goals create a context in which the same outcomes and input provide information about effectiveness of one's learning and mastery strategies.

While Dweck (1991) examines implicit theories of intelligence, goal orientation, and confidence in intellectual ability as indicators of learning motivation, Harter focuses most of her work on perceived competence in five domains of the self-concept and on the relation of perceived competence to children's learning motivation.

Harter's (1985) "Self-Perception Profile for Children" provides a domain-specific representation of a child's perceived competencies in six domains: scholastic competence, social acceptance, athletic competence, physical appearance, behavioral conduct, and global self-worth. In sum, this model taps

children's perceptions of themselves, and provides a "profile" based on differences in an individual's scores across the various domains of his life.

Harter argues that children don't feel equally competent in every self-concept domain. Working with James' (1892) notion that global self-esteem represents the ratio of one's successes to one's aspirations for success in the various domains of one's life, Harter (1985) finds that perceived competence in domains rated as important to the self is strongly predictive of motivation.

Consideration of how adequate the child feels in just those areas he/she judges important is crucial. If the child is competent in preferred areas, there will be little or no discrepancy between perceived competence and importance. Feeling accomplished in important areas should also lead to a strong sense of efficacy. Children with high self-efficacy exert greater effort to master challenges, and demonstrate high perseverance with high performance attainments (e.g., DeCharms, 1968; Graber & Seligan, 1980; Lefcourt, 1976). This amounts to a state of intrinsic motivation. In contrast, if a child perceives his competence to be low in areas of some significance to him, there would be a discrepancy between importance and perceived competence. For a child focused on

performance rather than learning, this discrepancy would result in low to moderate self efficacy resulting in low persistence and efforts to sidestep challenge and thus avoid judgments of incompetence. This in turn suggests an extrinsic learning motivation.

It should be noted that Harter's subscales are restricted to cognitive competence in school, social relationships, and physical competence in sports. They do not tap cognitive competence outside of school, social relationships with adults, or the type of physical skills required to do crafts, build and fix things, etc.

A significant similarity emerges between Dweck's "construct of confidence" and Harter's "perceived competence in domains deemed important." While Dweck addresses children's confidence in their general intellectual ability (whether one is smart enough to be successful to learn new material), Harter looks at competence in specific domains of self-concept (scholastic competence, social acceptance, athletic competence, physical appearance, and behavior conduct).

The purpose of the present study was to integrate Dweck's (1991) and Harter's (1985) ideas into an explanatory and predictive model of the role that a child's naive theory of intelligence and perceived competence plays in determining motivation for

learning. Such a model might in turn provide the basis for effective interventions aimed at impacting learning motivation in the early school years. This model would posit that:

(1) learning motivation is in part a function of a child's implicit theory of intelligence such that incremental theory is associated with intrinsic motivation and entity theory is associated with extrinsic and moderately intrinsic motivation (Dweck & Chiu, 1992; Dweck & Leggett, 1988),

(2) both general confidence in intelligence (Dweck & Leggett, 1988) and perceived competence in domains important to the child (Harter, 1985) should mediate the effects of goal orientation.

Learning goal-oriented children should be **Intrinsically motivated**, regardless of their ability perceptions.

Children with a **Performance goal-orientation**, however, will be **Extrinsic** if they perceive their ability as low, and **Moderately Intrinsic** if they perceive their ability as high.

Developmental Issues in Motivation and Children's Achievement

It is crucial to consider the developmental differences in children's cognitive capabilities that influence the formation and operation of ability

perceptions.

Implicit Theories of Intelligence Development

Studies by Dweck (1986), and Dweck & Bempechat (1983) demonstrate the shift in children's ideas about intelligence. Younger children have an undifferentiated concept of ability as an "instrumental-incremental" concept - ability is similar to skill. They think that anyone can become more skillful and smarter over time. A theory of intelligence as more stable or fixed emerges as the child gets older, i.e., with age an "entity" concept prevails. Assessing ability using an entity concept requires interpersonal comparisons. Judgments of intelligence are based on normative standards. Younger children (second- versus sixth-graders) are significantly more likely to think that they will become smarter as they get older and progress through schools (Veroff 1969; Ruble, Feldman, and Boggiano 1976; Ruble, Parsons, and Ross 1976; Stipek, 1984).

Thus it might be predicted that children (second- versus sixth-graders) will show a developmental shift from an incremental to an entity theory of intelligence. This developmental shift will also move their goal orientation from learning and

mastery to performance. This in turn amounts to a shift toward an extrinsic locus for learning motivation.

Harter (1980) found dramatic shifts in motivation for learning across grades 3 through 9 from intrinsic to extrinsic locus of motivation, as well as from reliance on teacher's judgment to independent judgment, and from need for external criteria to internal criteria to determine whether one is successful. Harter implies that with each higher grade, children should become more knowledgeable, more capable of making their own judgments, and better able to determine whether or not they are successful. The underlying process would appear to be one in which they gradually internalize the rules for making judgments about school-related issues. As the developmental data indicate (Harter, 1980), the child can be relatively intrinsic on the motivational cluster (challenge, curiosity, and mastery) and relatively extrinsic on the cognitive-informational cluster (judgment and internal criteria).

Thus it is predicted that third graders will be relatively intrinsic on the first cluster, demonstrating significant intrinsic mastery motivation, but will be less intrinsic with regard to the second cluster, reflecting their dependence on the teacher.

The pattern for the ninth graders will be just the opposite. They will show relatively extrinsic scores on the first cluster, suggesting that they are doing assignments to meet teacher expectations and to get grades, and will show more intrinsic scores on the second cluster, demonstrating that they have acquired sufficient information about the school system to make their own judgments and to determine whether or not they are successful.

Gender Differences in Ability Expectancies in Motivation and Children's Achievement

Gender differences in ability expectancies have not been found in preschool children. However, as children get older (6-8 years), girls' expectancies drop more in response to failure, and thus make more stable attributions for their failures than boys (Parsons & Ruble 1977). Wherefore, the incorporation of failure into self-concept may begin earlier in females than in males. Boys may remain "eternal optimists" longer than girls or, alternatively, girls may become "doubting realists" sooner than boys. However, while girls may approach a new task with lower expectancies, some research suggests that subsequent success at the task can override the initial gender difference (Parsons & Ruble 1977). An explanation for the developmental trend toward an increasing response

to failure, with girls preceding boys, might be seen in the fact that older children, and girls in particular, may have learned that it is more ego protective and also more socially acceptable to express less rather than more certainty of success (Parsons & Ruble 1977).

In addition, findings indicate that girls are more concerned with pleasing others, more committed to follow classroom rules, and to "being good," which suggests that females may be more sensitive to negative peer or teacher feedback than boys, and that they may use more stringent standards when assessing themselves (Parsons & Ruble 1977). Evidence further suggests that young children of both sexes view girls as more preferred by teachers, more successful in school, and better behaved. Yet, as they get older, girls rate their abilities lower than boys (Brophy and Good 1974; Maccoby and Jacklin 1974).

Rationale and Hypothesis for the Study

There is no current empirical evidence linking Dweck's constructs of Implicit Theory of Intelligence, Goal Orientation on Academic Tasks, and Achievement Behavior Patterns with Harter's model of Learning motivation. The purpose of the present study was to establish this linkage and to compare Dweck's measure of Confidence in Intelligence with Harter's measure of

Perceived Competence as indices of children's level of confidence. Dweck's "Achievement Goals and Achievement Behavior model" proposed the importance of implicit theories of intelligence (entity, incremental) in influencing achievement goal orientation (performance, learning). Further, this model suggested how confidence in personal ability (high or low) affects behavior pattern (mastery-oriented vs. helpless), as well as locus of motivation (extrinsic, intrinsic). Harter's construct of competence in domains deemed important to the child allows a more domain-specific assessment of children's competence and thus predicts motivation.

Taking Dweck's and Harter's findings into consideration, the present study suggested the following predictions comprising one central hypothesis:

(1) Children who hold an **Incremental** theory of intelligence with **high or low** level of **Confidence** in their intellectual ability will demonstrate mastery-oriented behavior such as seeking challenge that fosters learning with high persistence, and thus will be **Intrinsically** motivated.

(2) Further, children who espouse an **Entity** theory of intelligence with **high Confidence** in their intellectual ability will demonstrate a mastery-oriented behavior

pattern, such as seeking challenges to protect positive judgments of their confidence, and thus will portray **Moderately Intrinsic** motivation.

(3) Those **Entity theorists** having **low Confidence** in their intellectual ability will demonstrate a helpless behavior pattern, such as avoiding challenge with low persistence, and thus will portray **Extrinsic** motivation.

(4) Children who hold an **Incremental** theory of intelligence with **high** or **low** level of perceived **Competence in Domains Important to them** will show mastery-oriented behavior and thus demonstrate **Intrinsic** motivation.

(5) However, children who espouse an **Entity** theory of intelligence but perceive their **Competence** to be **high** in Domains Deemed Important to them will demonstrate mastery-oriented behavior pattern, such as to gain positive judgments or avoid negative judgments of their competence showing high persistence, and thus display **Moderately Intrinsic** motivation.

(6) Those **Entity** theorists perceiving their **Competence** to be **low** in Domains Deemed Important to them will demonstrate helpless behavior pattern, such as avoiding challenge with low persistence, and thus display **Extrinsic** motivation.

(7) As per Dweck's findings, it is further predicted

that children (second -versus six- graders) will show a developmental shift from an **Incremental** to an **Entity** theory of intelligence.

(8) Due to Parsons & Ruble (1977) findings that girls are more concerned with pleasing others, more committed to follow classroom rules, and to "being good," this leads to additional prediction that **girls**, more than **boys**, will exhibit "performance-goal"orientation and thus subscribe to an **Entity** theory of intelligence, and demonstrate **Extrinsic** motivation.

METHOD

Subjects

One hundred forty five children from Grand View Elementary school in Los Angeles participated in the study. The signed parental as well children's informed consents were obtained from the school principal before the study was conducted. Children were tested in groups in the school library. Because 16 subjects marked both sides of the questions, had to be excluded from the study. Thus the remaining 129 subjects, girls (n=75) and boys (n=54), ages 8 through 12, were considered for the study.

Measures

The brochure of five measures had a standardized order (WHAT I AM LIKE, HOW IMPORTANT ARE THINGS TO HOW YOU FEEL ABOUT YOURSELF AS A PERSON?, IN THE CLASSROOM, THE IMPLICIT THEORY MEASURE, AND CONFIDENCE IN INTELLIGENCE MEASURE) for every subject.

1. Self-Perception Profile for Children (Harter, 1985)

The revised instrument contains six subscales tapping five specific domains, as well as global Self-Worth:

SPECIFIC DOMAINS

1. Scholastic Competence
2. Social Acceptance
3. Athletic Competence
4. Physical Appearance
5. Behavioral Conduct
6. Global Self-Worth

(for a description of subscale content, see Appendix E).

The actual questionnaire is entitled "WHAT I AM LIKE" and is included in Appendix F.

The question format for all S-PPC subscales is constructed to (a) minimize the influence of social desirability response tendencies (the "Structure Alternative Format" is direct and personal to the child, and is designed to offset the tendency to give socially desirable responses), and (b) provide a greater range of responses for each item (four choices rather than the more typical two choice true/false format). (See Harter, 1982 for a more complete description of scale construction).

Scale items asked children whether they perceive themselves as competent in each of the above domains. Subjects were asked to indicate which of two types of children is most like themselves. One child is

competent in the domain at issue while the other child is not. Subjects further indicated how true statements describing these children were of themselves.

The scoring key for the S-PPC is included in Appendix G. Items are scored 4,3,2,1, where 4 represents the most adequate self-judgment and 1 represents the least adequate self-judgment. Items within each subscale are counter-balanced such that three items are worded with the most adequate statement on the left and three items are worded with the most adequate statement on the right. Scores from a child's protocol were transferred to the "Data Coding Sheet," included in Appendix H, where all items for a given subscale were grouped together to facilitate the calculation of the mean for each subscale. Scoring resulted in a total of six subscale means which defined a given child's profile.

2. The Importance Rating Scale (Harter, 1985)

In addition, children filled out a 10 item questionnaire consisting of 2 questions from each of the five S-PPC's domains. These items followed the same format as the S-PPC, where subjects indicated the extent to which statements were true of them. However, on the Importance Scale, statements concerned the importance of the above domains rather than competence

in those domains. This measure, entitled "HOW IMPORTANT ARE THESE THINGS TO HOW YOU FEEL ABOUT YOURSELF AS A PERSON," is included in Appendix I; the scoring key is presented in Appendix J. Appendix K describes the step-by-step procedure for calculating the competence/importance discrepancy score.

3. Intrinsic Versus Extrinsic Motivation in the Classroom (Harter, 1980)

This scale addresses the question: To what degree is the child's motivation for classroom learning determined by **intrinsic** factors (e.g., desire for challenge, curiosity, and mastery) or **extrinsic** factors (e.g., teacher approval and/or grades, peer approval).

INTRINSIC POLE

EXTRINSIC POLE

1. Motivational Cluster

- | | | |
|-----------------------------|-----|-------------------------------------|
| A. Preference for Challenge | vs. | Preference for Easy Work Assigned |
| B. Curiosity/Interest | vs. | Pleasing the Teacher/Getting Grades |
| C. Independent Mastery | vs. | Dependence on the Teacher |

2. Cognitive-Informational Cluster

D. Independent Judgment vs. Reliance on Teacher's Judgment

E. Internal Criteria vs. External Criteria

The mastery, challenge, and curiosity subscales each have a distinctive motivational flavor in that they tap issues involving what the child wants to do, likes to do, prefers to do. The independent judgment and internal criteria subscales seem to tap more cognitive-informational structures.

Scale items follow the same format as the S-PPC and the Importance Scale. Subjects indicated which of a pairing of intrinsically and extrinsically oriented statements best described them and how true that statement was of them. The actual form administered to the child is entitled "IN THE CLASSROOM" and is included in Appendix L; the scoring key is presented in Appendix M. Scores from a child's protocol were transferred to the "Data Coding Sheet," included in Appendix N, where all items for a given subscale were grouped together to facilitate the calculation of the mean for each subscale. In general, the higher a child's subscale or overall score the more intrinsically motivated is that child in achievement settings.

4. A Measure of Implicit Theories of Intelligence
(Dweck, 1991)

The scale measures an individual's belief about the malleability of intelligence. It consists of three questions using a four choice format (e.g., Strongly Agree, Agree, Sort of Agree, Sort of Disagree, Disagree, Strongly Disagree). Scores on these items are averaged to give a summary score.

Subjects scoring 4.0 or above are classified as "Incremental theorists", and those who score 3.0 or below are classified as "Entity theorists". The full instrument entitled "THE IMPLICIT INTELLIGENCE THEORY MEASURE" is presented in Appendix O.

5. The Confidence in Intelligence Measure

The measure, (see Appendix P) consists of four items assessing children's perceptions of the effectiveness of their overall intelligence. In each item, the child was given a pair of statements and was asked to choose between the two statements, one representing high confidence, and one representing low confidence. After children indicated which of the two statements was more true for them, they were asked to show on a three-point scale how true that statement was for them: "very true", "true", or "sort of true." Scores on the four items were averaged to give a

summary score, with higher scores indicating higher confidence.

Procedure

All participants' parents as well as children were asked to sign an informed consent form (see Appendix A and B). The consent forms included the purpose of the study, anonymity and confidentiality assurance, and directions for obtaining a summary of results. Parents, in addition filled out a brief demographic survey. The demographic assessment included such indices as age, gender, educational level, number of children, etc. (see Appendix C). Both consent forms as well as the demographic assessment were collected from each child by the school principal before the time of testing.

Children were tested in groups by the researcher at the school library. Each child was given a packet obtaining all of the 5 measures, asked for some brief background information, then given oral instructions and two practice items for each measure (see Appendix D). When all children understood the procedure, the researcher worked with the children, reading each item aloud as participants read silently, then waiting until responses were marked before moving to the next item. This procedure was followed for each measure in turn.

Administration of the tests lasted approximately 45 minutes.

Scoring

For each subject, several scores were obtained:

(1) **six mean Perceived Competence Scores** calculated from the six individual six item subscale scores on the Self-Perception of Competence Profile for Children measure,

(2) **a mean Discrepancy Score** obtained by

a)- subtracting the Importance Ratings from their respective Competence or Adequacy scores for each domain rated as important,

b)- adding up the discrepancy scores to arrive at a Total Discrepancy Score, and c)- dividing by the number of domains rated as Important,

(3) **three mean Motivational Scores** from the three individual six item sub scale scores acquired from the Intrinsic versus Extrinsic Orientation in the Classroom Scale,

(4) **two mean Cognitive-Informational Scores** from the two individual six item sub scale scores acquired from the Intrinsic versus Extrinsic Orientation in the Classroom Scale,

(5) **the Implicit Theory Score** from The Implicit

Intelligence Measure where score 4.0 or above classified a respondent as an "Incremental theorist", and score of 3.0 or below classified a respondent as an "Entity theorist", and

(6) a **Confidence in Intelligence Score** from The Confidence in Intelligence Measure, where the scores on the four items were averaged to get a summary score, and a higher score indicated higher confidence.

RESULTS

The model of learning motivation proposed in this study gives rise to one central hypothesis. This is a claim that children who hold an incremental theory of intelligence and by implication, are learning-goal oriented, will be intrinsically motivated regardless of their level of confidence while children who hold an entity theory of intelligence (performance goal-orientation) will be extrinsically motivated if their confidence is low and moderately intrinsic if their confidence is high. As a test of this hypothesis two complex analyses of variance of implicit theory of Intelligence (2) X Level of confidence (2) were conducted on the combined challenge, curiosity and mastery subscales of Harter's learning motivation measure. In the first analysis level of confidence was assessed using Dweck's confidence in Intelligence measure. In the second analysis Level of confidence was assessed using Harter's measure of Perceived competence in domains considered important by the child

The two categories of Implicit Theory of Intelligence were created by way of previously established norms (Dweck's 1990). Individuals scoring

equal to or less than 3.00 were considered entity theorists and individuals scoring greater than or equal to 4.00 were considered incremental theorists.

The high - low categories of Confidence level in Intellectual Ability as well as the high - low categories for Perceived Competence in Domains Important to the child were established by using the upper and lower 40 percent of the distribution. Individuals scoring in the lower 40 percent of the distribution were included in a low Confidence group. Subjects scoring in the upper 40 percent were included in a High Confidence group.

Results of the first analysis of variance indicated a significant main effect for level of confidence (assessed through Dweck's Confidence in Intelligence measure), $F(1,81) = 4.43, p < .008$. Children with high confidence were more intrinsic than children with low confidence. There was no main effect for Implicit Theory of Intelligence, $F(1,81) < 1.00$. The interaction between Level of Confidence and Implicit Theory of Intelligence was significant, $F(1,81) = 4.07, p < .047$. See Table 1 and Figure 1 for relevant cell means. The simple main effect analyses revealed that incremental theorists with high confidence in their intellectual ability were significantly more intrinsically motivated than incremental theorists with

low confidence in their intelligence, $F(1,26) = 8.342$, $p < .008$. There was no significant difference in motivation between the low and high confidence groups of entity theorists, $F(1,56) = 1.31$, $p < .26$.

Table 1

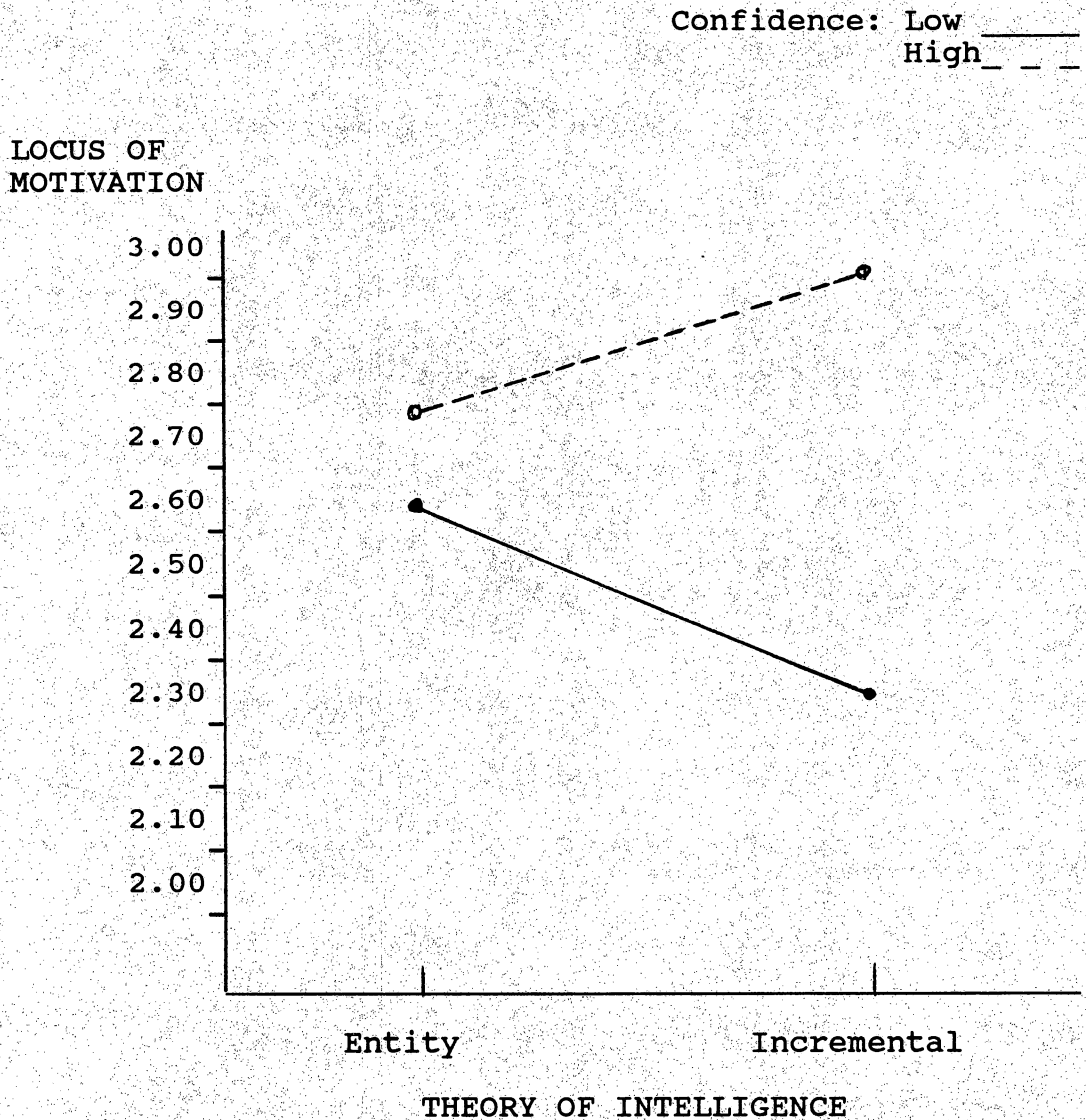
Mean Numbers of Locus of Motivation as a Function of Theory of Intelligence and Confidence in Intellectual Ability

Implicit Theory of Intell. * n	Confidence in Intellectual Ability		
	Low Level	High Level	Row Mean
Entity	57 (30)	2.64 2.80 (27)	2.77
Incremental	28 (13)	2.33 3.03 (15)	2.68
Column Mean		2.49 2.91	

Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

*Numbers of children out of 129 who met the group's criteria.

Figure 1. Locus of motivation as a function of implicit theory of intelligence and confidence in intellectual ability.



Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

The second analysis of variance also yielded a

significant main effect for Level of Confidence (assessed through Harter's construct of Perceived Competence in Domains Deemed Important by the Child), $F(1, 74) = 4.75, p < .033$. Again, higher confidence was associated with a more intrinsic orientation. There was no main effect for Implicit Theory of Intelligence, $F(1, 74) < 1.00$, and no significant interaction between Level of Confidence and Implicit Theory of Intelligence, $F(1, 74) < 1.00$. See Table 2 and Figure 2 for relevant cell means.

Table 2

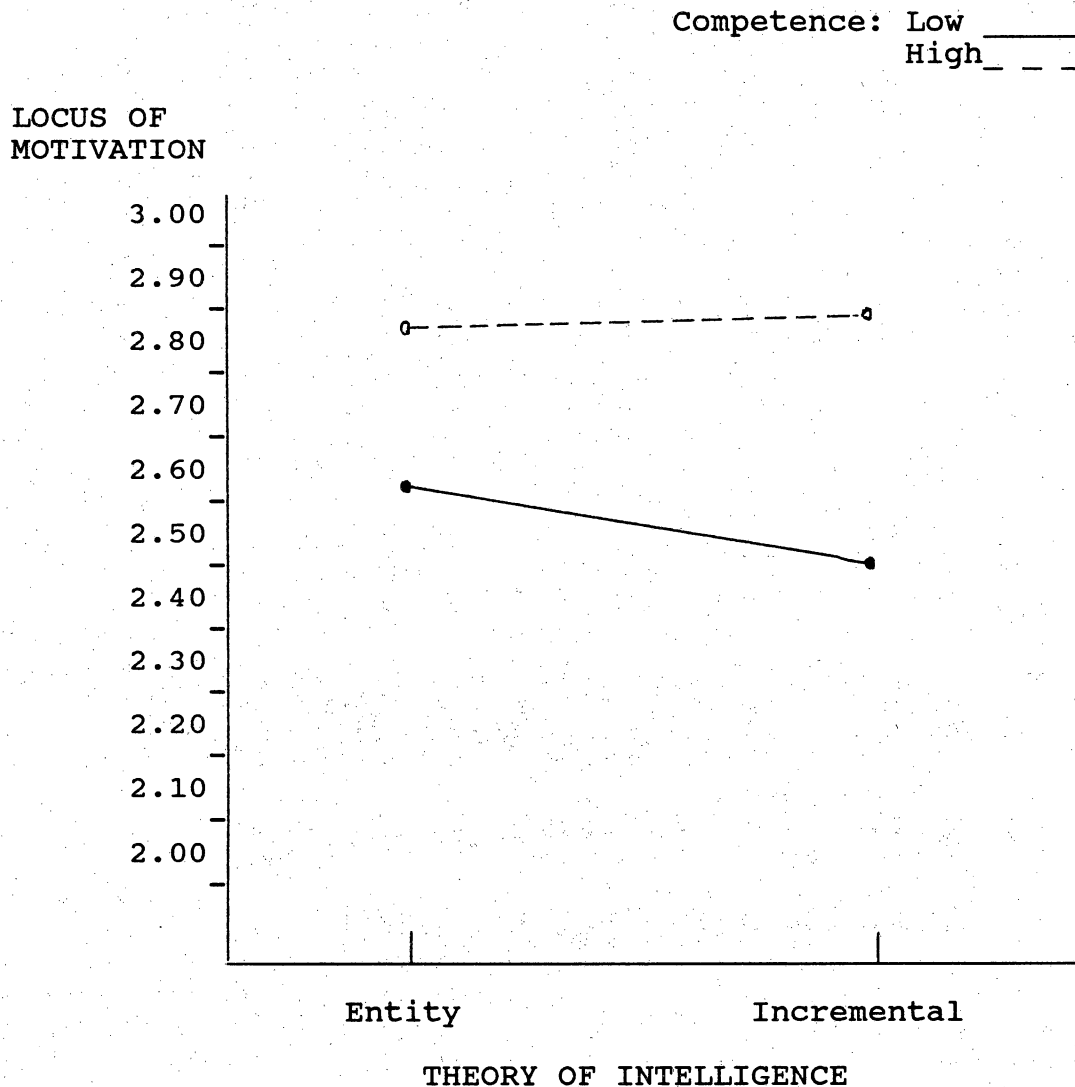
Mean Numbers of Locus of Motivation as a Function of
Theory of Intelligence and Competence in Self-Concept
Domain Deemed Important to the Child

Implicit Theory of Intell. * n	Competence in Domains Important		
	Low Level	High Level	Row Mean
Entity	50 (26)	2.87 (24)	2.62 2.75
Incremental	28 (16)	2.88 (12)	2.48 2.75
Column Mean		2.88	2.55

Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

*Numbers of children out of 129 who met the group's criteria.

Figure 2. Locus of motivation as a function of theory of intelligence and perceived competence in self-concept domains important.



Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

A second hypothesis of the present study maintains that children (second through sixth grade) will show a developmental shift from Incremental to Entity theory of intelligence. As a test of this hypothesis, a simple analysis of variance of age group (2) on children' Implicit Theory of Intelligence scores was conducted. Age groups were created in the following manner. The Early Primary group consisted of children 8 to 10 years of age while the Late Primary group consisted of children 11 to 12. Results indicated that Early Primary children ($\bar{M}=3.34$) did not differ significantly from Late Primary Children ($\bar{M}=3.47$), $F(1,127) < 1.00$.

A third hypothesis claims that younger children and boys will be more intrinsic than older children and girls on the motivational cluster of Harter's learning motivation scale. As a test of this hypothesis, a complex analysis of variance was conducted on the combined motivational subscales of Harter's measure. The factors were Agegroup (Early Primary, Late Primary) and Sex (2). The analysis yielded no significant main effect for Sex, $F(1, 125) < 1.00$, and no interaction between Agegroup and Sex, $F(1, 125) < 1.00$. The main effect for Agegroup approached significance, $F(1, 125) = 3.64$, $p < .059$. Early Primary children were more intrinsic than Late Primary children. See Table 3

and Figure 3 for cell means.

Table 3

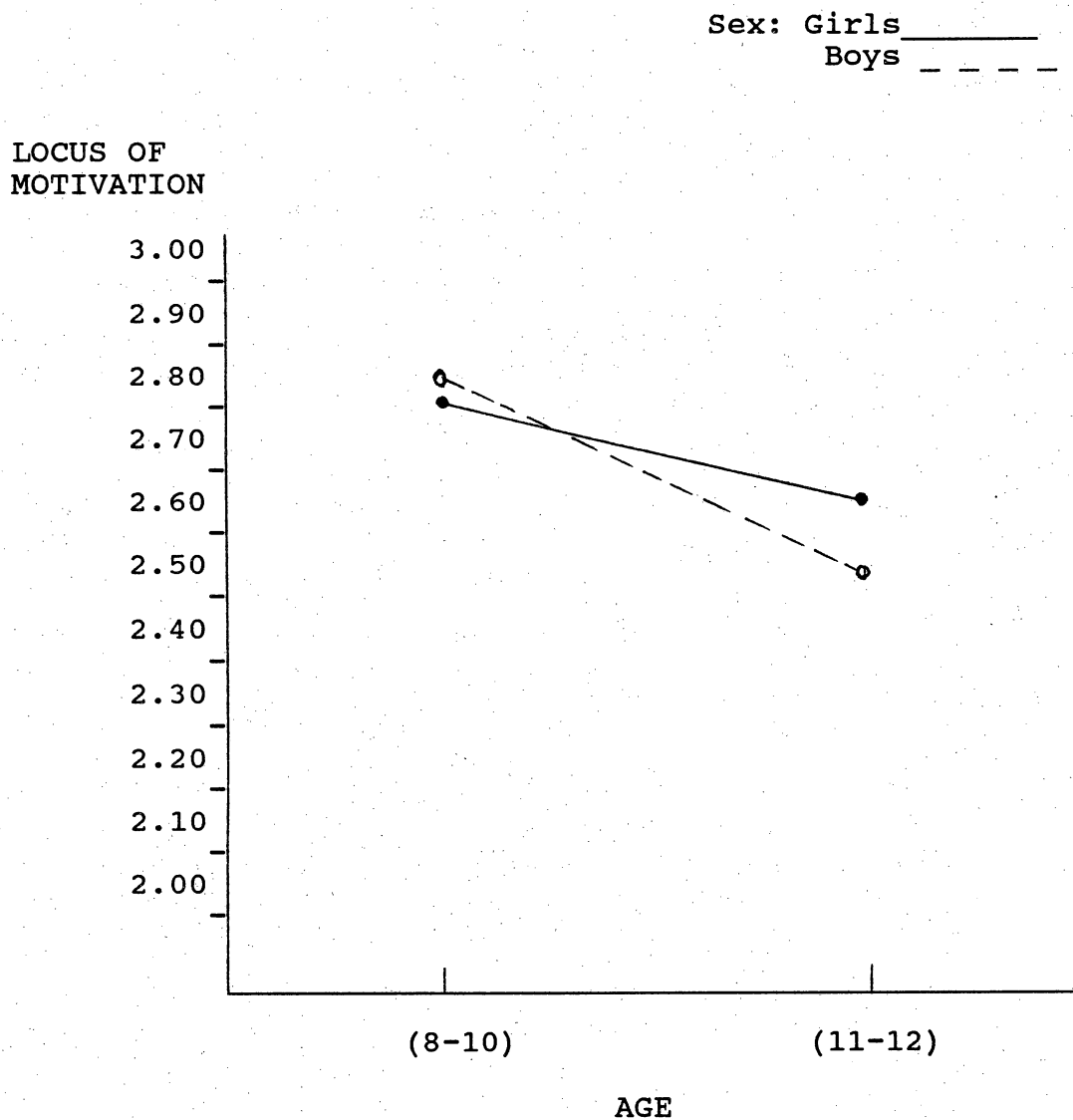
Mean Numbers of Locus of Motivation as a Function of Age and Gender

Mean	Age		Row
	* n	(08-10)	(11-12)
Girls	75	2.80	2.66
		(45)	(30)
Boys	54	2.83	2.57
		(25)	(29)
Column Mean		2.82	2.62

Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

*Numbers of children out of 129 who met the group's criteria.

Figure 3. Locus of motivation as a function age and gender



Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

The final hypothesis of this study maintains that

children become more intrinsic with age in the criteria they employ for judging success and failure. This hypothesis was tested by way of a simple analysis of variance of Agegroup (Early Primary, Late Primary) on the combined Informational subscales of Harter's learning motivation measure. Results indicated that Late Primary children ($\bar{M}=2.47$) were more intrinsic than Early Primary children ($\bar{M}=2.29$) to an extent approaching significance, $F(1, 127) = 3.88, p < .051$. See Table 4 and Figure 4 for cell means.

Table 4

Mean Numbers of Locus of Information-Motivation as a
Function of Implicit Theory of Intelligence and Age

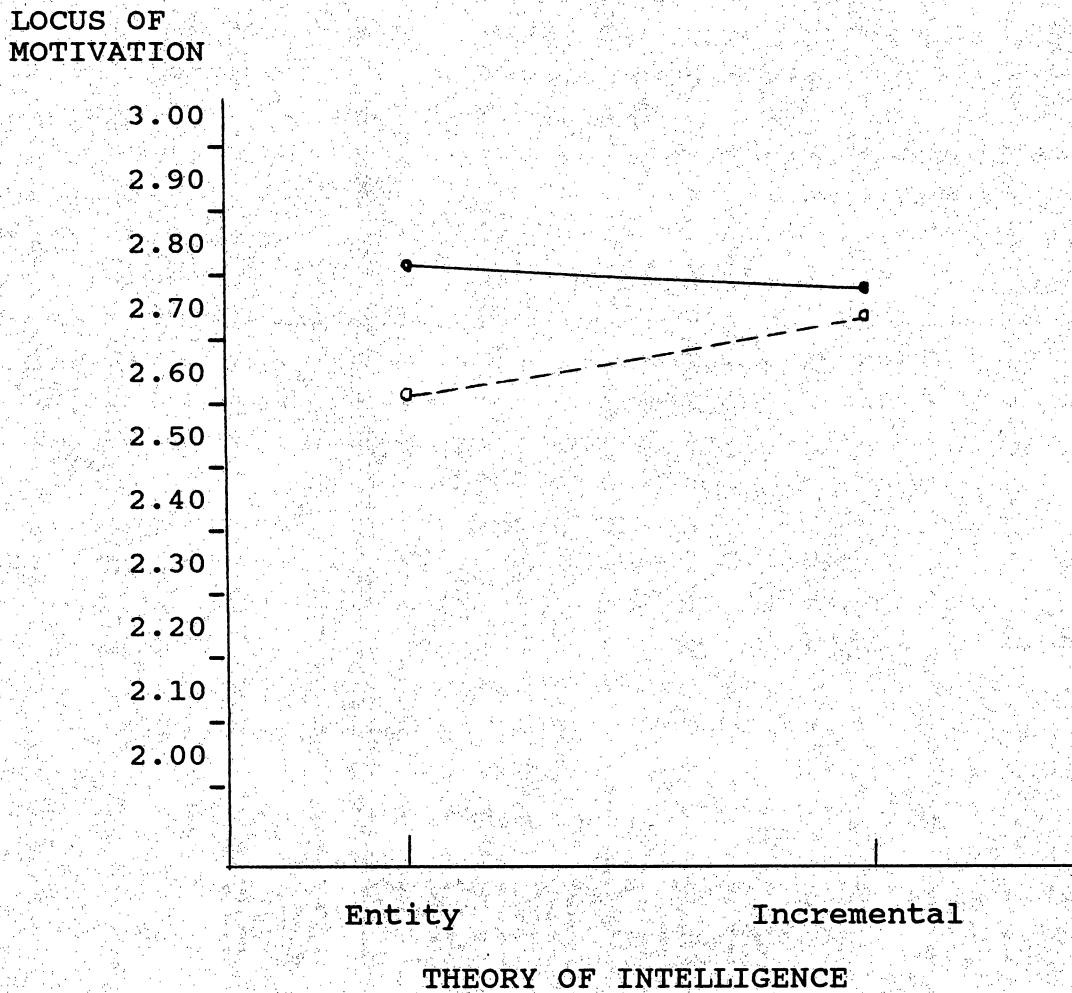
		Age	Row Mean
Implicit Theory of Intell.	* n (08 - 10)	(11 - 12)	
Entity	51	2.81	2.76
	(38)	(13)	2.79
Incremental	48	2.61	2.71
	(29)	(19)	2.66
Column Mean		2.71	2.74

Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

*Numbers of children out of 129 who met the group's criteria.

Figure 4. Locus of motivation as a function of theory of intelligence and age.

Age: (08-10) _____
(11-12) _ _ _ _



Note. The higher the motivation score, the more intrinsic the child. Maximum score = 4.00.

DISCUSSION

The model proposed in this study was not supported by the results. Contrary to Dweck's findings, there is no evidence that Implicit Theory of Intelligence is related to motivation. In addition, for Entity theorists learning motivation was not a function of either Confidence in intelligence or perceived Competence in domains important to the child. In fact, the interaction between Level of Confidence and Implicit Theory of Intelligence, which approached significance in this study, suggests that Level of Confidence as defined through Dweck's Confidence in Intelligence measure is more predictive of learning motivation for Incremental theorists than Entity theorists. Specifically, Incremental theorists with high Confidence in their overall intelligence were more Intrinsically oriented than Incremental theorists with low Confidence.

The most consistent effect in the present findings is the relationship between learning motivation and Level of Confidence as assessed through either Dweck's global Confidence in Intelligence measure, or Harter's more specific measure of Perceived Competence in

Domains Important to the Child. This suggests that Confidence in either global ability or specific abilities deemed important by the child may be used to predict learning motivation independently of children's beliefs about the nature of their intelligence. For children in the primary school years, a self-concept that involves Confidence in one's academic ability may lead to curiosity, and a tendency to seek challenges and persevere in the face of failure. Uncertainty or lack of Confidence in academic abilities may result in a dependence on Extrinsic rewards to motivate oneself to undertake academic tasks.

The proposed model may not have found support, in part, because of an incompatibility between Dweck's and Harter's measures of learning motivation. Dweck (1988) established a relationship between Implicit Theory of Intelligence and Learning Motivation by presenting children with actual academic tasks and assessing their perseverance and challenge-seeking. Harter (1980) explored relations between learning motivation and various other variables by way of a paper-and-pencil, self-report measure of challenge-seeking in academic contexts. It was an assumption of this study that these operational definitions are, in effect, interchangeable. Another dubious assumption concerns the relationship between Goal Orientation in Dweck's

model and Learning Motivation in Harter's model. There is no clear empirical evidence that these two variables are related, yet Goal Orientation provides an important bridge between Implicit Theory of Intelligence and Learning Motivation in the model at issue in the present study.

Partial support was found for the secondary hypotheses of this study. As predicted, older children were significantly less Intrinsic on motivation and more Intrinsic on locus of criteria for judging success than younger subjects. These findings support previous research by Harter (1980). On the other hand, boys were not found to be more Intrinsic in their orientation than girls. This may reflect changes in socialization both within the family and in prominent social institutions such as elementary school. In addition, there was no evidence of a relationship between age and Implicit Theory of Intelligence. Older children were not any more likely than younger children to be Incremental theorists. This nonfinding is consistent with the lack of significant main effects for Implicit Theory of Intelligence on the complex analyses of variance.

The absence of significant findings in the present study makes it difficult to suggest future directions for this research. It seems likely that a better test

of the proposed model would require a more sophisticated measure of children's beliefs concerning the nature of intelligence. These beliefs may well be related to learning motivation in the manner claimed, however the relationship is perhaps best approached by way of recent research on children's developing theories of mind. Measures are currently available of children's metacognitive knowledge in the areas of memory, reasoning, and specific aspects of information processing. These more specific indices of the role of cognitive and academic competence in children's self-concept may yield more interpretable findings.

Appendix A

Parental Informed Consent

Dear Parent

My name is Irena Vagner. I am a graduate student in the Department of Psychology at California State University, San Bernardino, and am conducting a study under the direction of Dr. Bob Ricco. The purpose of this study is to investigate factors which may affect children's learning motivation. The information gained from studies such as this can be very useful to school officials and teachers as they design assessment and curriculum strategies. This study has been approved by the Human Subject Review Board, Department of Psychology, California State University, San Bernardino.

We are asking your permission for your child's participation in this study. Your child will be asked to answer several questions about feelings related to school, learning, and him/herself. Your child will be in a classroom setting with other children familiar to him/her, and your child's teacher will be present to assist children as needed. It will take about

Appendix A

(Continued)

45 minutes for your child to complete all questions on the questionnaires. Your participation in this study and

the participation of your child is completely voluntary, and both you and your child are free to withdraw participation from the study at any time.

In addition to permission for your child's participation in this important project, we are asking that you complete the attached questionnaire--it should take less than 10 minutes to complete. Please be assured that your responses will be kept completely confidential. Neither your name, nor your child will be associated with any responses. We are interested only in group responses--the individual responses of you and your child will never be reported. If you have any questions about the study or your child's participation in the study, please contact Irena Vagner (310-397-8994) or Dr. Bob Ricco (909-880-5485).

At the conclusion of the study, you may receive a report of the results. If you wish to receive a copy of the results, please indicate so on the attached

Appendix A

(Continued)

consent form. Your completed questionnaire and the attached signed consent form should be returned to the researcher by your child in the envelope provided.

We appreciate your willingness to participate in our study of this important topic. Thank you for your help!

Sincerely,

.....

Thesis Student

.....

Professor, Psychology Dpt.

I acknowledge that I have been informed of the nature and purpose of this study and I give my permission for my child _____ to participate in this study.

.....

Parent's Name (Printed)

.....

Parent's Signature

____ Yes, please send me a copy of the study results when they become available.

Name _____

Address _____

Appendix B

Child's Informed Consent

My name is Irena Vagner. I am doing a study of children and things that may affect their learning. I am interested in finding out more about the school subjects and activities children like and those that they think are important.

If You would like to be a part of this study, I will ask you several questions which I would like you to answer on the papers given to you. Answering all the questions will take about 45 minutes. This is not a test, and there are not right or wrong answers; I'm interested in what you think and how you feel about yourself and school.

I would like for you to finish all the questions, but you can stop answering questions at any time. No one will see the answers that you give to the questions but me. I will not discuss the information you give with anyone.

Appendix B

(continued)

If you would like to be a part of this study,
please sign your name below.

Child's Name (Printed)

Child's Signature

____ Yes (PLEASE CHECK)

Please mail me a copy of
the results when
available.

Name _____

Address _____

Appendix C

Background Information

1. Your age _____
2. Your sex (circle one): Male Female
3. Your current marital status (check one):
 __single __married __separated __divorced
 __other
4. What is your ethnic background? (check one):
 __American Indian or Alaskan native; tribe
 __Black, non-Hispanic
 __Mexican-American, Mexican, Chicano
 __Hispanic - Central American
 __Hispanic - South American
 __Other Hispanic (Cuba, Puerto Rico, other
 Caribbean Island)
 __Asian - Chinese
 __Asian - Japanese
 __Asian - Korean
 __Southeast Asian (Cambodia, Laos, Thailand,
 Vietnam)
 __Other Asian
 __Pacific Islander

Appendix C

(continued)

White, non-Hispanic

Philipino

Other: _____

Decline to state

5. What is the highest level of education you have completed? (check one):

have not finished high school

graduated from high school

trade school

some college (includes A.A. degree)

graduate from college (B.A. or B.S. degree)

some post-graduate work

graduate or professional degree

(specify: _____)

6. What is (or has been) your primary occupation?

7. How old is your child now _____ girl__ boy__

Appendix D

Instruction to the Child

We have some sentences here and, as you can see from the top of your sheet where it says "What I am like" we are interested in what each of you is like, what kind of a person you are. This is a survey, not a test. There are no right or wrong answers. Since kids are very different from one another, each of you will be putting down something different.

First, let me explain how these questions work. There is a sample question at the top, marked (a). I'll read it out loud and you follow along with me. (Examiner reads sample question.) This question talks about two kinds of kids, and we want to know which kids are most like you.

(1) So, what I want you to decide first is whether you are more like the kids on the left side who would rather play outdoors, or whether you are more like the kids on the right side who would rather watch T.V. Don't mark anything yet, but first decide which kind of kid is most like you, and go to that side of the sentence.

Appendix D

(continued)

(2) Now, the second thing I want you to think about, now that you have decided which kind of kids are most like you, is to decide whether that is only sort of true for you, or really true for you. If it's only sort of true, than put an "X" in the box under sort of true; if it's really true for you, then put an "X" in that box, under really true.

(3) For each sentence you only check one box. Sometimes it will be on one side of the page, another time it will be on the other side of the page, but you can check one box for each sentence. You don't check both sides, just the one side most like you.

(4) OK, that one was just for practice. Now we have some more sentences which I am going to read out loud. For each one, just check one box, the one that goes with what is true for you, what you are most like.

Appendix E

SELF-PERCEPTION PROFILE FOR CHILDREN

Content of Each Domain

1. Scholastic Competence. All of the items are school related. Thus they tap the child's perception of her competence or ability.
2. Social Acceptance. This subscale taps the degree to which the child is accepted by peers or feels popular. The items tap the degree to which one has friends, feels that most kids like them.
3. Athletic Competence. All the items in this subscale tap content relevant to sports and outdoor games.
4. Physical Appearance. Taps the degree to which the child is happy with the way she looks, likes one's height, weight, body, face, hair, and feels that she or he is good-looking.
5. Behavioral Conduct. Taps the degree to which children like the way they behave, do the right thing, act the way they are supposed to, and avoid getting into trouble.
6. Global Self-Worth. These items tap the extent to which the child likes herself as a person, is happy the way she is leading her life, and is generally

Appendix E

(continued)

happy with the way she is. Thus it constitutes a global judgment of one's worth as a person, rather than domain-specific competence or adequacy.

Appendix F

What I Am Like

Name _____ Age _____ Birthday _____ Group _____
Month Day
 Boy or Girl (circle which)

SAMPLE SENTENCE

	Really True for me	Sort of True for me		BUT		Sort of True for me	Really True for me
(a)	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>	<input type="checkbox"/>
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are very <i>good</i> at their school work	BUT	Other kids <i>worry</i> about whether they can do the school work assigned to them.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it <i>hard</i> to make friends	BUT	Other kids find it's pretty <i>easy</i> to make friends.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do very <i>well</i> at all kinds of sports	BUT	Other kids <i>don't</i> feel that they are very good when it comes to sports.	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>happy</i> with the way they look	BUT	Other kids are <i>not</i> happy with the way they look.	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often do <i>not</i> like the way they <i>behave</i>	BUT	Other kids usually <i>like</i> the way they behave.	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are often <i>unhappy</i> with themselves	BUT	Other kids are pretty <i>pleased</i> with themselves.	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel like they are <i>just as smart</i> as other kids their age	BUT	Other kids aren't so sure and <i>wonder</i> if they are as smart.	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have <i> alot</i> of friends	BUT	Other kids <i>don't</i> have very many friends.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F

(continued)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish they could be alot better at sports	BUT	Other kids feel they are good enough at sports.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>happy</i> with their height and weight	BUT	Other kids wish their height or weight were <i>different</i> .	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually do the <i>right</i> thing	BUT	Other kids often <i>don't</i> do the right thing.	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>don't</i> like the way they are leading their life	BUT	Other kids <i>do</i> like the way they are leading their life.	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are pretty <i>slow</i> in finishing their school work	BUT	Other kids can do their school work <i>quickly</i> .	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would like to have alot more friends	BUT	Other kids have as many friends as they want.	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might <i>not</i> do well at sports they haven't ever tried.	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their body was <i>different</i>	BUT	Other kids <i>like</i> their body the way it is.	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually <i>act</i> the way they know they are <i>supposed</i> to	BUT	Other kids often <i>don't</i> act the way they are supposed to.	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>happy</i> with themselves as a person	BUT	Other kids are often <i>not</i> happy with themselves.	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids often <i>forget</i> what they learn	BUT	Other kids can remember things <i>easily</i> .	<input type="checkbox"/>	<input type="checkbox"/>
20.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are always doing things with <i>alot</i> of kids	BUT	Other kids usually do things <i>by themselves</i> .	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F

(continued)

	Really True for me	Sort of True for me		Sort of True for me	Really True for me		
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids feel that they are <i>better</i> than others their age at sports	BUT	Other kids <i>don't</i> feel they can play as well.	<input type="checkbox"/>	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish their physical appearance (how they look) was <i>different</i>	BUT	Other kids <i>like</i> their physical appearance the way it is.	<input type="checkbox"/>	<input type="checkbox"/>
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids usually get in <i>trouble</i> because of things they do	BUT	Other kids usually <i>don't</i> do things that get them in trouble.	<input type="checkbox"/>	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>like</i> the kind of <i>person</i> they are	BUT	Other kids often wish they were someone else.	<input type="checkbox"/>	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do <i>very well</i> at their classwork	BUT	Other kids <i>don't</i> do very well at their classwork.	<input type="checkbox"/>	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age <i>do</i> like them.	<input type="checkbox"/>	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	In games and sports some kids usually <i>watch</i> instead of play	BUT	Other kids usually <i>play</i> rather than just watch.	<input type="checkbox"/>	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids wish something about their face or hair looked <i>different</i>	BUT	Other kids <i>like</i> their face and hair the way they are.	<input type="checkbox"/>	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do things they know they <i>shouldn't</i> do	BUT	Other kids <i>hardly ever</i> do things they know they shouldn't do.	<input type="checkbox"/>	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are very <i>happy</i> being the way they are	BUT	Other kids wish they were <i>different</i> .	<input type="checkbox"/>	<input type="checkbox"/>
31.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have <i>trouble</i> figuring out the answers in school	BUT	Other kids almost <i>always</i> can figure out the answers.	<input type="checkbox"/>	<input type="checkbox"/>
32.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are <i>popular</i> with others their age	BUT	Other kids are <i>not</i> very popular.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix F

(continued)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
33.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>don't</i> do well at new outdoor games	BUT	Other kids are <i>good</i> at new games right away.	<input type="checkbox"/>	<input type="checkbox"/>
34.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	<input type="checkbox"/>	<input type="checkbox"/>
35.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.	<input type="checkbox"/>	<input type="checkbox"/>
36.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>are</i> not very happy with the way they do alot of things	BUT	Other kids think the way they do things is <i>fine</i> .	<input type="checkbox"/>	<input type="checkbox"/>

Appendix G

SCORING KEY

SELF-PERCEPTION PROFILE FOR CHILDREN
 (Revision of the Perceived Competence Scale for Children)

Susan Harter, Ph.D., University of Denver, 1985

What I Am Like

- | | | | | | | | |
|----|---|---|---|-----|--|---|---|
| 1. | 4 | 3 | Some kids feel that they are <i>very good</i> at their school work | BUT | Other kids <i>worry</i> about whether they can do the school work assigned to them. | 2 | 1 |
| 2. | 1 | 2 | Some kids find it <i>hard</i> to make friends | BUT | Other kids find it's pretty <i>easy</i> to make friends. | 3 | 4 |
| 3. | 4 | 3 | Some kids do <i>very well</i> at all kinds of sports | BUT | Other kids <i>don't</i> feel that they are <i>very good</i> when it comes to sports. | 2 | 1 |
| 4. | 4 | 3 | Some kids are <i>happy</i> with the way they look | BUT | Other kids are <i>not</i> happy with the way they look. | 2 | 1 |
| 5. | 1 | 2 | Some kids often do <i>not</i> like the way they <i>behave</i> | BUT | Other kids usually <i>like</i> the way they behave. | 3 | 4 |
| 6. | 1 | 2 | Some kids are often <i>unhappy</i> with themselves | BUT | Other kids are pretty <i>pleased</i> with themselves. | 3 | 4 |
| 7. | 4 | 3 | Some kids feel like they are <i>just as smart</i> as other kids their age | BUT | Other kids aren't so sure and <i>wonder</i> if they are as smart. | 2 | 1 |
| 8. | 4 | 3 | Some kids have <i>alot</i> of friends | BUT | Other kids <i>don't</i> have very many friends. | 2 | 1 |

Appendix G

(continued)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me
9.	1	2	Some kids wish they could be alot better at sports	BUT	Other kids feel they are good enough at sports.	3 4
10.	4	3	Some kids are <i>happy</i> with their height and weight	BUT	Other kids wish their height or weight were <i>different</i> .	2 1
11.	4	3	Some kids usually do the <i>right</i> thing	BUT	Other kids often <i>don't</i> do the right thing.	2 1
12.	1	2	Some kids <i>don't</i> like the way they are leading their life	BUT	Other kids <i>do</i> like the way they are leading their life.	3 4
13.	1	2	Some kids are pretty <i>slow</i> in finishing their school work	BUT	Other kids can do their school work <i>quickly</i> .	3 4
14.	1	2	Some kids would like to have alot more friends	BUT	Other kids have as many friends as they want.	3 4
15.	4	3	Some kids think they could do well at just about any new sports activity they haven't tried before	BUT	Other kids are afraid they might <i>not</i> do well at sports they haven't ever tried.	2 1
16.	1	2	Some kids wish their body was <i>different</i>	BUT	Other kids <i>like</i> their body the way it is.	3 4
17.	4	3	Some kids usually <i>act</i> the way they know they are <i>supposed</i> to	BUT	Other kids often <i>don't</i> act the way they are supposed to.	2 1
18.	4	3	Some kids are <i>happy</i> with themselves as a person	BUT	Other kids are often <i>not</i> happy with themselves.	2 1
19.	1	2	Some kids often <i>forget</i> what they learn	BUT	Other kids can remember things <i>easily</i> .	3 4
20.	4	3	Some kids are always doing things with <i>alot</i> of kids	BUT	Other kids usually do things <i>by themselves</i> .	2 1

Appendix G

(continued)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
21.	4	3	Some kids feel that they are <i>better</i> than others their age at sports	BUT	Other kids <i>don't</i> feel they can play as well.	2	1
22.	1	2	Some kids wish their physical appearance (how they look) was <i>different</i>	BUT	Other kids <i>like</i> their physical appearance the way it is.	3	4
23.	1	2	Some kids usually get in <i>trouble</i> because of things they do	BUT	Other kids usually <i>don't</i> do things that get them in trouble.	3	4
24.	4	3	Some kids <i>like</i> the kind of <i>person</i> they are	BUT	Other kids often wish they were someone else.	2	1
25.	4	3	Some kids do <i>very well</i> at their classwork	BUT	Other kids <i>don't</i> do very well at their classwork.	2	1
26.	1	2	Some kids wish that more people their age liked them	BUT	Other kids feel that most people their age <i>do</i> like them.	3	4
27.	1	2	In games and sports some kids usually <i>watch</i> instead of play	BUT	Other kids usually <i>play</i> rather than just watch.	3	4
28.	1	2	Some kids wish something about their face or hair looked <i>different</i>	BUT	Other kids <i>like</i> their face and hair the way they are.	3	4
29.	1	2	Some kids do things they know they <i>shouldn't</i> do	BUT	Other kids <i>hardly ever</i> do things they know they shouldn't do.	3	4
30.	4	3	Some kids are very <i>happy</i> being the way they are	BUT	Other kids wish they were <i>different</i> .	2	1
31.	1	2	Some kids have <i>trouble</i> figuring out the answers in school	BUT	Other kids almost <i>always</i> can figure out the answers.	3	4
32.	4	3	Some kids are <i>popular</i> with others their age	BUT	Other kids are <i>not</i> very popular.	2	1

Appendix G

(continued)

	Really True for me	Sort of True for me			Sort of True for me	Really True for me	
33.	1	2	Some kids <i>don't</i> do well at new outdoor games	BUT	Other kids are <i>good</i> at new games right away.	3	4
34.	4	3	Some kids think that they are good looking	BUT	Other kids think that they are not very good looking.	2	1
35.	4	3	Some kids behave themselves very well	BUT	Other kids often find it hard to behave themselves.	2	1
36.	1	2	Some kids <i>are</i> not very happy with the way they do alot of things	BUT	Other kids think the way they do things is <i>fine</i> .	3	4

Appendix I

Name _____ Age _____ Group _____

HOW IMPORTANT ARE THESE THINGS TO HOW YOU FEEL ABOUT YOURSELF AS A PERSON?

	Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it is important to do well at schoolwork in order to feel good as a person	BUT	Other kids don't think how well they do at schoolwork is that important.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that having a lot of friends is all that important	BUT	Other kids think that having a lot of friends is important to how they feel as a person.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be good at sports	BUT	Other kids don't think how good you are at sports is that important.	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be good looking in order to feel good about themselves	BUT	Other kids don't think that's very important at all.	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think that it's important to behave the way they should	BUT	Other kids don't think that how they behave is that important.	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that getting good grades is all that important to how they feel about themselves.	BUT	Other kids think that getting good grades is important.	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think it's important to be popular	BUT	Other kids don't think that being popular is all that important to how they feel about themselves.	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think doing well at athletics is that important to how they feel about themselves as a person	BUT	Other kids feel that doing well at athletics is important.	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that how they look is important to how they feel about themselves as a person	BUT	Other kids think that how they look is important.	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't think that how they act is all that important	BUT	Other kids think it's important to act the way you are supposed to.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix J

Scoring Key for IMPORTANCE Ratings

	Really True for Me	Sort of True for Me			Sort of True for Me	Really True for Me
Scholastic Competence	1. <input type="checkbox"/> 4	<input type="checkbox"/> 3	Some kids think it is important to do well at schoolwork in order to feel good as a person.	BUT	Other kids don't think how well they do at schoolwork is that important.	<input type="checkbox"/> 2 <input type="checkbox"/> 1
Social Acceptance	2. <input type="checkbox"/> 1	<input type="checkbox"/> 2	Some kids don't think that having a lot of friends is all that important.	BUT	Other kids think that having a lot of friends is important to how they feel as a person.	<input type="checkbox"/> 3 <input type="checkbox"/> 4
Athletic Competence	3. <input type="checkbox"/> 4	<input type="checkbox"/> 3	Some kids think it's important to be good at sports.	BUT	Other kids don't think how good you are at sports is that important.	<input type="checkbox"/> 2 <input type="checkbox"/> 1
Physical Appearance	4. <input type="checkbox"/> 4	<input type="checkbox"/> 3	Some kids think it's important to be good looking in order to feel good about themselves.	BUT	Other kids don't think that's very important at all.	<input type="checkbox"/> 2 <input type="checkbox"/> 1
Behavioral Conduct	5. <input type="checkbox"/> 4	<input type="checkbox"/> 3	Some kids think that it's important to behave the way they should.	BUT	Other kids don't think that how they behave is that important.	<input type="checkbox"/> 2 <input type="checkbox"/> 1
Scholastic Competence	6. <input type="checkbox"/> 1	<input type="checkbox"/> 2	Some kids don't think that getting good grades is all that important to how they feel about themselves.	BUT	Other kids think that getting good grades is important.	<input type="checkbox"/> 3 <input type="checkbox"/> 4
Social Acceptance	7. <input type="checkbox"/> 4	<input type="checkbox"/> 3	Some kids think it's important to be popular.	BUT	Other kids don't think that being popular is all that important to how they feel about themselves.	<input type="checkbox"/> 2 <input type="checkbox"/> 1
Athletic Competence	8. <input type="checkbox"/> 1	<input type="checkbox"/> 2	Some kids don't think doing well at athletics is that important to how they feel about themselves as a person.	BUT	Other kids feel that doing well at athletics is important.	<input type="checkbox"/> 3 <input type="checkbox"/> 4
Physical Appearance	9. <input type="checkbox"/> 1	<input type="checkbox"/> 2	Some kids don't think that how they look is important to how they feel about themselves as a person.	BUT	Other kids think that how they look is important.	<input type="checkbox"/> 3 <input type="checkbox"/> 4
Behavioral Conduct	10. <input type="checkbox"/> 1	<input type="checkbox"/> 2	Some kids don't think that how they act is all that important.	BUT	Other kids think it's important to act the way you are supposed to.	<input type="checkbox"/> 3 <input type="checkbox"/> 4

Appendix K

Calculation of Discrepancy Score

STEP 1

Write down names of just those domains in which the Importance Score was 3.0 (Sort of important), 3.5 (Half-way between Sort of important and Very important) or 4.0 (Very important). There will be a potential maximum of five scores if all domains are considered important. However, in many if not most cases, not all domains will be considered important.

STEP 2

From the Self-Perception Profile, fill in the mean subscale scores for just those areas rated as important.

STEP 3

Record only those importance ratings which are either 3.0, 3.5, or 4.0 in value.

STEP 4

Subtract the Importance Ratings from their respective Competence or Adequacy Scores for each domain rated as important. The sign of these values is critical. If the Importance Rating (the second value) is greater

Appendix K

(continued)

than Competence Score (the first value) then the Discrepancy Score will be negative. If the Importance Rating is smaller than the Competence Score, then the Discrepancy Score will be positive.

Step 1 Name of domains in which Importance Scores are 3.0, 3.5, or 4.0.	Step 2 Competence or Adequacy Scores (from Self-Perception Profile)	Step 3 Importance Ratings of 3, 3.5, and 4 only (from Importance Rating Scale)	Step 4 Discrepancy Score	
			Sign (+ or -)	Value
(a) _____	_____ minus	_____ equals	_____	_____
(b) _____	_____ minus	_____ equals	_____	_____
(c) _____	_____ minus	_____ equals	_____	_____
(d) _____	_____ minus	_____ equals	_____	_____
(e) _____	_____ minus	_____ equals	_____	_____

Do *not* include domains in which Importance ratings are 2.5 or lower.

Appendix K

(continued)

STEP 5

Add up the discrepancy scores taking their sign into account to arrive at a Total Discrepancy Score. In most cases, this value will be negative since Importance Ratings tend to be higher than Competence Scores. The larger the Total Discrepancy Score with a negative sign, the more the child's Importance Ratings Exceed his/her Competence Scores. Large, negative discrepancy scores should be associated with extrinsic motivation. Small negative, zero, or positive scores should be associated with moderately intrinsic or intrinsic motivation.

STEP 6

Divide by the number of domains rated as Important (those with Importance Scores of 4,3.5,3), to get the mean discrepancy score. Note that you are just dividing by the number of domains for which discrepancy scores were calculated.

In most cases this Discrepancy Score will be *negative*, however, it can also be zero, or assume positive values.

The larger the negative discrepancy score, the more one's importance scores exceed one's competence levels, and the lower one's self-worth score should be as a result.

Step 5
Sum of Discrepancy Scores taking sign into account:

Step 6
Mean Discrepancy Score:

(sign)	(score)
(sign)	(score)

Appendix L

In the Classroom

Pupil's Form

Name _____ Age _____ Birthday (Month) _____ (Day) _____

Grade _____ Teacher _____ Boy or Girl (circle which)

Sample Questions

	Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
(a)	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	<input type="checkbox"/>	<input type="checkbox"/>
(b)	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like hamburgers better than hot dogs	BUT	Other kids like hot dogs better than hamburgers.	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>							
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like hard work because its a challenge	BUT	Other kids prefer easy work that they are sure they can do	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	When some kids don't understand something right away they want the teacher to tell them the answer	BUT	Other kids would rather try and figure it out by themselves	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids work on problems to learn how to solve them	BUT	Other kids work on problems because you're supposed to	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids almost always think that what the teacher says is O K	BUT	Other kids sometimes think their own ideas are better	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids know when they've made mistakes without checking with the teacher	BUT	Other kids need to check with the teacher to know if they've made a mistake	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like difficult problems because they enjoy trying to figure them out	BUT	Other kids don't like to figure out difficult problems	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do their school-work because the teacher tells them to	BUT	Other kids do their school-work to find out about alot of things they've been wanting to know	<input type="checkbox"/>	<input type="checkbox"/>

Appendix L

(continued)

	Really True for Me	Sort of True for Me			Sort of True for Me	Really True for Me	
8.	<input type="checkbox"/>	<input type="checkbox"/>	When some kids make a mistake they would rather figure out the right answer by themselves.	BUT	Other kids would rather ask the teacher how to get the right answer	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids know whether or not they're doing well in school without grades	BUT	Other kids need to have grades to know how well they are doing in school	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids agree with the teacher because they think the teacher is right about most things	BUT	Other kids don't agree with the teacher sometimes and stick to their own opinion	<input type="checkbox"/>	<input type="checkbox"/>
11.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't like difficult schoolwork because they have to work too hard.	BUT	Other kids do like difficult schoolwork because they like to figure things out.	<input type="checkbox"/>	<input type="checkbox"/>
12.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like to learn things on their own that interest them	BUT	Other kids think its better to do things that the teacher thinks they should be learning	<input type="checkbox"/>	<input type="checkbox"/>
13.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids read things because they are interested in the subject	BUT	Other kids read things because the teacher wants them to	<input type="checkbox"/>	<input type="checkbox"/>
14.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids need to get their report cards to tell how they are doing in school	BUT	Other kids know for themselves how they are doing even before they get their report card	<input type="checkbox"/>	<input type="checkbox"/>
15.	<input type="checkbox"/>	<input type="checkbox"/>	If some kids get stuck on a problem they ask the teacher for help	BUT	Other kids keep trying to figure out the problem on their own	<input type="checkbox"/>	<input type="checkbox"/>
16.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like to go on to new work that's at a more difficult level	BUT	Other kids would rather stick to the assignments which are pretty easy to do	<input type="checkbox"/>	<input type="checkbox"/>
17.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think that what the teacher thinks of their work is the most important thing	BUT	For other kids what they think of their work is the most important thing	<input type="checkbox"/>	<input type="checkbox"/>
18.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids ask questions in class because they want to learn new things	BUT	Other kids ask questions because they want the teacher to notice them	<input type="checkbox"/>	<input type="checkbox"/>
19.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids aren't really sure if they've done well on a test until they get their papers back with a mark on it	BUT	Other kids pretty much know how well they did even before they get their paper back	<input type="checkbox"/>	<input type="checkbox"/>

Appendix L

(continued)

	Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
20.	<input type="checkbox"/>	<input type="checkbox"/>	If a school subject is hard to understand some kids want the teacher to explain it to them.	BUT	Other kids would first like to try to understand it themselves.	<input type="checkbox"/>	<input type="checkbox"/>
21.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think they should have a say in what work they do in school.	BUT	Other kids think that the teacher should decide what work they should do.	<input type="checkbox"/>	<input type="checkbox"/>
22.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like school subjects where its pretty easy to just learn the answers.	BUT	Other kids like those school subjects that make them think pretty hard and figure things out.	<input type="checkbox"/>	<input type="checkbox"/>
23.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids aren't sure if their work is really good or not until the teacher tells them.	BUT	Other kids know if its good or not before the teacher tells them.	<input type="checkbox"/>	<input type="checkbox"/>
24.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like to try to figure out how to do school assignments on their own.	BUT	Other kids would rather ask the teacher how it should be done.	<input type="checkbox"/>	<input type="checkbox"/>
25.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids are curious and find that a lot of things they can learn in school are really interesting.	BUT	Other kids are not very curious about the things they learn in school.	<input type="checkbox"/>	<input type="checkbox"/>
26.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids think its best if they decide when to work on each school subject.	BUT	Other kids think that the teacher is the best one to decide when to work on things.	<input type="checkbox"/>	<input type="checkbox"/>
27.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids know they didn't do their best on an assignment when they turn it in.	BUT	Other kids have to wait til the teacher grades it to know that they didn't do as well as they could have.	<input type="checkbox"/>	<input type="checkbox"/>
28.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids don't like difficult schoolwork because they have to work too hard.	BUT	Other kids like difficult schoolwork because they find it more interesting.	<input type="checkbox"/>	<input type="checkbox"/>
29.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids like to do their schoolwork without help.	BUT	Other kids like to have the teacher help them do their schoolwork.	<input type="checkbox"/>	<input type="checkbox"/>
30.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids do their schoolwork because the teacher tells them to.	BUT	Other kids do schoolwork so they can learn a lot of interesting things.	<input type="checkbox"/>	<input type="checkbox"/>

Appendix M

Intrinsic Versus Extrinsic Orientation in the Classroom

SCORING KEY: 4 = most intrinsic, 1 = most extrinsic

Scores (4, 3, 2, or 1) are in the box for each individual item.

Subscale designations are indicated under each item number coded in terms of the intrinsic pole:

PC: Preference for Challenge vs. Preference for Easy Work Assigned

CI: Curiosity/Interest vs. Pleasing the Teacher, Getting Grades

IM: Independent Mastery vs. Dependence on the Teacher

IJ: Independent Judgement vs. Reliance on the Teacher's Judgement

IC: Internal Criteria for Success/Failure vs. External Criteria

	Really True for Me	Sort of True for Me		BUT		Sort of True for Me	Really True for Me
1. (PC)	4	3	Some kids like hard work because it's a challenge	BUT	Other kids prefer easy work that they are sure they can do	2	1
2. (IM)	1	2	When some kids don't understand something right away they want the teacher to tell them the answer	BUT	Other kids would rather try and figure it out by themselves	3	4
3. (CI)	4	3	Some kids work on problems to learn how to solve them	BUT	Other kids work on problems because you're supposed to	2	1
4. (IJ)	1	2	Some kids almost always think that what the teacher says is O.K.	BUT	Other kids sometimes think their own ideas are better	3	4
5. (IC)	4	3	Some kids know when they've made mistakes without checking with the teacher	BUT	Other kids need to check with the teacher to know if they've made a mistake	2	1
6. (PC)	4	3	Some kids like difficult problems because they enjoy trying to figure them out	BUT	Other kids don't like to figure out difficult problems	2	1
7. (CI)	1	2	Some kids do their schoolwork because the teacher tells them to	BUT	Other kids do their schoolwork to find out about a lot of things they've been wanting to know	3	4

Appendix M

(continued)

	Really True for Me	Sort of True for Me			Sort of True for Me	Really True for Me	
8. (IM)	4	3	When some kids make a mistake they would rather figure out the right answer by themselves	BUT	Other kids would rather ask the teacher how to get the right answer	2	1
9. (IC)	4	3	Some kids know whether or not they're doing well in school without grades	BUT	Other kids need to have grades to know how well they are doing in school	2	1
10. (IJ)	1	2	Some kids agree with the teacher because they think the teacher is right about most things	BUT	Other kids don't agree with the teacher sometimes and stick to their own opinion	3	4
11. (PC)	1	2	Some kids would rather just learn what they have to in school	BUT	Other kids would rather learn about as much as they can	3	4
12. (IJ)	4	3	Some kids like to learn things on their own that interest them	BUT	Other kids think it's better to do things that the teacher thinks they should be learning	2	1
13. (CI)	4	3	Some kids read things because they are interested in the subject	BUT	Other kids read things because the teacher wants them to	2	1
14. (IC)	1	2	Some kids need to get their report cards to tell how they are doing in school	BUT	Other kids know for themselves how they are doing even before they get their report card	3	4
15. (IM)	1	2	If some kids get stuck on a problem they ask the teacher for help	BUT	Other kids keep trying to figure out the problem on their own	3	4
16. (PC)	4	3	Some kids like to go on to new work that's at a more difficult level	BUT	Other kids would rather stick to the assignments which are pretty easy to do	2	1
17. (IJ)	1	2	Some kids think that what the teacher thinks of their work is the most important thing	BUT	For other kids what <i>they</i> think of their work is the most important thing	3	4
18. (CI)	4	3	Some kids ask questions in class because they want to learn new things	BUT	Other kids ask questions because they want the teacher to notice them	2	1
19. (IC)	1	2	Some kids aren't really sure if they've done well on a test until they get their papers back with a mark on it	BUT	Other kids pretty much know how well they did even before they get their paper back	3	4

Appendix M

(continued)

	Really True for Me	Sort of True for Me			Sort of True for Me	Really True for Me	
20. (IM)	1	2	Some kids like the teacher to help them plan what to do next	BUT	Other kids like to make their own plans for what to do next	3	4
21. (IJ)	4	3	Some kids think they should have a say in what work they do in school	BUT	Other kids think that the teacher should decide what work they should do	2	1
22. (PC)	1	2	Some kids like school subjects where it's pretty easy to just learn the answers	BUT	Other kids like those school subjects that make them think pretty hard and figure things out	3	4
23. (IC)	1	2	Some kids aren't sure if their work is really good or not until the teacher tells them	BUT	Other kids know if it's good or not before the teacher tells them	3	4
24. (IM)	4	3	Some kids like to try to figure out how to do school assignments on their own	BUT	Other kids would rather ask the teacher how it should be done	2	1
25. (CI)	4	3	Some kids do extra projects so they can get better grades	BUT	Other kids do extra projects because they learn about things that interest them	2	1
26. (IJ)	4	3	Some kids think it's best if they decide when to work on each school subject	BUT	Other kids think that the teacher is the best one to decide when to work on things	2	1
27. (IC)	4	3	Some kids know they didn't do their best on an assignment when they turn it in	BUT	Other kids have to wait til the teacher grades it to know that they didn't do as well as they could have	2	1
28. (PC)	1	2	Some kids don't like difficult schoolwork because they have to work too hard	BUT	Other kids like difficult schoolwork because they find it more interesting	3	4
29. (IM)	4	3	Some kids like to do their schoolwork without help	BUT	Other kids like to have the teacher help them do their schoolwork	2	1
30. (CI)	1	2	Some kids work really hard to get good grades	BUT	Other kids work hard because they really like to learn things	3	4

Appendix O

IMPLICIT THEORY OF INTELLIGENCE MEASURE

1. Check the sentence that is most true for you.

I usually think I'm intelligent. (A)

I wonder if I'm intelligent. (B)

Now, show how true the statement you chose is for you.

1	2	3
very true for me	true for me	sort of true for me

2. Check the sentence that is most true for you.

I'm not sure if I'm smart enough to be successful. (B)

I'm pretty sure I'm smart enough to be successful. (A)

Now, show how true the statement you chose is for you.

1	2	3
very true for me	true for me	sort of true for me

3. Check the sentence that is most true for you.

When I get new material, I'm usually sure I will be able to learn it. (A)

When I get new material, I often think I may not be able to learn it. (B)

Now, show how true the statement you chose is for you.

1	2	3
very true for me	true for me	sort of true for me

4. Check the sentence that is most true for you.

I'm not very confident about my intellectual ability. (B)

I feel pretty confident about my intellectual ability. (A)

Now, show how true the statement you chose is for you.

1	2	3
very true for me	true for me	sort of true for me

Appendix P

CONFIDENCE IN INTELLECTUAL ABILITY MEASURE

Instructions. People have different ideas about their intelligence. Read each statements below and then circle the one mark that shows how much you agree with the statement.

You have a certain amount of intelligence and you really can't do much to change it.

1	2	3	4	5	6
Strongly Agree	Agree	Sort of Agree	Sort of <u>Disagree</u>	<u>Disagree</u>	Strongly <u>Disagree</u>

Your intelligence is something about you that you can't change very much.

1	2	3	4	5	6
Strongly Agree	Agree	Sort of Agree	Sort of <u>Disagree</u>	<u>Disagree</u>	Strongly <u>Disagree</u>

You can learn new things, but you can't really change your basic intelligence.

1	2	3	4	5	6
Strongly Agree	Agree	Sort of Agree	Sort of <u>Disagree</u>	<u>Disagree</u>	Strongly <u>Disagree</u>

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