1-1-1993

The Test-Retest and Inter-rater Reliability of the Teacher Rating of Academic Achievement Motivation

Rachel P. Pitcher

This research is a product of the graduate program in School Psychology at Eastern Illinois University. Find out more about the program.

Recommended Citation

http://thekeep.eiu.edu/theses/2121
THESIS REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates who have written formal theses.

SUBJECT: Permission to reproduce theses.

The University Library is receiving a number of requests from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow theses to be copied.

Please sign one of the following statements:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

Signed

Date

I respectfully request Booth Library of Eastern Illinois University not allow my thesis be reproduced because______________________________

_______________________________________________________________

_______________________________________________________________

Date Author
The Test-Retest and Inter-rater Reliability of the
Teacher Rating of Academic Achievement Motivation
(TITLE)

BY

Rachel P. Pitcher

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

Specialist in School Psychology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

1993

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

7-6-93
DATE

7/6/93
DATE
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables</td>
<td>ii</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>iii</td>
</tr>
<tr>
<td>Abstract</td>
<td>iv</td>
</tr>
<tr>
<td>Introduction and Review of Literature</td>
<td>1</td>
</tr>
<tr>
<td>Method</td>
<td>12</td>
</tr>
<tr>
<td>Subjects</td>
<td>12</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>12</td>
</tr>
<tr>
<td>Procedure</td>
<td>14</td>
</tr>
<tr>
<td>Results</td>
<td>17</td>
</tr>
<tr>
<td>Discussion</td>
<td>21</td>
</tr>
<tr>
<td>References</td>
<td>25</td>
</tr>
<tr>
<td>Appendix A</td>
<td>31</td>
</tr>
<tr>
<td>Appendix B</td>
<td>33</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Means and Standard Deviations for TRAAM Factors and Total Score by Administration</td>
<td>18</td>
</tr>
<tr>
<td>2 Test-Retest Reliability Coefficients by Grade</td>
<td>19</td>
</tr>
<tr>
<td>3 Means and Standard Deviations for TRAAM Factors and Total Score by Raters</td>
<td>20</td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

I would like to thank the teachers who kindly volunteered their time and effort to participate in this study. The cooperation and assistance of the principals is also sincerely appreciated.

I would like to thank Dr. Terry Stinnett, Dr. Judy Oehler-Stinnett, and Dr. William Addison for their direction, assistance, and encouragement. Special thanks to Dr. Stinnett for his time, support, and patience.

I would like to thank my husband, Tony, and my parents, Michael and Pauline Phillips, for their neverending support and belief in me.

Finally, I would like to thank God for making all things possible. "I can do all things through Christ who strengthens me." Philippians 4:13.
Abstract
The Teacher Rating of Academic Achievement Motivation (TRAAM) is in development as a measure of academic achievement motivation. To examine the scale's test-retest and inter-rater reliability, teachers rated 90 third through sixth grade students. Results indicated that the TRAAM, in general, is reliable. The test-retest reliability coefficient for the TRAAM Total Score was .96. The four factor scores of the TRAAM were also found to be consistent over time with reliability coefficients ranging from .85 to .93. Inter-rater reliability of the TRAAM was also found to be adequate for the Total Score (\( r = .77 \)). The inter-rater reliability coefficients of the factor scores were lower but adequate except for Factor 3 (\( r = .46 \)). Limitations and implications of the study are discussed.
CHAPTER I

Introduction

Academic Achievement Motivation

Academic achievement motivation is the child's tendency to strive to accomplish tasks in his or her academic arena. Although researchers have described this construct in varying ways, most theoretical models include personality trait, attribution, competence and self-efficacy, and behavioral theory.

Early researchers viewed achievement motivation as a stable personality trait (Atkinson, 1964; Clarizio & McCoy, 1976; McClelland, 1965; Murray, 1962). McClelland (1965) described it as "laid down in childhood," and difficult to change in adulthood, attesting to its stability. According to this approach, achievement motivation involves the constant striving for attainment and success that affects a broad range of human activity. Personality traits imply that motivation is stable, most likely not influenced by situational factors, and is resistant to change. Although this approach has not led to treatment or intervention methods, it did initiate a great deal of interest in the construct.

Attribution theory holds that the underlying motivator of human behavior is the search for causal understanding of successes and failures (Covington, 1984; Dweck & Elliott,
It is assumed that individuals make causal assignments for the outcomes of their actions (Schunk, 1985). Most attribution theorists dichotomize these attributions into either ability or effort. Children typically attribute success and failure either to ability or effort. Future performance expectations depend upon these causal attributions. The amount of effort a child chooses to exert may depend on this as well. If a child exerts much effort but still fails, this conveys a lack of capability to the child. Success that was the result of little effort will be perceived as showing a high degree of ability. Wagner, Powers, and Irwin (1985) found a student's attribution of school success to ability to be the single best predictor of achievement motivation. Stipek and Hoffman (1980) found that low achieving boys attributed failure to a lack of ability significantly more than high achieving boys. The low achieving boys had lower expectations for future success due to this attribution of failure to lack of ability.

A large portion of the research on achievement motivation comes from competence and self-efficacy theory (Bandura, 1982; DeCharms, 1976; Deci, 1975; Gottfried, 1985; Harter, 1978, 1981; McCombs, 1984; Schunk, 1985; & White,
1959). Self-efficacy involves subjective judgment of one’s ability. This is important in understanding an individual’s motivation to learn new skills and acquire knowledge. Self-efficacy can influence students’ choices of activity, their motivation, and their performance (Schunk, 1985). Repeated successes increase self-efficacy, whereas repeated failures decrease it. Students may obtain information about their abilities from observing others’ performance, from teacher feedback, and from their own physiological reactions to the learning situation (Schunk, 1985). Bandura (1982) described self-efficacy in terms of self-control and competency. A child’s perception of personal control and competency likely affects his or her academic achievement motivation. Children who perceive themselves as in control and competent are more likely to have high academic achievement motivation. Students who feel their performance is not under their control and who feel incompetent are more likely to have low academic motivation. The student with high levels of self-efficacy is more likely to persist on a task, to focus on problem solving strategies, and to have reduced fear and anxiety (Schunk, 1985).

White (1959) also described effectance motivation using a personal competence model. This viewpoint focuses on childrens’ self-evaluations of their attempts to master their environment. There is an intrinsic need to achieve
mastery. Positive interactions with the environment will most likely result in a positive self-evaluation and feelings of competence and self-efficacy. A negative interaction would then most likely result in a negative self-evaluation and tend to decrease feelings of mastery and competence. Harter (1981) expanded the effectance motivation model and described academic motivation on a continuum from intrinsic to extrinsic. Intrinsic motivation increases as successful or adaptive attempts increase. Extrinsic motivation would then be increased by attempts that failed to provide the necessary feedback for the child's own self-evaluation. This child then begins to rely on external factors to evaluate his or her performance.

Harter (1981) developed the Scale of Intrinsic versus Extrinsic Orientation in the Classroom (SIEOC) which includes the five dimensions of challenge, curiosity, mastery, judgment, and criteria. Harter views intrinsic and extrinsic motivation as two separate components. One component is related to cognitive-informational processes, or how the child evaluates and makes judgments. The second component is motivational in nature and involves what the child wants, likes, and will attempt to do. Harter also reports that academic motivation reflects a developmental trend. Intrinsic motivation decreases with age while extrinsic motivation increases. Tzuriel (1989) replicated
the specific five factors Harter reported in an American sample.

A behavioral framework has also been used to conceptualize academic achievement motivation (Maehr, 1976, 1982; Stinnett, Oehler-Stinnett, & Stout, 1991). Maehr (1976, 1982) defined motivation in relation to five identifiable overt behaviors: direction of attention, persistence, activity level, continuing motivation, and performance. Teachers can observe these overt behaviors of their students to judge an internal state like academic motivation (Stinnett et al., 1991). Stinnett et al. applied the skill versus performance deficit model to academic motivation and suggested these two types of deficits be discriminated for accurate assessment of the construct. They suggested that problems in the area of motivation be viewed as academic performance deficits. It is important to distinguish between a child who has the academic skills needed but does not perform them adequately and the child who actually lacks the skills required to perform the task. The type of diagnosis given and treatment received may vary depending upon the specific nature of the deficit (i.e. skill deficit versus performance deficit.)

Many researchers have found relationships between academic achievement motivation and academic achievement or grades (Das, Schokman-Gates, & Murphy, 1985; Gottfried,
1985; Pokay & Blumefeld, 1990; Pintrich & de Groot, 1990; Soto, 1988; Stinnett et al., 1991; Stinnett & Oehler-Stinnett, 1992; Uguroglu & Walberg, 1986; & Wagner, Powers, & Irwin, 1985). Higher levels of intrinsic value and self-efficacy have been found to be associated with higher levels of student achievement (Pintrich & de Groot, 1990). Soto (1988) also found high-achievers to be more likely to have an intrinsic orientation and low-achievers an extrinsic orientation in a sample of 57 fifth- and sixth-grade English-speaking Puerto Rican children. Students who perceived their class as emphasizing mastery goals were found to use more learning strategies and to choose more challenging tasks over performance-oriented students (Dweck, 1986). These students want to learn all they can instead of merely receiving good grades. Self-efficacy and intrinsic value have been found to correlate with cognitive strategy use and self-regulation (Pintrich & de Groot, 1990).

Gottfried (1985) found academic intrinsic motivation to be positively and significantly related to actual school achievement but negatively related to anxiety. Students high in academic intrinsic motivation are less likely to experience anxiety in the learning situation. It has also been shown that academic motivation is related to social skills. Stinnett and Oehler-Stinnett (1992) reported that academic motivation is positively related to prosocial
functioning and school adjustment and inversely related to problem behavior.

A student's motivational orientation may affect how he or she reacts to the use of rewards in the classroom or in intervention. Studies have found that rewards affect students differently based on the student's motivational orientation (Calder & Staw, 1975; Loveland & Olley, 1979). The use of rewards, especially monetary ones, tends to decrease the interest and enjoyment of highly intrinsic children. If a child has an extrinsic motivational orientation he or she will find a task more enjoyable if a reward is attached.

Attention is a very important component in the classroom and has been found to have a relationship with academic achievement motivation. Attention is more focused on tasks done for intrinsic purposes (Stipek, 1986). Maehr (1982) distinguishes between a task-oriented and an ego-oriented individual. With task being the goal, attention is focused on completing a task. With ego being the goal, attention is focused on the self and external evaluations of the self. Task-oriented individuals can also be described as intrinsically motivated and ego-oriented individuals as extrinsically motivated. Activities done for intrinsic purposes will involve more pleasure and satisfaction than those done for external reasons (Stipek, 1986).
Developmental trends for motivational orientation are also seen with increasing age where there is a shift from an intrinsic orientation to an extrinsic orientation (Das, Schokman-Gates, & Murphy, 1985; Harter, 1981). Young children perceive their success to be the result of effort but older children shift to an ability-focused-perception. This shift from intrinsic to extrinsic and effort to ability may be affected by increasing competition as a child progresses through school and is faced with the stress of meeting certain requirements and looking toward college (Stipek, 1986). Students with low perceived competence indicate effort and studying are more important than ability and are more likely to attribute success to luck. Girls have been found to attribute their high grades to studying hard and low test grades to ability (Stipek & Hoffman, 1980). Girls have also been found to be rated as more motivated than boys (Stinnett & Oehler-Stinnett, 1992).

Inherent in the construct of academic achievement motivation is the striving of individuals to reach their full potential in the classroom. Some gifted students lack the motivation or the appropriate motivation needed to attain success in the classroom. Instead of perceiving this as a mismatch between the child’s motivational orientation and the dynamics of the classroom, most teachers will perceive this as incompetence. This may then present
problems in the classroom between student and teacher, such as teacher perceptions of laziness (Phillips, 1984).

Academic achievement motivation can make a valuable contribution to a psychoeducational assessment. Due to the relationship between motivation and achievement, there is a need to assess academic achievement motivation in order to determine if a motivational problem is the primary cause of academic failure before making an eligibility determination. Adequate and effective methods must be used to assess this construct. The most commonly used methods are informal observation, interview, and self-report measures. Informal observations and interviews are time-consuming, lack adequate reliability and validity, and lack a standardized sample to make comparisons (Stinnett et al., 1991). Many of the self-report measures have also been shown to have low reliability and validity, (See Naccarato, 1988) and rely on the ability of the child to read, understand, and follow directions. Additionally, inherent in self-report measures is the chance of eliciting socially desirable answers as opposed to reports of actual behavior.

Teacher ratings may be a more efficient method for collecting this information. They have been shown to be quicker, more reliable, valid, and objective than the aforementioned methods (Gresham, Reschly, & Carey, 1987). Gerber and Semmel (1984) argue that the present system of
A psychological assessment has strayed from using teacher judgments as the basis for assessing the criterion validity for standardized tests. They see teachers as very useful but overlooked sources. Teacher judgments of students' classroom performance have been reported to correspond to the students' actual achievement (Hoge & Butcher, 1984). They have also been found to be highly accurate in classifying students as either learning disabled or non-handicapped (Gresham et al., 1987). Teacher ratings are based on a wider range of activities and situations over a longer period of time than observation by a psychologist.

The current study was designed to examine the test-retest and inter-rater reliability of a teacher rating scale of academic achievement motivation currently in development. The rating scale investigated in this study is the Teacher Rating of Academic Achievement Motivation (TRAAM) (Stinnett & Oehler-Stinnett, 1990). Reliability of the TRAAM has not yet been investigated. Reliability refers to the consistency and stability of test results. In order for a psychometric instrument to be valid it must provide consistent or stable results over time. Test-retest reliability is an indicator of temporal stability. The usual procedure is to administer the same test to the same group of individuals at two different times, usually within a short period of time (for example, 2 weeks to a month) (Sattler, 1988). Another
indicator of the reliability of a test is inter-rater reliability. Inter-rater reliability refers to the agreement between scores obtained from two or more raters. The following research questions regarding the TRAAM were addressed: (1) Does the TRAAM have adequate test-retest reliability? and (2) Does the TRAAM have adequate interrater reliability? If the TRAAM has stability overtime it might be used in a pretest-posttest fashion to evaluate the effects of interventions implemented with problem children. Also, if the scale can be demonstrated to be reliable among raters in different settings, it could provide information about the situational specificity of the child’s academic motivation which is an indication of the pervasiveness of the difficulty.
CHAPTER II

Method

Subjects

Principals from several schools were contacted and asked for teacher volunteers. Thirteen regular education teachers (in grades three through six) from two public schools in a small school district in southeastern Illinois rated third through sixth grade regular education students (N=90). Requests for teacher volunteers were made of all teachers in the target grades. Thirteen of the 14 teachers (93%) solicited chose to participate. All teachers were white; two were men and eleven were women. One teacher had 1 to 5 years of regular education experience, one had 6 to 10 years, six had 11 to 15 years, two had 16 to 20 years, one had 21 to 25 years, and two had 26 to 30 years of experience in regular education.

Instrumentation

The Teacher Rating of Academic Achievement Motivation (TRAAM; (Stinnett & Oehler-Stinnett, 1990) was used. The TRAAM is a teacher rating scale in development designed to measure academic achievement motivation in children as an essential part of multifactored assessment (Stinnett & Oehler-Stinnett, 1992).

The TRAAM consists of 44 descriptive statements that indicate aspects of academic achievement motivation.
Teachers rate the student on a five-point, Likert scale according to how each descriptive statement relates to that particular student’s behavior. Each statement is scored with a numeric value from 1 to 5. Some statements are worded so as to reflect motivated behavior and some are worded to reflect unmotivated behavior. Factor scores as well as the total score are computed by summing the appropriate items. A high score reflects motivated behavior.

Factor analysis of the TRAAM indicated that the scale is a four-factor instrument (Stinnett, Oehler-Stinnett, & Stout, 1991). Factor 1 reflects the student’s tendency to work to the best of his or her ability, to complete assignments without prompting, and to give good effort on school tasks. Factor 2 reflects the student’s behavior in relation to mastery. This includes the tendency to maintain effort when approaching a difficult task and level of curiosity. Factor 3 reflects the child’s preference for competitive versus cooperative educational tasks. Factor 4 reflects the student’s history of school success and ability to keep up with the pace of classroom instruction. Internal consistency estimates for the four factors were acceptable (coefficient alphas ranged from .79 to .98.) The four factors and Total score of the TRAAM have been shown to be related to student performance on the Wide Range Achievement Test- Revised (WRAT-R) and Teacher Ratings of Academic
Performance (TRAP) (Stinnett et al., 1991).

The TRAAM has also been shown to be related to other measures of academic achievement motivation. Correlations among the TRAAM, the Scale of Intrinsic versus Extrinsic Orientation in the Classroom (SIEOC), and the Children’s Academic Intrinsic Motivation Inventory (CAIMI) indicate a small to moderate relationship among them (Stinnett & Oehler-Stinnett, 1992). Both the SIEOC and CAIMI are self report inventories of academic motivation. The TRAAM has been found to be moderately correlated to the Social Skills Rating System- Teacher (SSRS-T), an assessment system that utilizes parent, teacher, and self report to gain information about a student’s social skills, problem, and academic competence behaviors.

Procedure

Data were collected in January of the 1991-1992 school year. To investigate test-retest reliability of the TRAAM, nine teachers each rated ten of their students with the TRAAM. Two weeks after the first administration, the teachers rated the same students again. The first TRAAM’s administered were collected within two weeks from the date the teachers received them. The second group of scales was then distributed after two weeks had passed from the first administration. Teachers were instructed to complete the scales within the first few days after receiving them. The
second group of scales was also collected within two weeks after the teachers received them. The rating scale for each student took approximately 10 minutes to complete. No compensation was given to the teachers for their participation.

Students were randomly selected from each class of the nine teacher volunteers with equal numbers of males and females being chosen. The original intention of the researcher was to use eight teachers and have equal numbers of students in each grade (i.e., 20 in each grade) rated. Due to an extra volunteer in the third grade, the sample consisted of an extra 10 students in that grade and in the total sample. Students receiving special services were not included in this study to be consistent with previous research with the TRAAM.

To investigate inter-rater reliability of the TRAAM, four teachers not involved in the test-retest study each rated ten students who were also being rated during the first administration of the test-retest study (n=40). These teachers taught at least one subject to the students they rated. There were 10 third grade students (5 males and 5 females), 10 fourth grade students (5 males and 5 females), 5 fifth grade students (3 males and 2 females), and 15 sixth grade students (7 males and 8 females). Three teachers rated ten students within their grade level (grades 3, 4, and 6).
while a teacher who taught both fifth and sixth grade rated 5 fifth graders and 5 sixth graders resulting in the uneven numbers. These scales were administered at the same time as the first administration of the test-retest study and collected within two weeks of the date that the teachers received them.
CHAPTER III

Results

Characteristics of the sample were described using SPSS PC Plus subprogram Descriptives. In analyzing the TRAAM data, the SPSS PC Plus subprogram Correlation was used. Pearson product-moment correlation coefficients were used to examine the consistency of the factor scores and total test scores. In accordance with Sattler (1988), coefficients of .80 or higher were considered minimum for adequate test-retest reliability.

Test-Retest Reliability

Table 1 displays means and standard deviations for TRAAM factors and Total score by administration. Overall, the test-retest reliability for the total score was excellent ($r = .96, p < .001$). Stability coefficients for the factor scores were adequate; Factor 1 ($r = .93, p < .001$), Factor 2 ($r = .87, p < .001$), Factor 3 ($r = .85, p < .001$), and Factor 4 ($r = .86, p < .001$).
Table 1

Means and Standard Deviations for TRAAM Factors and Total Score By Administration

<table>
<thead>
<tr>
<th></th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>35.74</td>
<td>30.98</td>
<td>15.78</td>
<td>24.03</td>
<td>162.34</td>
</tr>
<tr>
<td>SD</td>
<td>8.52</td>
<td>6.90</td>
<td>2.88</td>
<td>4.49</td>
<td>32.14</td>
</tr>
<tr>
<td>Administration 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>35.62</td>
<td>31.28</td>
<td>15.39</td>
<td>23.86</td>
<td>162.57</td>
</tr>
<tr>
<td>SD</td>
<td>8.44</td>
<td>6.37</td>
<td>2.66</td>
<td>4.40</td>
<td>30.57</td>
</tr>
</tbody>
</table>

Note. F1=TRAAM Factor 1, F2=TRAAM Factor 2, F3=TRAAM Factor 3, F4=TRAAM Factor 4, and TS=TRAAM Total test score.

When analyzing the test-retest reliability by grade, adequate reliability coefficients were found. For third graders the stability coefficient was again excellent for the total score ($r = .95$). Stability coefficients for the four factor scores ranged from .82 for Factor 3 to .96 for Factor 1. The fourth grade stability coefficient for total score was excellent ($r = .98$). Stability coefficients for the factor scores ranged from .81 for Factor 3 to .98 for Factor 1. For fifth graders the total score stability coefficient was .96 with a range in factor score coefficients from .85 for Factor 3 to a .92 for Factor 4.
The total score coefficient for the sixth grade was .96. Factor score coefficients ranged from .75 for Factor 4 to .95 for Factor 3. Table 2 presents the test-retest reliability coefficients by grade.

Table 2

<table>
<thead>
<tr>
<th>Grade</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third</td>
<td>.96</td>
<td>.82</td>
<td>.82</td>
<td>.87</td>
<td>.95</td>
</tr>
<tr>
<td>Fourth</td>
<td>.98</td>
<td>.88</td>
<td>.81</td>
<td>.92</td>
<td>.98</td>
</tr>
<tr>
<td>Fifth</td>
<td>.91</td>
<td>.86</td>
<td>.85</td>
<td>.92</td>
<td>.96</td>
</tr>
<tr>
<td>Sixth</td>
<td>.85</td>
<td>.93</td>
<td>.95</td>
<td>.75</td>
<td>.96</td>
</tr>
</tbody>
</table>

Note. All correlations were significant, p < .001.

Inter-rater Reliability

Table 3 displays means and standard deviations for TRAAM factors and Total score by rater. The inter-rater reliability of the TRAAM was found to be adequate for the total score (r = .77 p<.001). Reliability coefficients were lower for the factor scores but still significant: Factor 1 (r = .74, p<.001); Factor 2 (r = .70, p<.001); Factor 3 (r = .46, p<.01); and Factor 4 (r = .72, p<.001).
Table 3

Means and Standard Deviations for TRAAM Factors and Total Score by Rater

<table>
<thead>
<tr>
<th></th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Raters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>33.57</td>
<td>29.78</td>
<td>14.93</td>
<td>21.67</td>
<td>150.25</td>
</tr>
<tr>
<td>SD</td>
<td>6.44</td>
<td>6.42</td>
<td>2.40</td>
<td>3.72</td>
<td>26.91</td>
</tr>
<tr>
<td>Comparison Raters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>35.70</td>
<td>31.83</td>
<td>15.43</td>
<td>23.97</td>
<td>164.70</td>
</tr>
<tr>
<td>SD</td>
<td>9.69</td>
<td>7.94</td>
<td>3.03</td>
<td>5.32</td>
<td>37.03</td>
</tr>
</tbody>
</table>
CHAPTER IV

Discussion

The data collected and analyzed in this study suggest the TRAAM is a reliable instrument. The Total Score was found to be more reliable than the individual factor scores. This is expected due to the greater number of items that make up the total score. In general, the more items there are, the greater the reliability (Sattler, 1988). The TRAAM was found to have excellent test-retest reliability and adequate interrater reliability.

According to Hoge (1983), levels of inter-rater agreement are usually lower and account for considerably more variance. This is an indication that the informants may have varying degrees of interaction with the pupils. This tends to lower the correlation coefficients. Achenbach, McConaughy, and Howell (1987) meta analyzed cross-informant ratings. In this study they reported that low correlations between raters might be an indication of situational specificity of the behaviors measured, rather than invalid or unreliable reports on the part of the rater. Variance in the situations and informants must be considered in the assessment of most children. Achenbach et al. (1987) found correlations, about .60, for pairs of informants who saw children under similar but not identical conditions. The inter-rater reliability was .64 between informants who were
teachers. The TRAMM's reliability exceeded the average reported in the meta-analysis. Edelbrock (1983) reported that valid and reliable ratings can be gathered from different informants even if they disagree. He also stated that it would not be worthwhile to seek to achieve high levels of agreement among informants.

The TRAMM's consistency across multiple raters meets one criterion to be included in multifactored assessment (Gresham, 1983). Because users can expect congruence across TRAMM ratings when different teachers are used, the scale would be appropriate to include in a multifactored assessment. Also because the TRAMM is stable over a brief interval it could be used to evaluate effects of intervention on academic motivation in a pretest-posttest design. This connection with intervention meets another criterion for multifactored assessment.

Possible limitations of this study involve characteristics of the sample used. All teachers and students were white. All subjects came from public schools in a small school district in rural southeastern Illinois. The generality of the findings to other populations may be limited.

Another possible limitation of this study involves the use of different teachers to rate the same children for the inter-rater reliability study. Teachers involved in the
test-retest study were the students' homeroom teachers, and they had the children in their classroom throughout most of the day. The teachers who also rated the students in the inter-rater study had the children in their classrooms much less and perhaps did not have an equal opportunity to observe the child's motivational behavior. These teachers were different in terms of the extent of their knowledge of the children. This may have negatively affected their ability to rate the children. However, the inter-rater stability coefficients were very good.

Although teachers were instructed to complete the rating scales within a few days after receiving them, it is likely that the scales were not completed at the same time. Thus, some students may have been rated twice with either a shorter span of time between the ratings or a longer span. This problem would be expected to equal out since teachers most likely followed a similar path when filling out the second group of scales.

Further researchers in this area should consider the limitations noted above. Attempts should be made to select raters who are more similar in respect to their experience with a student or situation. Choosing a sample that is more likely to generalize to other populations is also important. Consideration should also be given to the span of time allowed between the administration and completion of the
scales.

Despite the limitations noted above, the results of the present study indicate excellent test-retest and adequate inter-rater reliability of the TRAAM. Not only was the inter-rater reliability adequate, but it exceeded that of the average noted in the meta-analysis conducted by Achenbach et al. (1987). The TRAAM's consistency across multiple raters and its stability over brief periods of time supports its use as a part of multifactored assessment.
References


DeCharms, R. (1976). *Enhancing motivation.* New York:
Plenum.


achievement-related expectancies as a function of academic performance histories and sex. *Journal of Educational Psychology, 72*, 861-865.


Appendix A continued

I have enclosed my thesis proposal and a copy of the teacher rating scale for you to review. I would like to speak with you to discuss my project and see if any of the teachers would be willing to participate. Your consideration and time is greatly appreciated.

Sincerely,

Rachel Pitcher, School Psychology Graduate Student, S.S.P. Candidate
Appendix A

Request for Teacher Participation

Dear Principal,

I am a candidate for the Specialist Degree in School Psychology at Eastern Illinois University. In order to fulfill the requirements of the specialist’s degree, I must complete an independent research project (Thesis). I am investigating the reliability of a recently developed teacher rating scale of academic achievement motivation and would like to solicit teacher volunteers from your elementary school. Academic motivation is related to students’ curiosity, enthusiasm for learning, and persistence and can predict academic achievement, problem behaviors, and prosocial behaviors in children. Assessment of academic motivation can help educators identify children at risk for various behavior and emotional problems that might affect school adjustment and functioning.

The project is under the direction of Psychology Faculty at EIU and is under the specific direction of Dr. Terry Stinnett. The project has been approved by the Psychology Department’s Research/Ethics committee.

I would like to use a total of eight teacher volunteers from grades 3-6. The teachers must simply rate ten of their students who will be randomly selected. Each teacher will spend about ten minutes to rate one child and about one and a half hours total to complete the ratings. Teachers will be asked to rate these students at two different times. If your school has student teachers, teachers’ aides or other teachers who have these same children in class, they may also be asked to participate.

Individual students will not be singled out or interact with me. The only individuals who will actually participate in the study will be the teachers or other staff. Students’ names and information will be kept confidential.

I am willing to trade some of my time for that of the teachers. Perhaps they can use me to grade papers, cut out decorations, or read to the children, etc.
Appendix B

**Teacher Rating of Academic Achievement Motivation**

**Teacher Rating of Academic Achievement Motivation**

**TRAAM**

Terry A. Stinnett and Judy Oehler-Stinnett
Eastern Illinois University
For Research Purposes Only

Student Name:_________________________ Teacher:_________________________
Date of Birth:_________________________ Date of Rating:___________
Race:__________
Sex:_________
Grade:_______
School:________________________________________

Directions: Please read each item carefully and think about the student’s behavior during the past month or two. In some cases you may not have observed the student perform a particular behavior. Make an estimate which you think would be the most accurate description of the student. Circle only one letter from A to E for each item. Do not skip any items.

a = strongly agree
b = agree
c = don’t agree or disagree
d = disagree
e = strongly disagree

1. enjoys learning new things
   a b c d e
2. continues to work on a problem until he/she understands the problem.
   a b c d e
3. prefers easy assignments to more difficult tasks.
   a b c d e
4. often prefers to repeat a task that has already been mastered, rather than attempt a difficult novel task.
   a b c d e
5. often does not work to the best of his/her ability.
   a b c d e
6. This child will occasionally work with persistence, but often does not give good effort unless supervised.

7. This student is able to keep up with the pace of instruction in my classroom.

8. This student gives up easily on tasks that are difficult or challenging.

9. This child often must be supervised to get his/her best performance on school work.

10. The child works on problems until they are solved or understood.

11. This student does only the minimum that is required for task completion.

12. This child demonstrates mastery of work that has been previously completed.

13. This student needs improvement in organization and work habits.

14. This student becomes bored easily.

15. This child is not discouraged easily even after failures.

16. This child will try a new task again even if he/she was not successful the first time.

17. When this child does poorly on an assignment it is usually due to a lack of understanding rather than to a lack of effort.

18. This student often makes efforts to learn more about topics that have been introduced in class.

19. The child likes to do new work in school.
20. This student doesn’t like to do more school work than is required. a b c d e
21. This student shows pride in his/her work. a b c d e
22. The child almost always completes his/her homework in a timely manner. a b c d e
23. This child prefers to figure out the problem independently rather than to be helped by others. a b c d e
24. This student prefers to work on assignments in social studies. a b c d e
25. The student often does not complete his/her assignments. a b c d e
26. This child completes his/her reading assignments without teacher prompting. a b c d e
27. This child completes his/her math assignments without teacher prompting. a b c d e
28. This child completes his/her science assignments without teacher prompting. a b c d e
29. This child completes his/her social studies assignments without teacher prompting. a b c d e
30. This student has good overall motivation to achieve. a b c d e
31. This student has poor motivation to achieve in reading. a b c d e
32. This student has poor motivation to achieve in math. a b c d e
33. This student has poor motivation to achieve in English/spelling. a b c d e
34. This child completes his/her English/spelling assignments without teacher prompting. a b c d e
35. This student tries to avoid work in English/spelling.

36. This child works cooperatively with other students on group projects.

37. This child enjoys doing academic work in a competitive setting.

38. This child has had little success in school.

39. This child attributes his/her success in academics to hard work.

40. This child attributes his/her failure in academics to outside sources (e.g., teacher, inappropriate assignment, weather).

41. This child values education and learning.

42. This child expects to do well in school.

43. This child indicates that he/she feels his/her successes and failures are under his/her own control.

44. This child enjoys improving his/her own personal best on academic tasks.