This study examined the academic motivation of the first students (25 from each school) in the 1990-91 school year in each of 4 schools in grades 9 through 12 who were suspended from school or placed in in-school suspension programs for repeated offenses (disrupting class, exhibiting aggressive behavior toward school authorities or peers, or refusing to follow directions or accept punishment). The Student Motivation Diagnostic Questionnaire was administered to the students. Findings indicated that students in all four schools scored lowest in the areas of self-concept and attitudes toward teachers. It is suggested that intervention programs could counteract students' low self-concepts and negative attitudes toward teachers. Such programs would include: parent training; teacher staff development; school programs that focus on one-on-one relationships with students; remediation of academic difficulties and administrative monitoring of individual teachers and evaluation of the school environment. Four tables are included. (11 references) (LMI)
THE ACADEMIC MOTIVATIONS OF STUDENTS
WHO ARE DISCIPLINE PROBLEMS

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and

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Adapted from a paper presented at the annual American
Association of School Administrators Convention, New
Orleans, LA, March 2, 1991
THE ACADEMIC MOTIVATIONS OF STUDENTS
WHO ARE DISCIPLINE PROBLEMS (Note 1)

Educators face growing pressure to find ways of improving the motivations of students, and thereby the achievement of students. Because these low achieving students who are "at risk" of dropping out of school, are frequently those who cause discipline problems in school it is important that we know the academic motivations of these students. The primary objectives of this study are to identify the academic motivations of students who are repeated violators of disciplinary policies in secondary schools and to compare these motivations across schools.

Importance of the Study

As pressure grow to reduce the drop-out rates and, at the same time, to improve student achievement, more intense efforts are being made to find ways of improving the academic motivations of students. If educators can reduce the amount and severity of disciplinary problems, they will have a better chance of improving student achievement. If they can improve the academic motivations of students, they can reduce disciplinary problems and, at the same time, contribute to higher student achievement.

It has been demonstrated that there may be significant differences in the various aspects of the academic motivations of students in the general population of students in the four major academic disciplines. It has
also been shown that efforts to improve motivation, in general, may not only be ineffective, but that they may also result in lowered levels of motivation for some academic disciplines (Matthews & Chan, 1980). Thus efforts to improve student motivation, in general, are ill-advised. The efforts should be directed toward the specific aspects of motivation in greatest need of improvement.

The Sample of Students

Students in four high schools who were identified as habitual discipline problems comprised the sample of students for this study. Specifically, the study examined the academic motivations of the first students in the 1990-1991 school year in each of the four schools in grades nine through twelve who were suspended from school or placed in an in-school suspension program for repeated offenses in the following areas: (a) disrupting classroom instruction, (b) exhibiting aggressive behavior toward school authorities or peers, or (c) refusing to follow directions or accept punishment. The number of students in each school was limited to a maximum of 25 with the cutoff date for inclusion in the study being December 21, 1990.

The Schools

The four schools selected to be included in the study were all secondary schools with grades nine through twelve. They varied in enrollment from approximately 700 students to 2100 students. School A was the largest with 2100 students.
School B had 700 students and School C had 900 students. School D's enrollment was approximately 1300 students. Schools B and C are located in rural settings in middle Georgia and schools A and D are located in the Atlanta metropolitan area.

**Instrumentation**

The Student Motivation Diagnostic Questionnaire (1988) was selected for administration to the students participating in this study. This instrument is designed to access four aspects of student motivation: (1) student self-concepts of academic ability, (2) student beliefs about teacher expectations and values, (3) student beliefs about the future utility of achieving in school, and (4) student attitudes toward teachers. These aspects are assessed in each of the four major academic disciplines of English, mathematics, science, and social studies.

The theory supporting the Student Motivation Diagnostic Questionnaire has evolved over a 15 year period of reported efforts. After its first publication (Matthews, 1976), the background for the theory was expanded and published again in 1979 (Matthews) and again in 1984 (Matthews). The central components of the theory are expressed in the traditional form of a set of assumptions (cf. Kerlinger, 1973, p. 9; Halpin, 1966, p. 8; and Hoy & Miskel, 1978, p. 20). The decision to use this format was based on several considerations. One, a set of assumptions is a parsimonious
method of expressing the essential elements of the theory. Two, the assumptions of the theory are readily discernible by being explicitly stated. And finally, this format provides a convenient focus for reexamining and refining the theory based on additional information. A comprehensive description of the research and logical support for the theory is forthcoming (Matthews & Holmes, in press). The assumptions of the current form of the theory follow (Matthews & Holmes, in press).

**Assumption One.** The ability to achieve in school is a function of the interaction between experiences, both in and out of school, and the potential to benefit from these experiences.

**Assumption Two.** The ability to achieve in school is a threshold variable. (Once a required level of ability is attained, higher levels of ability may not contribute to higher levels of achievement).

**Assumption Three.** The motivations of students to achieve in school are influenced by their self-concepts of academic ability and desires to achieve in school.

**Assumption Four.** Student attitudes toward their teachers, student beliefs about their teachers' expectations for academic achievement, student beliefs about the values their teachers place on the academic disciplines they teach, and student beliefs about the future utility of achieving in school influence the desire of students to achieve in school.
Assumption Five. Teachers have a direct impact on students' (a) self-concepts of academic ability, (b) beliefs about their teachers' expectations, (c) beliefs about the value their teachers place on academic disciplines they teach, and (d) beliefs about the future utility of achieving in school.

Assumption Six. The relationship between factors affecting student motivation and achievement in school are not linear. (For example, even though positive self-concepts of ability may have positive effects on achievement, self-concepts that are too positive may lead to less effort to achieve and subsequently to lower levels of achievement).

Assumption Seven. The achievement of students in school is affected by the selective use of appropriate human and material resources.

Assumption Eight. There are interactive effects among factors affecting student achievement. (For example, if self-concepts of ability are relatively low, the consequences may be ameliorated if strong desires to achieve exist).

Assumption Nine. Specific interventions may have differential effects on motivational factors affecting student achievement, some positive and some negative. (For example, strategies to create positive self-concepts of academic ability may result in students believing teachers have low expectations).
Two of the nine assumptions forming the theory focus directly on motivational factors -- assumptions three and four. The Student Motivation Diagnostic Questionnaire addresses these motivational variables and is designed to provide a focus for strategies to improve student motivation. It also provides an effective way to monitor the impact of those strategies.

The questionnaire consists of four questions for each of the four aspects of motivation for each of the academic disciplines of English, mathematics, science, and social studies. The direction of the response formats on the original questionnaire was randomly reversed with 32 of the 64 questions having responses in numerical order and the other 32 having the numerals presented in reverse order. The critical results of the preliminary field tests follow. More complete descriptions are published elsewhere (Matthews & Chan, 1980).

Preliminary Field Tests. The questionnaire was administered to 2,304 students enrolled in grades 4 through 12 in six public school in Georgia. Reliability estimates using odd-even correlations corrected by the Spearman-Brown Prophecy Formula ranged from a low of .869 for the Teachers Expectations and Values Scale to a high of .967 for the total instrument.

To examine the ability of the questionnaire to effectively discriminate among groups of students, a series of analyses were performed. Twenty-one of the 30
comparisons made showed differences among the groups to be statistically significant at the .05 level of significance. These field tests of this early version clearly demonstrated that individual student motivations differed among the various academic disciplines and that differences in motivation among groups of students existed both within schools and among schools. Based upon the results of these preliminary field tests, it was concluded that the questionnaire was both reliable and effective in discriminating among the motivations of groups of students.

**Modifications of the Questionnaire.** Several modifications were made to the original instrument to enhance its utility (Matthews & Brown, 1988). One - the Osgood semantic differential scale was shortened from seven to five points. Two - whereas the numerical responses were randomly reversed on one-half of the questions on the original instrument, the revised instrument shows the response scale in ascending numerical order for all of the 64 questions. Three - approximately one-half of the questions were reworded to improve clarity.

Construct validity for the questionnaire was addressed by developing and presenting questions that focus directly on the motivational variables included in the constructs described in the theory. Sample questions for each of these motivational variable follow.

**Teacher Expectations and Values.** "How much does your English (math, science, social studies) teacher want you to
learn?" "How important is English (math, science, social studies) to your English (math, science, social studies) teacher?"

**Self-Concept of Academic Ability.** "What is your true ability in English (math, science, social studies)?" "How good are you at learning English (math, science, social studies)?"

**Future Utility.** "How much will English (math, science, social studies) help you to successful?" "How much will English (math, science, social studies) help you in life?"

**Attitude Toward Teacher.** "How much do you like your English (math, science, social studies) teacher?" "How much do you want to please your English (math, science, social studies) teacher?"

**Follow-up Field Tests.** The revised questionnaire was administered to 1,260 students in grades 4 through 12 in nine public schools in Georgia. Reliability estimates obtained through the use of repeated measures correlation coefficients ranged from a low of .90 to a high of .99 for the 16 aspects of motivation measured by the questionnaire. All correlations were significant beyond the .05 level (Note 2). Because of differences in mean scores across disciplines, percentile scores were developed for each of
the 16 areas assessed. These percentile scores were produced in two sets: one for individual students and one for groups. By using the percentile scores, the motivational deficiencies of both individual students and groups of students can be identified. Thus the Student Motivation Diagnostic Questionnaire can be a useful tool for identifying motivational deficiencies and for monitoring the effects of strategies for overcoming the deficiencies.

Findings

A preliminary review of the data provided in Tables 1 through 4 shows there are differences in the motivations of the students assessed across disciplines within schools. For example, in School B the Attitude Toward Teacher percentile scores ranged from the third percentile for the English teachers to the eighty-ninth percentile for the mathematics teachers (see Table 1). Although not as dramatically different, the percentile scores for students in School D for Teacher Expectations and Values ranged from the third percentile for the mathematics teachers to the thirty-eighth percentile for the science teachers. Similar differences were observed in School C in Self-Concept of Ability scores for English and mathematics (see Table 3) and in School A in Future Utility scores for science and mathematics (see Table 4).

Analyses of variance showed significant differences among schools in the following areas: Attitude Toward
Table 1
Attitude Toward Teacher Percentile

<table>
<thead>
<tr>
<th>School</th>
<th>English</th>
<th>Mathematics*</th>
<th>Science</th>
<th>Social Studies</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>7</td>
<td>20</td>
<td>20</td>
<td>24</td>
<td>17.75</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>89</td>
<td>51</td>
<td>24</td>
<td>41.75</td>
</tr>
<tr>
<td>C</td>
<td>65</td>
<td>27</td>
<td>55</td>
<td>24</td>
<td>42.75</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>7</td>
<td>31</td>
<td>24</td>
<td>16.25</td>
</tr>
</tbody>
</table>

Means 19.50 35.75 39.25 24

Grand Mean Attitude Toward Teacher Percentile = 29.62
(*Significant difference among schools, p < .05)

Table 2
Teacher Expectations and Values Percentiles

<table>
<thead>
<tr>
<th>School</th>
<th>English</th>
<th>Mathematics*</th>
<th>Science</th>
<th>Social Studies</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
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<td>20</td>
<td>38</td>
<td>20</td>
<td>22.00</td>
</tr>
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<td>B</td>
<td>24</td>
<td>96</td>
<td>74</td>
<td>61</td>
<td>63.75</td>
</tr>
<tr>
<td>C</td>
<td>92</td>
<td>38</td>
<td>44</td>
<td>38</td>
<td>53.00</td>
</tr>
<tr>
<td>D</td>
<td>14</td>
<td>3</td>
<td>38</td>
<td>27</td>
<td>20.50</td>
</tr>
</tbody>
</table>

Means 35.00 39.25 48.50 36.5

Grand Mean Teacher Expectations and Values Percentile = 39.81
(*Significant difference among schools, p < .05)
Table 3

Self-Concept of Ability Percentiles

<table>
<thead>
<tr>
<th>School</th>
<th>English</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
<td>5</td>
<td>7</td>
<td>4.50</td>
</tr>
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<td>14</td>
<td>54.50</td>
</tr>
<tr>
<td>C</td>
<td>17</td>
<td>57</td>
<td>55</td>
<td>38</td>
<td>41.75</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>4.50</td>
</tr>
</tbody>
</table>

Means 18.25 40.50 30.00 16.50

Grand Mean Self-Concept of Ability Percentile = 26.31

(*Significant difference among schools, p < .05)

Table 4

Future Utility Percentiles

<table>
<thead>
<tr>
<th>School</th>
<th>English</th>
<th>Mathematics*</th>
<th>Science*</th>
<th>Social Studies</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17</td>
<td>34</td>
<td>3</td>
<td>17</td>
<td>17.75</td>
</tr>
<tr>
<td>B</td>
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<td>38</td>
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<td>77</td>
<td>60</td>
<td>55</td>
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<td>63.25</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
<td>17</td>
<td>3</td>
<td>27</td>
<td>13.00</td>
</tr>
</tbody>
</table>

Means 36.75 52.5 26.25 35.75

Grand Mean Future Utility Percentile = 37.81

(*Significant difference among schools, p < .05)
Teachers of mathematics, mathematics Teachers' Expectations and Values, Self-Concept of Ability in English and mathematics, and Future Utility of science and mathematics. Yet, additional inspection showed similarities among schools.

In three of the four of the schools, Self-Concept of Ability scores were lower than the scores in the other areas. In three of the four schools, Attitudes Toward Teachers were the next to the lowest scores. In Schools A, C, and D, Self-Concept of Ability scores were the lowest. In School B, Attitude Toward Teachers scores were the lowest with Self-Concept of Ability scores next to the lowest.

**Implications for Practice**

The volume of professional literature dealing with student discipline is evidence of the widespread concern among educators. A disproportionate amount of teaching and supervisory time must often be diverted to handling matters that may generally be classified as discipline problems. Educators are charged with the responsibility of providing programs for students who exhibit antisocial behavior and who are "at risk" of dropping out of school. The antisocial behaviors of the students in this study can be directly linked to the self-concepts of academic ability and attitudes toward teachers.

Antisocial students who display behavior patterns such as aggression, noncompliance, and class disruption represent a major social problem in today's society. Teachers find
these students difficult to cope with in the classroom. The usual punishments such as detention, in-school suspension, out-of-school suspension, seem to have virtually no effect on the behavior of many of these students. Administrators and teachers cannot ignore these problems, which can become extremely severe. Antisocial behavior must be addressed as early as possible. The secondary school setting may be the last opportunity to intervene before the individual will face the adult consequences of these behaviors: high rates of unemployment, marital problems, delinquency, etc.

Given that, in all four schools, the students in this study scored lowest in Self-concept of Ability or Attitude Toward Teacher, intervention programs to counteract these students' low self-concepts and negative attitudes toward teachers could alleviate or lessen the antisocial behaviors that are exhibited by these students. Interventions aimed at improving the students' self-concepts and attitudes toward teachers could include: 1) Parent Training, 2) Teacher Staff Development; 3) School programs that focus on one-on-one relationships with students; 4) Remediation of Academic Difficulties; and 5) Administrative monitoring of individual teachers and evaluation of the school environment.

The parent training would involve programs in which parents are taught specific techniques for improving their day-to-day effectiveness with their children. Parents are taught to monitor various aspects of the lives of their children from homework assignments, to peer relationships, to the whereabouts of their children.
They are taught to consistently reinforce appropriate social and academic behavior. If parents resist participation, a variety of techniques could be used to induce their involvement. These could include nominal payments, school pressure, or court orders. Although a court order may seem drastic, the judicial system is looking for methods to deal with "delinquents."

Teacher staff development should be held to train teachers in behavior management techniques which can prevent many problems by providing specific classroom rules, giving "clear directions, effectively," using praise, and using low-profile intervention methods. This would help teachers to devise individualized discipline plans for students who are discipline problems. These plans should be appropriate for the teachers' needs, but, at the same time, be beneficial for the academic self-concepts of the students. The plan should also provide for record-keeping to aid the teacher in recognizing the situations that stimulate students to act out undesirable behaviors. Students need teachers who help them learn to behave appropriately in schools.

Although one-on-one counseling sessions can be beneficial to students, economically, it is not feasible or possible for all "problem" students to be served. School intervention programs that utilize teachers, parent volunteers, and business community partners can be effective in providing one-on-one relationship experiences for
students. In addition to building relationships, these experiences should consistently reinforce positive social and academic behaviors. These volunteer individuals can help create relationships with students and can greatly improve the students' motivations toward school and their perceptions of themselves.

For years, schools have had success with a variety of mentor programs. These programs can help a wide variety of student centered concerns. Those students who have been identified for having the potential for destructive behaviors need the influence of a concerned adult each day. In general, the mentor would serve as an advocate for the high-risk child, providing a means of both monitoring and guiding the student through each day and situation.

Intervention groups, aimed at bringing together students with similar problems, may help students better understand their dysfunctional feelings and behaviors and provide a basis for support from these other students. These groups should be led by counselors or other professional staff members.

Schools have a supply of intelligent, sensitive students who have the potential of becoming positive role models for younger students. Older students in a school are a unique source for mentor programs. These older students are near the ages of the "at risk" students and can provide more realistic models than adults. These mentor relationships provide avenues for individualized academic
instruction, increased motivation, increased communication about matters of concern, and for promoting friendships.

Many successful school intervention programs include some form of remediation for students who are behind academically. An added benefit is that improved academic skills create success for students. Students who have low self-concepts and low motivation toward school could benefit if there exists ways for the students to obtain some meaningful successes in the academic areas. These remediation programs could include tutors from other students, teachers, or community volunteers. Remediation programs could become part of the daily school schedule, after-school sessions, or "free" summer school sessions.

One of the components in the intervention process of students who are discipline problems would include administrative monitoring of various disciplinary situations within the classroom. If there is evidence that the students' difficulties may, in part, rest with the teachers' methods of classroom discipline, administrators would intervene to help teachers more adequately deal with the students and aid the students in the adjustment of their responses to the teacher.

There is a consistent relationship between school environments and students' feelings and behavior in them. Students tend to respond more positively when the school setting provides clear expectations for behavior, when they and other students have participated in defining behavioral
rules, when all persons in the school setting show sensitivity to individuals, and when all rules are fairly and consistently enforced.

Obviously, schools and individual teachers cannot control all the variables and outside influences that affect the students' abilities to adjust their behaviors to maximize the educational opportunities offered. However, by having a formal mechanism to identify, monitor, and provide intervention for high-risk students, schools can help prevent the long-term effects of the low motivations of students who are repeated violators of disciplinary policies.
End Notes

Note 1. Portions of this paper are adapted from a paper entitled "Why Kids Don't Learn - Field Tests of the Student Motivation Diagnostic Questionnaire" presented at the Georgia Association of School Psychologists' Annual Conference, 1989.

Note 2. More complete data are available in the Student Motivation Diagnostic Questionnaire Manual by Kenneth M. Matthews, Atlanta, GA: (Humanics Psychological Test Corporation), 1991.
References


