

VARIABLES EFFECTING STUDENT ACHIEVEMENT

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Introduction

Why do some students achieve academically and why do others fall short? Successful high school completion can provide for the student many doors of opportunity in life. My concern centers not on students with mental or physical hurdles, as these are easier identified and can be dealt with through various avenues. Not that these avenues are properly funded or directed but they are established. My greater concern is why seemingly able bodied students don't succeed academically. I believe we live in a time with greater individual opportunity for students than ever. However the consequences and risk of not traveling this road successfully is equally great. How can we quell the "unsuccessful" and thus lessen the great disparity between "haves" and "have nots" in our society and world? I have researched in this paper the effects during school of employment, extracurricular or outside activity, self-concept and motivation, and home life factors in attempting to answer this paramount and controversial question.

Employment

In looking at the employment issue, I reviewed research from Green et al. (1987) and Quirk et al. (2001). The research was notable in its agreements on methods and striking in its differences concerning results. Student GPA was the common achievement criteria used in both studies in relation to employment, or lack thereof, of high school students. Self reporting by students was used in both studies to gather employment information.

Green et al. (1987) found "no significant difference in accumulated

GPA” from students that worked during school and those that didn’t. It was noted in the findings that students that worked generally viewed their work as a “positive” aspect of their life. It should be noted that the only adverse effect of work on academic criteria was a statistically lower ACT testing score for students that worked during school compared to those students that did not.

In the Quirk et al. (2001) study, employment during high school was found to have a negative overall impact on GPA. Overall research on the impact of employment and academic achievement has had inconsistent and conflicting results. This was a longitudinal study which provides a look over a longer period of time and thus gives us a look at the relationship over a longer period of time. It should be noted however that a curvilinear effect was observed for students working less than 4 hours a week.

The Quirk study revealed the negative impact of employment for those working more than 12 hours a week. Interestingly those students working, but less than 12 hours a week, had better academic success than those students not employed. However, a significant academic decline was observed “when students worked more than 11-13 hr per week”. This report also revealed students that work and were performing poorly academically tended to seek more hours of employment. The research supported “that students begin to work because their school performance is low, and students’ work subsequently lowers their GPA.”

Outside/Extracurricular Activity

Evidence for the effects of “outside” or extracurricular activities on academic achievement was found in a study by Schreiber et al. (2002). “After-school pursuits” were broad in scope and “were categorized as in-

or out-of-school, academic or non-academic, organized or unorganized instead of simply in or out of school. For example, varsity football would be categorized as in-school, nonacademic, organized.”

Two hypothesis were tested. The first was “zero sum concept” which says a student has only so much time and thus time away from academics will have a negative effect. The second is “commitment-to-school” which states these activities will enhance academic performance. Both were found to be inconclusive but revealed some interesting findings.

Students involved in “academic in-school activities complete more hours of homework” and “attain a higher achievement level than other students.” Thus, examples could be Spanish Club participants do better academically in Spanish and Debate Club members do better academically in debate class. This could be the result of students involved being high academic achievers or simply they are spending more time on the subject matter.

The “zero-sum” concept could not be proved as “students who were more engaged than other students in nonacademic activities, whether in- or out-of-school, organized or not, did not have a consistent significant negative impact on achievement”. Likewise, the “commitment-to-school” concept was inconclusive as “In- and out-of-school, organized and non-organized non-academic pursuits were not significantly associated with achievement after other factors were accounted for”.

I think it is important to mention that this research was not consistent in its findings for content area, school year, or ethnicity. It is important not to generalize these findings for all students in all subjects.

Self-Concept/Motivation

What role does self-concept or self-esteem play on academic achievement? Two recent studies, Ma (2003) and Ferrer-Caja, et al. (2002) shed some light on this subject. The Ma study showed self-esteem was the number one predictor of a student's sense of belonging to a school. High self-esteem led to positive feeling about the school. This study also clearly showed that students with a positive outlook on the school they attend, had much to do with interactions with other students which created a sense of belonging. A positive image of the school did not come from outsiders(i.e. rival high schools). The school itself, not outside elements, created the positive atmosphere. Students who are positive usually achieve academically.

The Ferrer-Caja study took a look at the role elective courses have on motivation. Motivation is broadly considered a key component to academic success. The Ferrer-Caja et al. (2002) study showed a positive correlation between voluntary selection(elective course) and intrinsic motivation. Students were more motivated by elective courses. Students also indicated enjoyment for the "process" of learning. In fact this study showed a link with learning and participation to effort and self-improvement. This link could lead to higher academic achievement. Revealingly, participation was enhanced by enjoyment, fun, and excitement of the activities. Ferrer-Caja also found that classes that stress the learning process, encourage participation, effort and improvement positively effected motivation. However, the participatory activity must be viewed as competent by the students. Content is important. Many believe

a highly motivated student is a successful student.

Home

As discussed in the previous section on self-concept and motivation, a sense of belonging contributes to the positive aspects of a school which can lead to positive student academic achievement. Ma (2002) found that health was a predictor of belonging. A generally healthy student has a greater likelihood of a sense of belonging in school. This is also supported by Ma (2003) that participation in school activities is related to health. Health was defined by the frequency of backaches, depressed moods, bad moods, nervousness, insomnia, dizziness, and skin problems in the past 6 months. Some health factors can be attributed to home conditions and the ability, for whatever reason, of the family to take care of the student's health issues. This underlies the correlation of positive health to a sense of school belonging.

This study also looked at parental involvement including but not limited to help with homework, checking homework for accuracy, help with school activities, and TV restrictions. Ma (2003) found "In sum, this study suggests (a) students' sense of belonging to school is influenced more by their mental and physical conditions but less by their individual and family characteristics and (b) that students' sense of belonging to school is influenced by school climate characteristics rather than school context characteristics."

However, the impact of home on academic achievement, outside of health, can not be completely discounted by research. A study by Ridley-Johnson (1982) showed that parents with limits and restrictions on TV for

their children had children with higher academic achievement and higher IQ than those students without TV restrictions. This study also showed a connection with increased TV watching and lower student grades in reading.

Method

The methodology of the six refereed articles used for this paper was quantitative in nature. Some mention of method is discussed in the body of the paper. I will refer to the article by lead author for this section. Please refer to “References” at the end of this paper for more specifics on the article.

Green (1987)

This study compared student work involvement during school with GPA and ACT scores. Specifically an ACT score t-Test showed results of employed and non employed students and a t-Test with results of employed and non employed students on English class GPA. This study also used self reported surveys of participants for relevant information.

Ridley-Johnson (1982)

This study used all children in a small mid-western town middle school for their sample. A TV viewing questionnaire was administered to assess viewing habits and preferences including what shows watched, whether shows were discussed with others, and if the viewer was limited by parental rules. The participants were then compared by TV viewing habits with IQ and academic achievement.

Schreiber (2002)

This study looked at the same students in 8th and 10th grade and compared after-school activities with academic achievement. Multiple variables were used for after-school pursuits when comparing to academic achievement.

Ferrer-Caja (2002)

This study looked at variables that could have an impact on intrinsic motivation. Variables included Social-Contextual Factors(Learning Climate, Teaching Non-Directiveness, Performance Climate) and Individual Factors (Task Orientation, Perceived Competence, Self-Determination, Ego Orientation). The study obtained t values to determine the positive or negative impact of the variables on intrinsic motivation.

Ma (2003)

This study used 15,000 students in New Brunswick that took 4 achievement tests and a questionnaire with questions in area of sense of belonging, self-esteem, general health, academic press, disciplinary climate, and parent involvement. This information was used to determine the degree with which a school can help create a sense of belonging for students.

Quirk (2001)

This study took a longer longitudinal look at the effects of employment for students while in school and its effect on academic

achievement. The study used GPA as well as surveys and follow up surveys on employment from involved students, parents, teachers, and administrators.

Conclusion

Why do some students succeed academically and others not? This is a question that can truly never be answered for all but maybe it can for many. Through this research and my own personal and professional experience I can apply a greater understanding of this question and hopefully help “reach” a few more students.

It is clear to me that a key to an individual student’s academics success is self-concept. A positive or high self-concept will give a student a greater likelihood of academic success. What can I do as a teacher to help improve a student’s self concept?

Not all people learn the same way or demonstrate their learning in the same way. It is important to view what students are attempting to do to learn, as positive. Some may ask more questions, some may want to draw what others write. If the student is earnestly attempting to learn and demonstrate learning, I will be flexible.

A positive classroom brought on by a positive teacher can contribute to academic success. A student that views their school as positive and their teacher and courses as positive will have greater success. It is also true that some things viewed as positive by students may have the exact opposite effect. TV viewing does have a negative effect on academic achievement when unregulated. Simply informing students of this can at least plant a seed which may bare fruit.

The more positive a classroom environment the more involved students will be become. Classrooms need to be fun, creative, and challenging. Laughing is not required but highly recommended for each student. It is also very encouraging to me that my research has shown that students develop their own impression of a school environment, not through others' opinions. This helps all teachers and students in schools with less resources, high ESL population, high free and reduced lunch population, and low SES population. Schools and students in them can be positive places and thus places where students achieve academically. Kids latch onto the positive. As teachers we must make our classrooms positive for our students.

References

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