2004 Second Place Informative Research Paper

Academic Performance, Mental Health, and School Factors

Stories abound about successful and intelligent individuals who had troubled childhoods. In some fields, literature for example, it is so common that being traumatized as a child is jokingly considered a prerequisite. Even in my own family’s experiences I can see how often achievement and trauma coincide. My grandmother was very successful academically, but had a terrible experience at a strict school with unforgiving teachers at the same time.

Many studies have been conducted to investigate the relationships between schools and their effects on academic performance and mental health. Few though, if any, have compared these results to see when these effects coincide. It turns out that the school characteristics that lead to greater academic achievement quite often have detrimental effects on a student’s psychological wellbeing. This is due to the opposition between the underlying factors in academic performance and mental health, namely attention to students and student diversity.

Academic Performance

A cursory review of the scholastic literature on the subject of academic performance will reveal that the most important predictors of scholastic achievement are socioeconomic status (SES) and parental education (Anderson and Resnick, 11). Though these factors are the most predominant, the characteristics of a student’s education also play a significant role. The various school characteristics, namely funding (public or private), school size (small or large), and gender (single-sex or coeducational), all can help determine the academic success of an individual, and have at their core the underlying factor of individual attention to students.
Public verses Private. There has long been a myth that private schools have higher levels of academic development that public schools, with the alternate source of funding and the higher level of discipline found in private schools cited as support (Anderson and Resnick, 4). A particular study published in 1981 by James Coleman, T. Hoffer, and S. Kilgore undoubtedly strengthened this belief. Coleman et al. reported a high gain in academic achievement among private schools (Bickel and Chang, 92). Almost immediately after this report was published though, massive criticism came from the academic world (Bickel and Chang, 91). In their study, Coleman et al. used very weak controls for SES and parental education (Bickel and Chang, 96). Because private schools are by their nature selective and tend to filter out those of low SES (Anderson and Resnick, 6), this gave skewed results, not representative of a private school’s ability to educate its students.

Since then there have been many more complete studies that have found no significant benefit for private schools. A 1986 study using the College Board Aptitude tests, and a commendable set of well suited controls, found no significant difference between the two types of schools, except one statistically significant benefit for public schools in mathematics (Bickel and Chang, 103). A more recent 2000 study investigated the academic performance of university students from private, public, and home school backgrounds. The study found no statistically significant difference between any of the three school types (Sutton and Galloway, 141). It seems, as Anderson and Resnick concluded, “all things being equal, a good school is a good school whether public or private,” (11). Thus it appears that while private schools tend to have higher academic performance, this is not a result of school type, but rather due to the selective nature of private schools.

Small versus Large. Though privatized education has no direct effect on academic performance, attendance at a small school does appear to have a positive impact. Studies have shown that smaller schools have increased attendance and lower dropout rates (Overbay, 5). According to researcher Amy Overbay, evidence suggests “that smaller school size may have a positive impact on student achievement,” (5). The benefits enjoyed by small schools may be due in part to the greater involvement of the administration and a greater focus on individual students. Some studies show that a large school size has a detrimental impact on academic performance in direct proportion to the school’s poverty level (Overbay, 5). For example, a recent
study of eighth and eleventh grade students in Georgia indicated that small school size benefits academic performance with a most profound effect in the most impoverished areas (Bickel and Howley). This study was replicated with fourth and seventh grade students in Washington with similar results (Abbott et al., 16).

There are however studies to the contrary, finding no significant results or results in support of larger schools (Overbay, 4). Some of these studies though are investigating the more affluent areas (Overbay, 4) where, as suggested by the studies previously mentioned, the effect of small school size is less pronounced, and therefore hardest to accurately measure. It is easier then in these areas for a small or non-representative sample to confuse their results. Overall then, it seems that small school size is a positive factor in a student’s academic performance.

Class Size. While comparing private and small schools to public and large schools it is important to mention the other school factors that these two characteristics influence. The most important of these factors is class size. Private schools (Anderson and Resnick, 8) and small schools both tend to have smaller class sizes than their public or large counterparts. Smaller class sizes may thus be the cause of any effects found for small or private schools.

In 1984, Helen Pate-Bain of Tennessee State University did a study of class size in a Nashville school. Interested in her results, the state of Tennessee commissioned the landmark Student/Teacher Achievement Ratio (STAR) Project to conduct a thorough investigation into the effects of class size (Nye et al., 31). Because this study was so well planned and thoroughly investigated, it continues to be commended for its high quality of research (Pate-Bane et al., 4). The STAR project revealed that smaller class sizes had a significant positive effect on academic performance (Pate-Bane et al., 4). Most striking was that this result held true across all variables (Nye et al., 31), including grade level, location, ethnicity, gender, and SES (Pate-Bane et al., 4) These results most likely come from the greater teacher control, more individual attention, and it being easier to make classes educationally engaging for all students in a smaller class. Follow-up studies, including the Lasting Benefit Study (Nye et al., 32) and others revealed that early exposure to small class sizes continues to have a positive effect on academic performance many years afterwards, even if the students have returned to larger
classes (Pate-Bane et al., 5). Small class sizes thus have a positive effect on academic performance and may be the underlying cause of any benefit for private or small schools.

*Single-Sex verses Coeducational.* Most western schools at the present are coeducational. This is due to a shift that occurred in the 1960s and 1970s away from single-sex schools (Bryk, 381). In the United States, the recent Title IX law also prohibited any form of gender discrimination in federally funded bodies, which eliminated all single-sex schools from the public school system. There has however been several studies comparing single-sex and coeducational schools, particularly outside the United States. One study in 1986 found many positive academic effects for single-sex schools, particularly for all-girls schools, including greater academic achievement, a better attitude towards academics, and more time spent doing homework (Bryk, 383). A 1996 study investigated two single-sex schools (one all-boys school and one all-girls school) that became coeducational and found a significant decline in scholastic achievement only at the former all-girls school (Smith, 5). A more recent 2002 study also found that girls at all-girls schools had significantly higher ideal and realistic career aspirations than did their coeducational counterparts (Watson et al., 329). These studies appear to show that for girls, single-sex schools seem to have a positive effect on academic performance.

There have been many theories into the causes of these increases. Anthony Bryk argues that some separation of social and academic environments remove distractions that can interfere with an academic achievement (394). Watson et al. helps explain that characteristic gain for all-girls schools, while all-boys schools show little to no change. They point out that scholarly literature indicates that at coeducational schools, boys tend to be given more attention that the girls. When boys are removed the focal point shifts to the girls and they are able to achieve a much higher level of development (333). Accordingly then, at least for girls, a single sex school has a positive impact on academic performance.

Underlying each of these results is the key factor of attention to students. The difference between public and private schooling has no meaningful influence on academic performance because alternate sources of funding has no effect on individual student attention. Attending smaller schools or having small class sizes both
benefit scholastic achievement because the teachers and administration are able to play a more active role in a students’ individual learning. Single-sex schools benefit girls because they place attention on those students who would be more neglected in coeducational schools, namely female students. In conclusion then the suggested way to increase academic performance is to place more individual attention on each student.

Mental Health

During the years of elementary and secondary education students spend a vast majority of their time either in school or doing school related activities. It seems obvious then that the characteristics of a student’s school has significant effects on his or her mental health. The various school characteristics mentioned above, funding, school size, and gender, also directly influence the psychological wellbeing of a student and are rooted in the diversity of the student population.

Private/Small verses Public/Large. While the difference between private and small schools verses public and large schools have separate effects on academic performance, their influences on psychological wellbeing are similar. Private and small schools may thus be considered together as compared to public and large schools. On average private schools do tend to be smaller schools, while public schools tend to be quite large (Anderson and Resnick, 25). Similarities also exist in their student behaviors and composition. Private and small schools tend to be more disciplined and more homogeneous than large or public schools. These characteristics are realized in private schools because they are able to select which students to admit, which tends to filter out undisciplined or minority students (Anderson and Resnick, 6). Small schools on the other hand have fewer students to handle and may thus deal with disciplinary problems more effectively. Studies have shown that small schools are related to lower crime rates and fewer behavioral problems (Watt, 355-357). The students of small schools also often come from a small geographical area, making it more likely for small schools to have largely homogenous student bodies. Because of these similarities private schools and small schools may be considered in conjunction with each other.
While a majority of the vast number of studies concerning school characteristics focus primarily on their effects on academic achievement, there are a few that deal primarily with students’ mental health. One such study in 2003 dealt jointly with private and small schools. The study found that in private schools, students felt that they had a level of social acceptance that was lower than comparable students in public schools, while female students at small schools are more likely to feel depressed and four times more likely to have attempted suicide in the past year than their large school counterparts. At private schools, the study found that males and females are twice and three times more likely to have used or threatened to use a weapon in the past year, respectively (Watt, 353-357). Attending a private or small school then has detrimental effects on a student’s mental wellbeing.

School Diversity. While in general attending small, private schools has a negative effect on a student’s mental health, there are some such schools in which these effects are not realized. Investigating the similar characteristics between private and small schools, it becomes apparent that the key element that determines this effect is student diversity. There have been a small number of studies conducted dealing with school diversity and its effects on students. One 2002 study investigated a particular university’s increase in diversity over the course of a several years and found that as the student body became more diverse, students reported having greater cross-cultural interaction and increased development of leadership and other personal skills (Luo and Jamieson-Drake, 7, 12). A 1999 review of literature concluded that for majority students (whites in the study mentioned), attending a more diverse institution lead to greater social concern and humanitarian values (Hartado et al., 21). Urban ecologist Claude Fisher explains these positive factors by noting that larger and therefore more diverse populations are more accepting of minorities and they are able to form supportive subcultures instead of having to face isolation (quoted in Watt, 348). Loo and Rolison clarifies this in their statement that despite the quality of education, minorities will feel alienated if they are underrepresented (quoted in Hartado et al., 20). This appears to be the reason why private and small schools have their characteristically detrimental effects on mental health, namely their abnormally low levels of diversity. Thus high levels of ethnic and cultural diversity in a school is an important positive factor in a student’s mental health.
**Single-Sex verses Coeducational.** An investigation into the many studies on the subject of single-sex verses coeducational schools reveals that single-sex schools have a negative impact on mental health. In Ian Smith’s 1996 study, mentioned earlier in the discussion on academic performance, concerning two same-sex schools and their transition to coeducational status found that for both the all-boys school and the all-girls school, measures of student self concept in the now coeducational schools eventually raised to levels much higher than achieved during their time as single-sex schools (5). Another 2001 study found that students in single-sex, all-girls schools were more likely to exhibit signs of eating disordered behavior than similar girls in coeducational schools (Mensinger, 16-19). Thus the evidence suggests that attending single-sex schools is detrimental to a student’s mental health.

Just as attention to students was the underlying factor to the effects of school characteristics on academic performance, the key to the effects on mental health is student diversity. The benefits shown for large or public schools is found to be a result of greater ethnic and cultural diversity. Coeducational schools find their benefit to mental health through greater gender diversity. Thus the suggested way to further mental health among students is to promote and increase student diversity.

**Conclusion**

Comparing the positive and negative effects of school characteristics reveals many instances where positive influences on student achievement coincide with negative effects on mental well-being. The benefits of a small school on academic performance match the detrimental effects small and private schools have on mental health. Single-sex schools are beneficial to girls’ academic performance, while at the same time being detrimental to students’ psychological wellbeing. The task for educators then is to overcome this situation of matching positive and negative effects. This may be achieved by taking the steps necessary to emphasize the underlying characteristics of attention to students and student diversity that their school lacks. To increase attention to students in diverse schools educators can decrease class size and devote more time to often ignored
minorities, while educators in academically successful schools can take steps to promote and increase student diversity. In this way, both high academic performance and good mental health may be preserved.

It is still interesting to note that except in rare circumstances where steps have been taken to avoid it, the school characteristics that give the most positive academic effects tend to coincide with those that have the worst psychological impacts. It seems to be no surprise then that many of our age’s greatest minds come so often from such dismal backgrounds. It appears that it is these bleak periods may act as a refiners’ fire, from which comes the purified silver of a towering intellect.
Works Cited:


Smith, Ian D. “The Impact of Coeducational Schooling on Student Self-Concept and Achievement” Biennial Meeting of the International Society for the Study of Behavioral Development, August 1996

