

Study of the Impact of a Tailored Education Environment (Freshman Academy) on Urban High School Students' Academic Achievement and Truancy Rates

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Outline

- Background
- Method
- Results
- Discussion/Future Research
- Contact Information

Background

- Problem
 - Widening achievement gap
 - Rising drop-out rates
 - Middle school
 - African American/Hispanic American
- Proposed Solutions
 - Small Learning Communities (SLC)
 - Freshman Academy

Freshman Academy

- Defined
 - Tailored, self-sustaining educational environment for freshman students.
- Benefits
 - Core curriculum integration
 - Student generated extra-curricular activities
 - Low drop out rate
 - 8% vs. 24% (Newton-Reents, 2002)
 - 6.39% vs 3.47% (McAndrew & Anderson, 2002)

Freshman Academy

- Benefits cont'd
 - Fewer discipline issues (Cotton, 1996)
 - Easier middle school – high school transition
 - Develop secondary level work skills
 - Positive attitude development (school/self)
 - Lower teacher turnover (Bolton, 2002)
 - Easier to form meaningful relationships
 - Student-to student
 - Student-to-teacher

Limiting Factors of Large Learning Environments

- Impersonal
- Pedagogically stifling
- Few strong teacher-student relationships (Daynes, 2003)
- Academic achievement- school size correlation among minority students (Cotton, 1996)

Method

- Population
 - n=214
 - Freshman Academy: n=200
 - Control Group: n=14
- Procedure
 - Collected data for 18 weeks
 - Truancy (weekly)
 - Criterion Referenced Test (wk 9 & 18)
 - Algebra, Biology, World History, English

Academic Outcomes

Subject	P value
Algebra	.008
World History	.003
English	.003
Biology	.052

Truancy Outcomes

Group	Possible Days	Days Missed	Percentage
Freshman Academy	18,832	483	2.46%
Control	18,832	593	3.15%

The number of days required for each school district to complete as mandated by the State Education Department is 180 days. The number of days measured in the study is from the first semester only. The number of days on roll during the study (first semester) is 88. Therefore, the total number of days available to the study participants is 18,832.

Discussion

- Results support current literature about SLCs.
- Proliferation of SLCs by NCLB Act.
- Positive predictors for minority students
 - Academics
 - School attendance
 - Community outlook
- P[.052] – Biology
 - Tutoring for all students

Future Research

- Future studies of SLCs combined with cultural specific pedagogy
 - Delivery methods
 - speakers
 - Instructional materials
 - Books
 - examples
 - Activities
 - Parental involvement in learning/teaching

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Abstract:

This study evaluated the impact of a tailored educational environment on urban high school 9th grade students. The purpose was to measure any outcomes a tailored education environment would have on African American 9th grade students' academic achievement using students' Criterion Referenced Test (CRT) scores and truancy rates. 214 African American 9th grade students participated in the study. The researcher met with the teachers and administrative staff once a week for a semester to obtain the truancy data. The CRT exam was administered two times and collected after each administration. The data was collected, compared and analyzed using SPSS. The data was compared to students of the same demographics as the target group. Preliminary results suggest that the Freshman Academy had a positive effect on the CRT and truancy data. The findings suggest implications for school and classroom reform for minority students. Furthermore, these findings could lend themselves as a tool for the reduction of the academic achievement gap for minority students of all ethnicities.

BACKGROUND

Under the Pressure of NCLB Act, Educational systems nationwide are scrambling to improve test scores. After school academic supplementary programs are popping up everywhere and additional faculty meetings have become necessary. Workshops on everything from instructional improvement to classroom management to how to read test data are being conducted on a regular basis. Teachers and students alike are being inundated with how to prepare and implement assessments and taking numerous assessments respectfully

During the Reagan administration education reform focused on improving the quality of science and mathematics achievement to keep up with the Russians in the arms race. In more recent presidential administrations, Bill Clinton and George W. Bush, education reform has included in it's focus maintaining an international presence in educational quality in general. Educator's administrators and politicians agree that this can only be done through an improvement in education quality for minority students.

The National Education Administration statistics, within the current decade, has shown a widening of the academic achievement gap between minority students and non-minority students. As mentioned earlier, compensatory programs are appearing at schools across the nation with the goal of improving the scores of their minority student population. One approach that has re-emerged is the concept of small learning communities (SLC). From New York City to Los Angeles, Miami to Seattle, and in

numerous smaller cities between, a SLC reform movement is sweeping the nation (Ancess & Allen, 2006). Research has shown that SLCs have a positive effect on academic achievement, truancy rates, and discipline issues (Williams, 1990). One type of SLC that has recently gained a considerable amount of attention, both in grade school and post-secondary settings, is the Freshman Academy.

Freshman Academies are SLCs in which ninth grade students are isolated in one part of the building for most or all of the school day. In general, and in the case of the program in this study, the teachers in the academy solely teach freshman, and the core subject classes, lunch and most of the electives consist of academy students only. They have their own administrator and often their own part or wing of the building. Important components of the academy include core curriculum integration, after-school academic programs such as tutoring sessions, and student generated organizations and clubs. Student generated extracurricular activities are important to the success of this setting because it promotes “buy-in” from the student’s perspective. Student buy-in lends itself to the generation of more positive attitudes and behaviors as a bi-product of student choice. Being relatively new to the education scene, the results of freshman academies are positive. Newton-Reents (2002) highlights the successes of several ninth grade academies in Houston, Rochester, and Downingtown, Pennsylvania. According to Newton-Reents schools with “full-blown transition programs’ had only an 8% drop out rate compared to 24% for those schools without freshman academies. Another recent study, conducted by Policy Associates, examined seventy-five of New York City’s SLCs in their first three years and found that students in these schools were making better progress toward graduation than students in comparable large schools (Henszenhorn, as cited in Ancess & Allen, 2006). They also experience fewer discipline problems than larger schools (Cotton, 1996). Additionally, McAndrews & Anderson (2002) reports that the average drop out rate for high schools with more than 1000 students is 6.39%; the same rate for schools of fewer than 200 is 3.47%. As a side note some of the reasons cited in research for high teacher turnover are less related to salary, but professionalism, collegiality, and administrative support (Bolton, 2002). SLCs provide an environment for these factors to be eliminated. The close knit working environment and inherent interdependence on one another promotes collegiality, more administrative support, and ultimately more professionalism.

The main assumption of Freshman Academies and other SLC efforts is that students will learn better if they build cohesive social and intellectual networks amongst themselves (Laufgraben and Shapiro as cited in Daynes, Esplin & Kristoffer, 2004). Also embedded within this concept are powerful assumptions that there is a relationship among student commitment, engagement, and achievement. Large comprehensive schools built a half-century or longer ago have reached their pedagogical limits. Research overwhelmingly supports the notion that students in kindergarten through high school are more successful when they attend small schools. Additionally, Daynes (2003) showed that SLCs like the Freshman Academy are more likely to develop strong relationships with the faculty; which can be valuable in achieving academic success for minority students due to their familistic nature. Interpersonal relations are better both among students and between students and teachers (Cotton, 2000).

Although much research exists regarding the transition into junior high school, surprisingly few studies have focused on the move into high school. Many students find the transition from the middle school to high school difficult. They lack the skills necessary for doing secondary-level work, and they do not have the study skills needed to meet higher standards in high school. Consequently their attitude about school is negative, they become truant and ultimately their grades suffer. Minority students, particularly African American and Hispanic American, due to socioeconomic factors, substandard schooling, and cultural influences on learning have an even more difficult transition to high school. As it relates to minority students, Cotton (1996) showed that enrollment size has a stronger effect on learning in schools with a large concentration of poor and minority children. SLCs help reduce the damaging effects of poverty on student achievement; conversely, large schools have a negative impact on minority students relative to all students (Cotton, 1996; Howley and Bickel, 2000). In fact, the correlation between poverty and low achievement is as much as ten times stronger in larger schools than in small ones (Howley and Bickel, 2000).

In this paper, I examined the problems surrounding the academic achievement gap associated with America's minority students and how SLCs are being used as a tool to reduce the achievement gap. In addition, I sought to contribute to the current literature by building a case for the use of SLCs as an intervention in minority student education.

METHOD

Population

The proposed student sample in the study was true freshman in the ninth grade student body of a large inner city high school in the southern region of the state of Alabama. Two groups of freshman ninth grade students were used as the sample for analysis of the Freshman Academy. One group of freshman was true freshman that participated in the Freshman Academy, and one group of freshman was repeat ninth graders who were placed outside of the Freshman Academy.

A list of true freshman students was obtained from the school registrar database. The sample selection size consisted of all students classified as freshman and broken down as follows:

- n=200 Freshman Academy participants
- n=14 Non-Academy participants

All students' identity was kept confidential and was not disclosed at any time throughout the study.

Procedure

The evaluation (impact assessment) of this Small Learning Community (SLC) took place in a southern Alabama urban high school over the course of a semester (18 weeks). During the 18 weeks the measured factor, Criterion Referenced Test (CRT), was administered two times; at week 9 and at week 18. Participating teachers collected and reported this data for 214 9th grade students. Additionally, the truancy data were collected during the same time period. No preference was given to the type of absence in this phase of the assessment.

The school's STI Office database was utilized for the collection of student data. For research purposes, archived documents revealing CRT scores and truancy counts were obtained from the STI Office database archival records. They were exported from STI Office to a Microsoft Excel spreadsheet. The data were then entered into SPSS for statistical analysis. The direct transfer of student information from the STI Office program to the Microsoft Excel program reduced the opportunity for human error in the process of transferring student data.

Data were then analyzed to determine the academic impact of the Freshman Academy using the following CRT scores (critical factors):

- Science
- Algebra
- English
- World History

Truancy measurements were compared using the percentage of missed days as it relates to the total number of school days in a school year.

RESULTS

Academic

A pooled t-test was performed on the measured factors with the following results:

- a. Algebra: t-212, significant at less than .05. - p[.008]
- b. World History: t-212, significant at less than .05. - p[.003]
- c. English: t-211, significant at less than .05. - p[.003]
- d. Science: t-212, significant at less than .05. - p[.052]

Truancy

The number of days required for each school district to complete as mandated by the State Education Department is 180 days. The number of days measured in the study is from the first semester only. The number of days on roll during the study (first semester) is 88. Therefore, the total number of days available to the study participants is 18,832. Data analysis of the research showed the following:

- The number of days missed by the Freshman Academy participants (group 1) for the first semester is 483 out of 18,832 possible.
- The percentage of days absent from school is 2.56%.
- The number of days missed by the Non-Academy participants (group 2) is 593 out of 18,832 possible.
- The percentage of days absent from school by group 2 is 3.15%

Discussion/Future Research

The results indicate that the Freshman Academy, in three of the four measured academic factors, made a significant difference in the academic achievement of the participating students. The results of these factors also support the existing literature concerning the effectiveness of Small Learning Communities and the benefits of small, tailored education environments. However, one factor did not achieve significance with a $p[.052]$. This could be due to the relative low number of students in the control group [$n=14$].

Furthermore, the results of the truancy analysis support the case of effectiveness for SLCs. However, it could be argued that the truancy trends could be a sub-factor positively linked to the inherent nature of the SLC itself. The more personal and smaller the classes are, the more a connection is established between the student and the teacher. This strongly lends itself to increased school attendance. This is especially true for minority students who are more social in nature. It also supports the existing literature concerning the effectiveness of SLC's ability to facilitate other critical factors for their success. Factors such as intimacy (Daynes, 2003) and teacher/student ratio (Cotton, 1996).

Academic quality and equality for all students has become a national concern. The current presidential administration acknowledged the concern of educational equality by establishing the No Child Left Behind Act. The proliferation of SLCs in secondary schools, have no doubt, been fueled by this legislation. Fortunately, previous and current research about the effectiveness of this intervention has been positive for all students, especially for the African American and Hispanic student population.

These students would further benefit from future research that examined the combined effectiveness of SLCs with tailored instructional strategies that included cultural specific instructional material and activities. An assumption, based on the effectiveness of this research, is that one would continue to see positive correlations between experimental factors and measured factors.

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