College Knowledge and Closing the Gap: The Effectiveness of the Blugold Beginnings Middle School College Access Program on College Readiness

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Background
College access programs have been developed over the past 20 years to create an atmosphere in the classroom where students can become more familiar with what a college education entails and how to stay on track throughout high school in order to be accepted into college (Klopot & Martinez, 2004; Kranen, 2005). College readiness is defined as possessing the skills to stay organized, understanding the course requirements needed to enter college, and maintaining a GPA above 3.0 to meet the requirements for being accepted (Conley, 2005).

Blugold Beginnings is a program that works with local schools to provide a comprehensive college connection from fifth grade through high school graduation. The Blugold Beginnings Middle School Program has grown from mentoring 25 students to currently having 178 students enrolled in the program, with the goal of preparing them for a future college education.

Some of the research used to develop the Blugold Beginnings Middle School Program is as follows:
- Parents of low-income, first generation, and minority students expect their children to do well in school however these parents also often lack a background in formal education, making it difficult for them to prepare their children for college within the home (Park, 2007).
- The average percentage of Americans over the age of 25 who have a baccalaureate degree is 17.1 percent, while in the Hmong population baccalaureate attainment is 10.4 percent (Pfeifer, 2008).
- The poverty rate for the Hmong population is 26.4 percent, which is considerably higher than the United States average of 9.8 percent (Pfeifer, 2008).
- To help students overcome these barriers, schools have started offering aspects of college culture within their daily functions (McCafferty et al., 2002).
- Students who are low- to middle-income, first generation and are minority are at a high risk of not obtaining a post-secondary education. Even though programs and initiatives have been developed and implemented to address this problem, many of these students are still not obtaining college degrees (Schulte & Mueller, 2007).

The following research was conducted to investigate the efficacy of the Blugold Beginnings Middle School Program on student GPA and performance on the "college knowledge" survey.

Method
Overview
The assessment tools used in this study were a "college knowledge" survey developed by Mary Huffcutt that consisted of 47 questions (17 multiple choice, 6 True/False, 12 matching, and 12 fill in the blank), and the change in students’ core GPA (Math, Science, and English) from the time they entered the program to their core GPA at the end of the first semester of classes.

Some of the true/false questions on the survey used to assess college knowledge included:
- My parents expect me to go to college.
- I have spent time on a college campus.
- Last year I received a C or below in a class.

Some of the multiple choice questions on the survey used to assess college knowledge included:
- Last school year, I was absent this amount of days:
  - a) 0
  - b) 1-4
  - c) 5-8
  - d) 9-12
  - e) More than 12

- Last school year, I got in trouble and a parent/guardian was called:
  - a) I didn’t get into trouble
  - b) 1 time
  - c) 2-3 times
  - d) More than 3 times

Sample of Students Used
The cohort used in this research was a convenience sample of 93 students out of the 178 students enrolled in the Blugold Beginnings Middle School Program. The inclusion criteria was that the students must have completed the "college knowledge" pretest and post-test.

Within the sample of students, there were 47 male students and 52 female students. Within this middle school sample, 25 were in sixth grade, 49 were in seventh grade, and 25 were in eighth grade. The students in the sample varied with how long they were enrolled in the program, ranging from 1 month to 2 years and 6 months. The average number of meeting times for students was 18.8 and ranged from 1 meeting time to 58 meeting times.

For the purposes of this research, students were separated into three groups based on how many mentoring sessions they attended (0-20, 21-40, and 41-60 mentoring sessions).

Scores on the "college knowledge" pretest ranged from 13 percent to 89 percent with an overall mean of 48 percent, and scores on the post-test ranged from 13 percent to 97 percent with an overall mean of 56 percent. The range of entrance GPAs was 0.5 to 4.0, with a mean GPA of 2.54.

Results
College Knowledge scores differed significantly from the pretest to the post-test for students who attended 0-20 mentoring sessions (t(61) = -3.72, n = 62, p < .001), and students who attended 21-40 mentoring sessions (t(30) = -3.87, n = 31, p = .001). However, students who attended 41-60 mentoring sessions did not significantly differ in their pretest and post-test scores (t(5) = -.64, n = 6, p = .553).

Whereas students’ scores increased between times of testing for those who attended 0-20 and 21-40 mentoring sessions, there is not a significant difference in post-test scores across the three groups, (F(2, 96) = 1.36, p = .26).

For example, post hoc comparisons show that students who attended 41-60 mentoring scores did not score significantly higher on the post-test than students who attended 0-20 mentoring sessions, p = .26.

Discussion
Overall, the findings of this study are difficult to interpret. The wide range of time that different students were enrolled in the program, range in number of mentoring sessions attended, lack of control group, and inclusion of objective and subjective items as a single measure on the "college knowledge" test make it nearly impossible to disentangle which effects, if any, the Blugold Beginnings Middle School program had on the students enrolled.

There is also an issue of students potentially self-selecting into attending more mentoring sessions. This may be a factor since students that attended 41-60 mentoring sessions started out with an average pretest score already six percent higher than the post-test scores for the groups of students who attended fewer mentoring sessions.

Recommendations for future research include the following changes in program implementation and assessment:
- Randomly assign students to one of three mentoring groups where the number of mentoring sessions would remain constant within each group, along with following a control group throughout the year as a comparison.
- Reformulating the "college knowledge" survey so it asks questions only assessing the students’ knowledge of information pertaining to college. Questions regarding their subjective feelings about college preparedness, parental investment in education, and past academic record could be asked; however, they should not be included in the overall score intended to determine knowledge of college systems and prerequisites.

- Changing the methods for collecting data and enrolling students so that all students are enrolled in the program within a window of time and are given the pretest and the post-test within set time periods.

These changes along with others outlined in Introduction to Behavioral Research Methods (Leary, 2008) will allow for a better investigation of whether or not students enrolled in the Blugold Beginnings Middle School Program perform significantly better on an assessment of their "college knowledge," have a significant improvement in GPA, or a significantly higher attendance rate than students in the control group.

References

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