

What does it matter what happens after school: The impact of library after school programs on teen academic performance

Original Research Question

In my original literature review, I stated my research goals as an “attempt to identify after school programs at public libraries affecting young adults, and examine the ways in which these young adults are impacted.” I purposefully left the question open-ended so as to allow for future customization.

Revised Research Hypothesis

Common knowledge suggests that students who participate in after school programs should perform better than their peers. Woodland posits that the impact of after-school programs is more significant among disadvantaged populations who more often lack other forms of institutional or family support. Despite these assertions, there is a paucity of data that demonstrates a measurable relationship between participation in after school programs and performance in school. Using quasi-experimental methods, I plan to test the hypothesis that participation in library after school programs positively impacts school performance.

Research Method Justification

A quasi-experimental design provides the best compromise between practicality and high quality data. A research question that asks about the impact of one variable on another variable, in this case after school library programming on school performance, is best answered using experimental design which offers the most conclusive evidence for correlation or causality. While a pure positivist experiment would provide more internal validity, the difficulty of controlling intervening variables in a public setting makes such a design both impractical and almost impossible. Instead, the quasi-experimental design takes into account human and environmental variation. Performing the experiment in a real-world context increases its external validity by ensuring that the findings are not the result of an unnatural research environment.

Sampling

The theoretical population that is being examined are public school students in the 7th grade that attending schools in the Oakland Unified School District. The district serves K-12 students in the East Bay area of California. This is a large and diverse school district with students who come from a variety of racial, ethnic, and economic backgrounds.

From this population, two schools have been selected for study based on their similarities. Both Westlake and Bret Harte middle schools support about 75% of their students on free or reduced lunch programs indicating that their student populations are from similar economic backgrounds. Additionally, the schools are racially and ethnically similar: both are approximately 50% African American and categorize 20% of their students as English Language Learners. The All 7th grade students at these two schools make up the sample population for this study. From this population, all students who volunteer to participate in the study will be considered the sample.

For this purposive sample, permission from the school board will allow access to both schools' student populations. All 7th grade students at the schools who are not already involved in after-school activities will be invited to participate voluntarily in the study once they and their parents sign a consent form (see appendix 1.2). Gift cards will be used as an incentive for student participation. Cards will be for an amount totaling no more than \$20.00 and will be identical for all study participants.

Research Design

To collect information about the impact of after school library programs on 7th grade students, researchers will assign one of the two chosen schools to act as the test case and the other as the control. Students at the control school will be asked to participate in a study but will experience no change to their daily routine. Participating students attending the test school will visit after school programs at a local library five days a week. Programs currently offered by the City of Oakland Public Libraries range from writing and performance workshops to dedicated teen spaces and volunteer opportunities. After participating in these programs for one semester, students in the control group will be compared with those in the test group.

Data Collection

This study will collect quantitative, numerical information related to student performance as well as using questionnaires and focus groups to provide context and a deeper understanding of the issue. Employing both qualitative instruments will contextualize the numerical data and increase the internal validity of the findings. Triangulating data obtained by different means should minimize the chances of skewed information as a result of collection errors.

Participating students will fill out a questionnaire at the beginning of the study (see appendix 1.3). The purpose of this tool is to develop a baseline for understanding students' interactions with and feelings about the library and after school programs. The questionnaire will also include questions about students' attitude toward school and about their feelings about their own academic performance. Since the majority of the students will likely be new to participating in research and because of the range of sentiments that students are likely to express, a questionnaire is the best tool for collecting this data. Questionnaires will be both anonymous and confidential. Those used in this study will be paper-based and mailed to participating students, allowing them to answer questions about schools and libraries frankly away from any interference by those institutions. Samples of the questionnaire will be sent to a pilot group for feedback prior to disseminating them to the sample students. The questionnaires distributed to students will include a mix of closed and open-ended questions with the majority being questions that provide numerical data. The mix of responses will give researchers additional context about the attitudes of the students at the outset of the study.

The two measures used to assess student performance will be grades and disciplinary action. Both sets of numbers will be gathered for all participating students at the beginning of the study (end of the fall semester) and at the end of the study (end of the spring semester). No identifying information will be attached to the student records. Disciplinary action was selected in addition to grades to test the hypothesis put forth in much of the library literature that participation in after school programs is effective because it keeps teens off the street and replaces negative peer role models with positive ones. Examining a change in the number of recorded disciplinary actions will provide an indication of whether after school programs are actually having this impact on teens.

The project will conclude with focus groups involving all of the participants. Focus groups will involve 8-10 students and one research facilitator. Since the focus group is the culminating portion of the study, researchers should be well versed in the subject matter and able to facilitate a discussion around it. All focus groups will use the same briefing sheet (see appendix 1. 4) with minor modifications made for those students in the test population (who attended the after school program). Focus groups will be conducted at either the school or library in a private meeting room. The purpose of the focus group is to determine whether student behavior, but more saliently, attitudes toward school, libraries, and after school programs have changed since the beginning of the study.

Reliability and Validity Issues

The reliability of the data collected during this study may be impacted by a variety of random errors. The use of human subjects makes controlling for these errors impossible. Instead, we hope that the impact of these variables will be slight. The use of non-random sampling procedures raises a question about the ability of the study to produce the same results in a different context. That said, the experimental design is easily repeatable and the real-life context in which the original data was collected increases the likelihood that the information gathered from this study would apply in other similar settings. Finally, the use of human subjects in a real-life context raises issues with the internal validity of the study since it would be impossible to control for all potential intervening variables. To combat this issue, we have designed the study so that both the control and test sample populations are quite large.

Ethical Issues

One issue that arose in the development of this design was the use of minors as the sample population. Despite the additional ethical challenges of working with under-aged populations, this is the only way to obtain information about this group. After weighing the potential harm that could be incurred with this research design, mainly that the interactions that students experienced while participating in the focus groups might be psychologically damaging, against the potential benefit of improving learning and student performance using the the principal of beneficence, it was clear that the potential benefits outweighed the potential costs.

Several steps were also taken to ensure ethical treatment of human subjects. First, all participants will be provided with a consent form informing them of the nature of the research (see appendix 1.2). Consent forms must be signed by both the student and their parent or guardian to ensure that the consent being granted is fully understood by the subject. Second, the nature of the research design allows all of the data collected for this study will be either anonymous (grades, school records) or confidential (focus group transcripts) ideally these precautions will limit any potential harm to the research sample. Lastly, this research design requires review and approval by a Human Subjects review board (see appendix 1.1).

The nature of this experiment is that it relies on a control group of students who will not be receiving the opportunities to potentially improve their school performance. Denying some students the resources that are provided to others raises an ethical dilemma. Unfortunately without a control sample population, it would be impossible to separate the impact of after school library programs from other variables such as general improvement over time. To minimize the impact of providing students with different opportunities, we have designed a relatively short-term study. If data analysis indicates a positive relationship between library programming and school performance, we will recommend extending the program to students from the control population as soon as possible.

Data Analysis

Data collected as part of this study will be analyzed using both quantitative and qualitative methods. First, the data collected from each data collection method will be analyzed individually. Numerical data from the questionnaires will be analyzed statistically to determine frequency of specific responses and to build a picture of the student population as well as to identify areas that may be interesting to re-visit in the focus groups (see appendix 1.5). The responses from the control and test groups will be compared to rule out any major discrepancies that might be present at the beginning of the study. Open-ended questions from the questionnaires and the notes collected during focus groups will be analyzed using content analysis to look for patterns and outliers in the responses. Coding will be developed to provide some guidelines and standardization for the qualitative analysis. The responses from the control and test groups will be compared with an emphasis on determining similarities and differences.

Finally, the numerical data from students' grades and disciplinary records will be collated and examined to determine if there are discrepancies between the student groups at the outset of the study. Analysis will also test for changes in student performance between the beginning and the end of the semester for both the test and control groups. Statistical analysis will be conducted using a statistical software package to determine the correlation (if any) of after school library program attendance on grades and/or disciplinary actions and whether the correlation is statistically significant.

The results of the analysis of all of the data collected will be examined together in order to draw conclusions about the impact of the after school programs. By looking at the results of both the quantitative and qualitative analysis together, I will develop a nuanced understanding of how the programs are impacting students. From this I will be able to provide recommendations to both school districts and libraries about where future research is needed and potentially about the relative usefulness of investing resources in these programs or in using them as a suggested resource for scholastic improvement.

Bibliography

Bret Harte Middle School 2009-2010 Annual School Score Card. Retrieved from http://web.ousd.k12.ca.us/sarc/docs/ScoreCard09-10/Bret%20Harte%20Middle_09-10_Scorecard.pdf

Pickard, A. (2007). *Research methods in information*. London: Facet Publishing.

Westlake Middle School 2009-2010 Annual School Score Card. Retrieved from http://web.ousd.k12.ca.us/sarc/docs/ScoreCard09-10/Westlake_09-10_Scorecard.pdf

Appendix

- 1.1 – [Human subjects review form](#)
- 1.2 – [Consent form](#) (updated [in blue] from the [UW sample consent form](#))
- 1.3 – [Sample questionnaire](#)
- 1.4 – [Sample focus group briefing sheet](#) (updated from [Jessamine County School System](#))
- 1.5 – [Sample numerical questionnaire data & analysis](#)
- 1.6 – [Sample focus group data & analysis](#)