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The Impact of Participation in Extracurricular Activities on Elementary School Students

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EDUC 322 Educational Research and Statistics

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Abstract

The purpose of this study was to investigate the relationship between participation in extracurricular activities and academic achievement. Surveys were administered to 23 4th-8th-grade students to gather information on their extracurricular participation, and data was collected on these students’ most recent standardized test scores and first-quarter grades. The quantitative data collected was then statistically analyzed using the SPSS program. The results of this analysis suggest a statistically significant positive correlation between hours spent participating in extracurricular activities and cumulative GPA. Students’ GPAs did not appear to be impacted by the total number nor types of activities in which they participated. No significant relationship was found between students’ standardized test scores and extracurricular participation. These results indicate a positive relationship between participation in extracurricular activities and overall GPA. These findings may assist teachers and school administrators in decision-making regarding the allocation of resources to extracurricular activities. Further research could be conducted in larger settings, in addition to examining the impact of student, teacher and parent attitudes on extracurricular participation and academic success.
The Impact of Participation in Extracurricular Activities on Elementary School Students

Introduction

In recent years, a debate has arisen regarding the importance of extracurricular activities in the field of education. When faced with limited resources, a growing number of teachers and school administrators place a higher priority on academics, reducing or altogether eliminating school-sponsored extracurricular activities (Israel, 2013; Vukic & Zrilic, 2016). The American public school system is not alone in facing this dilemma: both private and public schools across the worldwide field of education are struggling to find the ideal balance between students’ academic, personal, and social lives (Bradley & Conway, 2016; Eccles, Barber, Stone, & Hunt, 2003; Fujita, 2006).

In small, privately funded schools—especially Christian schools—this topic is especially relevant. When parents or school staff must volunteer their time, school resources must be spent in hiring professional instructors, or fees must be charged for students’ participation in extracurricular activities, the question remains: Should the valuable resources of time, finances, and parental involvement be expended in non-academic pursuits? An examination of the relationship between extracurricular participation and academic achievement becomes necessary when addressing this issue.

This study was conducted for the purpose of answering the following research question: What is the nature of the relationship between students’ participation in extracurricular activities and academic performance? When conducted in a setting such as the one referenced above, the answer to this question may be the first step toward the resolution of the greater issue of extracurricular activities in the private school setting.
Review of Related Literature

As public and private school systems around the world come under greater scrutiny regarding their allocation of resources and commitment to academic success, the necessity of extracurricular activities in schools has been called into question (Israel, 2013; Vukic & Zrilic, 2016). When faced with limited resources such as instructional time, finances, and staff, school administrators are left to ponder whether extracurricular activities are a worthwhile investment. Often, the pressure placed on schools to boost the academic performance of their students leads to the expenditure of extracurricular resources on academic subjects (Bradley & Conway, 2016).

History of Extracurricular Activities and Academic Achievement

The effects of extracurricular activities (ECAs) on student achievement have long been a topic of interest for researchers. In years past, this interest has manifested itself in such large-scale studies as the one conducted by Cooper, Valentine, Nye, and Lindsay (1999), which examines the relationship between students’ participation in ECAs and their academic achievement. However, in more recent years such in-depth, specific research on this topic has shifted in its nature. Large-scale studies such as the one referenced above no longer focus solely on students’ academic accomplishments, but on school success, which includes many factors such as student motivation, attitude, social and psychological development, and academic achievement (Eccles, Barber, Stone, & Hunt, 2003; Gilman, Meyers, & Perez, 2004). While these studies do indicate a positive correlation between extracurricular participation and academic achievement, the attention given to this correlation is only minimal, as researchers often choose to focus on the impact of these activities on student outlook and social inclusion (Eccles et al., 2003; Holloway, 2002).
**Relationship between Extracurricular Activities and Academic Achievement**

The decline in extensive, large-scale studies designed to specifically examine the relationship between ECAs and academic success has led to an increase in research conducted by students and teacher-practitioners (Fujita, 2006; Jansen, 2016; McLaren Gibbons, 2006), as well as studies conducted outside the United States (Bradley & Conway, 2016; Vukic & Zrilic, 2016). These studies, conducted in various elementary and secondary school settings, support the theory that academic achievement may be linked on some level to participation in extracurricular activities, though the exact nature of that relationship is unclear. The results of the study conducted by Cooper et al., for example, indicate a positive correlation between participation in certain categories of activities (e.g., sports or structured clubs) and students’ grades and test scores (1999); these results are supported by Fujita (2006), whose study of 52 junior-high students indicated that students who spend time engaging in activities such as community service experience a higher rate of academic success than those who pursue other interests, such as music. However, these studies differ in their findings on television viewing, as Cooper et al. (1999) found time spent watching television to be associated with lower grades and test scores, while Fujita (2006) found television viewing to be related to higher test scores. Additionally, a similar study of approximately 2,000 high school students indicates that the number of ECAs in which a student participates affects his or her academic performance more than the specific types of ECAs (Reeves, 2008). These findings are supported by Jansen (2016) and McLaren Gibbons (2006), whose studies indicate that the number of hours students spend in extracurricular activities are positively related to their grade-point averages (GPAs).

Overall, the current body of literature examined indicates a positive correlation between participation in extracurricular activities and academic achievement. This may be evidenced in
the types of activities in which students participate, in the hours they spend in each activity, in standardized test scores, or cumulative GPA. However, the exact nature of this correlation has yet to be conclusively identified, warranting further research on the subject.

**Methodology**

This study was conducted at a private Christian elementary school in South Carolina. Before conducting this study, written permissions from both the school board and the school principal were obtained. The participants for this study were selected by asking 29 students from grades 4-8 to participate in completing a brief survey. These students came from two classrooms: a 4th-6th grade class, and a 7th-8th grade class. Before the survey was administered, each student was asked to sign an assent form stating the voluntary nature of participation in the study (see Appendix B). Parental consent forms were also sent home with each child, which were signed and returned before the administration of the survey instrument (see Appendix B). Of the 29 students, 25 volunteered to participate in the study, while four declined. Parental permission was obtained from 23 of the 25 volunteers. The remaining subjects consisted of 11 girls and 12 boys, ranging in age from 9 to 14 years old. Nine of these students were from the 7th-8th grade classroom, while the other 14 students came from the 4th-6th grade class.

**Data Collection**

In order to determine the participants’ level of participation in extracurricular activities, a survey was administered to each of the students, requesting both background information (age, grade, and gender) and information regarding extracurricular activity participation for the current (2018-19) school year (see Appendix A). Students were asked to indicate the specific activities in which they participated (both affiliated and unaffiliated with the school) and the number of hours they spent per week participating in extracurricular activities. Students were also asked to
rate their academic performance for the first quarter of the 2018-19 school year on a Likert-type scale, ranging from 1 (poor) to 4 (excellent). Each participant was then asked to write their name on the back of the survey.

Following the administration of the survey instrument, each participating student was randomly assigned a number by the school principal. These numbers were recorded on the front of the surveys, which were then photocopied on one side only, blinding the researcher to individual students’ names. This was done in order to preserve students’ anonymity and ensure the objectivity of the research study.

The principal also provided records of students’ first-quarter grades and scores for the 2018-19 administration of the Iowa Test of Basic Skills (ITBS), which had been redacted to omit any personally identifiable information. Once again, each student’s randomly assigned number was included on these reports in place of a name. The students’ numbers were then entered into a spreadsheet, along with the number of hours each student participated in extracurricular activities per week, the types of activities in which students participated, and their self-rating of their current academic performance. Another spreadsheet contained students’ first-quarter mathematics and English language arts (ELA) grades, which had been converted to grade-point averages (GPA) using the following scale: A = 4.00; A - = 3.67; B + = 3.33; B = 3.00; B - = 2.67; C + = 2.33; C = 2.00; C - = 1.67; D + = 1.33; D = 1.00; D - = 0.67; F = 0.00. Students’ national percentile rankings (NPR) for their mathematics, ELA, and complete composite ITBS scores were also entered into this spreadsheet.

**Analysis**

Due to the large number of quantitative data collected during this study, IBM’s Statistical Package for the Social Sciences (SPSS) was used to assist in data analysis. The spreadsheets for
students’ survey results and academic records, created during the data collection phase, were combined into a single sheet and entered into the SPSS program.

Using SPSS, the Pearson correlation coefficients were calculated and reported for the following 13 variables: total number of extracurricular activities, hours spent per week in extracurricular activities, self-rating of academic performance, total number of music- and art-related activities, total number of sports-related activities, total number of religious or community service activities, total number of acrosporo or martial arts activities, ITBS mathematics NPR, ITBS English language arts NPR, ITBS complete composite NPR, first-quarter mathematics GPA, first-quarter English language arts GPA, and first-quarter cumulative GPA. The resulting correlations were analyzed, and significant correlations at both the .05 and .01 levels were flagged. Exceptionally weak relationships ($r = \leq 0.30$ or $\geq -0.30$) between certain variables (e.g., total number of extracurricular activities and ITBS composite national percentile ranking) were also flagged.

**Results**

The flagging of significant correlations revealed a moderate positive correlation ($r = 0.451$) between students’ self-rating of academic performance and the total number of extracurricular activities in which they participated; however, only a weak relationship ($r = 0.332$) was indicated between this self-rating and total number of hours spent in extracurricular activities. No significant correlations between student self-ratings and academic performance were found, with the exception of a moderate ($r = -0.407$) negative correlation between self-rating and ITBS mathematics national percentile ranking (see Table 1).

The correlations between students’ total number of ECAs and ITBS scores, first-quarter grades, or cumulative GPA were not statistically significant. This was also true of each
individual category of extracurricular activities, as no significant correlations were found between participation in a certain type of activity and academic performance (see Table 1). However, though not statistically significant, a moderate positive relationship was indicated between participation in acrosports or martial arts and first-quarter mathematics grades ($r = 0.344$).

The total number of hours students spent participating in extracurricular activities showed very little correlation to ITBS scores, and very weak positive correlations to first-quarter English language arts and mathematics grades (see Table 1). However, a statistically significant positive correlation ($r = 0.439$) was indicated between hours spent in extracurricular activities and first-quarter cumulative GPA. This correlation is represented in the scatter plot (see Figure 1). While this correlation cannot be equated with a cause-and-effect relationship between the two variables, it may indicate the presence of a positive association between the number of hours students spend participating in extracurricular activities, and their cumulative grade-point averages.

![Table 1 – Correlations between students’ survey results and academic performance at the .05 level](image-url)
Discussion

Based on the results obtained through the statistical analysis described above, there is little evidence that a significant relationship exists between the total number of extracurricular activities in which students participate, and their performance on standardized tests or classroom assignments. It would also seem that the types of activities in which students participate bear little significance to their academic performance. These results contrast with the findings of Reeves (2008), whose study indicated a positive relationship between the amount of extracurricular activities in which students participated and their academic achievement; or Cooper et al. (1999) and Fujita (2006), who found that the types of extracurricular activities in which students participated impacted academic performance more significantly than the total number of activities. Students’ self-ratings of their academic performance seem to be positively related to the number of activities in which they participate, though these ratings may not be indicative of their actual levels of achievement. Students’ performance on standardized tests also
appear unrelated to their participation in extracurricular activities, contrasting with other studies that found a positive relationship between total number, hours, or types of extracurricular activities participated in and standardized test scores (Cooper et al., 1999; Reeves, 2008).

Perhaps the most important finding of this study is the presence of a statistically significant positive correlation between the hours students spend participating in extracurricular activities and their cumulative GPA, which aligns with the results of studies conducted by Jansen (2016) and McLaren Gibbons (2006). Although correlation cannot imply causation, the results of this and other, similar studies indicate that a positive relationship exists between the hours students spend in extracurricular activities and their overall GPA. This relationship may be influenced by external factors. For example, at the research site, participation in extracurricular activities is contingent upon the retention of a minimum 3.0 GPA. When students are unable to meet this grade requirement, they are placed on academic suspension, and are not permitted to return to their chosen activities until their grades improve. Most students are eager to participate in after-school sports or clubs, and the threat of suspension from these activities serves as a motivating factor for academic achievement. Additionally, many parents are unable to retrieve their child from school immediately after its close, meaning that after-school care must be obtained and financed. The monetary costs associated with academic suspension may be incentive enough for parents to monitor and assist in students’ homework completion and test preparation. Other factors—such as teacher-student bonding, health maintenance, social inclusion, and personal enjoyment—may also play a role in this relationship, but further research is necessary to confirm their level of impact.

The results of this study support the findings of other studies in the field, which indicate that a positive relationship between students’ participation in extracurricular activities and their
academic performance does exist (Bradley & Conway, 2016; Vukic & Zrilic, 2016). While some of the results of this study conflict with other researchers’ findings, this simply illustrates the fact that the nature of the relationship between ECAs and academic achievement is still very much unknown (Cooper et al., 1999; Fujita, 2006; Reeves, 2008). It is only through the continuation of studies such as these that the field of education will arrive at a conclusive definition of this relationship. Through the defining of this relationship, school administrators, teachers and parents can adapt educational and extracurricular programs to meet the needs of their students.

**Limitations**

Several possible limitations were associated with this study, including sample size, time, and researcher availability. While the participant pool included 23 of the 29 4th-8th grade students enrolled in the school, and is therefore highly representative of its middle- to upper-grade population, none of the data collected was obtained from the primary grades (K-3). Therefore, it is difficult to confidently apply the study’s results to the entire elementary school. Time was another limiting factor in this study, as the researcher could only obtain standardized test scores and grades for the first quarter of the school year. It is unclear whether the positive correlation between hours spent in extracurricular activities and cumulative GPA would remain throughout the entire school year. The final limitation, researcher availability, impacted this study heavily in its data collection phase, as difficulty coordinating schedules with the cooperating teachers necessitated the collection of quantitative data only. Further exploration of student and teacher attitudes and opinions toward extracurricular activities would have provided a broader picture of the topic, but the pursuit of these data through qualitative measures, such as interviews, was prohibited by limited accessibility to class time.
Future Research

The question of the importance of extracurricular activities in students’ academic development is not one that can be resolved easily. However, it is an important question, and one that cannot be answered based solely on opinions—it requires experience and tangible results. Schools want their students to succeed, and the results of this study suggest that participation in extracurricular activities may play a positive role in students’ academic achievement. These results give rise to additional questions. Would a full year of data collection, for example, yield similar results to those obtained in the first quarter? Can these conclusions be applied to larger private school settings? What role do student, teacher, and parent attitudes play in the relationship between academics and extracurricular activities? These are questions which need to be answered, and avenues that need to be explored. This study is simply a small step in the process of addressing a much larger topic, which additional research must continue to further.
References


Appendix A

Survey

Age _____________________  Grade__________________  Gender:  M  F

2018-2019 School Year

Do you currently participate in any of the extracurricular activities offered by the school?  Yes  No

If you answered “yes,” please check all that apply:

☐ Soccer/Sports  ☐ Gymnastics  ☐ Adv. Bells  ☐ Art Club

Do you currently participate in any extracurricular activities outside of the school?  Yes  No

If you answered “yes,” please check all that apply:

☐ Sports  ☐ Gymnastics/Cheer/Dance  ☐ Music Lessons  ☐ Martial Arts

☐ Pathfinders/Adventurers  ☐ Community Service (please describe):______________

☐ Other (please describe): ________________________

Approximately how many hours per week do you currently spend on extracurricular activities?

☐ Less than 1  ☐ 1-2  ☐ 3-4  ☐ 5-6  ☐ 7-8  ☐ 9+

How would you rate your academic performance so far this year?

1  2  3  4

Poor  Fair  Good  Excellent
Dear Students,

I am conducting a research project on extracurricular activities and school success. I am doing this project because I am interested in seeing whether participating in sports, music, or other activities outside of school impacts how well students learn in class. Hopefully, this project will help me better understand how students’ school achievement may change when they participate in extracurricular activities.

I’m asking you to help me with this project by completing a short survey. Your name will be removed from the survey before I see it, so I won’t know whose answers I am looking at. This way, you can be sure that all your answers are completely private, and they will remain so throughout the study.

If you decide you do not want to participate in this study, it won’t change your grades at all, and no one will be upset with you. If you do decide to participate, you can change your mind at any time—just let me or your teacher know if you no longer want to be included in my project. When I write a report on the results of this study, your name and other personal information will not be mentioned, and no one will know whether or not you were in the study. If you have any questions, feel free to talk to me at school, or send me an email at ameadows@southern.edu.

Thank you so much,

Amy Meadows

Please check one:

☐ Yes, I would like to be a part of Ms. Amy’s research study.

☐ No, I would not like to be a part of Ms. Amy’s research study at this time.

____________________________________________________  ___________________
Your Name                                       Date
Dear families,

My name is Amy Meadows. I am a senior education major at Southern Adventist University in Collegedale, TN. I am currently conducting a study on the relationship between participation in extracurricular activities and academic achievement in elementary school. Through this study, I hope to determine whether students’ participation in extracurricular activities improves their rate of success in academic pursuits.

As part of this study, I will be asking students to complete a brief survey on their past and current extracurricular activities. In order to protect your student’s privacy and ensure my own objectivity, each child’s name will be removed from the surveys before I receive them. The data will be coded in such a way that neither I nor my intended audience will be able to identify any individual student based on his or her responses. Because participation in this research project is completely voluntary, I am asking for your and your child’s permission before administering the surveys.

If either you or your child elects not to consent to participation in this study, there will be no penalty associated with that decision. If your child does choose to participate, he or she may withdraw from the study at any time. This study and its results will not impact your child’s grades in any way. While the results of this study may be published, any information collected regarding your child will be kept confidential.

If you have any questions regarding this study or its implications, please feel free to contact me at ameadows@southern.edu. Thank you for your time.

Sincerely,

Amy Meadows

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**Participant Consent Form**

I, _________________________________, DO/DO NOT (please circle one) consent for my Parent/Guardian Name child, _________________________________, to participate in the research study referenced above. Child’s Name

I understand that my child’s participation is voluntary, and that any information collected regarding my child will be kept confidential.

______________________________

Parent/Guardian Signature

______________________________

Date