AT-RISK STUDENTS’ PARTICIPATION IN AFTER SCHOOL PROGRAMS:
IMPACT ON ACADEMIC ACHIEVEMENT

Thesis
Submitted to
The School of Education and Health Sciences of the
UNIVERSITY OF DAYTON

In Partial Fulfillment of the Requirements for
The Degree of
Educational Specialist in School Psychology

By
Lindsay Peltz
Dayton, Ohio
August, 2014
AT-RISK STUDENTS’ PARTICIPATION IN AFTER SCHOOL PROGRAMS:
IMPACT ON ACADEMIC ACHIEVEMENT

Name: Peltz, Lindsay J.

APPROVED BY:

_____________________________
Susan Davies, Ed.D.
Advisory Committee Chair
Associate Professor
Department of Counselor Education
& Human Services

_____________________________
Elana Bernstein, Ph.D.
Committee Member
Clinical Faculty
Department of Counselor Education &
Human Services

_____________________________
Connie Mathes, M.Ed.
Committee Member
Instructor
School of Education and Health Sciences:
Teacher Education
ABSTRACT

AT-RISK STUDENTS’ PARTICIPATION IN AFTER SCHOOL PROGRAMS: IMPACT ON ACADEMIC ACHIEVEMENT

Name: Peltz, Lindsay
University of Dayton

Advisor: Dr. Susan Davies

This study evaluated after school program (ASP) participation and the growth on Ohio Achievement Assessment (OAA) scores in math and reading from spring of one school year (without participation in an ASP) to spring of the following year with an ASP in place to support growth. Participants were 43 boys and girls in the fifth grade for the 2012-2013 school year at South Middle School, a school in a small rural Midwestern town. South Middle School is a public, Title I funded school with 250 fifth and sixth grade students; 52% of students are on free and reduced lunches. A one way analysis of variance (ANOVA) was conducted to see if varied levels of participation (high, medium, and low) yielded growth on math and reading OAA scores. Results indicated that while there was individual student growth on math and reading OAA scores for those involved in ASPs, various levels of participation were not significantly correlated with OAA score growth. Implications for future research and ASPs are discussed.
Dedicated to David & Kindyl Peltz and Tom & Mona Kindell for their patience and support throughout my graduate school endeavors. The never ending selflessness and sacrifices that they have made to support me has not gone unnoticed or unappreciated. I could not ask for a more loving and supportive family.
ACKNOWLEDGEMENTS

Thank you to Dr. Susan Davies, Dr. Elana Bernstein, and Connie Mathes for your assistance with this project.
# TABLE OF CONTENTS

ABSTRACT .......................................................................................................................... iv

DEDICATION ....................................................................................................................... v

ACKNOWLEDGEMENTS ................................................................................................. vi

LIST OF TABLES ............................................................................................................... ix

LIST OF FIGURES ........................................................................................................... x

CHAPTER I: INTRODUCTION ......................................................................................... 1

CHAPTER II: LITERATURE REVIEW ............................................................................. 2

  After School Programs (ASPs) ...................................................................................... 2

    School-based versus community-based ASPs .............................................................. 4

  Benefits of After School Programs ............................................................................. 5

    Academic achievement ............................................................................................... 6

    Social competence ..................................................................................................... 7

    Motivation and confidence ......................................................................................... 8

    Performance on standardized tests ............................................................................ 9

  Limitations of ASPs ....................................................................................................... 9

  The Present Study ......................................................................................................... 10

CHAPTER III: METHODS ................................................................................................. 11

  Research Questions and Predictions .............................................................................. 11

    Research Questions ................................................................................................... 11
Prediction ........................................................................................................11
Research Design ..........................................................................................11
Participants and Setting ..............................................................................12
Materials ........................................................................................................12
Procedures .....................................................................................................15
CHAPTER IV: RESULTS ..................................................................................16
CHAPTER V: DISCUSSION ..............................................................................20
Review of Purpose and Major Findings .....................................................20
Interpretation of Findings Relative to Prediction ........................................20
Limitations ....................................................................................................21
Implications for Future Research & ASPs ...................................................22
Conclusion ....................................................................................................22
REFERENCES .................................................................................................24
LIST OF TABLES

Table 1  Student Score Interpretations of OAA Results in Reading ..................13
Table 2  Student Score Interpretations of OAA Results in Math ..................13
Table 3  ANOVA of Participation in ASP and Growth on Reading OAA scores .................................................................18
Table 4  ANOVA of Participation in ASP and Growth on Math OAA Scores .................................................................18
LIST OF FIGURES

Figure 1  Individual Student Scores on Reading OAA from Spring 2012-Spring 2013 ................................................................. 17

Figure 2  Individual Student Scores on Math OAA from Spring 2012-Spring 2013 .................................................................................................................. 17
CHAPTER I
INTRODUCTION

After school programs (ASPs) can provide at-risk students with a number of positive outcomes. ASPs can be both school-based and community-based. School-based ASPs take place in the traditional academic environment and are supported by a school district; community-based ASPs are run by outside agencies in various environments. The ASPs referred to throughout this paper involve middle through high school students and have a strong academic component combined with enrichment activities. These programs can supplement academics outside the regular school day and are associated with increased scores on standardized tests (Watts, Witt, & King, 2008). Because ASPs can differ in terms of structure and supervision, it is important that ASPs are assessed regularly for quality and effectiveness.

Current research has examined the effects of ASPs on academic achievement, social competence, motivation, and confidence. Effective ASPs that involve academic support should provide measurable skill growth in student performance. The purpose of this study was to evaluate the correlation between students’ level of participation in an ASP and their growth in scores on the Ohio Achievement Assessment (OAA) during a year when they did not participate in an ASP to a year in which they did participate.
CHAPTER II
LITERATURE REVIEW

This literature review summarizes research related to after school programs (ASP’s) and academic achievement. It opens with a definition of what an after school program is and the components of an ASP. The review highlights what make ASPs successful, interesting, and engaging to students. The review summarizes the necessary staff components and compares ASPs implemented in a school setting to those implemented in a community-based environment. This literature review also touches on the benefits of ASPs, such as the positive correlation found between students receiving ASP support and their scores on high stakes state assessments. Finally, the review points to a general lack of research on ASPs as academic supports.

After School Programs (ASPs)

Powerful after school programs combine academics, sports, and arts to appeal to students’ diverse interests. Activities that are interesting to youth and that address social, emotional, and physical needs, often overlooked in the classroom, are those that are most inviting to at-risk students. Attributes of high quality programs include: 1) low staff to student ratios that ensure individualized support, 2) educated staff, 3) proper facilities and equipment that allow for flexible and relaxed scheduling of the program, 4) predictable environments, 5) opportunities for self-expression, 6) opportunities to share feelings and thoughts, and 7) time for unstructured play and fun (Daud & Carruthers, 2008).
According to Baker, Rieg, and Clendaniel (2009) programs that are successful begin immediately after school and start with a 15 minute snack time, 30-45 minute homework or concept review period, and 30 minutes or less of structured game time that may include sports and fitness activities or board games. Gewertz (2007) identified four key aspects to successful programs, including: 1) setting ground rules, 2) providing praise, 3) remaining consistent with expectations, and 4) managing behavior problems in a firm but fair way.

While some ASPs only address the need for a safe and supervised after school environment, the current study focuses on programs that provide a significant “quality” academic component. According to Baker et al. (2009), the key to success of ASPs involves preparation of mentors, making a long-term commitment, and establishing specific program goals. Achievement is lost when commitment fails and management of the program is disorganized. It is ideal to have one program coordinator who is responsible for the recruitment, training, and credentials review of tutors, and who assigns tutors to schools, trains and provides support to supervising teachers, copies materials, and writes year-end district reports. It also is ideal to have two supervising teachers within each building to serve as liaisons between classroom teachers and tutors. Relationships in ASPs are essential for students to connect to the program; best practice literature stresses that youth need to feel a sense of connectivity to caring adults (Watts et al., 2008). Programs that are deemed successful in academic reviews have combined various training approaches with activities that achieve skill objectives, active learning, and focus on personal or social skills. These programs have also evaluated the knowledge of students and collaborated with community agencies and families (David,
The National Middle School Association stresses the importance of providing 21st century learners with multiple learning and teaching approaches that emphasize students’ unique experiences and personal backgrounds in order to positively impact their achievement (NMSA Research Committee, 2003).

Zhang, Lam, Smith, Fleming, & Connaughton (2006) emphasize the importance of establishing procedures to monitor progress of an ASP. Although it is important to monitor student achievement, it is also necessary to assess components of the program such as effectiveness, attendance, and need for change. Assessment should be relevant to the desired outcome of the program and focus on improving the environment to best suit the student. It is important to gain participant (student) feedback and measure students’ perceptions of the program to address their changing needs.

School-based versus community-based ASPs. Schools are only “one of a range of learning environments that share responsibility for helping students learn and achieve mastery…community–based organizations, museums, parks, libraries, families, and others, are also themselves settings for learning and engagement” (Lee & Hawkins, 2008, p.52). Community-based ASPs can utilize different resources and connect with children in different ways than schools. However, mentors of these programs oftentimes are removed from the school setting for long periods of time, have little to no college education, and have limited academic skills (Lee & Hawkins, 2008). Community-based ASPs are appealing to students who may not have access to transportation needed to attend the school-based programs that their middle-class peers participate in. Research suggests that teachers “have little direct contact with the families of their students, with
their neighborhoods, or community traditions,” (Lee & Hawkins, 2008, p.53) leading to a lack of understanding of students’ life experiences.

Consequently, school-based ASPs are preferable in terms of academic achievement as they have a closer connection with the school district and the common core curriculum. These programs often model the typical school setting and provide more formal instruction (Lee & Hawkins, 2008). School-based programs may receive federal funding in situations where they qualify for Title I funding or grants. Funding ensures that tutors are college-educated, and because tutors work within the educational setting they can form more effective relationships with classroom teachers and utilize them as valuable resources. These established relationships can improve student attendance in an ASP, as working within the school permits tutors to monitor and encourage students to attend. Research has shown that more formal ASPs housed in the students’ schools outperform other groups in math and reading. Moreover, “reform is most successful when schools receive intensive, on-site support from experienced educators who reside close to the schools they serve” (Rothman & Henderson, 2011, p.2).

Benefits of After School Programs

Various studies have demonstrated myriad benefits of ASPs. For example, Watts et al. (2008) found positive correlations between the Texas Assessment of Knowledge and Skills (TAKS; a standardized assessment) math scores, ASP attendance, feelings about the ASP as safe and caring, homework help, and overall ASP satisfaction (Watts et al., 2008). Likewise, Rothman and Henderson (2011) conducted an academic analysis of ASP impact on standardized testing in both math and language arts. Findings showed that
students involved in such programs outperformed a matched control group of peers who did not participate.

Mahoney, Lord, and Carryl (2005) conducted a longitudinal ecological study comparing outcomes of racially/ethnically diverse disadvantaged children in a variety of after-school care situations. Participants received at least one hour weekly in the following after-school care arrangements: involvement in an ASP, parent care, care from a non-parental adult, or care from a non-adult. Data suggested that reading achievement, expectancy of success, motivation, and school grades were higher for students in ASP care than any of the other arrangements (Mahoney et al., 2005). Studies on the impact of ASPs are broad and vary in terms of factors assessed and measured outcomes.

While there is an increase in information on what makes ASPs effective, few studies provide direct correlation between student participation in ASPs and growth in state mandated assessment scores from year to year.

**Academic achievement.** Studies by Jenner and Jenner (2007), Rothman and Henderson (2011), and Mahoney et al. (2005), have demonstrated a positive correlation between academic achievement and ASP participation for at-risk students. However, participation in such programs requires a level of commitment from staff, students, and parents; increased involvement in the program yielded greater gains in academic achievement. While initially student participation has the largest impact, increasing the frequency of attendance continually improves academic performance (Jenner & Jenner, 2007). Data suggest a stronger impact of ASPs on reading, language arts, and social studies than on math and science (Mahoney et al., 2005). Equally important is the relationship between students and their tutors; when students feel cared for by their
tutors, academic achievement improves (Rothman & Henderson, 2011). An ecological analysis (Mahoney et al., 2005) of academics and ASPs showed significant improvement in reading achievement for students involved versus those who had alternate arrangements during their after school time. “Strong programs complement, rather than duplicate the material that students see in the course of a structured school day, while at the same time focusing on subjects that are often underemphasized in schools” (David, 2011, p.84). Programs that are demanding and offer challenging and relevant activities have the best chance of helping students achieve positive academic outcomes (Shernoff, 2010).

**Social competence.** Approximately twelve million youth in the United States will require assistance regarding their academics to avoid the negative social and economic factors of living in at-risk environments (Dodd & Bowen, 2011). Students spend 75% of their waking hours outside of school where they lack supervision and constructive activities in which to engage (David, 2011). The lack of supervision and constructive activities in the after school hours have negative consequences for youth and society. ASPs can provide both the structure and positive reinforcement of values and beliefs (Davies & Peltz, 2012). Programs can address values and behaviors while providing discussion and opportunities to practice those behaviors. An example of this is promoting teamwork and collaboration while working together to solve complex math problems. Engaging with students allows staff to accurately model socially acceptable behaviors in multiple real-life situations. In many cases, participants grow up in environments where appropriate social skills are not emphasized or modeled (Dodd & Bowen, 2011). ASPs provide a chance to enhance communication skills, collaborative efforts, and public
performances (Daud & Carruthers, 2008). Many of the elements of ASPs contribute to positive peer relationships and help bridge the social stigma some students experience by creating a family-like environment. Participation in organized after school activities can also help students cope with personal and/or social identity issues (Denault & Poulin, 2009).

Motivation and confidence. In 2004, more than six million children and youth participated in ASPs (Dodd & Bowen, 2011). At-risk students tend to hold low expectations regarding their success on novel and challenging tasks. They also demonstrate low motivation in putting forth the effort to pursue such tasks (Davies & Peltz, 2012). Desirable outcomes for students involved in ASPs are stronger commitment to academics and a brighter outlook for their futures due to increased motivation (Davies & Peltz, 2012). These students learn that if they invest their time in hard work they will see positive results in the end. Students are exposed to a variety of opportunities for success, instruction, and challenges that provides them with confidence in their academics as well as in social situations. ASPs allow students to develop a sense of self-worth and accomplishment and provide a chance to foster an optimistic view of the future. Conversations with staff members allow students to make positive connections with adults who are focused on life skills for the future. Encouraging students to acquire academic skills assures them better futures once they leave the academic setting. Programs also allow students to have an active role in program decisions, carrying out leadership roles, and serving others that promotes a sense of belonging and value. Stronger commitment to academics leads to improvement on homework and class work, ultimately leading to better grades in school (Daud & Carruthers, 2008)
**Performance on standardized tests.** With the passage of the No Child Left Behind Act (NCLB; 2001), schools are now mandated to ensure that all students pass state achievement assessments. NCLB also forced schools that did not meet adequate yearly progress (AYP) to offer students the opportunity to receive supplemental educational services (SES), usually in the form of tutoring (Rothman & Henderson, 2011). Even though there are documented positive outcomes of ASPs, policy makers often reject evaluations that do not show increased scores on standardized tests (Jenner & Jenner, 2007). Such documentation shows, “The typical student who takes part in the ASP is expected to achieve a learning gain of one and one-third months over a counterpart who does not participate in the program” (Jenner & Jenner, 2007, p.225). This translates to meaningful academic achievement compared to a non-participant and also proves that participants in an ASP are closing the achievement gap. In Rothman and Henderson’s (2011) study students who were tutored in language arts and math significantly outperformed those who were not on state tests. The study also indicated that programs that were medium length (approximately 48 hrs. per six month period) were more effective in both reading and math versus longer programs (100 hours or more) which produced smaller outcomes. For reading, one-on-one tutoring is preferable, and small group tutoring is most beneficial for math (Rothman & Henderson, 2011).

**Limitations of ASPs**

Even though ASPs appear to positively impact students’ academic achievement, social competence, motivation and confidence, and standardized test performance, their existence is limited due to a lack of funding (David, 2011). There are challenges in implementing successful programs, but they are outweighed by the strengths of the
programs. Students often experience ASP burn-out, and ASPs cannot always accommodate all students’ or parents’ schedules. It can also be argued that participant responsiveness has large implications for what ASPs are able to achieve and for their ultimate success. The academic setting is not the only source for providing students with learning success, and many argue that learning must begin at home (Dodd & Bowen, 2011). Additional research is needed to determine whether students’ improvements are linked to an increase in academic time or the program content itself (Rothman & Henderson, 2011). Ultimately there must be a strong connection between students, teachers, administrators, and communities in order for ASPs to be sustainable. Ultimately, students need to be held to high expectations and schools should work to see that students accomplish the goals set forth for them (Baker et al., 2009). “All youth deserve the opportunity to realize their full potential. This is possible only if after-school organizations can fully realize theirs” (Daud & Carruthers, 2008, p.112).

The Present Study

One way to ensure funding and thus sustainability of ASPs is to demonstrate a correlation between ASPs and growth on state mandated assessments. While there is some research pointing to what makes ASPs effective, few studies provide direct correlation between student participation in ASPs and growth on standardized test scores from year to year. Thus, the purpose of this study was to determine whether participation in ASPs is associated with academic growth on standardized tests, such as the OAA.
CHAPTER III
METHODS

Research Question and Prediction

The following research question and corresponding prediction was posed in the present study:

Research question. What is the relationship between length of time spent in after school programs and growth on the Ohio Achievement Assessment from one year to the next?

Prediction. It was hypothesized that increased levels of participation in an after school program (low = 0-33%, medium = 34%-67%, and high 68%-100%); would be positively correlated with an increase in students’ scores on the Ohio Achievement Assessment. This prediction was based on the research demonstrating a positive correlation between participation in after school programs and growth on math and reading scores.

Research Design

This study utilized a quasi-experimental design examining the relationship between ASPs as an academic support and students’ academic achievement. Extant data were examined for students participating in an ASP, including OAA scores from fourth (no participation in an ASP) and fifth grade (participation in an ASP) and attendance data.
Participants and Setting

The study was conducted at Concord Middle School, a school in a small rural Midwestern town. Concord Middle School is a public, Title I funded school with 250 fifth and sixth grade students; 52% of students receive free and reduced lunch.

The after school program evaluated in the present study was coordinated by a certified staff member, (requiring a minimum of a bachelor’s degree in any subject), a certified teacher, a para professional (support staff member), and a group of community volunteers. The primary researcher served as the certified staff member for the after school program evaluated in the present study.

Participants included students who qualified for an after school program at South Middle School during the 2012-2013 academic school year. These students were in fifth grade and also had spring 2012 OAA scores between 370 (below proficient) and 410 (just above proficient). For the purpose of this study, 81 fifth grade students who had not previously participated in an ASP were given the opportunity to participate in a free and optional ASP program based on the above mentioned criteria. The program had 47 available seats that were filled on a first come first served basis.

Materials

The OAA scores for fifth graders were used as a measure of academic achievement for students participating in ASPs. The OAA is aligned to Ohio’s Academic Content Standards in reading and math and is a measure of the skills that students should learn in grade 5. Refer to table 1 and table 2 for the OAA score interpretations in math and reading.
<table>
<thead>
<tr>
<th>Score</th>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>252-385</td>
<td>Limited</td>
<td>Students struggle with simple reading tasks</td>
</tr>
<tr>
<td>386-400</td>
<td>Basic</td>
<td>Students understand some of what they read and they use strategies to learn new words</td>
</tr>
<tr>
<td>401-415</td>
<td>Proficient</td>
<td>Students understand what they read and try to list important ideas in texts they read</td>
</tr>
<tr>
<td>416-432</td>
<td>Accelerated</td>
<td>Students understand what they read and compare stories with other stories</td>
</tr>
<tr>
<td>433-507</td>
<td>Advanced</td>
<td>Students go beyond understanding what they read to explain what they like/dislike about a story</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>Score</th>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>244-378</td>
<td>Limited</td>
<td>Students struggle with math terms and concepts and common tasks such as rounding, making change, and solving 1-step problems</td>
</tr>
<tr>
<td>Score Range</td>
<td>Level</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>379-400</td>
<td>Basic</td>
<td>Students can remember some math terms and concepts and do common tasks, such as measuring lines and comparing shapes</td>
</tr>
<tr>
<td>401-429</td>
<td>Proficient</td>
<td>Students can solve some problems with whole numbers and fractions or decimals and explain their reasoning with words or pictures</td>
</tr>
<tr>
<td>430-447</td>
<td>Accelerated</td>
<td>Students understand shapes and estimate measurement, combine different ideas and explain their reasoning</td>
</tr>
<tr>
<td>449-522</td>
<td>Advanced</td>
<td>Students can solve new complex problems and explain their reasoning by using formal math terms and symbols</td>
</tr>
</tbody>
</table>

The NCLB act required states such as Ohio to establish academic standards in order to assess student knowledge in math and reading at the end of each grade level. OAAAs are administered annually in grades 3-8 required by Ohio law. These assessments are not intended measures of a student’s cognitive ability but rather were designed to measure what students have learned in comparison to what they are expected to know by the end of each school year in relation to Ohio’s Academic Content Standards. On both reading and math assessments, scores below 400 do not meet state standards and are not considered passing scores (Ohio Department of Education). OAA scores help to identify schools, districts, and students who may need additional resources to meet state standards.
Procedures

Approval to conduct this research was obtained from Concord City Schools to use existing data on student OAA scores, and from the University of Dayton’s Institutional Review Board (IRB). ASP staff recorded daily attendance for each student and administered a concept review assessment to students on a monthly basis. Students enrolled in the program received help on daily homework that was aligned to the state’s mandated fifth grade curriculum. Students also received weekly one-on-one tutoring delivered by community volunteers starting November 1, 2012 and ending May 11, 2013. On the days when volunteers assisted students, they alternated between supplemental math and reading lessons with corresponding assignments. Math lessons and assignments were generated from Count on It Math (fifth grade level) and Keep on Reading (fifth grade level) workbooks (Peoples Education, 2006), that aligned to state standards and thus targeted concepts students would have to demonstrate mastery of on the OAA. Students also completed supplemental math and reading materials on Apple iPads. The programs used were researched-based and deemed applicable and appropriate by the program’s coordinator and classroom teachers. Participation in the ASP was measured over the course of 30 weeks (October 2012 - May 2013). Each student received a code number so all student information was kept confidential.
CHAPTER IV

RESULTS

Extant data were used to compare scores from the Spring 2012 OAAs to the Spring 2013 OAAs. The number of total days possible for students to attend the program was broken into three categories: Low attendance (coded Low) = participation 0-33% or less of the days; Medium attendance (coded Medium) = participation 34-67% of the days; and High attendance (coded High) = participation 68-100% of the time. Scores on the OAAs were then split into three groups according to the OAA rating scale of: limited, basic, proficient, advanced, and accelerated. Group 1 was comprised of students who dropped one level on their scores from 2012-2013 (i.e., proficient to basic), group 2 included students who remained stable in their scores from 2012-2013 (i.e., proficient to proficient), and group 3 included students who advanced one level or more on their scores from 2012-2013 (i.e., proficient to advanced). This created 3 levels of independent variables (attendance/participation) and 3 levels of dependent variables (OAA scores), that were entered into a one way analysis of variance (ANOVA) to determine if growth on OAAs was positively correlated with greater student participation in the after school program (ASP).

While individual students enrolled in an ASP showed growth from one year to the next in math or reading scores on OAAs as shown in Figure 1 and Figure 2, the scores of 30 students declined in reading, and 19 students declined in math. An ANOVA revealed
no significant correlation between levels of participation in an ASP and growth on reading OAA from one year to the next (Table 3), $F(2,40) = 2.5, p = .10$, or math OAA from one year to the next (Table 4), $F(2, 40) = .62, p = .54$.

Figure 1. Individual Student Scores on Reading OAA from Spring 2012-Spring 2013

Figure 2. Individual Student Scores on Math OAA From Spring 2012-Spring 2013
### Table 3

**ANOVA of Participation in ASP and Growth on Reading OAA scores**

<table>
<thead>
<tr>
<th>Attendance (A)</th>
<th>Attendance (B)</th>
<th>Mean Difference (A-B)</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>.51</td>
<td>.256</td>
<td>.129</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.48</td>
<td>.261</td>
<td>.176</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>-.51</td>
<td>.256</td>
<td>.129</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>-.03</td>
<td>.270</td>
<td>.992</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>-.48</td>
<td>.261</td>
<td>.176</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.03</td>
<td>.270</td>
<td>.992</td>
</tr>
</tbody>
</table>

*Note: Attendance A compares the significance between participation at one level with Attendance B at the other levels.*

### Table 4

**ANOVA of Participation in ASP and Growth on Math OAA scores**

<table>
<thead>
<tr>
<th>Attendance (A)</th>
<th>Attendance (B)</th>
<th>Mean Difference (A-B)</th>
<th>Standard Error</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>.32</td>
<td>.293</td>
<td>.521</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>.10</td>
<td>.299</td>
<td>.945</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>-.32</td>
<td>.293</td>
<td>.521</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>-.23</td>
<td>.308</td>
<td>.747</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>-.10</td>
<td>.299</td>
<td>.945</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>.23</td>
<td>.308</td>
<td>.747</td>
</tr>
</tbody>
</table>

*Note: Attendance A compares the significance between participation at one level with Attendance B at the other levels.*

Table 3 and Table 4 indicate that while students who had a high level of attendance in the ASP demonstrated greater overall growth in both reading and math than
those with low attendance or medium attendance, the mean difference in overall scores was not statistically significant.
CHAPTER V
DISCUSSION

Review of Purpose and Major Findings

The purpose of this study was to evaluate the correlation between students’ levels of participation in an ASP and their OAA scores from spring of one school year (in which they did not participate in ASPs) to spring of the following year with varied levels of ASP participation.

Results of this study were consistent with earlier findings (e.g., Mahoney et al., 2005; Watts, Witt, & King, 2008; Rothman & Henderson, 2011) showing that individual students involved in ASPs can make gains in their academics. However, results did not support the research hypothesis that higher levels of participation in ASPs yielded significantly more growth on students’ math or reading OAA scores from one year to the next than lower levels of participation.

Interpretation of Findings Relative to Prediction

One potential reason for the findings relates back to Jenner and Jenner’s 2007 research on ASPs and standardized testing, which reported that students involved in ASPs on average gained one and a third months academic content compared to their non-enrolled peers. The research further explained that programs that offered 48 hours of tutoring in a six-month period showed the most favorable results over programs of longer or shorter duration. Based on this research, the ASP examined in the current study
provided approximately 45 hours or less of tutoring in a total of seven-month period, which could account for less growth. It is presumable that in order to yield more favorable results, more hours of tutoring may be needed to achieve the expected academic growth rate of students over a longer period of time.

The non-significant results in this study may be attributed to the fact that students enrolled in the particular ASP were already considered “at-risk” according to their fourth grade OAA scores, indicating that their potential to make significant gains from basic to proficient on OAAs would be unlikely, despite participation in an after school intervention. It may have been more beneficial to examine score growth in general versus growth from one proficiency indicator to the next on the OAA. Developmentally, the students in the present study may not have had the capability to achieve the gains required of the measurements in this study.

**Limitations**

Several limitations of this study exist. First, the researcher had a dual role as the ASP program coordinator. Second, there was an administrative change in leadership in the building in which the ASP was housed; therefore, there was building wide change in academic focus. Third, new staff members were hired to assist in the ASP implementation mid-year, and there were several untrained volunteers assisting with the program. This may have hindered the intervention integrity. Furthermore, students were given the opportunity to participate in the ASP two out of five days each week with the main focus of the program on assistance with homework completion. OAA preparation and tutoring did not occur until halfway through the school year (four months before students took OAAs) and only took place during one of the two sessions each week. A
final limitation is that the volunteers had various backgrounds (not necessarily current or former educators) and thus skills to assist in the OAA preparation and tutoring. While volunteers were all given the same lessons and materials to present to students, there was no uniformity or consistency in how such lessons or materials were presented.

**Implications for Future Research and ASPs**

Future research should examine whether increased participation in ASPs yields growth on math and reading OAA scores. Specifically, research should look at individual growth on such scores versus group growth. It may be beneficial to study ASPs that offer students opportunities to participate more often (e.g., 4 to 5 days a week). Such programs should also focus solely on OAA preparation and tutoring. Practically, it is suggested to only permit volunteers who have a background in education or to provide more extensive volunteer training so the tutoring materials are presented in a consistent manner to OAA format.

**Conclusion**

While the results of this study did not show a significant correlation between increased participation in ASPs and growth on math and reading OAAs, it is important to note that individual student growth did occur for 13 students in reading and 22 students in math. Thus, while it cannot be said that varied levels of participation in an ASP is key to growth on high stakes testing such as OAAs, other aspects of ASPs are still of value. ASPs with an academic focus supplement information students are presented throughout the school day. They offer the opportunity for further practice and mastery of academic skills, while providing students with more focused small group attention that is not
always possible for classroom teachers throughout the school day. ASPs also aid students in completion of assignments in the absence of parental help after the school day ends.
REFERENCES


