Impact of an Afterschool Program on Measure of Academic Performance (MAP) Reading and Mathematics Scores

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Impact of an Afterschool Program on Measure of Academic Performance (MAP) Reading and Mathematics Scores

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ABSTRACT

The purpose of this quantitative research study was to determine the extent to which students who participated in the 21st Century Community Learning Center Afterschool Program (21st CCLC) afterschool at Granger High School (GHS) improved their reading and math scores as measured by the Measure of Academic Progress (MAP) assessment. First a review of selected literature was conducted. Then MAP baseline data were obtained from which related inferences. Finally conclusions and recommendations were formulated. An analysis of data obtained supported the hypothesis that students who participated in the 21st CCLC afterschool program at GHS improved their reading and mathematic scores as measured by the MAP assessment.

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CHAPTER 1

Introduction

Background for the Project

> A study of Promising Afterschool Programs was designed to examine relations between high-quality afterschool programs and desired academic and behavioral outcomes for low-income students. The study was grounded in an assets orientation, which understands that all young people, including those living in poverty, have capacities to make healthy, positive choices if given the opportunity (Vandell, Reisner, & Pierce, 2007, p. 1).

As noted above, afterschool programs for students from low-income families have produced positive academic results. This research held particular significance for students at Granger High School (GHS) since 83.9% of students were eligible for the federal free and reduced lunch program and academically data indicated that 66.7% of 10^{th} graders passed the reading portion of the WASL while only 27.7% of students passed the math portion in the 2005-2006 school years.

A similar study by Afterschool Allegiance (2008), described the manner in which afterschool programs fostered success in school and found that regular participation in high-qualifying after school programs was linked to significant gains in standardized test scores. These findings underscored the fact that "student success outside the classroom is an indelible piece of student success inside the classroom. Afterschool plays a critical role in this equation" (p.1).

Statement of the Problem

At GHS, the need for a significant number of high school students to improve performance in the areas of reading and mathematics to meet Washington Assessment for Student Learning (WASL) standards was essential as 66.7% of 10th graders passed the reading portion of the WASL while only 27.7% of students passed the math portion during the 2005-2006 school years. As part of the plan to address this need, concerned administration and faculty made the determination to apply for and utilize external grant funding to help with the matter. Thus the implementation of the 21st Century Community Learning Center (21st CCLC) afterschool program afterschool program at GHS took place in 2007 to provide participants with additional academic support and remediation in reading and math.

Phrased as a question, the problem which represented the focus of the present study may be stated as follows: To what extent did students who participated in the 21st CCLC afterschool program at GHS improved their reading and mathematic scores as calculated by the Measure of Academic Progress (MAP) assessment?

Purpose of the Study

The purpose of this quantitative research study was to determine the extent to which students who participated in the 21st Century Community Learning Center (21st CCLC) afterschool program at Granger High School (GHS) improved their reading and math scores as measured by the Measure of Academic Progress (MAP) assessment. First a review of selected literature was conducted. Then MAP baseline data were obtained

from which related inferences. Finally conclusions and recommendations were formulated.

Delimitations

The present study assessed the reading and mathematics performance of participating students from fall 2007 to spring 2008 in the 21st CCLC afterschool program first grant year at GHS. Although open to all students at the GHS, the sample population included 17 selected students from grades 9th to 10th . The MAP was used to determine any improvement in reading and math scores during the tenure of the study. Four certified GHS teachers, including the writer (Jaquelin Herrera), and one para-professional, provided consistent supervision for the afterschool program throughout.

Assumptions

The assumption was made that if students participated in the GHS 21st CCLC afterschool program, where they had the opportunity to review and remediate skills needing improvement, they would have a better chance to improve their academic achievement in reading and mathematics as measured by the MAP assessment.

A further assumption was made that the afterschool program supervising teachers and para-professional were fully qualified to provide instructional remediation in reading and mathematics for all participants. Finally, it was assumed that all participants would give their best effort when completing the MAP assessment.

Hypothesis

High school students who participated in the 21st Century Community Learning Center (21st CCLC) afterschool program at Granger High School (GHS) improved their

reading and mathematic scores as measured by the Measure of Academic Progress (MAP) assessment.

Null Hypothesis

There would be no significant difference in MAP scores from students who participated in the afterschool program. Significance was determined for $p \geq$ at .05, .01 and .001 levels.

Significance of the Study

The project sought to provide information on the affect that after school intervention may have on influencing participating students' MAP scores. Helping students improve MAP scores could in turn have an effect on higher WASL scores as indicated by Granger School District data 66.7% of 10^{th} graders passed the reading portion of the WASL while only 27.7% of students passed the math portion.

The literature suggested several reasons that impacted the development of afterschool programs, student academic performance being one, and safety as another reason. The time right after school was critical not only for student safety but also for student academic success. A structured environment could help youth stay out of trouble, perform better academically and develop into responsible adults. Prior to the implementation of the 21^{st} CCLC afterschool program at GHS, students did not have access to this resource. Sports provided an option for some students, family responsibilities occupied other students, but for some, having a safe place to go with structured activities could have provided another productive and positive choice after the school day ended. Thus the need to provide additional help and resources beyond the

regular school day in the form of the 21st CCLC afterschool program became readily apparent.

Procedure

In the fall of 2007, the researcher (Jaquelin Herrera) received permission from the GHS principal, Richard Esparza, to undertake the study and to use MAP scores of participating students. During October 2007, afterschool program staff began screening potential student participants based on their MAP reading and math scores. The afterschool program was implemented during November 2007 from 2:40 to 5 PM, four days each week (i.e. Monday, Tuesday, Thursday, and Friday). Program participants regularly attended the afterschool program through May 2008. At that time, all 9th, 10th and 11th grade program participants took the post MAP assessment. Post-test scores from the May of 2008 were compared with fall 2007 MAP scores to measure progress. During the summer of 2008, the researcher completed data analysis and formulated related conclusions and recommendations.

Definition of Terms

Significant terms used in the context of the present study have been defined as follows:

academic achievement. Performance in specific subjects based on progress made based on test scores.

academic support. Help in specific subject areas or general academic skills in the form of tutoring, alternate methods of instruction, one-on-one help and peer tutoring.

afterschool program. A structured time beyond the regular school day that provides academic support and recreational enrichment opportunities for participating students.

measure of academic progress. Reading, mathematics, and language usage tests measuring growth to inform teaching and learning.

quantitative research study. The collection of numerical data in order to explain, predict and/or control phenomena or interest.

remediation. Improvement or correction of a specific subject areas or skills.

structured environment. Surrounding conditions that allow for student safety, discipline, consistent activities and expectation; and overall comfort.

t-test. An statistics technique used to determine whether the means of two groups are significantly different at a given probability level.

t-test for non-independent samples. A parametric test of significance used to determine whether, at a selected probability level, a significant difference exists between the means of two independent samples.

Washington Assessment of Student Learning. The Washington State's assessments tool that measures a student's learning of skills and knowledge important to their success in school and life.

Acronyms

21st CCLC. 21st Century Community Learning Center

ERIC. Educational Resources information Center

ESEA. Elementary and Secondary Education Act

GHS. Granger High School

GSD. Granger School District

MAP. Measurement of Academic Progress

MVPC. Mid Valley Providers Consortium

NCLB. No Child Left Behind

NWEA. North West Evaluation Association

OSPI. Office of Superintended of Public Instruction

RIT. Rasch Unit

WASL. Washington Assessment of Student Learning

CHAPTER 2

Review of Selected Literature

Introduction

The review of literature and research summarized in Chapter 2 was organized in the following topics:

Need for and Benefits of Afterschool Programs

The No Child Left Behind (NCLB) and the Washington Assessment of Student Learning (WASL)

The MAP Assessment

21st Century Community Learning Center (21st CCLC)

Summary

Data current primarily within the last eight years were identified through an online computerized literature search on Educational Resources Information Center (ERIC), the internet, and ProQuest. A hand-search of selected research materials was also conducted.

Need for and Benefits of Afterschool Programs

Three societal concerns have contributed to the growth of afterschool programs as described by Kulger, (2001). These included high frequency of teen crime, the lack of after school childcare at home, and, the idea that children who were economically disadvantaged could advance their learning given additional time and opportunities.

The rate of juvenile crime increased between the hours of 3 PM to 8 PM Newman, Fox, Flynn, and Christenson, (2000). The same literature further reports that this time was also when kids were most likely become victims of a violent crime, get in a car crash (for those able to drive), be killed by household or other accidents, experiment with dangerous drugs or illegal substances, and engage in sexual activities. A survey report published by Afterschool Alliance (2004), supported the previous statements in that it estimated that "about 14.3 million school age children, of whom 51% are in grades 9-12 are unsupervised after school" (p. 1). The *National Survey of American Attitudes on Substance Abuse VIII: Teens and Parents* (2003) provided further support for the claim that boredom and particularly self-care contributed to 50% increase in the likelihood of experimentation with drugs or alcohol.

The consequences of unsupervised children at home could include the increased risk of home injuries, poor nutrition and declining academic performance. According to Cosden et al., (2004), unsupervised children were at greater risk of negative educational outcomes in contrast to students who participated in afterschool programs which had a significant positive impact on educational outcomes. Many parents, especially those in low-income households, used TV as a substitute for after school care, resulting in children spending 1,500 hours watching TV compared to 900 hours a year spent in school (*National Survey of American Attitudes on Substance Abuse VIII: Teens and Parents* 2003). Those numbers seemed extremely low as internet, video games and a diverse and extensive selection of channels exists now. As for high-school students, they do not need baby-sitting, but they do need constructive activities that put them in touch

with caring adults and help them gain valuable job skills, learn to get along with others, and experience the satisfaction of serving their communities (Newman, S. et al., 2000).

Low-income children's needs have had a major influence on the implementation of afterschool programs. Cooper et al., (2000) noted the following:

> Title 1 of the Elementary and Secondary Education Act (ESEA) was created in part because of data indicating that low-income children are at risk for academic failure and therefore need additional time in educational activities to supplement what they experience during regular school hours. (p. 73)

Afterschool programs had developed out of the need to help increase student achievement. As a result, studies had shown that students who attended afterschool programs often attained higher test scores, completed homework more often, attended school on a regular basis, were less likely to drop out of school and improved student conduct during the school day. Conclusively, children's experiences in afterschool programs impacted their development and behavior in other settings as noted by Black (2004).

With the many responsibilities high school students faced, maintaining adequate academic progress became essential not only for graduation but also for the work force and postsecondary admissions, the military, among others. Jobs required specific skills and some type of post-secondary education. Only 32 percent of high school graduates were prepared for college coursework without needing any remedial coursework (Afterschool Allegiance, 2004). Afterschool programs could provide high school students with additional time to do career exploration with guidance, opportunities for community involvement and targeted skills development.

No Child Left Behind (NCLB) and

the Washington Assessment for Student Learning (WASL)

The NCLB of 2001 reauthorized ESEA, the federal law affecting education from kindergarten through high school. The NCLB legislation was built on four principles: accountability for results; more choices for parents; greater local control and flexibility; and an emphasis on doing what works based on scientific research. The NCLB act also sought to identify which states were working to close the achievement gap and to make sure all students, including those who are disadvantaged, achieved academic proficiency.

This act served as the major funding source for federal assistance to states for primary and secondary education. Although there was emphasis on all children achieving high standards, the NCLB targeted low-performing and high-poverty schools.

The legislation supported afterschool programs in various ways. The section of NCLB with which the afterschool community was most familiar was the 21st CCLC, the only federal funding recipient solely dedicated to afterschool programs. There were, however, other funding streams within NCLB that were able to be used to support extended learning. Although many of the funding streams included in NCLB are not new, the 2001 reauthorization allowed increased flexibility in their use, enabling them to support afterschool programs Fortune, Padgette, Fickel, (2005).

The NCLB legislation also encouraged the development of high stakes testing and the state of Washington developed its own version by which to measure students' academic gains. Washington's 1993 education reform law passed because Washington State schools were awarding high school diplomas to students who could not read, write, or demonstrate math skills well enough to survive in the job market or college.

Consequently, common learning standards for grades K-10 and the WASL were created to meet state and federal testing requirements.

The Office of the Superintendent of Public Instruction (OSPI), reported that the graduating class of 2007 included students who lacked the crucial skills tested by the 10th grade WASL and how, over the past decade, the WASL had helped schools better understand the strengths and weaknesses of their programs, thus enabling personnel to improve instruction. However, education reform has focused on academic skills, not the test. Those academic skills are further identified by the MAP assessment utilized in schools across the state as discussed in the next subset, which basically provided a blueprint which afterschool programs could focus on in helping students meet academic performance standards.

The Measure of Academic Progress (MAP) Assessment

In partnership with Washington State, the Northwest Evaluation Association developed a state-aligned computerized adaptive assessment (Measure of Academic Progress, MAP) program that provided educators with the information they needed to improve teaching and learning. The MAP assessment provided targeted instructional strategies to assist with school improvement while the test results helped educators make student-focused, data-driven decisions.

Part of a system, the MAP assessment included four important components: assessments; classroom resources; analytical tools; and professional development. The assessment piece is the MAP, which is an adaptive test that provides important information about student achievement and growth. The MAP results become part of the classroom resources as they directly apply to instructional planning. Each student's

assessment results were accompanied with a list of skills that needed improvement and specifics on how to remediate each skill. Teachers were provided with additional resources to interpret and investigate the impact made on student learning. Finally, the professional development piece consisted in building consistency and application for greater success through ongoing training and support.

The MAP assessment was conducted by GHS personnel three times during the school year to ninth and tenth graders to measure academic growth in reading and language usage skills assessed via the adaptive, computerized test.

The difficulty of the test was adjusted to the performance of the student. The questions became easier or harder based on how each student answered the questions. Based on their performance, each student receives scores for each area. Additionally, on the score report, they were given a range, the norm group average, the district's average Rasch Unit (RIT), used by the NWEA to measure students' academic growth from year to year, goals by subject area, and explanatory notes. The more detailed summary of a student's diagnosed academic needs included skills and concepts identified as either learned or remedial, thus providing useful lesson planning information for the teacher. Staff from the GHS 21st CCLC afterschool program used the results and detailed summaries in the development of program activities.

21st Century Community Learning Center

The Department of Education's 21st CCLC grants program, authorized under Title IVB of the ESEA as amended by the NCLB Act of 2001, originally developed with the leadership of Sen. James Jeffords (R-VT) in 1994, was the principal federal source of direct support for after-school programs. The purpose of 21st CCLC was to establish a

place that provided students with standards-based academic enrichment activities and opportunities especially in math, reading and writing during out-of-school time. These academic activities were designed to complement the students' regular academic program. The more detailed purpose of the 21st CCLC was noted as follows:

> Provide opportunities for academic enrichment, including providing tutorial services to help students (particularly students in high-poverty areas and those who attend low-performing schools) meet state and local student performance standards in core academic subjects such as reading and mathematics; offer students a broad array of additional services, programs, and activities, such as, youth development activities, drug and violence prevention programs, counselling programs, art, music, and recreation programs, technology education programs, and character education programs that are designed to reinforce and complement the regular academic program of participating students; and offer families of students served by community learning centers opportunities for literacy and related educational development. (U.S. Department of Education, 2003)

Since 1997, each of President Clinton's budgets called for expanding 21st CCLC afterschool grants. With great support in Congress and the public, the program now has $450 million in funding, estimated to serve 650,000 children and teens. On average and to this day, federal support for the 21st CCLC provided nearly $1 billion annually to offer supplemental programs to low performing schools in disadvantaged areas.

The 21st CCLC afterschool program at GHS was included in a partnership called the Mid-Valley Providers Consortium (MVPC) made up of eight school districts and various community organizations in the Yakima Valley which developed the following

general goals for all the learning centers to meet the needs of each grant: to increase student academic achievement in mathematics and reading; and to increase English proficiency and literacy levels of parents. To fulfill the goals of the partnership, GHS houses a 21st CCLC afterschool program in the school's library to offer math and reading enrichment using curriculum from the regular school day. Math and reading enrichment included various activities and reinforcements that assisted students with remedial skills and classroom assignments. As part of the targeted outcomes, the consortium encouraged the involvement of other school personnel, parents, students, and community members in the planning and implementation of the program.

Summary

The review of selected literature and related investigation reported in Chapter 2 support the following research themes:

1. Afterschool programs have demonstrated positive impact on student academic and personal success.

2. The NCLB legislation has encouraged the development of afterschool programs as a way to increase student achievement.

3. To positively impact student performance, the MAP was developed to help identify what students knew and needed to know to demonstrate academic growth over time.

4. The 21st CCLC supplements the education of children who attend low performing schools and live in high-poverty areas with academic enrichment during out-

of-school time hours, so that they may attain the skills necessary to meet state core curriculum content standards.

Chapter 3

Methodology and Treatment of Data

Introduction

The purpose of this quantitative research study was to determine the extent to which students who participated in the 21st Century Community Learning Center (21st CCLC) afterschool at Granger High School (GHS) improved their reading and math scores as measured by the Measure of Academic Progress (MAP) assessment. First a review of selected literature was conducted. Then MAP baseline data were obtained from which related inferences. Finally conclusions and recommendations were formulated.

Chapter 3 contains a description of the methodology used in the study. Additionally, the researcher included in the study details concerning participants, instruments, design, procedure, treatment of the data, and summary.

Methodology

The researcher used a quantitative research design to determine the extent which an afterschool program was effective in improving reading and math MAP scores of students who participated in the 21st CCLC afterschool program at GHS. A *t*-test for non-independent samples was utilized for data analysis to determine significance following pre and post-testing. All students were administered a pre-test in the fall of 2007 and a post test in the spring of 2008. Pre-and post-tests were assessed to measure if any significant improvement in MAP reading and math scores. The research was conducted during the 2007-2008 school year.

Participants

Participants involved in the study were 9th and 10th graders from GHS during the 2007-2008 school years. Although the program served a larger number of students from all four grades, the study studied comprised 17 students with diverse academic backgrounds and performance. Participants were expected to and made the commitment to attend the afterschool program regularly. A minimum of 30 days by the end of the school year was required to ensure the effectiveness and quality of the afterschool program on student academic achievement.

Instruments

The MAP assessment was adopted and used for pre- and post-tests to determine significance. The MAP has been adopted to assess students at GHS.

Design

Pre- and post-tests for participating students at GHS were organized as follows:

Pre-test. The pre-test was administered to ninth and tenth graders to measure their reading and math skills in fall 2007.

Post-test. The post-test was administered to ninth and tenth graders to measure their growth in reading and math skills in spring 2008.

Procedure

Procedures employed in the present study progressed in several stages as follows:

1. In the fall of 2007, the researcher (Jaquelin Herrera) received permission from the GHS principal, Richard Esparza, to undertake the study and to use MAP scores of participating students.

2. During October 2007, afterschool program staff began screening potential student participants based on their MAP reading and math scores.

3. The afterschool program was implemented during November 2007 from 2:40 to 5 PM, four days each week (i.e. Monday, Tuesday, Thursday, and Friday). Program participants regularly attended the afterschool program through May 2008. At that time, all 9^{th}, 10^{th} and 11^{th} grade program participants took the post MAP assessment.

4. Post-test scores from the May of 2008 were compared with fall 2007 MAP scores to measure progress.

5. During summer 2008, the researcher completed data analysis and formulated related conclusions and recommendations.

Treatment of the Data

A *t*-test for non-independent samples was used in conjunction with the *Windows STATPAK* statistical software program (Gay, Mills, and Airasian, 2006). This allowed the researcher to compare pre- and post MAP scores. Significance was determined for $p \geq$ at 0.05, 0.01, and 0.001 levels.

To test the null hypothesis, which would indicate no significant difference using after school intervention for increased MAP scores, a *t*-test for non-independent samples was again performed. The following formula was used to test for significance:

$$t = \frac{\overline{D}}{\sqrt{\frac{\sum D^2 - \frac{\left(\sum D\right)^2}{N}}{N(N-1)}}}$$

Summary

Chapter 3 provided a description of the research methodology employed in the study, participants, instruments used, research design, and procedure utilized. Details concerning treatment of the data obtained and analyzed were also presented.

CHAPTER 4

Analysis of the Data

Introduction

This quantitative research study determined the extent to which students who participated in the 21st CCLC afterschool program at GHS improved their reading and math scores as measured by the MAP assessment. The researcher compared pre- and post-test scores of participating students. Chapter 4 has been organized around the

following topics: (a) description of environment, (b) hypothesis, (c) results of the study, (d) findings, and (e) summary.

Description of the Environment

The study focused on the researcher's 2007-2008 ninth and tenth grade participating students in the 21st CCLC afterschool program at GHS. The 17 students selected included 13 boys and 4 girls. The afterschool program served students needing remedial math and reading skills.

All program staff with the exception of the para-educator held Washington State teaching endorsements. When the program was in session, the day's activities included the following: greeting of students as they came in and the dissemination of a snack and drink; twenty minutes of individual homework time; fifty-five minutes of assisted homework time or tutoring; forty minutes of instruction (usually a targeted remedial skill); and fifteen minutes of quiet individual reading. At the discretion of program staff, activities and lessons were developed to target remedial skills during the forty minutes of instruction. Instruction time was organized as such: Mondays were focused for reading and writing, Tuesdays and Thursdays were geared for math and science, and Fridays were primarily recreational enrichment days. All 21st CCLC participating students were expected to report to the GHS Library for the duration of the program. Setup in the library consisted of seating at the computers, cooperative sitting, and individual sitting per the needs of students and activities conducted.

Hypothesis

High school students who participated in the 21st Century Community Learning Center (21st CCLC) afterschool program at Granger High School (GHS) improved their

reading and mathematic scores as measured by the Measure of Academic Progress (MAP) assessment.

Null Hypothesis

There would be no significant difference in MAP scores from students who participated in the afterschool program. Significance was determined for $p \geq$ at .05, .01 and .001 levels.

Results of the Study

Table 1 displayed the participants' MAP scores. Pre-test raw scores for math and reading were obtained in the fall of 2007. Post-test raw scores for reading and math were obtained in the spring of 2008.

Table 1

Pre- and Post-test MAP Reading and Math Scores for 21st CCLC Study Participants

Student Number	Pre-test Fall 2007 MAP Math Scores	Post-test Spring 2008 MAP Math Scores	Pre-test Fall 2007 MAP Reading Scores	Post-test Spring 2008 MAP Reading Scores
1	243	244	220	240
2	184	188	196	214
3	202	207	200	207
4	240	240	218	232
5	218	225	207	219
6	214	223	212	217
7	244	245	211	214
8	211	221	210	210
9	216	221	214	217
10	202	220	197	199
11	206	223	194	208
12	217	218	207	217
13	229	250	230	229
14	241	245	234	235
15	238	252	231	238
16	186	187	184	189
17	222	240	213	218

Table 2 displayed the data collected from the MAP reading and math scores subtests of study. The *t* test for nonindependent variables on the *Windows STATPAK* (Gay, Mills and Airasian, 2006), was used to calculate data, statistics, and values. The mean MAP pre-test math scores for fall 2007 were 218.41. The mean MAP pre-test reading scores for fall 2007 was 210.47. By comparison, the mean MAP post-test math scores for spring 2008 was 226.41. The mean MAP post-test reading scores for spring 2008 was 217.82.

Table 2

MAP Mean and Standard Deviation Pre- and Post-test Scores, 2008

	Pre-test Fall 2008 MAP Math Scores	Post-test Spring 2008 MAP Math Scores	Pre-test Fall 2007 MAP Reading Scores	Post-test Spring 2007 MAP Reading Scores
Mean	218.41	226.41	210.47	217.82
Standard Deviation	18.96	19.66	13.74	13.72

Findings

As indicated in Table 1, it was significant to note that 16 of 17 (94 %) participating student improved their mathematics scores from fall, 2007 to spring, 2008. Similarly 15 of 17 (88%) participating students improved their reading score during the same period. These data combined with the results of the *t* test nonindependent samples have provided a convincing argument from which the researcher may conclude that the hypothesis of the study has been supported. Accordingly, there was significant difference in the improvement of pre-and post MAP reading and mathematics scores of students

who participated in the 21st Century Community Learning Center afterschool program at Granger High School, and the hypothesis was supported at .05, .01 and .001 levels based on the nonindependent *t* test.

Summary

The analysis of data presented in Chapter 4 indicated the hypothesis was supported at 0.05, 0.01, and 0.001 levels. Accordingly, students who participated in the 21st CCLC afterschool program at GHS showed significant growth as measured by the MAP reading and math scores.

Chapter 4 also provided an overview of the environment, hypothesis, null hypothesis, results of the study, and findings.

CHAPTER 5

Summary, Conclusions and Recommendations

Summary

The purpose of this quantitative research study was to determine the extent to which students who participated in the 21st Century Community Learning Center Afterschool Program afterschool at Granger High School improved their reading and math scores as measured by the Measure of Academic Progress assessment. First a review of selected literature was conducted. Then assessment's baseline data were obtained from which related inferences. Finally conclusions and recommendations were formulated.

Conclusions

From the review of selected literature presented in Chapter 2 and the analysis of data in Chapter 4, the following conclusions were reached:

1. Afterschool programs have demonstrated positive impact on student academic and personal success.
2. The NCLB legislation has encouraged the development of afterschool programs as a way to increase student achievement.
3. To positively impact student performance, the MAP was developed to help identify what students knew and needed to know to demonstrate academic growth over time.

4. The 21st CCLC supplements students' education with academic enrichment during out-of-school time hours, so that they may attain the skills necessary to meet state core curriculum content standards.

5. An analysis of data obtained supported the hypothesis that high school students who participated in the 21st Century Community Learning Center afterschool program at Granger High School improved their reading and mathematic scores as measured by the Measure of Academic Progress assessment.

Recommendations

Based on the conclusions cited above, the following recommendation has been suggested:

1. To positively impact student academic achievement and personal success, educators may wish to supplement regular school instruction with after school remedial programs.

2. To help identify what students need to know to demonstrate academic growth over time, secondary-level teachers may wish to adopt the Measure of Academic Progress comprised of a system including assessments, classroom resources, analytical tools, and professional development.

3. To provide low-income and low achieving students with academic enrichment essential for meeting state core curriculum content standards, adopting the 21st Century Community Learning Center afterschool program.

4. School personnel seeking information related to afterschool remedial programs may wish to utilize information obtained in the study or they may wish to undertake further study more suited for their unique needs.

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