An Analysis of the Effects of Summer School Programs

by

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ABSTRACT

The current school calendar includes a summer break for the months of June, July, and August. Researchers highlight the significant impact of the summer break on skill retention for all students. Because of pressure on school districts to meet state requirements, many schools are relying on summer school programs as a means of addressing the issue of the summer learning loss, as well as ensuring that students are performing at proficient levels across all academic areas. Educators and researchers have mixed views on whether summer school programs are effective in meeting these expectations. This research examines the existing literature on the historical evolution of summer education in the United States, as well as previous and current functions of summer school programs. The challenges and effective strategies used to design successful summer school programs are discussed throughout the paper. Year-round education was also reviewed as an alternative method to summer education programs. The paper concludes
with a critical analysis of how this paper can be used in current education practices as well as ideas for future research in the area of summer education.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td><strong>Chapter One: Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem and Purpose of the Study</td>
<td>5</td>
</tr>
<tr>
<td>Research Questions</td>
<td>6</td>
</tr>
<tr>
<td>Definitions of Terms</td>
<td>6</td>
</tr>
<tr>
<td><strong>Chapter Two: Literature Review</strong></td>
<td>8</td>
</tr>
<tr>
<td>History of Summer School Program</td>
<td>8</td>
</tr>
<tr>
<td>Types and Purposes of Summer School Programs</td>
<td>15</td>
</tr>
<tr>
<td>Remedial Programs</td>
<td>15</td>
</tr>
<tr>
<td>Enrichment Programs</td>
<td>16</td>
</tr>
<tr>
<td>Extended-Year Programs</td>
<td>17</td>
</tr>
<tr>
<td>Funding</td>
<td>18</td>
</tr>
<tr>
<td>Efficacy and Benefits of Summer School Programs</td>
<td>20</td>
</tr>
<tr>
<td>Challenges Associated with Summer School Programs</td>
<td>22</td>
</tr>
<tr>
<td>Effective Strategies for Program Development</td>
<td>24</td>
</tr>
<tr>
<td>Year-Round Education</td>
<td>26</td>
</tr>
<tr>
<td>Summary</td>
<td>27</td>
</tr>
<tr>
<td><strong>Chapter Three: Summary and Implications</strong></td>
<td>29</td>
</tr>
<tr>
<td>Summary of Main Findings</td>
<td>29</td>
</tr>
<tr>
<td>Implications for Practice</td>
<td>37</td>
</tr>
<tr>
<td>Implications for Future Research</td>
<td>38</td>
</tr>
</tbody>
</table>
Conclusion.................................................................41

References........................................................................42
Chapter One: Introduction

On the last day of school in the spring, American classrooms are filled with students looking forward to the summer break. Most students talk excitedly about their upcoming summer plans. Most students envision the summer break as a time of relaxation and tranquility, a break from discipline and school work. Summer vacations in America can be filled with camps, swimming and music lessons, family trips, socializing with friends, and a significant amount of sedentary time.

Research has examined the impact of this summer break on student learning. The National Center for Summer Learning (2008) reported that all children will experience some loss of academic skills when not exposed to any educational opportunities during the summer months. Research has indicated that the majority of students lose between one to three months of academic skills over summer vacation (Cooper et al., 1996). The terms “summer loss,” “summer slide,” and “summer setback” have been used to refer to this loss of academic skills during summer break, when children are not participating in any formal education (Cooper et al.; NCSL, 2008).

The degree of summer loss is influenced by the different skills associated with each subject area (Cooper et al., 2000). Cooper and his associates concluded that math and spelling skills illustrated greater losses than other subjects. Math and spelling are based on factual and procedural knowledge, and the home environment offers few opportunities for children to practice the use of these skills. The exposure and opportunities for children to apply their math and spelling skills during the summer break is a critical factor for the summer loss experienced by students. Reading is another subject area that is significantly affected by the summer break.
Many students will exhibit some level of loss in reading skills, but students who are already susceptible for academic failure are impacted more (Mraz & Rasinski, 2007). The National Assessment of Educational Progress (NAEP) reported that skillful readers continue to make gains through the summer; however, struggling readers continue to fall further behind in the summer (as cited in Mraz & Rasinski, 2007).

Some researchers have suggested that the regression of reading skills during the summer break may contribute to the achievement gap (Cooper, 1996; NCSL, 2008b). Data released by NAEP in 2005 found that 58% of fourth-grade students across the country receiving free or reduced lunch were performing below the proficient level for basic reading skills, while only 27% of fourth graders with higher social status fell below the proficient level. Research conducted by Cooper and colleagues provide evidence supporting the idea that summer vacation is a significant factor contributing to this achievement gap. They found that a student’s family income is highly correlated with summer loss, especially reading retention. When looking at reading retention, students who come from low-income families tend to lose more than two months of reading skills during summer break; although, middle class students have been identified as making small improvements (Cooper et al.). In addition, researchers at the NCSL report that low income children typically start off the school year with lower achievement scores, but during the school year these students develop at a similar rate when compared to their peers. During the summer break, however, these disadvantaged students retain less than their peers and continue to fall behind, widening the achievement gap. The NCSL has “discovered that two-thirds of the academic achievement gap between disadvantaged youngsters and their more advantaged peers can be explained by what happens over the summer” (n.p.).
The NCSL (2008b) found that more advantaged children reported to go to the library to check out books during the summer than children from low-income families. Low income students have a smaller selection and fewer opportunities to obtain books from either their home or community (Mraz & Rasinski, 2007). Researchers have found that for every business selling books in poorer communities, there are three book stores available in wealthier communities (Neuman & Celano, 2001). Children from higher income families were also more likely to visit museums, take trips out of town, and participate in sports, as well as other enriched activities than disadvantaged children (NCSL, 2008b). Along with findings from the NCSL, previous research has concluded that "summer learning rooted in family and community influences widens the achievement gap across social lines, while schooling offsets those family and community influences" (Alexander, Olson, & Entwisle, 2007, p. 167).

Researchers have referred to this phenomenon as the "faucet theory". During the school year the "resource faucet" is turned on, allowing all children an equal opportunity for learning (Entwisle, Alexander, & Olson, 2001). However, when school is not in session during the summer, the resource faucet is shut off. During the summertime, poorer families are unable to compensate for the instruction and resources that were provided by the school. The inability to provide these children with the same opportunities during the summer months causes children from poorer families to fall behind. Middle class families have more excess to the resources, so their children continue to experience academic growth during the summer; however, at a much slower rate than during the school year. These findings highlight the importance of summer learning on academic achievement (NCSL, 2008b).

Cooper and associates (1996) have also looked at other individual characteristics and their correlation with the degree of summer loss. Besides family income, researchers also
compared student’s intelligence, gender, and race to see if any specific quality increased the likelihood of summer loss. Copper and his colleagues concluded that intelligence, race, and gender do not have any significant influence on the summer learning loss. However, grade level did appear to play a significant role in the degree of summer loss experienced by students. The meta-analytic review conducted by Cooper indicated that the degree of summer loss increases as students get older. Students in fourth grade and beyond expressed significant summer losses in achievement.

The “summer loss” phenomenon has raised great concerns for educators across the country. Many school districts have responded by developing and implementing summer school programs in their schools. Through summer school programs, districts hope to provide their students with an opportunity to retain the academic skills learned during the regular school year, as well as an opportunity to build on these abilities to develop more advanced skills.

In recent years, the number of summer school programs has grown. Cooper and colleagues (2000) provide several reasons for the growing demands for summer school programs. One explanation is that the dynamics in American families are changing; both parents are more likely to work outside the house than in previous decades. This change has led many families to seek out child care services during the summer months when school is out of session. More parents today are enrolling their child in summer school programs as a means for providing them with a safe, enriched environment during summer.

Second, Cooper et al. (2000) suggests that the increase demand for summer school programs is because of the widening of the achievement gap between students from low socioeconomic families and more advantaged students. As previously discussed, research indicates that during the summer break, low-income students fall further behind their peers from
more advantaged families (Mraz & Rasinski, 2007). Districts are using summer school for lower income students with hopes that it can be the bridge that begins to close this gap; the school environment is able to provide equal learning opportunities for all students (Alexander, Olsen, & Entwisle, 2007).

A third reason is due to the increase in global competitiveness in the economy, causing policymakers to emphasize the need for a highly educated workforce. The competitive workforce has contributed to the need for supplemental education services for low-achieving students. Summer school programs can help prepare these students so that they are successful in society.

A fourth and related reason for an increase in summer school programs, is that policymakers have required schools to have higher expectations for their students. Summer school programs can help students achieve these higher expectations. Since the 1990s, there has been a huge push and demand for school accountability (Education Encyclopedia, 2008). The implementation of the No Child Left Behind Act of 2001 emphasizes the responsibility on state education departments and school districts to assure that all of their students are performing proficiently in mathematics and English (U.S. Department of Education, 2004). Each year, states and school districts are required to determine which students are making adequate yearly progress and which students are not. In response to these expectations, many schools have relied on remedial programs, including summer school, to help struggling students reach state education requirements (Jacob & Lefgren, 2001).

Statement of Problem and Purpose of the Study

Due to the summer loss phenomenon and the increased expectations on schools to assure that all students are meeting state levels of achievement, many schools have provided additional instruction for students. Summer school programs have become a popular means to help school
districts provide extra assistance to their struggling students in hopes of increasing levels of proficiency across all academic areas. Schools must understand the components of effective summer school programs which are grounded in evidenced-based practices. Therefore, the purpose of this literature review is to analyze previous and current research which examines summer school programs and their effects on academic growth and skill retention during summer breaks.

Research Questions

The following research questions directed this study:

1. What is the history and background of summer school programs?
2. What are the purposes of summer school programs?
3. What are the challenges associated with summer school programs?
4. What are the benefits of summer school programs?
5. What makes summer school programs effective?
6. What are alternative options to summer school programs?

Definition of terms

The following terms were defined to make certain that the readers have an appropriate level of understanding:

*Individualized Education Plan*- is an outline of goals and objectives for students, with additional education needs, to accomplish by the end of the school year.

*Summer Learning Loss*- refers to the academic skills that students lose over summer break.

*Social Promotion*- is when schools allow a student to proceed to the next grade level even though they have not met the grade requirements to advance.
Grade Retention- is when a student repeats a grade level because they did not meet the grade requirements to advance to the next level.
Chapter Two: Literature Review

Introduction

This chapter is a literature review examining the history of summer school, the types of summer school programs, and program funding. Following will be a section focusing on the purpose of summer school programs, as well as the advantages and challenges of these programs. The paper will conclude with the efficacy of summer school programs, and the last section will explore year-round education, an alternative option in regards to summer school programs.

History of Summer School Programs

Education has always been strongly valued in the American culture. As quoted by Cressman and Benda (1961), "Education is life, not just a preparation for it" (p. 197). Looking back, one can easily see how much the American school system has evolved over time. In his book, Tyler (1978) describes the roles and responsibility of American schools from the early 1700s to the mid 1900s. He indicates that schools were developed in order to provide all individuals with an equal opportunity for learning. Tyler also wrote that American schools serve as a "staging area" (p. 6) in which individuals were taught basic skills to prepare them for their performance in society. Aside from schools teaching basic learning and vocational skills, they have also been responsible for transferring the common beliefs and values of society to younger generations. Even though the skills and materials taught in the schools today have changed in order to match the needs of society, the overall goals and responsibilities have remained similar.

Summer education programs are an aspect of the American education system which have undergone dramatic changes over the years in their function and execution. The school year calendar—consisting of nine to ten months of instruction, with a summer break from late spring to early fall—is the schedule the majority of schools in the United States follow today. It is
widely believed that this current school schedule was developed to meet the needs of the agrarian lifestyle that once dominated the American culture (Gold, 2002). It is commonly believed that in the early nineteenth century, schools were closed during the summer months when the children were needed to help their families harvest crops (Education Encyclopedia, 2008). However, historical research indicates that this is not necessarily the truth.

In an examination of historical records, Gold (2002) concluded that the agrarian era did indeed influence the school calendar, but that it had little effect on the current summer break most schools now have. In fact, during the early and mid-nineteenth century, both urban and rural schools were in session during the summer months. Rural schools were actually closed during the autumn when extra help was needed for crop harvesting and in the spring when children were expected to help during the planting season, leaving only the summer and winter months available for children to attend school (Knight, 1949). Urban schools were also in session throughout the summer months. Inner city schools, such as schools in Detroit and New York City, operated on a year-round schedule providing services to their students somewhere around 250 days out of the year (Gold, 2002).

During the mid-1800s emerging philosophical views had a significant influence on the structure of American schools. Newly developed views on human development and functioning put a great deal of pressure on American schools to modify their school calendars (Gold, 2002). The construct of academic loss first emerged as rural educators began to conclude the fall and spring breaks were negatively affecting the development of their students (Heyns, 1978). Educators felt that longer sessions were needed in order to prevent children from losing their academic skills (Gold, 2002).
Urban schools, on the other hand, were awakened by another philosophical construct. The theory of overstudy was a popular idea in the mid nineteenth century that declared that excessive learning can lead to mental and physical fatigue for students and teachers (Gold, 2002). There was fear that the intensive studying was interfering with children’s sleeping and eating patterns, causing them to become frail and unhealthy (Massachusetts Teachers Association, 1873). This theory led urban educations to reduce the number of days students attended school. The goal was to provide a time when students and teachers could take a break from education in order to relax and regain their strength to learn (Gold). Scholars encouraged students and teachers to participate in outdoor activities as a way to restore their physical and mental wellbeing (American Educational Monthly, 1865). Since, the summer months provided more opportunities for children and educators to engage in outdoor play and activities, naturally the summer term was eliminated from urban school calendars (Gold, 2002).

The emergence of the construct summer loss in rural schools and the theory of overstudy in urban schools shaped the current school calendar, but another, less philosophical, reason impacted the decision to break from academic instruction during the summer months. Many parts of the country experience unbearable heat in June, July, and August. In addition, many schools had poor ventilation. These harsh conditions made learning more difficult during the summer months (American Educational Monthly, 1864-1876) as cited in Gold, 2002).

In the late nineteenth century the need for summer education reestablished in the American school system (Gold, 2002). Due to the leisure and tranquil environment associated with these programs, summer school programs during this time were called vacation schools (Reese, 1986). The vacation schools were started by various Woman’s Clubs and businessmen but would later be handed over to the public school system (Gold, 2002). The Woman’s Club
movement was the development of numerous groups across the country, consisting of elite, white women who were concerned with the child and family wellbeing of American families (Knupfer, 2005). In the late 1800s, woman’s clubs took interest in improving the services available for children. Raising money to build playgrounds and vacation schools become an important investment for these organizations.

Common activities offered to children through vacation schools included the following: visits to the countryside, parks, museums, historical markers, as well as storytelling and play performances. Children in poverty were targeted and provided with the same enriched opportunities available to wealthier students. In addition, these vacation schools were an attempt to reduce crime and keep children off the streets during the idle months of summer vacation (Reese, 1986). Social and moral education was an important element of vacation schools (Gold, 2002). Vacation schools were used to teach children appropriate behaviors and beliefs that were congruent with the morals of society during this era. Some of these activities included singing songs, reciting poems and verses that integrated the values of patriotism, and respecting the American Flag. Social education became a part of schools that had large numbers of immigrant children (Cardozo as cited in Gold, 2002).

As vacation schools expanded across the country, they were eventually adopted by the public and ran by state education departments (Gold, 2002). Members of the Woman’s Club felt that the public education system could provide greater financial security, more facilities to meet the growing numbers of children, and stronger administrative teams within the public schools (Chicago Woman’s Club as cited in Gold, 2002). There were major changes that occurred to the structure of these programs once school administrators were in charge. The most dramatic change was the addition of core academic courses for class credit (Gold, 2002). For the first time,
students of all grade levels were now able to retake a class they failed during the regular school year or take advance courses that could lead to early graduation. This transformation caused the term vacation school to develop into the term summer school.

The structure of vacation schools laid the foundation for the development of summer school programs in the beginning of the twentieth century, as well as the current programs visible in the United States today (Gold, 2002). Just as quickly as summer school programs were beginning to emerge across the nation, they were struggling to remain open. There were several historical events throughout the twentieth century that greatly impacted the development and function of summer school programs in America.

The Great Depression impacted summer school educational programs. Summer school programs continued to grow up until the stock market crash in 1929. The Great Depression caused the government to cut back on all financial aid they provided for federal programs, resulting in a huge hit to the education system. Many schools had to eliminate summer education from their school calendar (Gold, 2002). However, as a result of the Great Depression, the U.S. government established various types of programs that focused on rebuilding the society by creating job opportunities. Out of this, the government worked on re-opening and developing more schools across the country to educate people and prepare them for employment.

By the 1940s, summer school programs began to resurface across the country as a response to America's involvement in World War II. The government used these schools in a variety of ways to help fight the war (Gold, 2002). Some of the education programs in the summer were a means to provide care for the children of mothers who were working in the factories while their husbands were off fighting the war. Some education programs were developed in order to provide training to the women and children who were needed to fill the
jobs of the men in the war. Some of the classes that were offered included the following: business, clerical, firefighting, and police officer training. It was also required that the core academic areas be tailored to the demands of the military.

Another historical event that had an impact on the structure of summer education was the Soviet Union's launch of Sputnik (Gold, 2002). The United States had tried considerably hard to be the first country to reach space. Once the Soviet Union accomplished this task first, many Americans felt defeated. The success of the Soviet Union called for government officials to re-evaluate the value of the American education system, which lead to the push for students across the country to develop stronger math and science skills (Education Encyclopedia, 2008). In response to the defeat, government officials created the National Defense Education Act that allowed for federal funds to support the development of accelerated math, science programs and language courses (Gold, 2002). Many of these programs were offered during the summer months. Although most of these programs targeted the more intelligent students, remedial programs were still a part of summer education during this time.

Another event that influenced the organization and purpose for summer education was President Johnson's declaration of the War on Poverty in 1964 (Gold, 2002). During this time many men were being rejected from the military due to their inability to meet examination requirements to be admitted into the army (Katznelson, 1990). The President's committee proposed that poverty was the main reason for the men failing to meet the mental and physical standards of the military. These conclusions lead President Johnson and educators to find a way to close the gap between the poor and the middle class (Gold, 2002). Reformers looked towards summer education programs as a means for decreasing the gap, hoping that stronger academic skills and job training would help students in poverty overcome the misfortune of their
environment. President Johnson’s emphasis on providing greater support for individuals in poverty and their academic achievement lead to the development of numerous federal programs that targeted members of this population. Some of these programs included Title I, Head Start, school lunch programs, The Extended School Program and several others that are still present in schools today (Katznelson, 1990). Many of these programs began as a part of the summer education programs. The Title I program continues to be a strong asset to summer education by providing financial support for English Language Services, enrichment activities, and counseling services (Gold, 2002).

A more recent event impacting the development of summer school programs was the 1983 report, *A Nation at Risk: The Imperative for Educational Reform*, released by the National Commission on Excellence in Education. The National Commission on Excellence in Education was developed by the Secretary of Education in 1981 in order to inspect the quality of American education (U. S. Department of Education, 1999). The major concern of the committee was that American students were performing lower than students in other industrialized countries. The commission identified the common practice of American schools to allow students who have not meet grade requirements to continue to the next grade, also known as social promotion (Gold, 2002). As a means to eliminate this practice, policy makers emphasized the importance of students meeting state standards. One of the recommendations presented by the National Commission on Excellence in Education was to spend more time helping slower learners meet state standards and expectations (Educational Encyclopedia, 2008). Many schools responded to these recommendations by providing additional instruction and support for students through summer school programs. Majority of summer school programs today are still developed based on these recommendations, focusing on remediation and credit recovery to help students meet
state standards. Remedial programs make up a large part of summer education programs in the United States; however, there are other programs available that provide a variety of opportunities to students during the summer.

Types and Purposes of Summer School Programs

Summer school programs have been developed with differing intents. There are a variety of different summer school programs that school districts across the country offer their students. Some summer school programs are intended to offer additional opportunities for students to master basic academic skills or gain credit for failed content. Some programs offer students the ability to expand their knowledge in specific subjects or content areas. Other summer school programs are available for special needs children through extended-school-year. These different programs can be broken down into three different categories: remediation, enrichment, and extended-year for students with special needs (Education Encyclopedia, 2008).

Remedial Programs

What happens when a student transitioning from elementary school to middle school, from middle school to high school, or from high school into the real world does not meet the state’s academic standards to move to the next level? Current federal regulations and research indicates that the advancement of a student who lacks sufficient skills can have negative implications on their future success as an adult (Denton, 2001). There is also research that indicates that holding students back can also have negative implications in regards to the student’s self esteem and may also increase their chances of dropping out before graduation (Jimerson & Ferguson, 2007).

To address this issue, some schools have developed summer school programs in order to help these students gain academic skills or earn failed credits. These types of programs target
students who typically are struggling in one or more core academic areas, such as math or reading (Education Encyclopedia, 2008). Many times these students have not met the requirements needed to advance to the next grade level or they have failed classes and need to gain credits towards graduation. Students in these programs may also have done poorly on state competency examinations that are required by the state and local school districts. The curriculum of remedial programs emphasizes the mastery of basic skills and concepts that the student was unable to achieve during the regular school year. The overall goal of remedial summer school programs is to get students caught up with their peers.

**Enrichment Programs**

Enrichment programs are the second type of summer school education programs. Even though remedial programs are the foundation for the majority of the summer school programs, enrichment programs have seen the biggest growth, especially with elementary and middle school students (Baldauf, 1996). Enrichment classes can be offered in a variety of different subjects and areas of interest (Education Encyclopedia, 2008). These classes are designed to help students accelerate in specific subjects rather than teach students basic skills. Other programs focus on a particular area of interest. Some types of enrichment courses that may be offered include tennis, graphic design, second language courses, and performing arts (Boss & Railsback, 2002). The main reason these types of programs are becoming more popular in school districts, is because they provide students with an opportunity to experience learning in a fun, exciting way. This excitement towards learning can help students develop a desire to expand and pursue higher levels of education. Many parents also support enrichment summer school programs in their school district because it provides their children with a safe and productive environment during the summer months (Baldauf, 1996).
**Extended-Year Programs**

The third type of summer school program is very selective, in that only students with disabilities may be eligible to receive services. Under the Individual with Disabilities Education Act (IDEA), each child with a disability is required to have an Individualized Education Plan (IEP) (National Dissemination Center for Children with Disabilities, 2007). The team of education professionals who develop the IEP may decide that a child qualifies for an extended-year services program. The school is then required to implement services outside the typical school year. These services can be provided over short breaks, after school hours, and more commonly during summer break (Cortiella, 2008). The programs implemented during summer break for these individuals will look differently for each student, depending on their IEP goals and objectives. Services that may be offered to the student may include: tutoring, speech/language therapy, reading instruction, or supplemental instruction in other academic areas.

Some states have set eligibility standards for school districts to follow based on important court cases that have addressed this issue (Wisconsin DPI, 2008). The primary standard used by most school districts to guide their decision process includes the concepts of skill *regression* and *recoupment*. Regression is defined as depletion in skills as a result of an interruption in academic services (Department of Special Education, 1998). Recoupment refers to the length of time an individual needs in order to recover the loss of any skills after a break in education. In order to qualify for EYS, an individual needs to express a significant level of skill regression, along with increased lengths of time needed to recoup after the school break.

Some states' standards advise IEP teams to examine the stage of skill development that the child is in before the school breaks (Department of Special Education, 1998). If a student is in the process of developing a critical skill, which has the possibility to enhance their
development, they should be given the opportunity to master this skill before services are terminated for the school year. Some states also take into consideration the home environment of the student and the opportunities available to that child that will prevent regression and decrease the amount of time needed for recoupment. If parents are unable to provide an environment that provides the child with opportunities to practice their skills, it will increase the chances that the student will qualify for EYS.

Wisconsin is one of the states that do not have specific standards when determining the need of EYS. However, the Wisconsin Department of Instruction (2008) does recommend that all school districts consider the previous standards, as well as any other factors that may interfere with progression of skills the child gained during the regular school year. It is important to note that there does not need to be any documentation of previous skill regression or significant recoupment rates in order for the student to qualify. Predictive factors and past observations can be used when making an appropriate decision.

Funding

Funding continues to be a crucial issue for school districts when developing summer school programs. When districts experience budget shortfalls, often summer school programs are eliminated in order to save money. For example, due to revenue caps put in place in the state of Wisconsin in 1993, 42% of schools in this state were compelled to decrease or eliminate their summer education programs (Institute for Wisconsin's Future, 1998). Schools do not receive additional funds from the government at the end of the year to help support their summer programs.

In Wisconsin, the funds used for the school districts' summer education programs come out of the annual budget that is dispersed in the beginning of the academic year (Burmaster,
2008'). Due to uncertainty of the amount of funds that will be available at the end of the year for summer school programs, many times schools are forced to wait to the final months before summer in order to start organizing their programs (Boss & Railsback, 2002). This short amount of time can interfere with teachers' instruction planning and may not allow enough time for course materials to arrive. Due to lack of funding, many school districts are forced to seek financial assistance from other types of programs, grants, and agencies.

Some school districts apply fees for participation in summer school programs to help pay for some of the costs (Burmaster, 2008b). However, some people feel that charging a student fee for summer school can discourage low socioeconomic families from participating in these programs. States that do provide funds to school districts for summer education have strict guidelines on which types of activities and items schools can charge their students for. For example, the Wisconsin Department of Public Instruction (DPI) does not allow schools to charge students for anything when the program is funded by the state (Burmaster, 2008a).

Due to the lack of funds and the strict restrictions set forth by state legislation, school districts seek additional funds to support the development of their summer programs. There are several types of grants available to school districts that can help supplement the costs needed to run summer programs. One of the most common grants available and used by school districts to help aid summer programs is the Title I program. This program was designed to provide financial aid to schools with elevated numbers of students in poverty. The main principle of this program is assure that all students receive an equal opportunity to obtain a proficient level of academic skills and meet state standards through a high quality education program (U.S. Department of Education, 2008). Even though schools are required to use Title I funds for programs that target students who are at risk for failing, Title I services may include non-Title I
students, as long as the instruction is targeted towards those students who are eligible for Title I services (Wisconsin DPI, 2006). Information from the U.S. Department of Education reports that about 50,000 schools around the country use Title I funds to provide further education instruction and support for low-achieving students, allowing these Title I schools to use these funds towards summer education costs. Some areas that can be supported through Title I include tutoring, staff pay, enriched activities, and professional development (Boss & Railsback, 2002).

A variety of other types of grants can help schools finance the operation of summer school programs. Other federally recognized grants which can be used for funding summer school programs include the following: the migrant education grant, 21st Century Community Learning Center grant, and the safe and drug-free schools grant (Boss & Railsback, 2002; Wisconsin DPI, 2008b). Summer food programs and transportation grants are other forms of aid provided by state departments (Wisconsin DPI, 2008b). The type of grants available to school districts depends largely on their state education departments, as well as the population and structure of their schools. Donations from community businesses and agencies are other forms of resources that may help school districts pay for additional education costs.

**Efficacy and Benefits of Summer School Programs**

Some school districts have made summer school mandatory for low-achieving students in hopes of getting them caught up to their peers. Summer school programs are designed to teach these students the basic academic skills they will need in order to be successful when they enter the next grade level. If effective, summer school programs would eliminate the issues regarding grade retention and social promotion. However, there has been conflicting research and views on the effectiveness of summer school programs. Some researchers have concluded that summer school programs are effective at getting students caught up; (National Center for Summer
Learning, 2008; Cooper, 2003; Denton, 2002; & Entwisle, Alexander, & Olsen, 2001;) where other researchers have found that programs are a waste of time and money (Moore, 2003; Stenvall as cited in Roberts, 2001; Pipho, 1999).

Proponents of summer school offer several arguments as to why summer school programs are needed. The most common argument is that summer school programs have the potential to decrease the achievement gap between higher class students and students from lower socioeconomic families (Buchanan, 2007). Schools can be seen as an equal opportunity for all students, but during the summer months, a student’s environment and access to educational resources can have a great effect on their ability to retain academic skills. Advocates for summer believe that summer programs provide disadvantaged students with the resources they need to keep up with their peers.

Another advantage that advocates emphasize is that summer school programs have shown to be effective in helping low-achieving students obtain the skills needed in order to be promoted to the next grade level (Buchanan, 2007). An evaluation of a summer school program in the Chicago school district concluded that, on average, third grader who attended a summer school program increased their level of reading by .20 grade equivalents (Stone et al., 2005). This gain in reading skills is comparable to two months of learning. Students in sixth grade resulted in a .40 gain with eighth graders increasing their reading level by .60 grade equivalents.

After completing a meta-analytic review of summer school programs, Cooper et al. (2000) reported that students who complete remedial summer school programs will perform between one seventh and one quarter of a standard deviation higher when compared to a control group. Summer school programs can help to conserve the skills and gains that students made throughout the regular school year (Buchanan, 2007). Further Cooper et al. (1996) reported that all children
on average lost about one month of instruction during the summer months. When summarizing their findings, Cooper et al. suggest that the continuation of summer school programs can be seen as a possible approach towards decreasing the “summer loss” that is experienced by all students.

Proponents of summer school also contend that summer school programming provides students with a safe and positive environment during the summer months (Buchanan, 2007). Many times students find themselves alone at home during summer vacation. Especially in poorer communities, many children do not have access to positive activities in their neighborhood to keep them entertained throughout the summer. Boredom is what leads many children to engage in deviant, negative behaviors. Many parents and educators feel that summer school programs can help provide children with a positive and structured environment that will not only increase their academic skills, but can also decrease any deviant behaviors displayed by these students. In addition to more supervision and structured activities, summer school programs can provide an adequate nutrition program for those students from low socioeconomic families. Many of these students receive free and reduced lunch during the school year. Summer school programs can assure that these students continue to receive a nutritional meal during the summer months.

Challenges Associated with Summer School Programs

Despite the increase in summer school programs around the country, there are critics who feel that summer school programs are not worth the time and money. In addition to mixed research on the effectiveness of summer programming, there are also concerns regarding the long lasting effects of these programs, the material taught, and student attendance.
Some critics argue that, over long term, summer school does not help students maintain academic skills needed to match their peers (Moore, 2003). Summer school programs have been found to help students obtain enough skills to be promoted to the next grade level, but some research indicates that these students will continue to remain behind peers (Pipho, 1999). On average, only about 50% of students in summer school programs gained enough academic skills to be promoted to the next grade.

Critics of summer school also worry that the emphasis on state requirements and academic standards pushes summer school programs to design curriculum which teachers to the test (Moore, 2003). In doing so, this type of program will not prepare the students for the future and will not have any long lasting effects on increasing their level of academic performance. In fact, some educators and critics see summer school programs as a means of setting up struggling students for additional failure. Marilyn Stenvall, former Executive Director for the National Association for Year-Round Education, points out that students who struggled during the regular school year will likely be unsuccessful when required to attend summer classes with other struggling students receiving the same instruction that has already failed to help these students (as cited in Buchanan, 2007). Along with the same instruction, making summer school mandatory for low-achieving students can give these students an increasing negative perception about education. Stenvall compares the summer education experience for struggling students to a mandatory jail sentence. This negative experience only pushes these students further away from the education system rather than closer.

Not so much a criticism of summer school programs, but rather a concern, is the attendance rate during summer school. It can be a challenging to get students to attend classes on a regular basis during summer school. Jack Jennings, CEO of the Center on Education Policy,
reports that the students who skip classes are those students who are already suffering, and skipping classes only increases the achievement gap between them and their peers (as cited in Buchanan, 2007). This attendance issue is what has lead many schools to make summer school mandatory for certain students. However, if mandatory attendance is required for at-risk students, they will feel as if summer school is a penalty, possibly turning them away from school altogether (Boss & Railsback, 2002).

A major concern that critics of summer school programs address is the amount of funds spent on these programs when there is little research on the effectiveness or ineffectiveness documents have stated that summer school programs can be more expensive than traditional programs during the regular school year (Buchanan, 2007). Costs which need to be financed in order to run a summer school program include salaries for teachers, custodians, and administrators. In addition, there are transportation expenses, additional classroom materials and books, meals, and air conditioning costs (New York superintendent as cited in Black, 2005). Like previously mentioned, many schools will receive funding from Title I and other government programs. However, these funds are most likely not enough to support a summer school program. Many of the funds come from the district's annual budget, which draws from the regular programming (Black, 2005).

*Effective Strategies for Program Development*

Despite the arguments made by both advocates and opponents of summer school, summer school programs are continually being developed in school districts across the country. Even with very little research in the literature regarding the effectiveness or ineffectiveness of summer school programs, school districts are relying on these programs to help their low-achieving students meet state requirements and standards (Boss & Railsback, 2002). There has
been research conducted that compares numerous summer school programs across the country in order to determine which strategies are the most effective. Summer school programs which teach students material they have already mastered, use similar teaching methods and strategies that failed the first time, or present students with material which does not build from previous knowledge will not be effective or beneficial (Christie, 2003).

Small class size is a critical feature of successful summer school programs. Not only do smaller class sizes help with the development of strong teacher/student relationships, but it can also help reduce deviant behaviors displayed during summer sessions (Stone, Engel, Nagaoka, & Roderick, 2005; Aidman, 1998). According to a teacher interviewed in Aidman’s article, the smaller class sizes seemed to encourage students to take risks by participating in class discussions and to ask questions. This level of comfort allowed for students to seek attention through more positive methods. This teacher reported that many of the students’ defiant behaviors decreased during summer session when compared to the regular school year.

Beyond small sizes, researchers emphasize other feature of effective of summer programs. Curriculum focused on reading and math, curriculum targeting specific skills deficits, and curriculum which follows state standards have been correlated with increased student achievement (Cooper et al., 2000). Teachers who are experienced in working with low performing students are more successful. In addition, programs which evaluate and monitor teaching strategies and student achievement are more effective (Boss & Railsback, 2002; Christie, 2003). Despite these effective strategies used when designing successful summer school programs, many educators and parents feel that more needs to be done during the regular school year before students fall behind rather than after (Buchanan, 2007).
Year-Round Education

Summer school programs have been a popular choice by school districts to help address the issue of summer learning loss. However, there is another group of supporters who have come up with a different solution to summer learning loss. Advocates for year-round education strongly believe that modifications to the traditional school calendar will not only prevent summer learning loss, but it will also help school districts meet the high state standards and accountability measures (McMillen, 2001). Many educators have developed strong opinions in regards to year-round education which has lead to heated debates amongst education professionals and parents. The term, year-round education, is misleading. Year-round education does not include more or longer school days, rather it includes the traditional 180 school days, but the days are spread out more evenly throughout the school year (St. Gerard, 2007). The National Association for Year-Round Education (2000), defines year-round education as an education program that

...centers on reorganizing the school year to provide more continuous learning by breaking up the long summer vacation into shorter, more frequent vacations throughout the year. ...Students attending a year-round school go to the same classes and receive the same instruction as students on a traditional calendar. The year-round calendar is organized into instructional periods and vacation weeks that are more evenly balanced across 12 months than the traditional school calendar. The balanced calendar minimizes the learning loss that occurs during a typical three-month summer vacation.

The majority of schools who adopt a modified school calendar break instruction periods into 45 to 60 school days, with three to four week breaks in between each instruction period (St. Gerard, 2007). The school year typical ends with a five week break before the start of the next school year.

During the 2006-2007 school year, NAYRE (2000) reported that about 2 million students in the United States were enrolled in a school that followed an extended school calendar. This
number represents an 11% increase in year-round schedules over that last five years (St. Gerard, 2007). There are various reasons why many more schools are adopting an extended year school calendar. The main reason why school districts have modified the school schedule is in regards to the issue of the summer learning loss phenomenon. Year-round school schedules typically do not have any breaks longer than eight weeks. Advocates for extended education feel that shorter breaks throughout the school year help keep students engaged and in the "learning mode" (p. 57). The shorter breaks help to decrease the amount of time that teachers spend in the beginning of the year in reviewing subject material. Cooper (1996) and his associates reported that teachers spend up to a month in the beginning of the school year reviewing previously taught material.

Another strong argument for year-round education is that the schedule allows for remediation programs throughout the school year (St. Gerard, 2007; McMillen, 2001). Due to the periodic breaks throughout the school year, extended education programs allow schools to provide remedial services various times during the school year. Intersession is the term used by researchers and educators to refer to additional instruction provided to struggling students during the periodic breaks offered with a year-round school schedule. An intersession can provide low-achieving students more opportunities to receive additional instruction, helping increase academic performance. Enrichment programs can also be offered during these breaks in order to provide students with additional education opportunities. The one disadvantage that has been indicated by administrators and educators following an extended year schedule is the lack of time they have to prepare between school years (St. Gerard).

Summary

Summer school programs have a long history in the United States. The construct of summer loss, first conceptualized in research conducted by Cooper et al (1996), is still examined
in the research, and research has shown that students do indeed show a loss of academic skills in the summer (Copper et al, 1996). Summer school programs have been developed in order to offer remediation to struggling and at-risk students, as well as enrichment to all students (Education Encyclopedia, 2008).

Proponents and opponents argue several points about the advantages and disadvantages of summer school, and the body of literature on the effectiveness of summer school education programs is small. Most existing research shows that summer school is effective in helping struggling students learn the basic skills they need in order to be promoted to the next level (Cooper et al., 2000). However, questions remain about the long-term success and whether summer school just sets struggling students up for more failure (Stenvall as cited in Buchanan, 2007). Researchers have learned that the success of the student depends on the structure and design of the program. Unfortunately, many summer school programs are designed similar to that of the regular school year, in which many of the students in summer school were unable to be successful (Christie, 2003). Summer education programs with the greatest success include the following elements: small class sizes (Stone, Engel, Nagaoka, & Roderick, 2005; Cooper et al., 2000), highly qualified teachers—especially those trained to work with lower performing students, focus on mastering basic reading and math skills, and the use of innovative and original instruction that targets students' individual deficits (Boss & Railsback, 2002; Christie, 2003).
Chapter Three: Summary and Implications

Summary of Findings

Many schools across the country use summer school programs for various reasons. Some summer school programs provide enrichment and others focus on academic skills. Literature on summer learning loss indicates that the idle months of summer have a great influence on student achievement. The purpose of this literature review was to examine the effects of the summer break on academic performance and the usefulness of summer school programs on decreasing the amount of academic skills lost during the summer months. Several research questions guided the paper.

Research question 1: What is the history and background of summer school programs? Historical literature defies the myth that our traditional school calendar was developed based on the lifestyles of Americans during the Agrarian era (Gold, 2002). During the Agrarian period children attended school during the summer months, both in rural and urban communities. Children in rural communities only attended schools during the winter and summer months, due to the demands of farming during the spring and fall seasons (Knight, 1949). During this time, it was common practice for children in urban schools to attend school year round. Emerging philosophical views forced rural and urban educators to rethink the structure of their school calendars (Gold, 2002).

Reformists believed that the long breaks rural children were experiencing between school terms were negatively impacting their academic performance. The term academic loss was used to describe the idea that students will lose academic skills if not over long periods of time without any education instruction (Heyns, 1978). Educators redesigned their school calendars in order to better accommodate their students (Gold, 2002). Educators in urban schools feared that
their extensive school schedules would cause their students to burnout. The theory of *overstudy* introduced the idea that extensive studying and teaching may cause mental and physical exhaustion in the students and teachers. Urban school districts decreased the number of calendar days as a means of avoiding the effects of *overstudy* on teachers and students. The revised calendar included a three month break in order to provide a time for the children and educators to relax and break from their studies. Due to the unbearable weather conditions during the summer months and poor ventilation in the school buildings, both rural and urban school districts decided to omit the summer months from their school calendars.

In the late 1800s, summer education was re-introduced by the development of vacation schools to provide more opportunities for children living in the city during the summer months (Gold, 2002). The main reason for the development of these schools was to help decrease the levels of crime during the summer (Reese, 1986). It was believed that the lack of structure and opportunities for urban students lead these children to engage in more negative and criminal behaviors during the summer. As time went on, the public school system was able to support the increasing numbers of students enrolling in summer education programs. Once placed in the hands of the public school system, vacation schools become known as summer school and begin to resemble more of a remedial program rather than an enriched program.

Major historical events also played an important role in the transformation of summer school programs in the United States. Summer school programs took a big hit during the Great Depression. Many school districts had to decrease or eliminate the programs they offered during the summer months due to the lack of federal funding during these hard times (Gold, 2002). The involvement of the United States in World War II had an impact on the function and design of summer school programs during the 1940s. Government officials pushed school districts to use
summer school as a means of training women and children in the areas that were needed to be filled while the men were fighting in the war. Summer schools were also looked at as a form of daycare for the mothers who were working in the factories in order to support their families while their husbands were fighting for the country. Other events such as: the launch of Sputnik, the War on Poverty, and the National Commission on Excellence in Education, emphasized the need to develop a higher quality of education in the United States.

Research question 2: What are the types and purposes of summer school programs?
There are three main types of summer school programs implemented by districts. Remedial programs are those that target low performing and at risk students. This type of program is used to help students struggling in core academic classes, such as math, reading, or language arts (Education Encyclopedia, 2008). Remedial programs are designed to help students obtain and master the skills needed to advance to the next level, in hopes that these students will catch up to their peers by the next school year. Remedial programs at the high school level often focus on credit recovery.

In addition to remedial programs, enrichment programs focus on expanding a student's knowledge and understanding in one particular area of interest (Education Encyclopedia, 2008). The areas covered by enrichment programs can vary from a more academic foundation to more of a leisure and recreation focus. The purpose of enrichment programs is to provide students with structured activities during the summer break that are educational as well as exciting for the students (Boss & Railsback, 2002). Enrichment programs can be helpfully in getting students to develop a positive perspective about learning.

The last type of summer school program is only offered to a specific group of students. Extended-year service (EYS) programs were developed as a way of assisting and meeting the
needs of students with disabilities during school breaks. The student’s IEP team decides whether a student in special education would benefit from an EYS program (Wisconsin DPI, 2008). This decision is determined by guidelines set forth by state education departments. The criterion used may differ depending on the state; however, most school districts tend to follow similar guidelines when making these decisions.

The main criteria used to determine EYS eligibility is that of regression and recoupment. If a student in special education is at risk for losing skills obtained during the regular school year without adequate instruction and the time needed to re-learn these skills is beyond the time available during the following school year, they will likely qualify for the EYS programming (Department of Special Education, 1998). IEP teams also consider the development level at which the student is at before the break. A student who is in the process of developing a critical skill may qualify in order to gain additional time to master that specific skill.

Research question 3: What are the challenges associated with summer school programs? There are several challenges associated with summer school programs that may impact a school district’s ability to design effective summer school programs, or may even deter schools from offering summer education to their students. Funding issues is a common issue experienced by all school districts (Institute for Wisconsin’s Future, 1998). With the lack of funds, many schools have eliminated or have considered cutting their summer school programs. There has been a great debate on whether or not remedial summer school programs are worth the money.

Critics argue that summer school programs are not an effective strategy in helping students catch up to their peers. Opponents of summer school report the effects of summer programming does not last throughout the school year, meaning these students will fall back behind their peers by the end of the school year (Moore, 2003; Pipho, 1999). Summer school
programs are challenged with developing programs that have long lasting effects rather than immediate success in helping low performing students obtain a proficient level of academic skills. Some critics express the concern that school districts use summer school programs as a means for teaching to the test (Moore, 2003). With the increased levels of accountability on school districts to make sure 90% of their students are performing at the proficient level across all areas, critics fear that schools use summer education as a way of teaching students only the skills needed to perform well on state tests.

Another challenge school districts are faced with is finding highly qualified teachers who use innovative teaching strategies to educate low performing and at risk students during the summer months. It would not be useful or effective to use the same teaching methods to teach these students basic skills, when they were unable to learn it the first time (Stenvall, as cited in Buchanan, 2007). Using the regular education curriculum to educate struggling students will only set these students up for further failure and may discourage them from trying to succeed in school. The more discouraged these students are and the more negative perspective they have towards education, the more likely they are to not attend summer school (Jennings, as cited in Buchanan, 2007). Attendance rates tend to be much lower during summer due to the student's decision not to attend and the interference of family vacations. Some school districts have tried the use of mandatory attendance in order to avoid this struggle; however, critics feel that mandatory attendance may appear as more of a punishment for low performing students (Boss & Railsback, 2002). Students who feel they are being punished for their inability to succeed may lose interest and give up all together.

Research question 4: What are the benefits of summer school programs? Grade retention and social promotion have been an issue that schools have struggled with for years. School
districts do not like to promote students to the next grade level when they have shown proficient levels of performance on skills tests in their current grade; however, school districts do not like to hold students back. Research has suggested that both of these methods can have negative impacts on students socio-emotional functioning, as well as their academic functioning (Denton, 2001). Some researchers suggest that summer school programs may be the answer to this issue. Effective summer programs can help low achieving students catch up to their peers by the beginning of the school year (National Center for Summer Learning, 2008; Cooper, 2003; Denton 2002; & Entwisle, Alexander, & Olsen, 2001).

Another major benefit of effective summer school programs is that they have the likelihood to lessen the achievement gap between low-income students and their more advantaged peers (Buchanan, 2007). Research has indicated that these two groups of students vary in the types of resources and opportunities available to them during the summer break. Middle class students are more likely to spend their summers engaged in enriched and educational activates when compared to their disadvantaged peers (NCSL, 2008b). Summer school programs can provide students from diverse backgrounds with access to equal opportunities and resources (Alexander, Olsen, & Entwisle, 2007).

Summer school programs are also viewed as a possible solution to the phenomenon known as summer learning loss (Cooper et al., 1996). In a research study, students who were enrolled in a remedial summer school program were found to perform higher than those, in a control group, who did not attend summer school. Summer school programs can be helpful in preventing students from losing the skills and knowledge they developed during the regular school year (Buchanan, 2007). Continuing education throughout the summer will provide
students with a stimulating environment that will allow students to practice their academic skills as well as expand their abilities to a deeper level.

Many children find themselves home alone during the summer months, while their parents are at work. Advocates for summer school see these programs as a means for providing children with a safe and stimulating environment during the summer break (Buchanan, 2007). The additional supervision offered through summer school programs can help decrease the number of deviant behaviors displayed during the inactive months of summer. Another benefit of summer school programs is that it can help provide a nutritional meal for children who come from families who struggle on a daily basis to meet the needs of their children.

Research question 5: What makes summer school programs effective?

Despite the small body of research regarding the effects of summer school, many schools still rely on summer education programs as a way of addressing poor academic performance and the pressures of federal regulations on the demands of school accountability (Boss & Railsback, 2002). Most critics of summer school do not object to the intentions of summer educational programming. They do, however, feel that most programs implemented by school districts are not successful in addressing the individual needs of low performing students and should put more effort in developing effective programs (Fliegel, as cited in Goodnough, 2002).

Researchers have conducted meta-analysis studies in order to find which elements are needed in order for a summer school program to be effective. One of the major factors that influence the degree of effectiveness is class size (Aidman, 1998). The smaller the class sizes, the more attention the teacher can provide in order to meet individual needs. Class sizes also build stronger teacher/student relationships, which can help decrease the amount of behavioral
issues often displayed during summer school (Stone, Engel, Nagaoka, & Roderick, 2005; Aidman, 1998).

Other research articles have identified parent involvement, strong reading and math curriculum, teacher qualifications and experience, following state curriculum and guidelines, and yearly integrity evaluations are important factors to consider when developing effective summer school programs (Boss & Railsback, 2002; Christe, 2003). Summer school programs that have development programs using these some or all of these elements have resulted in higher academic performances by their students (Cooper et al., 2000).

Research question 6: What are alternative options to summer school programs? Year-round education has gained a considerable amount of attention within the last few years. Advocates for year-round education believe that the elimination of the summer break will help prevent students from losing any skills over long breaks and will help school districts address the pressures of accountability (McMillen, 2001). The idea is that the school calendar would still consist of 180 school days; however, the three month break during the summer would be spread out throughout the whole year (St. Gerard, 2007).

Another benefit of year-round education is that with shorter breaks between school terms, teachers will need to spend less time reviewing previously taught material before introducing new concepts. Supporters for year-round education also stress the availability for schools, using this type of schedule, to provide remedial services to their students (St. Gerard, 2007; McMillian, 2001). The more frequent breaks allows for schools to provide extra assistance several times throughout the school year. The more opportunities these students have to receive supplemental instruction, the greater the chance that these remedial programs will have long lasting effects.
Implications for Practice

This literature review has compiled a variety of information useful to school administrators and educators in regards to the effects of the summer break on students' academic performance, as well as the strategies used to address these issues. There is a great amount of research on the phenomenon known as summer learning loss. This paper highlights and informs educators of the important factors associated with the regression of academic skills over the summer break. Cooper et al. (1996) reports that on average students can lose between one and three months of academic skills over the summer break when they are not participating in any structured learning activities. These statistics affect educators and how they start off the school year. Due to the amount of skills lost of the break, teachers need to spend time in the beginning of the school year to go over material learned in the previous year before they can teach the students new skills. The amount of time needed to re-teach these skills is about one month. This significant amount of time spent on reviewing previous material can have an impact on how teachers organize and plan their lessons throughout the school year.

This paper also highlights the existing achievement gap between low socio-economic students and their more advantaged peers and the impact that the summer break has on these groups of students. Students from low income families experience a large decrease in their reading skills during the summer months, significantly more than their peers. Some students with higher socio-economic statutes have been reported to make small gains in the area of reading (Cooper et al., 1996). Researchers have concluded that the way students spend their summer break greatly affects the amount of skills retained over the break. Because low-income students have fewer opportunities and fewer educational resources available during the summer, they tend to lose more skills than that of their more economic advantaged peers (NCSL, 2008). This
difference among students is important for educators to be aware of. This data suggests that educators need to pay more attention to the needs of these at risk students. It may also indicate that when designing summer school programs, school districts need to tailor their programs to better address the needs of these students.

The review of literature in this paper provides suggestions as to what schools can do to address the regression of skills during the summer months. Summer school programs need specific elements in order for students to be successful. School districts have access to limited amounts of funds. Therefore, they would not want to waste their financial funds on programs that are not successful. This paper addresses the elements needed in order for summer school programs to be helpful for increasing the academic performance of low performing students. Administrators can use the accumulation of the literature findings in this paper to help them design summer school programs that will meet the needs of their students, while spending their money in an effective manner.

**Implications for Future Research**

Research on the effectiveness of summer school programs is not consistent. There are researchers who have concluded that summer school programs can be successful in helping low achieving students catch up to their peers, closing the achievement gap between low-income students and their advantaged peers, and helping students retain academic skills over the summer break (NCSL, 2008; Buchanan, 2007). Despite these findings, critics argue that summer school programs do not have a long lasting effect on a student's academic performance, therefore they are not successful in helping struggling students achieve at the level of their peers (Moore, 2003).

Due to the mixed data on the success of summer school programs and because the body of literature on the matter is quite small, more research needs to be conducted in order to address
and measure student's academic gains relative to completing remedial programs during the summer break. One major factor that may have had an impact on the varying results of the summer school literature is the fact that each study measured student's performance before the summer break and after within different time intervals (Cooper et al., 1996). For example, none of the studies reviewed tested student's achievement level on the last day of the regular school year and on the first day of the following school year, in order to measure any gains or losses in skills. Therefore, the amount of additional instruction time varied across studies measuring academic performance within the summer break interval. This inconsistency can have a great effect on how well a research studies are able to actually measure the impact that the summer vacation has on students' academic skills. Future researchers need to develop studies that are able to better control the influence of additional academic instruction when determining any increases or decreases in skills over the summer break.

The method researchers use to collect data on a student's performance level before and after the summer break can also have an impact on their results. A common method used by researchers in this area is referred to as absolute measures of change (Cooper et al., 1996). When using this method, researchers want to look at the overall skills that were gained or lost by the child over the summer break. This method looks at the difference of a student's raw score-the number of items answered correctly-across tests that are the same or contain similar content. Another way to assess the absolute measure of change would be to uses standard scores-raw scores converted in order to give them a predetermined mean and standard deviation- in order to compare a student's performance with that of their peers.

Relative measures of change are other ways used by researchers to collect data on the change of student performance (Cooper et al., 1996). When using this method, researchers are
more concerned with measuring a student's change in performance in relation to a comparison
group. For example, researchers would want to look at the difference between students, with
similar academic skills, who attend summer school programs and those who do not. This
information would help researchers determine how effective a summer school program may be
for a certain type of student. The type of methods used to look at the change in a child's
knowledge over the summer break may produce different scores. When making interpretations,
researchers need to understand the method in order to draw inferences about the effect of the
summer break and the effect of summer school programs on academic performance.

In regards to the varying effects of the summer learning loss on the different levels of
family income, there is no research determining differences in how students from different
economic categories spend their summer vacations. Research in this area can help provide more
information as to why this gap is present between these groups of students. Also, this information
can help determine which types of activities are beneficial and necessary for children during the
summer months in order to retain the most skills.

Research conducted by Cooper et al. (1996) concluded that the summer break has more
of an effect on math than reading, meaning that students tend to retain less math skills when
compared to their reading skills at the end of the summer. Researchers have concluded that the
reasons for this are due to the more opportunities children have during the summer months to
practice their reading skills compared to their math skills. However, most of the research on
summer learning loss focuses on reading. More research needs to be conducted on summer
school programs and their effectiveness in the retention of math skills during the school break.
Conclusion

The body of research literature is small and shows mixed results when studying the effectiveness of summer school programs. Most education professionals agree methods and programs need to be developed to increase the numbers of students performing below proficient levels in core subjects. Educators also agree that struggling students need to be identified at an earlier age. This has lead schools to use evidence-based curriculum, progress monitoring, and evidence-based interventions to ensure that schools are doing what they can to prevent students from falling through the cracks. In the mean time, school districts still rely on summer school programs to provide extra support for low performing students. Summer school programs can be effective in achieving this goal; however school districts need to put more thought and time looking at the research in order to develop high quality programs to ensure their students' success.
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