Year-Round School Education: Academic Impacts and Trends.

Kseniya Themm

Aquinas College

Faculty Mentor
Susan English

Second Mentor
Robert Ford

Master Teaching Project

Submitted to School of Education at Aquinas College

In partial fulfillment of the requirements for the Master in the Art of Teaching degree

8/01/18
Abstract

Research on year-round education programs is often confusing and contradictory to the data making it difficult to draw specific conclusions on its effectiveness. Comparing results is problematic when trying to filter out differences in timing, implementation, single-track versus multi-track, and other programs and factors that can independently affect results on achievement gains and success rates. Based on a broad review of the studies and research available it can be concluded that most schools make the transition to year-round programs for one of two reasons: To enhance and improve impact of instructional time while reducing summer fade, or to increase utilization of current facilities to meet space needs because of enrollment spikes. Academic gains are probably just as important if not more, than increased building utilization when it comes to why a growing number of schools are making the transition to year-round schools. Most schools that are looking to make gains in academic retention and performance are typically practicing a version of year-round education that focuses on reducing lengthy summer breaks and increases total retention through those enhancements. Multiple studies have sited positive gains in academic performance with year-round systems, specifically at the elementary grade levels or with low income and high-risk students. Gains in other socio-economic groups and for high performing students were marginal. With respect to performance gains for all grades and overall improvements for students, more studies are needed to properly evaluate the large number of variables and to track results over time. Another factor to be considered is the increased adoption rate of the year-round model as those numbers have continued to climb.
TABLE OF CONTENTS

ABSTRACT .................................................................................................................. 2

CHAPTER ONE: INTRODUCTION........................................................................... 4
  Introduction........................................................................................................ 4
  Purpose of the Study......................................................................................... 4
  Statement of Problem ..................................................................................... 5
  Research Question and Hypothesis................................................................. 6
  Definition of Terms......................................................................................... 7

CHAPTER TWO: LITERATURE REVIEW............................................................. 8
  History of Year-Round Education................................................................. 8
  Models of Year-Round Education................................................................. 11

CHAPTER THREE: PROCEDURES................................................................. 15
  Description of Research Design................................................................. 15
  Study Limitations........................................................................................ 17

CHAPTER FOUR: DATA ANALYSIS ............................................................... 18

CHAPTER FIVE: SUMMARY............................................................................. 23

REFERENCES.................................................................................................... 26
Year-round school education: academic impacts and trends

Chapter one

Introduction

In the American educational system, political and social pressure has been growing for years to find ways to push the performance level of its students back up to competitive levels on the international stage. Legislation over the past two decades including “No Child Left Behind” and “Common Core” are two prime examples of using national standards to drive performance results across the states, including holding the system more accountable. Improving and re-structuring school systems have been a major topic of focus for educators, administrators, and researchers for this reason. Restructuring the school calendar to year-round schools is one effort being evaluated as a primary means to improving academic performance. Planning school calendars around agrarian lifestyles is viewed by many administrators and parents as outdated and unnecessary. Since the desired result is to increase performance of the education system, the data and consensus from researchers and educators must be carefully evaluated.

The data and research conducted, faces many challenges when trying to reach one consensus on whether the year-round school calendar empirically improves performance. There are so many variables such as large differences in year-round calendar adoption across the states and school districts, as well as social, economic, and cultural variables that skew data and the adoption rate. One of the common rationales for evaluating a year-round schedule is the principle that the three-month summers break leads to learning loss. Therefore, most studies will compare and contrast the performance between traditional school calendars and year-round schools to capture potential academic improvements at the schools where opportunity for learning loss it can be lessened.
Year-Round School Education: Academic Impacts and Trends.

Purpose of the Study.

The purpose of this study is to look at research and data that helps illustrate the differences in academic improvements or lack thereof, between states and districts that have a varied implementation of year-round calendar systems. There are many studies that reference specific improvements in elementary academic performance as opposed to secondary-level education, especially of students in lower socio-economic levels. Since there is a lack of a National or State level standardization to year-round school systems, a better understanding of where positive gains are being made and how, is crucial for continued academic improvement. Regulation, and a national and state effort to improve American educational performance demands results. Year-Round School (YRS) systems are likely a major component that can allow measured success. This paper will look at a variety of geographic, socio-economic, demographic, and political implications and data sets, to form a hypothesis, and draw conclusions.

Statement of the problem. American educational institutions are constantly competing on the world stage to improve academic performance. Many regulations and programs have been instituted in an attempt to improve the situation of international ranking. According to results of the Program for International Student Assessment (PISA), which every three years assesses reading ability, math, and science in 15-year old students, the United States currently ranks 38th out of 71 countries in math, and 24th in science, according to the PEW Research Center. One major data point suggests a potential link to why the United States scores low against countries such as Japan, South Korea, Singapore, and Hong Kong; differences within their educational systems. The structure of high performing countries seems to correlate with YRS calendars and increased instructional time for students. Some limits to making direct correlations with performance in educational systems in the United States will relate to how educational regulations vary by state. Some of these variables are listed below:
Year-Round School Education: Academic Impacts and Trends.

- Variances in how each State defines number of instructional days required.
- Variances in how each state assess academic performance.
- Failure to report tests of significance.
- Failure to differentiate between year-round, and extended year schools

The National Center for Educational Statistics (NCES) published information documenting YRS policies by State, and at the time, there were only 17 States with established polices (NCES.ed.gov, 2008).

The purpose of this study is to determine if there are consistent and measurable differences in performance, between students attending YRS systems in contrast to those of traditional calendar systems. Datum available on this topic provides an inordinate amount of conflicting studies that point to either positive improvements in academic achievement, or little to no measurable improvement. Since there are a wide variety of programs and variables in the comparison between different school calendar systems, the regional and socioeconomic factors contrasted with high adoption areas of YRS systems versus low adoption areas, will provide some context to academic performance data.

**Research Question and Hypothesis.** The research question for this study is: How effective are year-round schools in the United States that use sustained academic improvements in comparison with traditional schools?

It’s believed that a review of available research, and an evaluation of current trends relating to adoption rates of traditional schools converting to YRS systems, should provide an improved understanding of the state of YRS education. It is within scope of this study to take all academically related improvements or declines, whether related to teacher impact and morale,
Year-Round School Education: Academic Impacts and Trends.

student gains in specific subjects, or financial benefits to school districts as well, into consideration.

Definition of Terms.

Traditional Calendar School

Operational Definition: This type of school calendar requires students to attend school 180 days. This calendar is a 9-month calendar with schools closed for 3 months during the summer (Rule, 2009).

Year-Round School

Operational Definition: The YRS type of schedule requires students to attend school 180 days; however, these days are structured differently. The YRS calendar shortens the summer break and lengthens other breaks throughout the year. YRS’ have two main tracks; single and multi-track (Rule, 2009).

Single -Track

Operational Definition: All students attend school at the same time. This type of calendar provides a more balanced instructional time. The most common types of single-track calendars are 45-15, 60-20, 90-30 (National Association for Year-Round Education, 2018). This calendar option provides a more balanced approach in relation to the continuous period of instruction and is more like traditional calendar year systems.

Multi -Track

Operational Definition: Students are subdivided into equal groups, or tracks. Typically, multi-track schools utilize four different schedules. This type of calendar is specifically designed for schools to alleviate overcrowding (National Association for Year-Round Education, 20018). This system is used to avoid double sessions, building new schools and temporary buildings.
Year-Round School Education: Academic Impacts and Trends.

Multi-track divides students and teachers into tracks of the same size, each assigned its own schedule. Teachers and students assigned to a particular track follow the same schedule and are in school and on breaks during the same times. Multi-track creates the “school-within-a-school” concept.

Intersession

Operational Definition: Break or vacation period that is offered in YRS. A variety of academic, cultural, athletic, remedial, and artistic opportunities are offered to students during intersession (Rule, 2009).

Chapter two

Literature Review

History of Year-Round Education

Since 1904 in the state of Indiana, year-round education has been practiced in the United States for multiple reasons to accommodate students (Fischel, 2003). Some reasons for initiating year-round schools include; vocational training, helping immigrants learn English, and to limit school overcrowding (Glines, 1987).

There has typically been a substantial contrast between schools in major cities, and those located in rural areas; the length of the school's calendar year. Major cities had calendars that were usually 11 months long. Rural schools however, typically were only open for six months (Hermanson & Gove, 1971). The societal needs of rural schools were historically scheduled to allow agrarian lifestyles to flourish by supporting a workforce focused on planting crops and harvesting them within an extended summer break. It was sometime over the last 200 years that the formal establishment of the American Education System eventually lead to the unintended adoption of the 9-month school year with a 6-week summers vacation. Regional needs, and
Year-Round School Education: Academic Impacts and Trends.

cultural adoption of extended summer vacation, led to an eventual reliance of tourist and summer entertainment industries, employing and entertaining student youths on break. This segued into an eventual phenomenon coined by educators and researchers alike, known as “summer fade.” There have been many studies indicating measurable declines in academic retention. Especially in math, during the 6-8-week summer breaks. In one such study, it is claimed that as much as 3 months of academic setback can occur per grade level (Cooper, 1996). A comparable study found that students from various socio-economic backgrounds make similar gains during the school year as their peers, but those from low socio-economic groups, realize deficits during the summer months (Cooper, 1996). In contrast, high achieving students struggling to compete with their international peers have also seen benefit from schools with year-round programs that can provide accelerated programs (Coalition, 2009).

The National Association for Year-Round Education (NAYRE) was founded in 1972 as a government lobbying and advocacy group, focused on promoting the concept of year-round education. NAYRE is the largest and most active organization supporting conferences, training, and resources for schools transitioning from a traditional school calendar year to a YRS model. NAYRE coins itself as the most comprehensive clearinghouse of resources, consultants, publications, and knowledge, on year-round education. The group provides a good overview and explanation of the differences between traditional and year-round school models; year-round education 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. It does not eliminate the summer vacation, but reduces it and redistributes it as vacation or intersession time during the school year. Students attending an YRS 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
Year-Round School Education: Academic Impacts and Trends.

months, than the traditional school calendar. The balanced calendar minimizes the learning loss that occurs during a typical three-month summers vacation according to NAYRE. It’s a common misconception that YRS’ constitute a change from a nine-month calendar to a 12-month full-time calendar. This isn’t the case. The standard definition and approach to YRS’s scheduling still maintains 180 days of instructional time.

Reviews of articles and reports about schools that have tried and either succeeded or failed to ultimately implement YRS programs site several challenges that must be overcome:

- Adoption by parents and community is pivotal.
- Education and communication about all aspects of the transition from traditional to year-round must be carefully managed.
- Additional financial cost to run the program must be considered including staffing.
- A single-track versus multi-track system.

In 2014 Ann Arbor Michigan was one such school district that had received grant money from the State and after an initial communication, announcing plans to convert, pulled back the plans after substantial negative feedback from parents and the community. In reviewing the 2008 table compiled by the National Center for Educational Studies (NCES) it’s interesting to examine the scope at which different States have deployed or are deploying YRS models. For instance, only 17 states out of 50 have established policies on YRS. Whether the States have or have not established legislation or policy, is not preventing school systems from making the transition, as 20 additional states without policies have one or more districts operating YRS (http://nces.ed.gov). In total, 37 states at the time of this 2008 study were indicating they had schools operating under an YRS model. States such as California and Minnesota both topped the list with 130 and 134 districts respectively, implementing YRS calendars. Adoption varied
Year-Round School Education: Academic Impacts and Trends.

widely between the states in 2008 as in the case of Michigan, which has an established policy on YRS and only documented two such schools at the time. In contrast, Kentucky, which did not report an official State sanctioned policy, reported at least twenty-seven YRS. This 2008 study provides several footnotes that reinforce the picture of an inconsistent approach and attitude to the adoption of YRS models. Items of note include variation of definitions for what each State considers requirements for total instruction dates, and both the minimum and maximum break periods. Also of note is many states could confirm operation of some YRS but do not specifically indicate the exact number at the time.

In 2017 a research group, Statistic Brain, compiled information that provides an update to the status of YRS from a national perspective. Their datum indicates that between 1987 and 2016, there was an increase of 563% in schools implementing YRS programs. The report indicated there were 3,253 YRS operating in the United States. The report also collected data on the percent of total student population enrolled in year-round schools, indicating 13%.

Models of Year-Round Education. There are two primary formats of YRS, single-track, and multi-track schedules. Understanding the difference between the two models and between year-round education and traditional education is helpful when trying to analyze the data about each. According to some researcher’s, year-round education is described as a reorganization of the school calendar into instructional blocks and vacations, distributed across the calendar year to ensure continuous learning (Quinlan, George, and Emmett, 1987). For instance, the more common single-track schedules used 45, 60, or 90-day blocks of mandatory attendance followed by a three-week break. Often, the three-week intersession breaks, offers students the chance to attend additional remedial or enrichment classes with the intent of increasing exposure to the curriculum. In some, school’s libraries and other support staff, remain available (McGlynn, 2002). These single-track schedules were implemented for all students so they could all be in
Year-Round School Education: Academic Impacts and Trends.

session and off session simultaneously. The other benefit is the increase of continuous learning patterns and a reduction for substantial review sessions after a long summer break (Serifs, 1990).

Figures 1 and 2 provide a graphical representation of the traditional education calendar versus the year-round education model (National Association for Year-Round Education, 2018).

![Traditional School Calendar](image)

*Figure 1. Traditional School Calendar Adapted (National Association for Year-Round Education, 2018)*

The traditional calendar features a long summer vacation of 12 weeks followed by a long period of in-session days, with the first break coming at Thanksgiving. The winter holidays are followed by 55 in-session days before a short spring break (National Association for Year-Round Education, 2008).
Year-round school calendar

Figure 2. Single-Track 45-15 Calendar
Adapted (National Association for Year-Round Education, 2018)

The single-track calendar reduces the long summer break and apportions those days throughout the school year producing more frequent breaks and thus limiting long periods of in session days as well as longer vacations (National Association for Year-Round Education). The other model is known as multi-track and has primarily been adopted by districts looking to educate more students without having to build extra facilities. One multi-track option is the 60-20 calendar where students attend school for 60 days and are off for 20 days. This track had four schedules where only three-fourths of the students attend school at one time. One group (or track) of students are always on vacation. Information available on the different types of multi-track patterns is not exact, but it is estimated that at least 30 different scheduling patterns exist.
1) The *45-15 Single Track Calendar* is currently the most popular of the year-round calendars in which the year is divided into four 9-week periods, separated by four 3-week intercessions. Students and teachers attend school for 9 weeks (45 days), and then take a 3-week vacation (15 days). Schools operating under this plan, use 36 weeks or 180 of interactional time per year. Four additional weeks within a school year are assigned to winter holidays, spring vacation, and National, State, or local holidays.

2) The *45-15 Multi-Track Calendar* normally divides students into four groups or tracks. While the first three groups are in session, the fourth group is on vacation. When the fourth group returns, the first group goes on vacation. The rotation continues every 3 weeks, consequently providing 33% additional space in the building. Each track has its own 45-15 schedule of 9 weeks in school and 3 weeks on vacation (Rule, 2005).

<table>
<thead>
<tr>
<th></th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Group 2</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Group 3</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>Group 4</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

*Table 1: 45-15 Multi-Track Calendar.*
Adapted (Ramos, 2006).

Key:

- Instructional time
- Vacation/ Intersession
Chapter three

Description of the Research Design

Through a systematic review, the researcher evaluated the content, results, and findings from a wide variety of research studies conducted between 1992 and 2001. The result of this review should provide comparison and contrast of data for further understanding into the effectiveness in academic achievement, status and adoption rates for YRS versus traditional schools. The evaluation criteria for studies reviewed centered on research that provided good control groups and quantitative as well as qualitative data to draw comparisons. The minimum rules leveraged in deciding whether to include one study over another focused heavily on selecting study results that allowed for compare and contrast analysis but also allowed for adequate historical and regional context.

In 1992 Alcorn tested grades three, five, and six, on CAP and grade five on CTBS to compare year-round education and traditional education students reading, language, and mathematic scores. His findings indicated that year-round students scored higher in all areas with the exception of grade five in language arts.

In 1996 Cooper conducted meta-analysis looking at a vote count, method, and size effect in which 39 studies and meta-analyses were compiled. The intent was to examine summer learning loss in mathematics and reading to the traditional school calendar. The results showed that there was in fact, a loss of learned material in mathematics for all students and a loss of learned material in reading for disadvantaged students.

In 1993 Grotjohn and Banks utilized vote count method, data collection, and requested complete studies listed by NAYRE. Their purpose in this study was to create a synthesis of YRS
Year-Round School Education: Academic Impacts and Trends.

and achievement to determine if YRS make a difference. Ultimately, they found that there were no adverse effects on academic achievement for most students.

In 1996 Kneese conducted a program evaluation on grade five and seven in three separate socio-economic schools, matched year-round education to traditional, data collection, used Rasch scores with achievement and growth scales (RIT); data analysis descriptive mean scaled scores and inferential analysis of variances. The purpose was to analyze the effect of year-round education on student differences in learning. Findings suggested that gain scores favor single-track year-round education with the exception of one. Statistical significance was found in half of the comparisons with year-round education most beneficial for math and high socio-economic status students. Hawthorne effect was possible for third year although year-round education was positive, it was less so in year three.

In 2000 Kneese used meta-analysis, vote count, inferential statistics, descriptive statistics, and thirty-six studies comparing year-round education to traditional education. This endeavor was meant to review student learning in a research synthesis relating to achievement for local decision-making. The findings showed that for at-risk or economically deprived students, year-round education was best in reading; year-round education academic performance is generally equal to, or better than, traditional education.

Also in 2000 Palmer and Bemis used meta-analysis and the vote count method of statistically significant directional findings of studies from 1980 to 1997. Their purpose was to compare academic achievement of year-round education and traditional education students. Findings indicate that 27 of 33 comparisons indicated significant positive effects of year-round education on achievement. Eleven of 13 in reading, and nine of 11 in math showed important
positive differences. Students attending year-round education perform as well if not better than traditional students.

In 1993, Six used meta-analysis, vote count method, and data collection from two groups. One group was in the program for two years and there were three testing points. The control group and group two, did not meet all three criteria. Lastly, data from 13 studies conducted from 1980 through 1992 were reviewed and analyzed. The purpose was to review achievement in year-round education and traditional education. The results were that ten favored year-round education where seven of ten were statistically significant. Three statistically significant were not reported, as the results were inconclusive.

Winters conducted research in 1995 using meta-analysis, vote count method, and data collection from 1991 through 1995. The focus was on year-round education over two years with statistics based on three testing points or comparison groups. The studies were in two groups; one that met all specifications and one group that did not. The purpose was to review studies relating to achievement of students enrolled in year-round education. The results were of 19 studies. The test results were mixed yet favorable for year-round education. Year-round education had 54 out of 64 categories that had net positive results. Traditional education had three out of 64 categories that had positive results. There were seven mixed findings.

**Study Limitations.** Research targeting year-round and traditional schools, although abundant, is varied and often contradictory in its findings. There are many attributing factors that seem to limit the scope or specificity of any conclusions that can be drawn. Some such factors include variations in:

- Required instructions days (over 180).
- Application of break and session lengths.
Year-Round School Education: Academic Impacts and Trends.

- Grade levels.
- Mid-year or multi-year changes to the nature of the schedule.
- Addition of other curriculum elements impacting performance.
- How long groups have participated
- Finding similar groups to study.

Studies reviewed this research, included topics such as effects of YRS on satisfaction levels of teachers, facility utilization, student achievement, and financial impact. Because of the nature, size, and complexity of most school systems, there are many other variables that could affect the results for these types of studies. For instance, if a school that has just transitioned from traditional calendar to a year-round model, also makes changes to class size, grade level configurations and resource allocation, it would be hard to differentiate the effect of any of those separate variables.

Chapter four

Data analysis

The primary question this study is exploring, is how academically effective, YRS are in the United States for sustained learning improvements, when compared to traditional schools? It is apparent that a review of the referenced research and an evaluation of current trends relating to adoption rates of traditional schools converting to YRS, will provide an improved understanding of the state of year-round education. This study conducted a systematic review of eight major research projects, which included data and results collected from a total of 161 studies completed from 1980 through 2000. The overwhelming majority of these results had at least some importance in their findings, showing there were positive gains in academic achievements for
Year-Round School Education: Academic Impacts and Trends.

year-round schools. Some groups in correlation to YRS, benefited more than others; such as low socioeconomic groups, or specific subjects.

In each study test results were reviewed in relation to various factors. Data from nearby schools regionally or similar in socio-economic status were analyzed for changes over time in academic performance and or in relation to any metrics showing improvement in retention. These data points were compared and contrasted between YRS and non-YRS with the intent to identify trends.

Cooper’s 1996 investigation into 39 studies looking at learning loss in mathematics and reading contrasted between year-round school and traditional school reported affirmations that loss did occur. Analysis indicated that learning loss equaled about one month on a grade level equivalent scale, or one-tenth a standard deviation to spring test scores. The effect was more impactful on math than on reading with the most substantial impact on math computation and spelling. Middle socio-economic level students actually gained on test scores over summer while lower socio-economic students lost on ground on their scores.

In Kneese’s 1996 study of six elementary schools in three different levels, low socio-economic, medium socio-economic, and high socio-economic schools compared a YRS and traditional school. In each group there were some definitive results captured. As shown below in table three, YRS outperform traditional schools in gains at all three socio-economic levels, and in both mathematics and reading test scores. Some gains were statistically insignificant but still provide a good base line for review. In another 1996 Kneese’s study (that look at results over four years) it was also found that after three years there was diminished gains indicating the Hawthorne effect. The overall results still found statistically significant gains for year-round schools.
Table 2: Comparison of District Level Test Scores in Reading for Year-Round Education (YRE) and Traditional Education (TE). Data displays by School Social Economic Status (SES) level.

Adapted (The Impact of Year-Round on student learning: a study of six elementary schools by C. Kneese, 1996).
Year-Round School Education: Academic Impacts and Trends.

Gains in Mathematics

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High-SES Schools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School A (YRE)</td>
<td>199.93</td>
<td>213.27</td>
<td>13.34</td>
</tr>
<tr>
<td>School B (TE)</td>
<td>207.88</td>
<td>216.29</td>
<td>8.42</td>
</tr>
<tr>
<td><strong>Mid-SES Schools</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School A (YRE)</td>
<td>196.95</td>
<td>204.62</td>
<td>7.67</td>
</tr>
<tr>
<td>School B (TE)</td>
<td>201.33</td>
<td>207.28</td>
<td>5.95</td>
</tr>
<tr>
<td><strong>Low-SES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School A (YRE)</td>
<td>179.07</td>
<td>206.23</td>
<td>9.16</td>
</tr>
<tr>
<td>School B (TE)</td>
<td>197.27</td>
<td>206.04</td>
<td>8.77</td>
</tr>
</tbody>
</table>

*Table 2: Comparison of District Level Test Scores in Reading for Year-Round Education (YRE) and Traditional Education (TE). Data displays by School Social Economic Status (SES) level.*

Adapted (The Impact of Year-Round on student learning: a study of six elementary schools by C. Kneese, 1996).

With the wide scope of studies collected over the last 20 years on academic gains made by students in year-round schools in comparison with traditional schools there is still lots of discussion about any of those being absolute in their findings. The multitude of variables and co-variables that impact significance will likely be a challenge into the future. It’s for this reason that reviewing historical records and statistics on adoption rates for year-rounds schools offers both a cultural and practical opportunity to compare those data points against some of those same variables to attempt to find cause.

In addition to reviewing quantitative and qualitative studies into academic performance gains of year-round education in contrast to traditional education, it’s also valuable to see what the adoption rates for year-round education has been over time. In table 2, from 1985 through
2001 there was a 364% increase in the number of year-round schools. The number of schools in that time frame went from 441 in 1985-85 up to 2,983 in 2000-2001. Student enrollments increased 1,638% from 354,087 students up to 2,162,120 in 2000. In the revised 2016 study compiled by Statistic Brains shown in table 3, the adoption rate for year-round education continued to climb to 3,253 schools operating with this model. From 1987 through 2016, there was a 563% sustained increase in the total number of year-round education.

<table>
<thead>
<tr>
<th>Trend of adoption of Year-round calendar school across nation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1985-1986</strong></td>
</tr>
<tr>
<td>States</td>
</tr>
<tr>
<td>Districts</td>
</tr>
<tr>
<td>Schools</td>
</tr>
<tr>
<td>Elementary</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Special</td>
</tr>
<tr>
<td>Enrollments</td>
</tr>
</tbody>
</table>

*Table 2: Year-Round Education in United States from 1985-2001. Adapted (National Association for Year-Round Education, 2018).*

<table>
<thead>
<tr>
<th>Year-Round Education (YRE) Statistics</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent increase in year-round school implementations from 1987 – 2016</td>
<td>563 %</td>
</tr>
<tr>
<td>Number of year-round schools in the U.S.</td>
<td>3,253</td>
</tr>
<tr>
<td>Percent of public school children enrolled in year-round schools</td>
<td>13 %</td>
</tr>
</tbody>
</table>

*Table 3: Adoption Rate of Year-Round Education from 1987- 2016. Adapted (Statistic Brain Institute, 2017).*

Adoption rates for school systems converting to year-round models is consistently high over large periods of time overall. This data is a little miss-leading in that the distribution of these schools and students is not evenly dispersed. There are States such as Michigan that
Year-Round School Education: Academic Impacts and Trends.

currently only lists two public schools officially as year-round schools with a couple of additional charter schools in that mix. California and Minnesota according to 2008 data were the top two adopters with at least 130 school districts each running year-round schools (NCES, 2008). What available data does not indicate is if these year-round educational facilities are operating as single or multi-track locations. States such as California would have more incentive to deploy multi-track schools to solve for accommodating large increases in student population. Agricultural and recreational states like Michigan or Iowa might struggle with large expansions due to some workforce and cultural proclivities towards shortening the summer break from the traditional calendar.

Chapter five

Summary

Research on year-round education programs is often confusing and contradictory to the data making it difficult to draw specific conclusions on its effectiveness. Comparing results is problematic when trying to filter out differences in timing, implementation, single-tier versus multi-tier, and other programs and factors that can independently affect results on achievement gains and success rates. Based on a broad review of the studies and research available it can be concluded that most schools make the transition to year-round programs for one of two reasons:

- To enhance and improve impact of instructional time while reducing summer fade.
- To increase utilization of current facilities to meet space needs because of enrollment spikes.

Research on YRS that adopted the multi-track system indicate there are benefits and cost savings to increase building utilization and alleviate overcrowding. Many schools see the savings associated with not having to build new schools every time enrollment increases. The
multi-track system allows a school building designed to handle 750 students to accommodate as many as 1000 students when they are grouped into three or four groups, staggering their attendance. Although school districts may find savings using the multi-track approach to avoid the massive cost of planning, engineering, licensing, building, and staffing a new building, there are still additional cost considerations that must be considered when increasing utilization of a building. Such costs include additional heating/cooling, maintenance, labor cost associated with staffing teachers, and support staff.

Academic gains are probably just as important if not more, than increased building utilization when it comes to why a growing number of schools are making the transition to YRS. Most schools that are looking to make gains in academic retention and performance are typically practicing a single-track model of the year-round education system. Multiple studies have sited positive gains in academic performance, specifically when it comes to elementary levels or correlating low income and high-risk students. Gains in other socio-economic groups and for high performing students were marginal. With respect to performance gains for all grades and overall improvements for student bodies as a whole, more studies are needed to properly evaluate the large number of variables and track results over time. Additional benefits that have often been sighted by various studies involve improvements to teacher morale and work-life balance. Some factors cited, are more frequent and consistent breaks, stabilization of instruction time, less review time resulting from summer fade, and more progress and gains made by students, all lead to positive morale gains in the teaching staff. Working parents of students at YRS also found some benefits in complimentary programs in for form of remedial and enrichment classes during intersession.

The last and most interesting piece to understanding the current state of year-round school in the United States is the historical and current adoption rate of schools converting from
Year-Round School Education: Academic Impacts and Trends.

traditional to one of the year-round school models. Data from the early 1980’s to present has shown sustained growth in the number of schools and the number of enrolled students in year-round education. Regardless of the challenges to find definitive proof showing that all aspects of year-round school are better than traditional models, the trends showing sustaining increases in the number of schools adopting year-round education models is telling.
Year-Round School Education: Academic Impacts and Trends.

References


Year-Round School Education: Academic Impacts and Trends.


Year-Round School Education: Academic Impacts and Trends.


