

The Influence of Year-Round Schooling on Reading Achievement

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by

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Abstract

The purpose of this investigation was to determine if there was a difference in reading achievement levels of students attending a year-round school as compared to students attending a traditional 9-month school. The study further examined student attitudes with regard to self-perceived reading skills and reading enjoyment, and whether there was any association between attitudes toward reading and the type of school attended.

Participants in the study consisted of two classes of students who were in fourth grade during school year 2010-2011: one class was from a year-round school, and the other class was from traditional 9-month school. Students were given an 11-question survey to determine student attitudes and perceptions toward their reading ability. A comparison of reading scores as measured by the Ohio Achievement Assessment for academic years 2009 through 2011 was made. The surveys were administered separately to the two classes and a comparative analysis between the two groups (year-round versus 9-month students) was made. While the results indicated that the students in the year-round school had more positive attitudes toward reading, the data regarding reading proficiency levels yielded mixed results.

The purpose of this investigation was to determine if a correlation existed between the achievement scores of students attending a year-round school and students attending a traditional calendar school on the Ohio Achievement Assessment (O.A.A.) in reading. A comparison was also made of student attitudes regarding skill level and reading enjoyment between the two types of schools.

The idea and practice of year-round schooling has been a topic of interest in the United States for over a century. Numerous reasons to implement a year-round school calendar have been advanced, including space-saving measures, greater ability to provide programs for struggling students, more opportunities for vocational training, and to better help students for whom English is a second language (Ballinger & Kneese, 2006). Some studies have also focused on the effects of “summer loss” of learning, and whether year-round schooling reduces summer loss (Huebner, 2010). Today, with the onset of “high stakes” testing, school districts are once again seriously considering or have moved to a modified, balanced year-round calendar as a way to improve overall achievement and give American students a competitive edge in the world.

The National Association of Year-Round Education (NAYRE) estimates that during the 2006-2007 school year approximately 3,000 schools (including public, charter, and private schools) in 46 states and the District of Columbia were considered to be year-round schools and operate on a modified, balanced school calendar. The types of schools operating year-round include a wide variety of school environments, from K-12, rural to suburban, and in public, charter, and private settings with small (15 students) to extremely large populations (up to 5,000 students) (Ballinger & Kneese, 2006).

Over the past 20 years, researchers in the field of education have brought to light the idea of summer loss and are diligently trying to find a way to raise American students' achievement. Summer loss can be thought of as the loss of academic skills over the summer vacation period. Students seem to forget an inordinate amount of material learned the year before when they return to school in the fall. The concept is not new to the classroom teacher. Every fall in schools that follow the traditional school calendar and operate from September through June, there is the need to review previously taught material.

Years of research have yielded a mixed picture on the benefits of year-round schooling with regard to student achievement (Shields & Oberg, 2000). Shields and Oberg share that there is a plethora of research writing taking a position either for or against calendar reform, although in most studies, there is marginal distinction between single-track and multi-track year-round schooling. The issue is further complicated in many studies by incomplete explanations regarding how success or failure of year-round schooling was measured. It is also noted that sometimes in a school district's haste to evaluate the effects of the new year-round school calendar; many studies were conducted in the first year of implementation. "The literature reinforces common wisdom that assessment and evaluation of new programs cannot be conducted reliably within the first year of a project" (Shields & Oberg, p. 76).

Defining Year-Round School Calendar and Traditional School Calendar

In order for a school to be considered a year-round school by NAYRE there cannot be more than eight consecutive weeks of vacation. A year-round calendar allows for continuous education with a shorter summer vacation and more frequent breaks

during the periods of instruction. Two basic forms of year-round calendars are frequently used: single track and multi-track. According to NAYRE,

Single track provides a balanced calendar for a more continuous period of instruction. Students and all school personnel follow the same instructional and vacation schedule. Single-track does not reduce class size, nor does it allow a school to accommodate more students. The long summer vacation is shortened with additional vacation days distributed throughout the school year into periods called "intersessions." Intersessions allow time for remediation and enrichment throughout the school year. The most common types of single-track calendars are 45-15, 60-20 and 90-30. (www.nayre.org/cal.htm)

On the other hand, according to NAYRE,

Multi-track is used primarily to alleviate overcrowding, although it also incorporates the educational values of single-track YRE, including intersessions. It was designed specifically for schools with a shortage of classroom space. Multi-track is used to avoid double sessions, building new schools and temporary structures. It not only saves on capital construction costs, but on the ongoing costs that are part of operating a new school. Multi-track divides students and teachers into groups, or tracks of approximately the same size. Each track is assigned its own schedule. Teachers and students assigned to a particular track follow the same schedule and are in school and on vacation at the same time. Multi-track creates a "school-within-a-school" concept. (www.nayre.org/cal.htm)

In this research study, only a single track calendar elementary school was studied. This elementary school has been a year-round school for eleven years and follows a modified calendar.

A traditional calendar school is a school that follows a calendar with an extended summer vacation of 10-12 weeks. Over the years, this calendar has been adjusted with regard to start and end dates for the school year. The traditional elementary school used in this study is considered to be the traditional calendar school for the purpose of this research, with school beginning in August and ending in May.

The question as to whether year-round schooling raises achievement scores is one that continues to be raised and one that is rather difficult to answer emphatically. There are numerous variables to consider when looking at research, including the research design and methodology (Huebner, 2010). Worthen and Zsiray (1994) and Cooper et al. (2003) performed meta-analyses and have arrived at the following conclusions:

- academic performance of students attending a year-round school was as good or slightly better than the academic performance of students attending a traditional school,
- students in families considered low-income appeared to benefit from attending year-round school,
- and positive attitudes toward year-round education were found in students, parents, and educators alike.

Numerous studies have demonstrated that growth in student achievement may be associated with year-round education (YRE), although trying to identify what has actually been the driving force of the gains has not been thoroughly researched (Shields

& Oberg, 2000). Regardless, the research literature suggests some possible theories: a change in the school calendar results in changes in curriculum and instruction that help minimize the effects of summer loss. Alternatively, the fact that students attend intersessions for remediation, enrichment, or acceleration may account for the reduction in summer loss (Shields & Oberg, 2000).

Intersessions are defined as periods of time which occur during the vacation periods that give students in some schools access to remediation, enrichment, or acceleration programs. During the intersession periods, students that are below achievement levels in reading and math receive remediation or advanced enrichment that may also include cultural, athletic, and artistic opportunities away from the school atmosphere. These sessions are voluntary; however, some schools receive Title I funds to support students that are from low-income families or have English as their second language. It should be duly noted that intersessions are not “fillers” but are part of the state curriculum and standards guidelines (Ruggiero, 2008). In theory, when students attend intersession, they are voluntarily extending their school year by as many as twenty days if they attend a one-week intersession after each regular grading period.

Intersessions may seem to be a sort of compromise between year-round and traditional calendar schools, or even a combination of the two. Intersessions result in a greater number of days of schooling, and consequently shortened breaks between school sessions. However, year-round schooling does not necessarily mean students attend school for a greater number of days than those attending traditional calendar schools. In the current study, for example, students in both types of calendar schools actually attended the same total number of days (180 days, as mandated by the Ohio Department

of Education requirements). As shown in Figures 1 and 2, while the total number of days is the same for each school calendar, the length of time between school sessions is decreased for the year-round calendar school. Intersessions may be available in either type of school calendar programs, however, they would increase the number of days of school attended for those participating in the intersessions, and reduce the time between regular school sessions.

Figure 1

2010-2011 Traditional School Calendar

Sessions	Number of School Days
1st nine weeks (Sept)	37
Fair Week	5
1st nine weeks cont.	9
2nd nine weeks	48
Winter Break	8
3rd nine weeks	43
4th nine weeks	43
Summer Break	54
Total Days (weekends excluded)	247

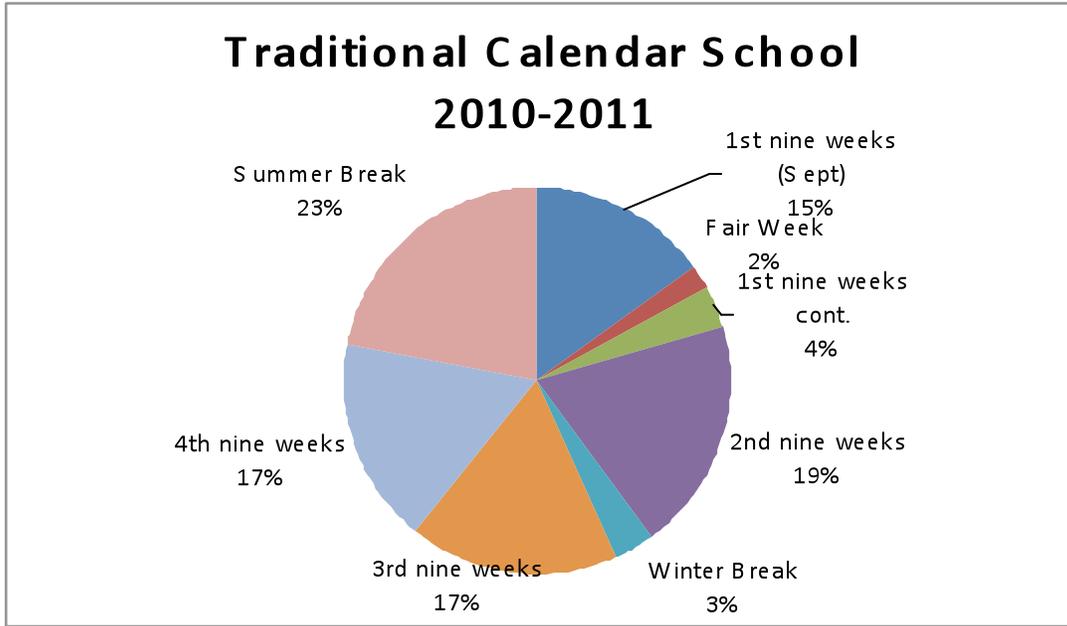
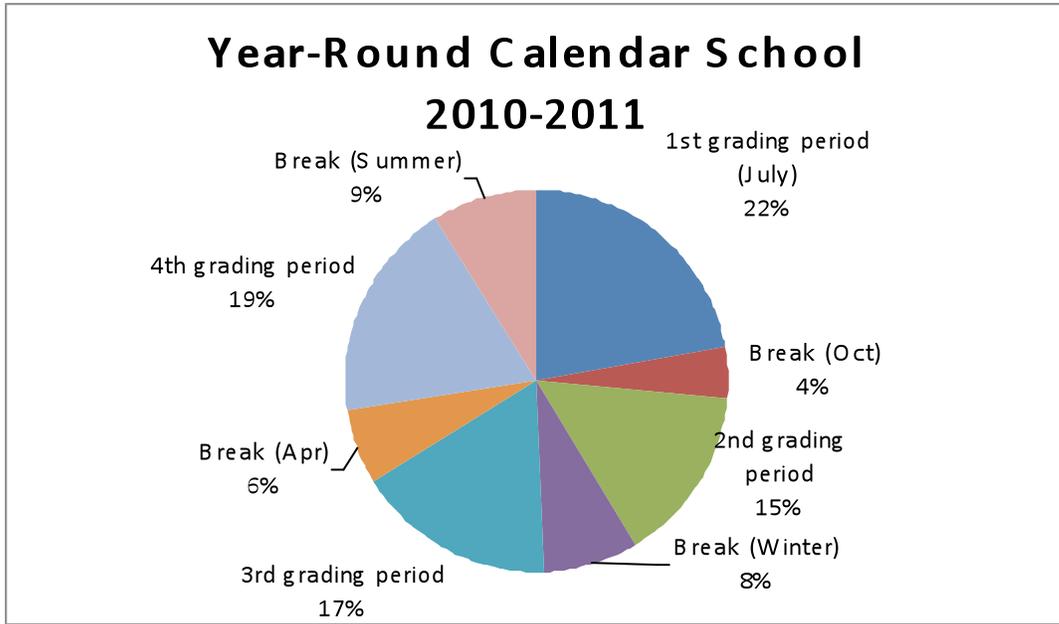


Figure 2

Year-Round School Calendar

Sessions	Number of School Days
1 st grading period (July)	55
Break (Oct)	10
2 nd grading period	37
Break (Winter)	20
3 rd grading period	41
Break (Apr)	16
4 th grading period	46
Break (Summer)	22
Total Days (weekends excluded)	247



Ultimately, other variables may influence the degree of summer loss and any effect of altered school calendars. Some research suggests that students of low socioeconomic status realize the greatest benefit from year-round schooling (Entwisle & Alexander, 1992), due to the lack of educational opportunities and limited resources outside the school setting. Two studies by Bracey in 2002 indicate that summer loss is a greater problem for students of low socioeconomic status than for students from middle or high income families. Similarly voluntary reading programs over the summer months that may effectively substitute as intersessions, appear to reduce the amount of summer loss and prevent decline in reading achievement (Kim, 2004; Malach & Rutter, 2003).

Research to determine the success or failure of year-round calendar schools in promoting student achievement has been conducted for many years. Research efforts have typically focused on whether or not year-round schools are more or less successful in helping students learn and retain information than traditional calendar schools. The current study seeks to determine if there is a difference in reading achievement levels and

in student self-perception of reading ability between year-round and traditional calendar schools.

Method

The purpose of this investigation was to determine if there was a difference in reading achievement levels of students attending a year-round school as compared to students attending traditional 9-month school. The study further examined students' attitudes with regard to self-perceived reading skills and reading enjoyment and whether there was any association between attitudes toward reading and the type of school attended.

Participants

The study was limited to one class of 27 students that had been in the fourth grade during the 2010-2011 school year, attending a year-round school, and one class of 19 students that had been in the fourth grade during the 2010-2011 school year attending a traditional calendar year school in the school district where the researcher teaches.

This study involved a total of 46 students that during the previous year had been enrolled in the fourth grade. Nineteen students from the fourth grade during the 2010-2011 school year residing in the school district where the researcher teaches and attending a traditional calendar school participated in this survey. Packets that included a letter describing the study, consent form for parents, and a researcher-created survey were mailed to the researcher's fourth grade class of 2010-2011, along with a self-addressed postage paid envelope to return the completed survey and parent consent to the school. Sixty-three percent of the consent forms and surveys were returned to the school and included in this research.

Twenty-seven students in the fourth grade during 2010-2011 school year attending a single-track year-round school were given parent consent forms to take home and have parents complete and return before being given the opportunity to complete the student survey. Forty-four percent of the students responded to the survey. All participants in the study remained anonymous. The only identifiers used were those indicating whether the student attended a year-round school or a traditional calendar school.

The results from the Ohio Achievement Assessment (O.A.A.) in reading taken in the spring of 2010 were obtained from the Ohio Department of Education website. The preliminary results for the spring O.A.A. taken in April 2011 were obtained from school principals because they had not yet been published on the Ohio Department of Education website at the time this research was being conducted (however, these results will eventually be available to the public).

Procedure and Instrumentation

The study compared O.A.A. reading scores of students attending one year-round school and one traditional calendar school during the 2009-2010 and 2010-2011 school years. The study investigated if year-round schooling had an effect on O.A.A. outcomes as well as if students' attitudes and perceptions of themselves as readers were different between year-round and traditional 9-month students.

An 11-item multiple-choice survey was given to 46 students that had been in a fourth grade class the previous school year (2010-2011). To determine attitudes and self-perceptions of students as readers, the researcher created an 11-item multiple choice survey. The survey and consent letters were mailed to the traditional calendar school

since the school was on summer vacation. For the year-round school, the consent forms were sent home with students, and parents that gave their student permission to participate returned the consent forms before the students were permitted to take the survey. Participants were asked to respond to a multiple-choice survey about their reading skills and attitudes that best described them as a reader. The researcher retrieved the surveys from both schools and analyzed the data. The actual survey can be found in Figure 3.

Figure 3

Survey for Fourth Grade Students

Please circle one:

- a) I attend a year-round school b) I do not attend a year-round school

1. Which of the following is your favorite subject(s) in school?

- a) Math
- b) Reading
- c) I like them both
- d) none of the above

2. How many books were you asked to read for school this year?

- a) less than 5 books
- b) 5-10 books
- c) 11-15 books
- d) 16 or more books

3. How much time do you spend reading each night?

- a) None—I only read at school.
- b) I read for 15 minutes each school night.
- c) I read for more than 15 minutes each school night.
- d) I read for more than 15 minutes each school night and also on weekends.

4. What kind of reader are you? Circle the one that best describes you as a reader.

- excellent good fair poor

5. Do your parents/guardians “bug” you to read?

- a) Yes, my parents/guardians always have to “bug” or remind me to read.
- b) No, my parents/guardians never have to remind me to read.

- c) My parents/guardians sometimes need to remind me to read.
- d) I read independently without being reminded to read.

6. When you took the Ohio Achievement Assessment (O.A.A.) how do you think you scored? Choose one and circle.

Limited Basic Proficient Accelerated Advanced

7. Do you think you improved on the O.A.A. this year from last year?

- a) I think I scored the same as last year.
- b) I think my score improved and moved to the next level up in reading from last year.
- c) I think I scored higher but remained in the same group (limited, basic, proficient, accelerated, advanced).
- d) I think I went down in my reading score on the O.A.A.

8. How long have you been at this school?

- a) I have attended this school one year.
- b) I have attended this school two years.
- c) I have attended this school three years.
- d) I have attended this school four years.

9. How many books have you read for your own enjoyment this year (not because you were asked to read them for school)?

- a) I haven't read any books on my own.
- b) I have read less than 5 books on my own.
- c) I have read more than 5 books but less than 10 books on my own.
- d) I have read more than 10 books on my own this year.

10. Do you read out loud to others?

- a) Yes, I like to read out loud to others.
- b) No, I don't like to read out loud to others.
- c) I have to be in the mood to read out loud to others.
- d) I will read out loud to others if I am asked to read.

11. How do you think your teacher would describe you as a reader?

 excellent good fair poor

Location

Two types of elementary schools were consulted for this study, traditional and year-round calendar schools. The traditional calendar elementary school serves students in grades 3-5. The approximate enrollment for the traditional calendar elementary school is 360 students. The traditional calendar elementary school is located in a rural area. The

year-round calendar elementary school serves students from preschool through 5th grade and has an approximate enrollment of 420 students. The year-round calendar school is situated in an urban area.

Data Analysis

The data obtained from the survey and the O.A.A. testing results were tabulated separately for each group. For each question on the survey, the percentage of the total responses was computed for each group so that a comparison could be made between the two groups as shown in Figure 4.

For the O.A.A. testing results, the percentage of students who were at or above proficiency level was computed for each group so that a comparison could be made between the two, as shown in Figure 5.

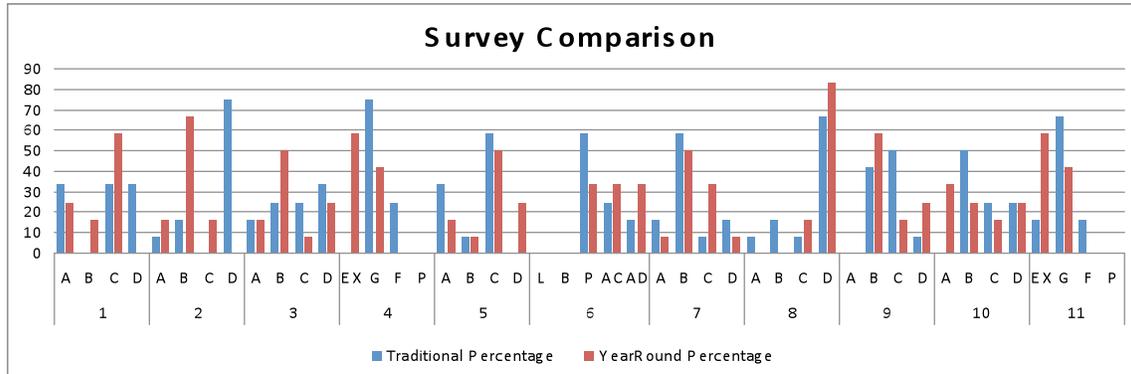
The O.A.A. testing results for the years 2009 through 2011 were obtained for the traditional calendar school and the year-round calendar school students to determine if there was a difference in the level of achievement between the two types of schools. The responses from the survey were used to determine if attitudinal differences and self-perception of reading ability existed among students attending each type of calendar school (traditional versus year-round).

Results

Results of the survey given to students yielded some interesting data. Overall, responses from students attending the year-round school indicated more favorable attitudes toward reading and also more positive perceptions of themselves as readers than students of the traditional school. A comparative summary of the response to the survey by both groups is depicted in Figure 4.

Figure 4

Summary of Responses by School



Reading and Math Enjoyment

Survey questions numbered 1, 5, 9 and 10 asked students about reading enjoyment. In response to question 1, none of the students attending the traditional calendar school indicated reading as their favorite subject; 17% of the year-round students named reading as their favorite subject. However, 58% of year-round students favored both reading and math, while only 25% of traditional calendar school students favored both subjects; while 38% of traditional calendar school students and 0% of year-round students indicated they preferred neither reading nor math.

In response to question 10, 33% of year-round students indicated they enjoy reading aloud, while none of the traditional calendar school students said they enjoyed reading aloud. However, 50% of the traditional calendar school students indicated they had read more than five books for pleasure over the past year, compared to only 17% of the year-round students (question 9). Twenty-five percent of the year-round students indicated they read independently, without being compelled by parents, while none of the traditional calendar school students indicated they read independently (question 5).

Reading Homework

Questions 2 and 3 asked about the amount of homework or assigned reading students performed. Responses to both questions appear to indicate that students in the traditional calendar school year school read more books and spend more time doing reading as homework than their counterparts in the year-round school.

Perceived Reading Skill/Proficiency

Questions 4, 6, 7 and 11 of the survey dealt with how the students perceived themselves as readers with regard to skill and proficiency. Fifty-eight percent of the year-round students perceived themselves as excellent readers, while none of the traditional calendar school year students indicated they thought of themselves as excellent readers (question 4), although none of the students perceived themselves as “poor” readers in either group.

Fifty-eight percent of the year-round students thought their teachers would describe them as excellent readers and 100% as either good or excellent, while only 76% of the traditional calendar year students thought their teacher would describe them as good or excellent readers. Again, none of the students in either group indicated their teacher would describe them as poor readers (question 11).

About two-thirds of the year-round students thought they scored at an accelerated or advanced level on the Ohio Achievement Assessment (O.A.A.), while about half of the traditional calendar school students thought they scored at an accelerated or advanced level (question 6). However, 50% of students in both groups indicated they thought their scores on the O.A.A. would show improvement over prior test scores.

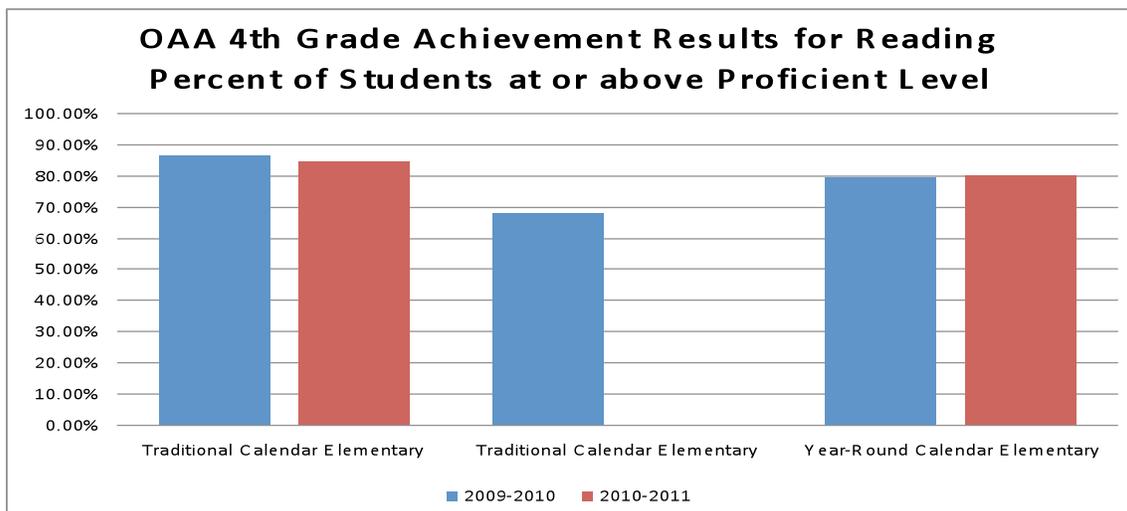
Ohio Achievement Assessment (OAA) Results

Results of the Ohio Achievement Assessment for students attending traditional calendar and year-round schools are shown in Figure 5. Data from the 2009-2010 school year were available for two traditional calendar year schools, and for one year-round school. The more recent results from the 2010-2011 school year were only available for one traditional calendar school and one year-round school. The percent of students who scored at or above the proficiency level was about 80% for the year-round school for both years, with little or no change from one year to the next.

The percentage of proficient or better students at another traditional calendar year school located in the same part of the city as the year-round school in this study were lower, with about 68% of the students at or above proficiency level. The highest percentage of students at or above the proficient level was found to be at the traditional calendar school included in this study, with about 85% or more students scoring at or above proficiency for both years.

Figure 5

OAA 4th Grade Reading Results



Discussion

The results of the current study indicate that students attending the year-round school have more positive attitudes and self-perceptions with regard to reading ability than students in the traditional calendar year school. Also, O.A.A. results for the year 2009-2010 indicate about 10% more students were at or above the proficient level at the year-round school than a 9-month school located in the same part of the city.

However, for the traditional calendar year school included in this study, located in another part of the state, there was a higher percentage of proficient students as compared to the year-round school (by about 5%), for both the 2009-2010 and 2010-2011 academic years.

The current study suggests that year-round schooling may help to foster positive attitudes and self-perceptions with regard to reading skills, and may or may not yield equal or higher levels of reading proficiency. However, it must be acknowledged that the sample size for the study is small, and drawn from a limited number of schools, and that other variables may account for differences in the data between groups.

Interestingly, the data from the survey indicated that the year-round students may be assigned less reading homework than their counterparts in the 9-month school, suggesting that positive attitudes toward reading could correlate with less reading homework. Also, possible differences in socioeconomic status between the two groups were not accounted for in the current study.

Another factor that might have influenced the results is that the year-round school was located in a major city in Ohio, while the traditional calendar year school used for the study was located in a more rural setting. Finally, the O.A.A. results for the year

2010-2011 were not available to the researcher for the 9-month school which was located near the year-round school, so it is unknown if the 10% difference in proficiency between the two seen in the 2009-2010 scores would have remained consistent during the more recent assessment period.

The concept of year-round schooling as a possible means of improving reading achievement and overall academic success of students in the United States remains a controversial topic for which further study is warranted. While some positive conclusions from the current study with regard to the effects of year-round schooling are tempting, further research may yield less encouraging results.

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