

To the Graduate Council:

I am submitting herewith a thesis written by Melanie S. Pritchard entitled "An Examination of the Effect of Year-round Scheduling on Student Attendance." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Human Ecology.

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AN EXAMINATION OF THE
EFFECT OF YEAR-ROUND
SCHEDULING ON STUDENT
ATTENDANCE

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

Melanie S. Pritchard
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DEDICATION

This thesis is dedicated to my husband and son,

Danny Pritchard and Nathan Spaustat

who have been the true happiness in my life.

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ABSTRACT

Year-round school scheduling is an alternative being explored by various school systems throughout the country. Alcoa High School has adopted a year-round schedule in the 2000-2001 school year from the traditional schedule used in 1999-2000. This research examined data using descriptive statistics to describe the relationship between student attendance rates within each scheduling type, by comparing Alcoa High School findings to other high schools in the area.

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CHAPTER I

Introduction

The year-round school schedule, first implemented during 1904, has grown to 3,000 school systems using year-round schedules in the year 2000 (<http://www.nayre.com>, 2001). School systems choose to implement year-round education for various reasons, including promoting student retention, achievement, and attendance. Year-round school scheduling as an alternative to traditional school scheduling is being examined and practiced. The controversial year-round school scheduling can consist of drastic changes to the days when students attend school. Information about year-round school scheduling is lacking in numerous areas. The study will examine one area of question as it attempts to determine the relationship between year-round scheduling and attendance rates of high school students.

Regular school attendance is an important factor in a student's self-esteem, academic achievement, and building of peer relationships (Weitzman, 1986). Since excessive absences challenge the ability of school systems to support students in achieving academic success, school systems must continually address the issue of absenteeism. "A recent study from Minneapolis found that students who were in class 95 % of the time were twice as likely to pass state language-arts tests as students with attendance rates of 85%. School districts are revising their rules on attendance in an effort to meet the demands to raise achievement test scores" (Johnston, 2000). The need of research focusing on attendance rates has been a long time concern.

Gee (1997) states that one way to address the changing demands of our society is to radically alter traditional school scheduling. Traditional scheduling allows for longer summer breaks but fewer vacation days within the school year. Alternative scheduling allows for shorter summer breaks but more vacation days within the school year. Could alternative scheduling lower absentee rates by offering increased breaks throughout the school year and decreasing the length of summer vacations? This study focuses on the attendance rates of enrolled students of Alcoa High School that recently changed from a traditional to a year-round schedule.

This chapter contains a Statement of the Problem, Statement of Purpose, Definition of Terms, Research Questions, Hypothesis, Rationale for Study, Assumptions, Limitations and Delimitations.

Statement of the Problem

School systems are exploring alternative programs such as year-round education to address student attendance concerns. Inadequate information is available concerning the effect of year-round scheduling on attendance.

Statement of the Purpose

The purpose of this research is to examine the relationship between school schedule types and student attendance rates and determine whether the benefits outweigh the risks involved of implementing year-round scheduling. Attendance and academic success are interdependent and scheduling options should be explored.

Definition of Terms

The following terms have been operationally defined for this study:

Traditional Scheduling - school schedule where students attend classes mid August to late May each year. All figures and tables are placed as appendices in this study. Figure 1 offers a visual comparison between traditional and year-round school schedules.

Alternative Scheduling - any school schedule other than the traditional mid August to late May school year.

Year-round Education- a modified school calendar that offers more breaks throughout the school year with a shorter summer vacation compared to a traditional schedule that offers fewer breaks during the school year with a longer summer vacation.

Student absentee - when a student did not attend at least two blocks of the four available each school day. The student is considered absent from each block if he/she missed more than ten minutes of the class.

Intersession – instructional periods of time rescheduled from summer vacation and redistributed within the school year under year-round education. They can be used as vacation but are usually utilized as time for student remediation and enrichment.

Attendance rate- the average number of days where students attended school divided by the average number of days students were enrolled.

Research Questions

This study will address the following research questions:

1. What were the demographics such as gender and grade classification of the Alcoa High School students during the 1999/00 and 2000/01 school years?

2. What was the student attendance rate under each scheduling program, 1999/2000 traditional schedule vs. 2000/2001 year-round schedule?
3. How does the Alcoa High School alternative schedule affect attendance for the years examined in comparison with other school systems located in the same county?

Hypothesis

There is no significant difference in student attendance rates from the Alcoa High School 1999-2000 traditional schedule to the 2000-2001 year-round schedule.

Rationale for the Study

“As important as it is to stress student achievement and to focus educators and the public on raising academic standards, strengthening curriculum, and improving test scores, the simple fact is that these efforts will not amount to much if students aren’t in school. One of the stronger findings from education research is that attendance and achievement are linked--time on task matters” (Hoachlander, Dykman, & Godowsky, 2001). Attendance is a major concern of teachers, some of whom have implemented classroom programs to promote attendance. Such programs include “having drawings for prizes to reward students who have not missed class, reading suspenseful novels aloud to classes, and using a time clock to track attendance” (National Education Association, 2001). Societal trends have changed the role of schools; in many instances the schools are expected to do much more parenting than in years past (Gee, 1997). The historical concern of parents to ensure student attendance is now being assumed by the school systems. By researching alternative ways of addressing the ever-existing issue of attendance, educators are expanding their roles to meet society’s demands.

Year-round education (YRE) is not a new idea (Gee, 1997). The first school systems to utilize YRE were in New York and Baltimore, and their schedules are currently being implemented by a number of United States school systems (Fager, 1997). Fager (1997) notes that many schools are adopting these schedules and are finding advantages.

Alternative schedules are used throughout the country and were implemented due to various reasons, such as overcrowding (Gee, 1997). McCord (1997) focused on efficient financial use of facilities to house a larger number of students enrolled in schools by utilizing a multi-track year-round schedule. He stated that Ontario's Ministry of Education has 10 techniques to increase facilities utilization, including innovative scheduling such as year-round education. Researchers suggest that additional benefits of year-round scheduling be examined (Shields & Oberg, 1999).

Several modified versions of YRE are discussed by Gee (1997). One version is referred to as the 45-15, meaning that the students have 45 days in the class and then a 15-day break. The 60-15 version represents 60 days in class followed by a 15-day break. Some schools have chosen modified versions of these plans. Alcoa High School implemented the 45-10 plan for the 2000-2001 school year.

Vacations, summer sports and summer college classes for graduating high school seniors are issues to be addressed when debating year-round scheduling. Although families have shorter times to schedule summer family trips, they do have an option of planning vacations during off-season times with lower vacation expenses. By having a shorter summer break, however, popular summer spots such as beaches can become

excessively crowded. Schools must be proactive to resolve summer sport scheduling conflicts. Because Alcoa High School is a small school of approximately four hundred students, it was possible to make individual arrangements for students with sporting conflicts and summer schedules of upcoming college freshman. However, this would be a bit more cumbersome in a school system with a larger student enrollment and multiple high schools in the system.

The costs associated with YRE are a necessary factor to examine when deciding to implement and continue this alternative schedule and warrant further study. Serifs (1990) stated that the start-up costs under YRE, such as renovations to the school building or air conditioning, could be high. He also noted that there would be less time for major renovations and more required maintenance due to use (Serifs, 1990). Goldman (1990) said that the scheduling process is complicated and would require careful management.

Pittman, Herzog, and Ronan (1998) evaluated year-round education and found that the alternative scheduling caused certain disruptions, such as the planning of summer vacations, to the sense of community. The authors also found that although teachers, students, and parents possessed positive attitudes toward the alternative scheduling, there was no increase in the student attendance rate.

Several benefits of YRE have been addressed by previous studies. Serif (1990) noted that benefits of year-round scheduling are fewer incidences of juvenile delinquency and less vandalism during traditional summer breaks. Brekke (1997) found that over a four-year study, students had lower absences in year-round scheduling than in traditional

scheduling. The assumption is that students will be less likely to miss school days because a break from the routine is always soon to come. In addition, because a break is always soon to come, educators also had better attitudes (Shields & Oberg, 1999). With this positive change in attitudes, educators provide a more supportive, motivating environment where students are less likely to miss school days (<http://www.nayre.com/about.html>, 2001).

Under year-round scheduling, Levine and Ornstein (1993) stated that teachers experience less fatigue and burnout and Goldman (1990) noted lower absences of teachers on year-round scheduling. One study (O'Neal & Adamson, 1993) found that students often feel more motivated toward school under year-round schedules. Donahue (1998) praised YRE and stated that factors leading to the successful educational program include strong administration, community involvement, a well-trained faculty and staff, and year-round scheduling. His research supports YRE with findings that reflected that the change from a traditional schedule to year-round scheduling offered improvements in attendance and educational retention.

Fager (1997) reported that when researching the fit between year-round scheduling and a particular school system, one should first research YRE and critically question both the pros and the cons of the alternative schedule. Next, the community should be solicited for their input. Understandably, such a dramatic change will appear fearful from the onset, so the author suggests offering time to digest the idea of year-round scheduling and time to provide answers to possible questions. Lastly, the type of year-round schedule and the number of holidays allowed would have to be researched to

discover which type best fits the community's needs. Fager (1997) states that above all, flexibility is the key to implementing a successful year-round schedule.

Assumptions

One assumption made with this study and maintained throughout the research process, is that Alcoa High School attendance records for the 1999-2000 and 2000-01 school years are accurate.

Limitations

There are at least three limitations to this study. The first is that the study is limited to only one county, therefore findings will not accurately represent national findings. The next limitation is that the study focused on a smaller school (less than 400 students) than most neighboring high schools. The third is that only eight of the nine 20 day reporting cycles of data could be collected from the 2000-2001 school year (due to technology issues and personnel turnover at Alcoa High School beyond the control of the researcher). All three limitations are issues that the researcher acknowledged and understood their implications for the study.

Delimitation

The following delimitation was formulated in this study of YRE: this study compared attendance rates of students enrolled at Alcoa High School during the first eight of nine 20-day reporting cycles of the 1999-2000 and 2000-2001 school years. This data was then compared to the attendance rates of other high schools in Blount County, Tennessee.

CHAPTER II

Review of Literature

The following review of literature conveys various research and findings related to school scheduling types. This chapter includes sections on school attendance, research supporting YRE, research with negative findings of YRE, inconclusive research and a summary.

School Attendance

Various factors affect attendance. Studies have shown that students with chronic illnesses have lower attendance rates than healthy peers (Weitzman, 1986). Vetiska, Glaab, Perlman, and Daneman (2000) studied the effects of diabetes on student attendance for the 1997-98 school year. The findings showed that diabetic students miss an estimated one week more per school year than do their siblings who were not diabetic. The authors stated, "the close correlation in absenteeism between diabetic children and their non-diabetic siblings suggests that family attitudes may be a major factor in determining school attendance. Factors contributing to differences in school attendance may include parental overprotection, parental philosophy regarding academics, and the quality of communication between parents and teachers" (Vetiska, Glaab, Perlman, & Daneman, 2000).

Bad weather or even the threat of bad weather affects school attendance rates. On March 6, 2000 almost half of the New York City public school children took the day off a day after school was cancelled in anticipation of a blizzard that never happened (The New York Times, 2001).

Research Supporting YRE

The schedule type Alcoa High School used during the 2000-2001 school year is called the Single-track schedule, meaning all students and school personnel follow the same vacation and instructional schedule. "Single-track does not reduce class size, nor does it allow a school to accommodate more students" (The National Association of Year-round Education Association, <http://www.nayre.com/about.html>, 2001). The Alcoa schedule is a balanced calendar where students and faculty attend school 45/10, meaning 45 days (nine weeks) in class and then 10 days off. Other versions of YRE include the 45/15, the 60/20, and the 90/30 (The National Association of Year-round Education Association, <http://www.nayre.com/about.html>, 2001).

In addition to providing information about scheduling types, the National Association of Year-round Education also provided the history of YRE. YRE began in 1904 when a four-quarter schedule was created and implemented in Bluffton, Indiana. From 1910 to 1938, many forms of year-round calendars were implemented to increase space, improve education, meet the needs of European immigrant children, and offer vocational training in Texas, New Jersey, North Dakota, Nebraska, Tennessee and Pennsylvania (<http://www.nayre.com/about.html>, 2001). In 1938-1945, YRE growth ceased during World War II due to the need for farm and factory workers. In 1946-1967, YRE was discussed in various areas, but not implemented due to the country's focus being placed on the Korean and Vietnam wars. In 1968, a California school system implemented a 50-15, the first YRE program following WWII. "It later changed to a 45-15 plan but remains the longest-running YRE program in the nation" (<http://www.nayre.com/about.html>, 2001). In 1971 two schools in San Diego County

became the first multi-track YRE programs in California which helped promote the state into a national leadership role in YRE. In the 1970's-1980's, many new school systems were added to the YRE roster (<http://www.nayre.com/about.html>, 2001).

The National Association of Year-Round Education (2001) reported statistics that show huge increases in numbers of school systems implementing YRE. The Association states that in 1995-96, more than 1.7 million students in 39 different states participated in year-round schools. In 1996-97, YRE continued to increase to nearly 1.8 million students in 41 states implementing alternative schedules. In 1997-98, YRE had an enrollment of 1.9 million students. In 1998-99, the students enrolled in YRE broke the 2 million mark. In 1999-2000, Mississippi, South Dakota, and the District of Columbia added themselves to the list of YRE providers. In 2000-2001, North Dakota began offering year-round programs as YRE advocates enjoyed the 15th year of consecutive growth (<http://www.nayre.com/about.html>, 2001). The National Association of Year-Round Education expounds the success of YRE through the growth of the number of school districts implementing year-round programs.

Pioneer Elementary School in Boise, Idaho, implemented YRE because of overcrowding (Fager, 1997). Enrollment was optional due to the uncertainty of how well the concept would be accepted, but the enrollment was overwhelming (Fager, 1997). The school district reported that the schedule was so well liked in the community that four new schools opened in Fall, 1997, using the same year-round scheduling (Fager, 1997). Fager (1997) noted that the school system observed that students need less time to adjust to the routine of year-round scheduling, retain previous learning to a greater degree, and have less burnout than under traditional scheduling.

Donahue (1998) collected data from students, parents, teachers, administrators and the community to compare attendance, grades, and discipline under traditional schedule and YRE. The author stated that the newly implemented year-round schedule showed improvements in attendance, grades, and discipline. Factors that contributed to the program's success were strong administration, community involvement, and a well-trained faculty and staff. Donahue's findings gave evidence that the change from a traditional schedule to year-round scheduling offered improvements in attendance and educational retention. He also discussed the improved opportunity for students to receive remedial help under the YRE using Intersessions.

Appalachia Educational Lab (1997) performed a study of block scheduling, educational change, educational quality, learning experiences, and student attitudes from high school students in Kentucky, Tennessee, Virginia, and West Virginia. The research focuses on over 160 high school students from the various states. The students were mostly seniors with various learning levels and attended rural, urban schools, and small-town schools. The students discussed block scheduling and year-round schooling. The students said that they benefited from changing to block scheduling and YRE.

Shields and Oberg (1999) studied YRE in Utah and found that out of 43 interviews with teachers and administrators, 95% favored YRE over traditional scheduling. Only 2 teachers of the 43 interviewed and none of the administrators preferred traditional scheduling. The administrators discussed organizational skills and the delegations of duties are critical for the successful implementation of YRE. One teacher was quoted as saying, "On year-round I just love teaching! I don't get burn out. I know there's always a break on the horizon and I see that the kids don't burn out as

quickly” (Shields and Oberg, 1999). Shields and Oberg (1999) also discussed how some teachers felt guilty for having the summers off and that YRE gave teachers a more professional image to the public. More opportunities for year-round vacation planning, fewer incidences of summer boredom for students, and a gentler way to introduce Kindergarten students into school were all benefits discussed in the study.

Although many YRE school administrators offer positive feedback on year-round schedules, high schools show less enthusiasm with YRE than do elementary schools (these negative reactions will be discussed later in this study). One elementary principal stated, “We’ve had some very positive comments from parents and students regarding it (YRE). It doesn’t mean everybody loves it, but as a whole it’s been rather positively received” (Davis, 2001). Another elementary school principal said, “It’s a wonderful way to work with small groups of children and do some intensive work (Davis, 2001). Yet another elementary administrator stated, “My staff loves it (YRE) for the rejuvenation aspect” (Davis, 2001). Alcorn (1992) reported that 17 out of 27 school systems interviewed favored YRE over traditional schedules.

Brekke (1997) discussed operating expenses associated with YRE including costs for personnel, utilities, transportation, maintenance, custodial service, lunch programs, materials and supplies. The costs were analyzed using data from a school district in California. The findings showed that if the capacity of the school is at 115% or greater, the operational costs under YRE would be equal to or less than traditional year costs. Brekke believes that due to these findings, a multi-track program must be used to justify implementation of YRE based on cost.

Intersessions are the equivalent of summer schools occurring during the breaks of the year-round school year. The ability to provide additional intersessions is a primary factor leading many school systems in their consideration of year-round school schedules. In theory, students should gain more from Intersessions because the remedial help occurs more frequently and more recently to curriculum content addressed in classes. Students can attend Intersessions for the first week of all three breaks of fall, winter, and spring instead of waiting until the summer to obtain assistance. One director of schools where YRE is being utilized said, "We've had a lot of wonderful enrichment activities that we cannot provide during the summers" (Davis, 2001).

Research with Negative Findings of YRE

The effectiveness of year-round school schedules has been examined to weigh the value for rural schools. Pittman and Herzog (1998) evaluated academic achievement, attitudes, school/community relationships, and year-round school systems in a rural North Carolina school district. The researchers found that the alternative scheduling caused disruption to the sense of community. The authors found that although teachers, students, and parents possessed positive attitudes toward the alternative scheduling, students did not increase achievement or attend school more often. The authors suggest that the decision to activate YRE should be based on community choice and not due to claims of educational benefits (Pittman & Herzog, 1998).

Stress and burnout of year-round school administrators has been a focus of previous studies. Wildman, Arambula, D. Bryson, and T. Bryson (1999) found that YRE affords little down time for administrators, which is a major source of internalized stress. The authors feared long-term consequences. Some administrators compared starting school after the YRE breaks to starting school in September under the traditional schedule, resulting in continual disruptions to the school environment (Wildman et al. 1999).

Certain administrators tend to believe that the success of YRE can depend on the age of the participating students. One high school administrator said, "The impact is also different depending on the child's age. What might be helpful to a primary-age child might be very successful at four times a year. When you are dealing with adolescents and early adults, it's totally different sometimes" (Davis, 2001). Research is lacking in this area. It would be interesting to examine the effectiveness of different school scheduling types within the same school system, such as a school system using a year-round schedule for the elementary levels and a traditional schedule in the high school levels. Although costs are associated with such a program, the possibility warrants further study.

The topic of Intersessions has both negative and positive implications. One school administrator stated, "Not all Intersessions are as successful. The summer Intersession immediately after the end of school was not as well attended as others. Everybody is tired at the end of school. That's a hard psychological barrier to recover from" (Davis, 2001).

Inconclusive Research

Scheduling alternatives must be examined and considered to meet individual school system needs. The schedule that may be highly effective for one system may not be the best option for another. Fager (1997) examined alternate-day-schedules, block-schedules, extended-school-day, and year-round schools to explore different types of school schedules to best meet individual student needs. The data showed that conclusions supporting any one type of scheduling are inconclusive.

Some people associated with the school systems feel that the cost of a year-round schedule takes money away from other needed school areas. At a school board meeting, one school board member said, "We need to consider whether the year-round calendar is truly effective. If it's not effective, we might consider using that money for buying teachers" (Davis, 2001). The director of the schools replied that to measure the true impact of YRE on a school system, two or three years should pass before evaluation (Davis, 2001).

Parents make a huge impact on determining the success or failure of a school schedule. Shields and Oberg (1997) studied misconceptions and parental attitudes concerning YRE. The research analyzed the responses of 300 elementary parental surveys in different schools with both year-round and traditional schedules. The authors perceived neither calendar as being perfect. They stated that YRE parents had problems scheduling family centered activities, but said that this did not necessarily detract from the satisfaction of the parents of the year-round schedule.

Gee (1997) researched block scheduling, educational benefits, pilot projects, and YRE with a focus on secondary education. Data was gathered using a poll given to 398 parents. The author proposed the public might accept the idea of YRE more easily by combining a block-schedule variation and YRE. He stated that under this option, teacher contracts, the facilities, and current budgets remain virtually unchanged. Gee concluded that the strongest resistance to YRE is the cost factor and under his proposed plan public resistance will be greatly lessened.

Summary

Previous studies discussed causes of lower school attendance rates, such as bad weather and illnesses. Past research also addressed concerns regarding school-scheduling types such as cost, student remedial help, building upkeep and community support. This study will build upon previous research and focus on the attendance rates of students to measure whether the activation of YRE made a significant change in the attendance of high school students at Alcoa High School.

CHAPTER III

Methodology

The students enrolled in Alcoa High School in Alcoa, Tennessee for the 1999-2000 and 2000-2001 years were used to examine the possible benefits of year-round scheduling on attendance rates. Figure 2 offers a Methodological Framework for this study. The following sections of Methodology include Design, Subjects, Instrumentation, Data Collection, and Data Analysis.

Design

The historical qualitative approach was used for this study to obtain and analyze the attendance rates of students for both the 1999-2000 and 2000-2001 school years of Alcoa High School. Attendance rates from the first year under traditional scheduling were collected and compared to the second year under year-round scheduling. The comparison will show the relationship between year-round scheduling and student attendance. The attendance rates will then be compared against three previous years (1997-98, 1998-99, and 1999-00) of the two other area school systems in the county: Maryville City High School and Blount County High Schools. Alcoa, Maryville, and Blount County are the high schools located in Blount County, Tennessee.

Subjects

The subjects of this study will include the entire Alcoa High School student population during the 1999-2000 and 2000-2001 school years. The school is the only high school in the Alcoa City School System. For each year examined, the student body consisted of around four hundred students. The Alcoa administration provided data that

indicated that the students are primarily Caucasian with approximately 30% of the population African American, and less than 1% Asian (2000). The school was selected because it is one of the first school systems in the area to implement year-round scheduling. The recent change from traditional to year-round scheduling made the population a relevant source of up-to-date, measurable data of the relationship between year-round scheduling and student attendance rates.

The attendance rates from the Blount County High Schools and Maryville High School were also compared to Alcoa High to define an average student attendance rate for the county, in the years immediately preceding the study.

Instrumentation

Historical attendance data kept in the Alcoa High School main office was reviewed to obtain numeric representations of the effect of year-round scheduling on the attendance rates for both years reviewed. Attendance records were broken down by student grade classification and gender. A detailed view of the procedures used will be covered in the Data Collection section.

Due to this study being based on a historical review, an instrument was not necessary. However, the researcher organized data using a Microsoft Excel spreadsheet and analyzed data using Statistical Package for Social Sciences (SPSS) software. The data was broken down into student grade classification, gender, the attendance rates for each of the eight twenty-day reporting periods, and comparative data from the other two Blount County school systems: Maryville and Blount County.

Data Collection

Data from the eight out of nine reporting cycles was collected using a historical review of records kept at Alcoa High School where attendance records were collected daily by hand and turned into the school's attendance coordinator. The attendance coordinator then compiled information and input data into a software package titled "Mac School Attendance" program. The data was then sent to the State of Tennessee every twenty days to track attendance. The data obtained for this research was offered through the administration of Alcoa High School and will begin with the 1999-2000 year. Student identities were not part of the data and were therefore kept confidential.

The Alcoa High School attendance rates were then compared to the other two school districts (Maryville City and Blount County) for the 1997-98, 1998-99, 1999-00 school years to define the average countywide attendance rate. The attendance rates for the Maryville and Blount County School systems for the examined years are public record and published on the Tennessee State Education Web page (<http://www.state.tn.us/education/mstat.htm>, 2001).

Data Analysis

The researcher used Microsoft Excel to organize the data and to analyze it using graphs, tables, and charts. The data was then statistically analyzed using descriptive correlational statistics from Statistical Package for Social Sciences (SPSS), statistical analysis software.

The eight reporting cycles were compared using the first twenty-day reporting cycles for both school years. This meant that the first reporting cycles under the 1999-00 traditional schedule was from August 6th through September 2nd and was compared to the first reporting cycle of the 2000-01 year-round schedule from July 26th through August 22nd. The second reporting cycles were from September 3rd to October 1st under traditional schedule and August 23rd to September 20th under year-round. The third reporting cycle was from October 4th to November 5th under traditional and from September 21st to November 1st under year-round. The fourth reporting cycle was from November 7th to December 7th under traditional and from November 2nd to December 4th under year-round. The fifth reporting cycle was from December 8th to January 20th under traditional and from December 5th to January 23 under year-round. The sixth reporting cycle was from January 21st to February 18th under traditional and from January 24th to February 21st under year-round. The seventh reporting cycle was from February 21st to March 24th under traditional and from February 22nd to April 4th under year-round. The eighth reporting cycle is from March 27th to April 25th under traditional and from April 5th to May 3rd under year-round.

Data was then analyzed by comparison of attendance rates between the three school systems: Alcoa, Blount County, and Maryville. This comparison effectively explained the relationship between year-round schooling and attendance rates at Alcoa High School for the 1999-2000 and the 2000-2001 school years.

Chapter IV

Data Analysis and Findings

This chapter includes the data analysis and attendance comparisons between the Alcoa High School traditional schedule used in the 1999-2000 school year and the year-round, single-track 45/10 schedule used in the 2000-2001 school year. Findings were then compared to the attendance rates of two other school districts located in Blount County, Blount County High Schools and Maryville High School. Data was analyzed to answer the three research questions and to test the hypothesis. The hypothesis states there is no significant difference in attendance rates of high school students from alternative school schedules, such as the Alcoa 2000-2001 year round schedule, and traditional schedules. The sections addressed in the Data Analysis and Findings chapter are demographics of the Alcoa High School students during the 1999/00 and 2000/01 school years, student attendance under each scheduling program, and the effect of the Alcoa High School alternative schedule on attendance.

Demographics of Alcoa High School Students

Research Question One:

What were the demographics such as gender and grade classification of the Alcoa High School students during the 1999/00 and 2000/01 school years?

Tables 1 and 2 display the demographic matrix upon which this study was based. During the 1999-2000 school year the Alcoa student body consisted of 80 male freshmen and 52 female freshmen students. The freshmen made up 30 percent of the entire student body. In the sophomore class, 64 enrolled males and 60 females accounted for 28

percent of the student body. As for the junior class, 40 males and 39 females comprised 18 percent of the student body. Finally, for the senior class, 65 males and 41 females made up 24 percent of the student body. A total of 441 students were enrolled in the 1999-2000 school year. Notable differences exist between the ninth grade class number in the 1999-2000 school year and when they were promoted up into the tenth grade during the 2000-2001 school year. The student membership went from 132 to 102 from one year to the next, showing a loss of 30 students in the 2000-2001 sophomore class. A large drop in school membership also appeared in the sophomore class of 1999-2000 school year when they were promoted to juniors during the 2000-2001. This class went from a population of 124 to 98, which is a drop of 26 students in the 2000-2001 junior class. The Alcoa administration said that they felt that this figure was normal student turnover and not related to YRE. Figure 3 provides a student grade graphic representation of the 1999-2000 demographics.

During the 2000-2001 school year, the freshman Alcoa student body consisted of 72 male and 60 female students which was 33 percent of the total student body. In the sophomore class, 54 enrolled males and 48 females accounted for 25 percent of the total Alcoa students. As for the junior class, 50 males and 48 females accounted for 24 percent of the students. Finally, for the senior class, 37 males and 35 females made up the last 18 percent of the student body. A total of 441 students were enrolled in Alcoa High School for the 2000-2001 school year. Figure 4 provides a graphic representation of the 2000-2001 student demographics.

Gender distribution for each of the discussed years is also represented graphically. Figure 5 represents that out of the 441 students enrolled at Alcoa High School during the 1999-2000 school year, 192 (44%) were female and 249 (56%) were male. During the 2000-2001, where the year-round schedule was adopted, 213 (53%) of the total students were males and 191 (47%) were females. This distribution is represented in Figure 6.

Student Attendance

Research Question Two:

What was the student attendance under each scheduling program, 1999/2000 traditional schedule vs. 2000/2001 year-round schedule?

Table 3 offers a graphic representation of the attendance data for each 20-day cycle and shows that out of eight reporting cycles, traditional scheduling consistently reported a higher attendance rate. The first 20-day period experienced a 94.37 percent attendance rate under the traditional schedule and an 84.16 percent using the year-round schedule. The difference column shows the percentage of higher attendance experienced by the traditional schedule. For the first cycle, the difference between the two is 10.21 percent meaning that under year-round school scheduling the attendance rate of Alcoa High School dropped 10.21 percent. The remaining 20-day reporting cycles show virtually the same relationship. The difference in attendance between traditional and year-round scheduling for the second cycle was 9.94 percent. The third cycle experienced a difference of 10.4 percent in attendance between traditional and year-round scheduling. The fourth was at 5.88 percent between traditional and year-round scheduling. The fifth was at 3.11 percent between traditional and year-round scheduling and the sixth experienced a 9.74 percent difference in attendance between traditional and

year-round scheduling. The seventh and eighth were at 6.30 percent and 8.25 percent difference in attendance rates respectively. These comparisons are visually represented in Figures 8 through 15.

Alcoa High School experienced an overall average of a 7.98 percent lower attendance rate when using the 2000-2001 year-round schedule in comparison to the traditional schedule used the year before. The data from Table 3 explains the findings and Figure 7 offers a graphic representation of the relationship between the data from both scheduling types.

Comparative Relationship

Research Question Three:

How does the Alcoa High School alternative schedule affect attendance for the years examined in comparison with other school systems located in the same county?

Table 4 offers attendance rates for the 1997-98, 1998-99, and 1999-00 school years of all three high school districts in Blount County, Tennessee. Blount County had an average attendance rate of 92.97 for the three examined years under traditional schedules. Alcoa had an average of 94.73 for the three years examined under traditional schedule. Maryville had an average attendance rate of 96.10 for the three examined traditional schedule years. Figure 16 offers a visual display of these findings. When all three averages from Alcoa High School, Maryville High School, and Blount County High Schools were combined an average attendance rate of 94.60 is found for all high schools located in the Blount County area.

The attendance rate at Alcoa High School for the 2000-2001 year-round schedule dropped significantly lower than the previous three years utilizing traditional schedules. The drop in attendance rates from the 1999-2000 traditional schedule to the 2000-2001 year-round schedule is significant as shown in the t-test illustrated in Table 6. Alcoa experienced a 7.98 percent drop in student attendance from the 1999-2000 traditional schedule to the 2000-2001 year-round schedule. There is also a significant difference in the attendance rates of high schools located in Blount County and the 2000-2001 year-round attendance rates of Alcoa High School. The average attendance rate for all county high schools was 94.6 percent for three previous years to this study. The 82.3 percent attendance rate from Alcoa High School's first eight of nine reporting cycles of the 2000-2001 year-round school established a significantly lower than normal attendance rate for the county. Exact cause of the excessive lower attendance rate can not be placed completely on the implementation of the year-round schedule. Further study conducted over a longer time span must be conducted to ensure the similar findings before the assumption that the year-round schedule is the cause of the lower student attendance rates.

Chapter V

Summary, Conclusions, Recommendations, and Implications

After examination of the data in this study and using the findings for a basis of further research, the researcher derived a set of conclusions, which when combined with findings of previous literature, allow the following recommendations. This chapter is organized into a Summary, Conclusion, Recommendations, and Implications.

Summary

This section reviews the researcher's findings and is arranged in a format as to answer the three research questions and the hypothesis. The research questions and findings are as follows:

1. What were the demographics such as gender and classification of the Alcoa High School students during the 1999/00 and 2000/01 school years?
2. What was the student attendance under each scheduling program: 1999/2000 traditional schedule vs. 2000/2001 year-round schedule?
3. How does the Alcoa High School alternative schedule affect attendance for the years examined in comparison with other school systems located in the same county?

The hypothesis is also as follows: There is no significant difference in absentee rates of high school students from alternative school schedules, such as the Alcoa 2000-2001 year round schedule, and traditional schedules.

Student Demographics. The demographic information for Alcoa High School students enrolled during the 1999-2000 and 2000-2001 school years is as follows. The 1999-2000 school year, which utilized a traditional school schedule, had 441 enrolled students. For the 2000-2001 school year, which used a year-round school schedule, 404 total students were enrolled. Although a notable drop in students occurred from one year to the next, Alcoa High School's administration stated that the drop was regular student transition, since the school where most of Alcoa's students transfer is also on a schedule very much like the Alcoa High School year-round schedule (2001). The drop in students enrolled was noted, but the researcher found the two populations comparable.

Gender distribution for the 1999-2000 traditional schedule school year had a student body of 44 percent female and 56 percent male. In the 2000-2001 school year, 47 percent of the student body were female and 53 percent were males. The populations were similar and therefore comparable.

Student Attendance. The following conclusions have been deducted using the attendance data collected for this study. Alcoa High School had a higher attendance rate under the 1999-2000 traditional scheduling for all eight 20-day reporting cycles then under the 2000-2001 year-round schedule. Group statistics are represented in Table 5 where the two Alcoa school years are compared using SPSS. The 1999-00 traditional schedule had an average attendance rate of 90.28 percent for the first eight reporting cycles in comparison to the 82.30 percent found in the first eight reporting cycles of the 2000-01 year-round schedule. This showed a 7.98 percent lower attendance rate for the first eight reporting cycles under YRE.

Comparative Relationship. In the Blount County high schools comparison (Alcoa, Maryville, and Blount County), Alcoa showed an average attendance rate of 94.73 for the 1997-98, 1998-99, and 1999-00 school years. Maryville had an average attendance of 96.10 and Blount County had an average of 92.97 for the same three years. These findings are represented in Figure 16. Therefore, a countywide high school attendance rate of 94.60 was calculated for the three examined years (1997-98, 1998-99, and 1999-00). With an average attendance rate of the county being 94.60, the attendance rate for the eight of the nine 20 day reporting cycles for the 2000-01 school year at 82.30 is lower than any other reported time period for any of the Blount County high schools. The difference is significant as shown in Table 6 to a .001 level of significance.

Hypothesis. The t-test for equality of means as seen in Table 6 supported the rejection of the hypothesis. There is a significant difference in attendance rates of high school students from alternative school schedules, such as the Alcoa 2000-2001 year round schedule, and traditional schedules. An average of 7.98 percent lower attendance rate occurred in the first eight reporting cycles when using the 2000-2001 year-round schedule in comparison to the traditional school schedule used just one year before. The findings only show a correlation and can not determine causal factors.

Conclusions

The following conclusion was reached based on the findings of this study:
Alcoa High School experienced a significant lower student attendance rate during year-round scheduling in comparison to the attendance rate under traditional scheduling. This decrease in attendance was significant in comparison to not only Alcoa High School's

immediate three-year past history, but also compared to the other immediate three-year past history of high schools in the area.

Recommendations

The recommendations include conducting further research of Blount County High Schools (Alcoa, Maryville, and Blount) to measure attendance rates over a longer time span to determine if YRE is the true cause of the lower attendance rates. In addition, research to observe measurable trends where attendance records are broken down into demographic areas would be useful. The different impact of YRE on students according to their grade level is an area deserving of further study. A comparison of schools to explore cost and educational retention associated with YRE should also be the focus of further study.

Implications

The major implications of this study are that the Alcoa High School findings are inconsistent with other studies (Brekke, 1997). Studies should focus on YRE around the country so communities and school systems can be fully aware of all aspects, both positive and negative, before implementing a year-round school schedule.

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Appendixes:

Table 1.

Demographic Data for the 1999-2000 School Year

Grade	Male	Female	Total
9	80	52	132
10	64	60	124
11	40	39	79
12	65	41	106

Table 2.

Demographic Data for the 2000-2001 School Year

Grade	Male	Female	Total
9	72	60	132
10	54	48	102
11	50	48	98
12	37	35	72

Table 3.

Attendance Data in 20-Day Reporting Periods for Both the 1999-2000 and the 2000-2001 School Years

Reporting Cycles	1st 20 days	2nd 20 days	3rd 20 days	4th 20 day	5th 20 days	6th 20 days	7th 20 days	8th 20 days	Total # of Registered Students
Total # of Students who attended 1999-2000 Reporting Cycles	369	366	362	353	348	341	344	341	391
Attendance Rates of 1999-2000 in %	94.37	93.61	92.58	90.28	89.00	87.21	87.98	87.21	
Total # of Students who attended 2000-2001 Reporting Cycles	340	338	332	341	347	313	330	319	404
Attendance Rates of 2000-2001 in %	84.16	83.66	82.18	84.41	85.89	77.48	81.68	78.96	
Difference in %	10.21	9.94	10.40	5.88	3.11	9.74	6.30	8.25	

*The Difference row shows the relationship between the 1999-2000 traditional schedule and the 2000-2001 year-round schedule and shows a higher attendance rate for the 1999-2000 traditional school schedule for every 20 day reporting cycle. The average difference is 7.98%.

Table 4.

Attendance rates of all Blount County, Tennessee High Schools

School Systems:	1997-98 Attendance Rates:	1998-99 Attendance Rates:	1999-00 Attendance Rates	Averages:
Alcoa High School	95.1	95.5	93.6	94.73
Blount County High Schools	93.2	93	92.7	92.97
Maryville High School	96.8	95.4	96.1	96.10

Table 5.

Group Statistics of the 1999-00, Traditional Schedule vs. the 2000-01, Year-round
Schedule

Group Statistics

	YEAR	N	Mean	Std. Deviation	Std. Error Mean
ATT	1999.00	8	90.2800	2.90037	1.02544
	2000.00	8	82.3025	2.86447	1.01274

Table 6.

Independent Samples Test

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
ATT	Equal variances assumed	.078	.784	5.535	14	.000	7.9775
	Equal variances not assumed			5.535	13.998	.000	7.9775

Year-round Schedule:Traditional Schedule:

July

August

September

October

November

December

January

February

March

April

May

June

1st
nine
weeks

2 week Fall Break

2nd
nine
weeks

3 week Winter Break

3rd
nine
weeks

2 week Spring Break

4th
nine
weeks1st
nine
weeks2nd
nine
weeks

2 week Winter Break

3rd
nine
weeks

1 week Spring Break

4th
nine
weeks

*Seven holidays are in both schedules that are not in conjunction with the scheduled breaks, which distort the size of the nine week blocks in the visual.

Figure 1. Year-round Schedule vs. Traditional Schedule Visual

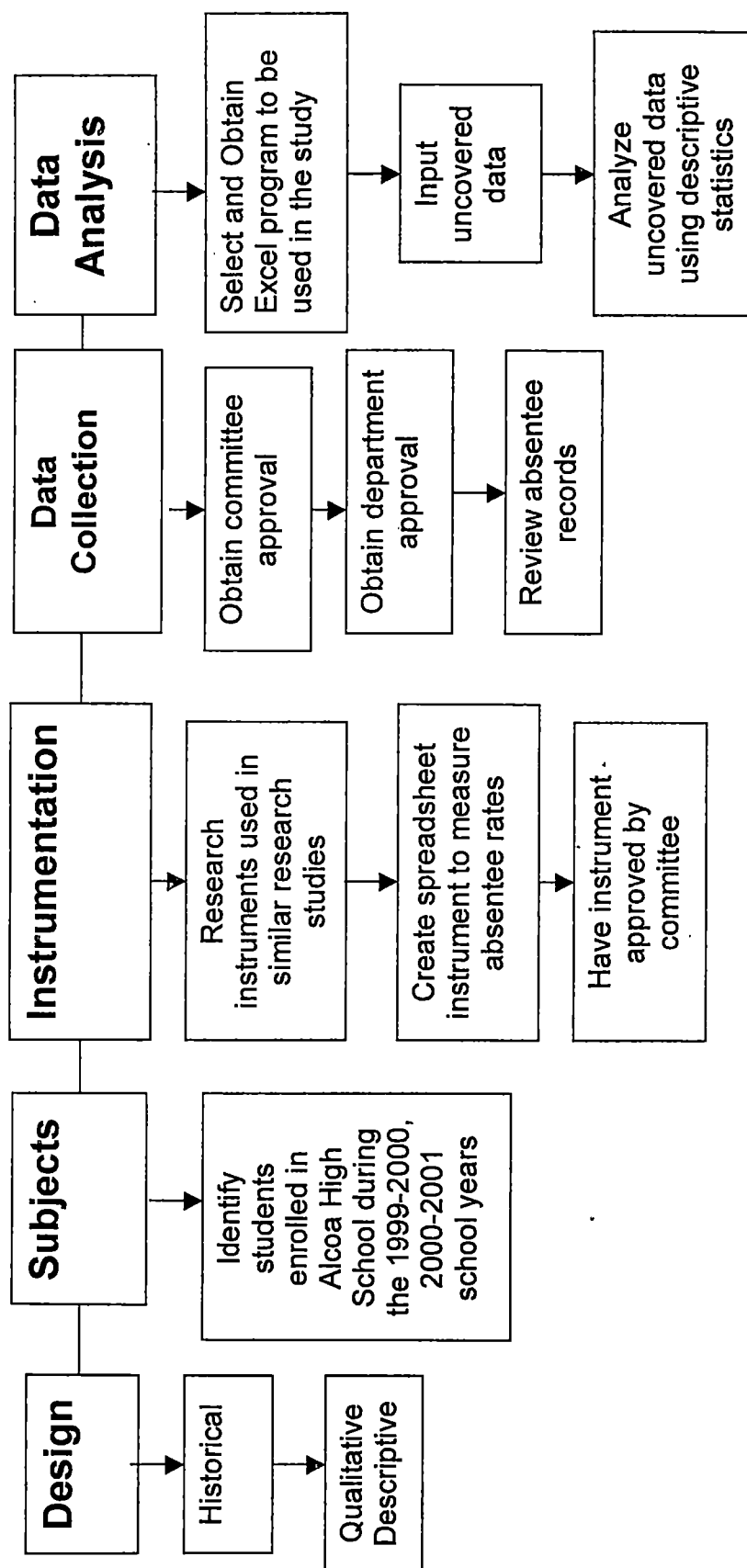


Figure 2.

Methodological Framework

Grade Demographics for the Alcoa High School 2000-2001 School Year:

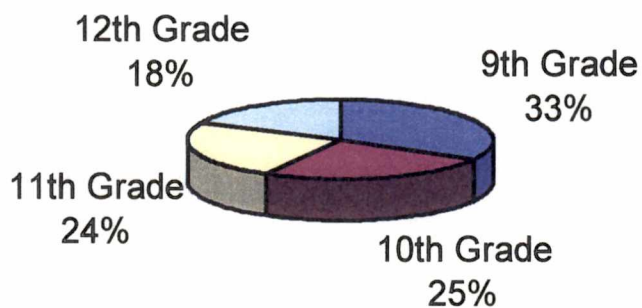


Figure 3.

Demographics for the 1999-2000 School Year

Grade Demographics for the Alcoa High School 1999-2000 School Year

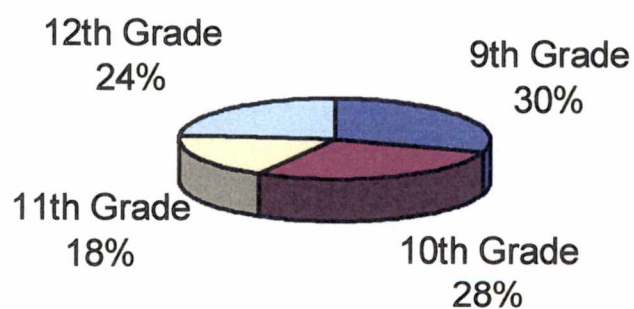


Figure 4.

Demographics for the 2000-2001 School Year

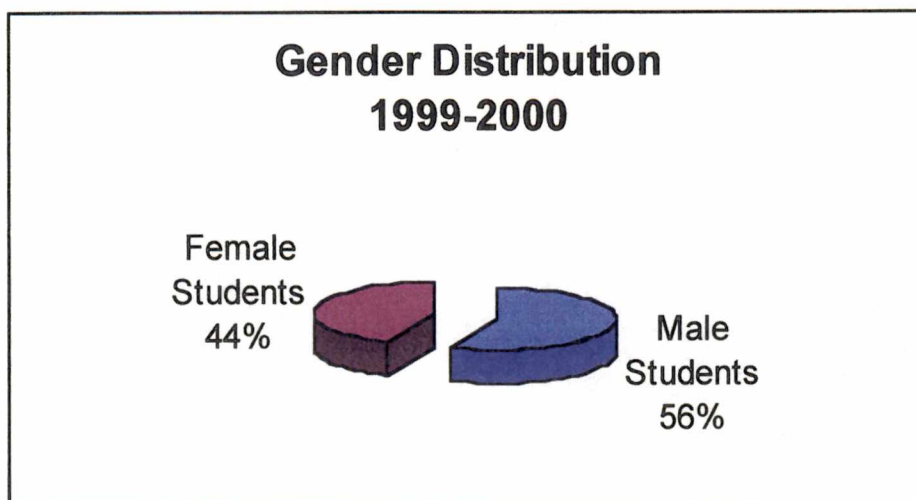


Figure 5.

Gender Distribution of the 1999-2000 School Year

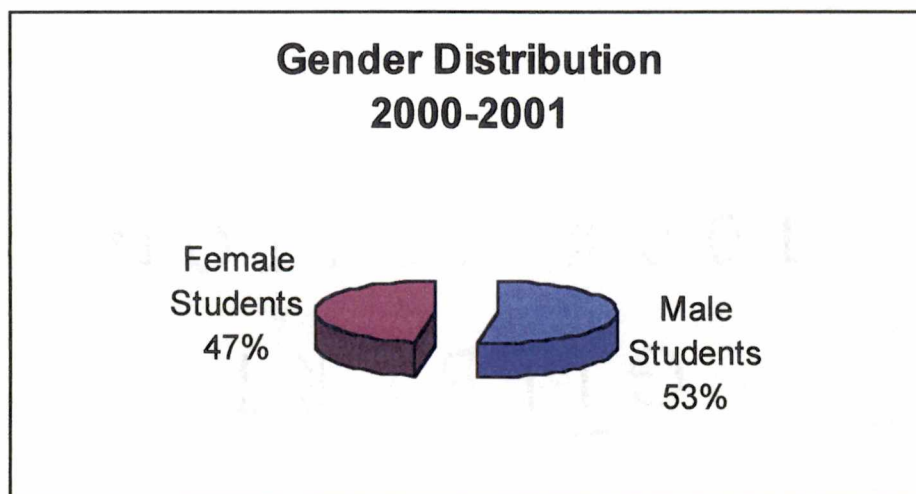


Figure 6.

Gender Distribution of the 1999-2000 School Year

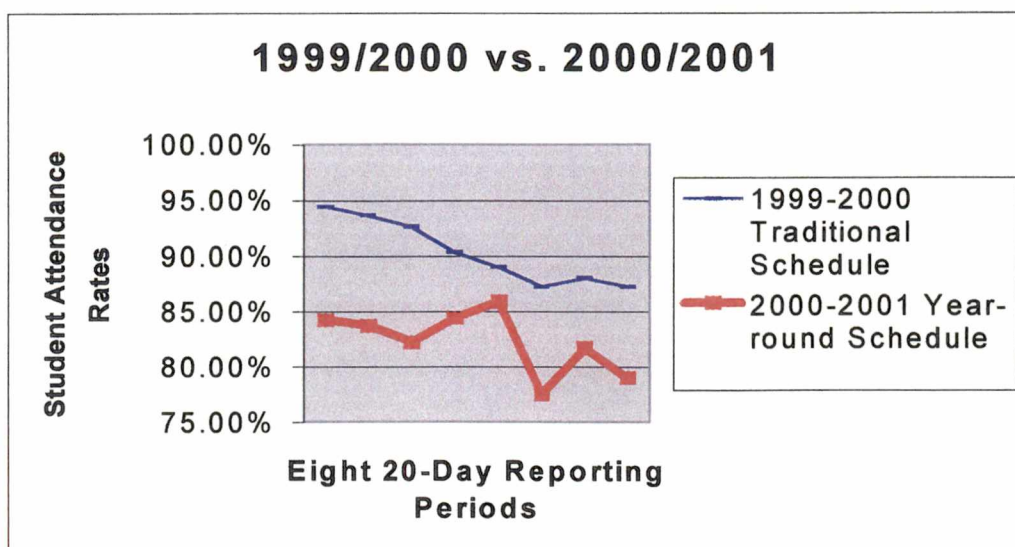


Figure 7.

A Comparison of Alcoa High School Attendance Rates under Both Traditional and Year-round Schedules:

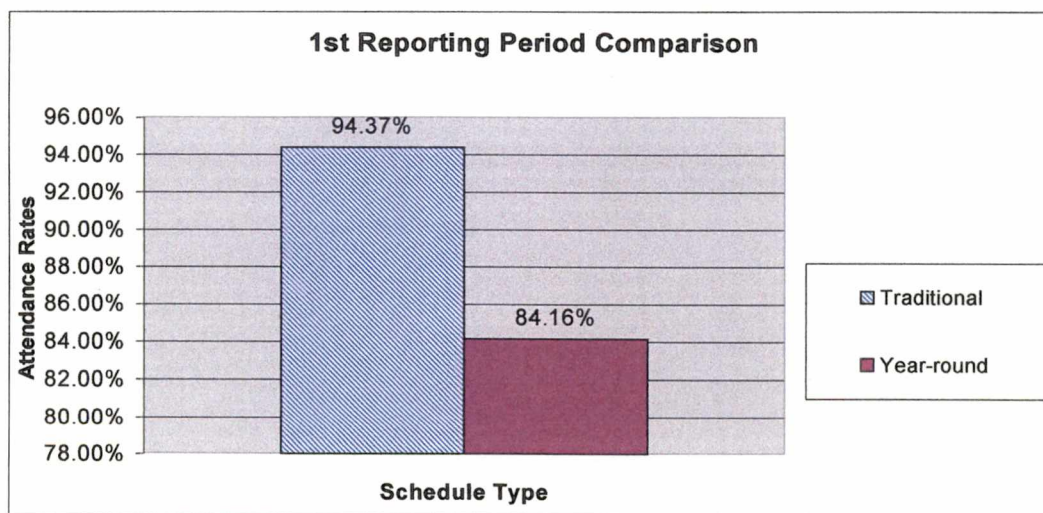


Figure 8.

A Comparison of the Traditional Schedule and Year-round Schedule for the 1st Reporting Cycle

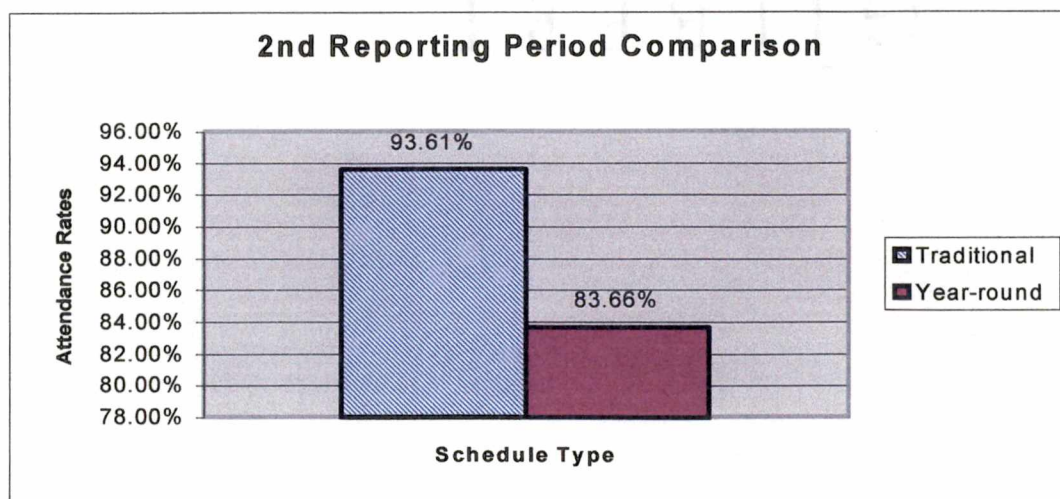


Figure 9.

Comparison of the Traditional Schedule and Year-round Schedule for the 2nd Reporting Cycle

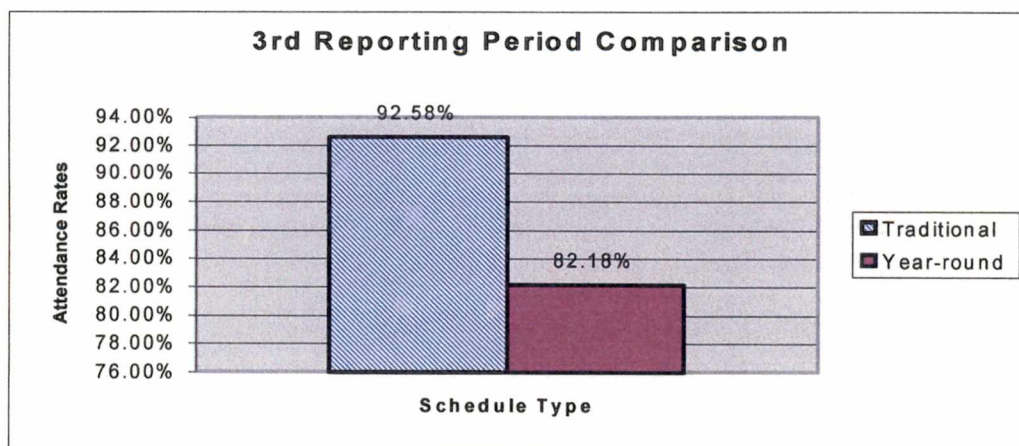


Figure 10.

Comparison of the Traditional Schedule and Year-round Schedule for the 3rd Reporting Cycle

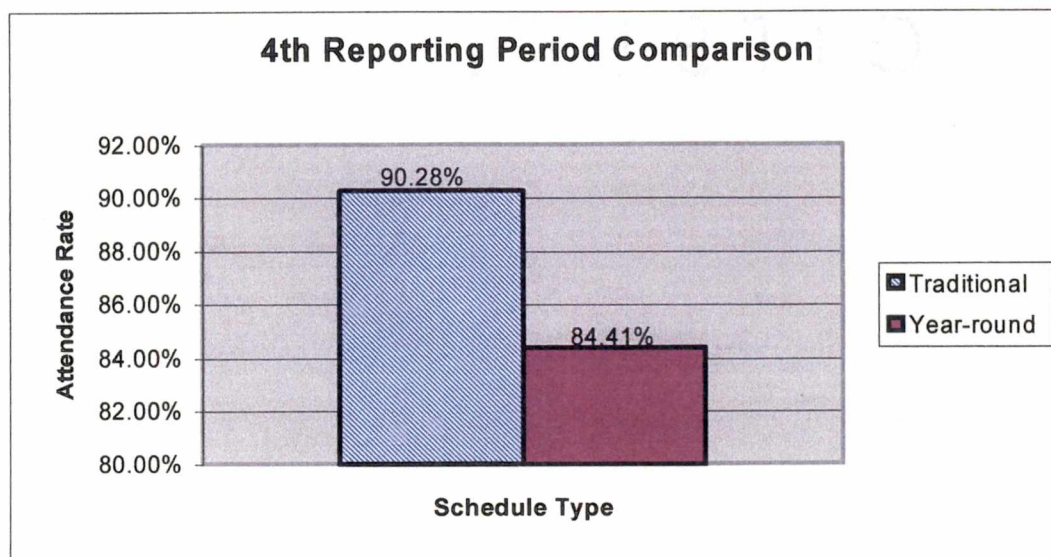


Figure 11.

Comparison of the Traditional Schedule and Year-round Schedule for the 4th Reporting Cycle

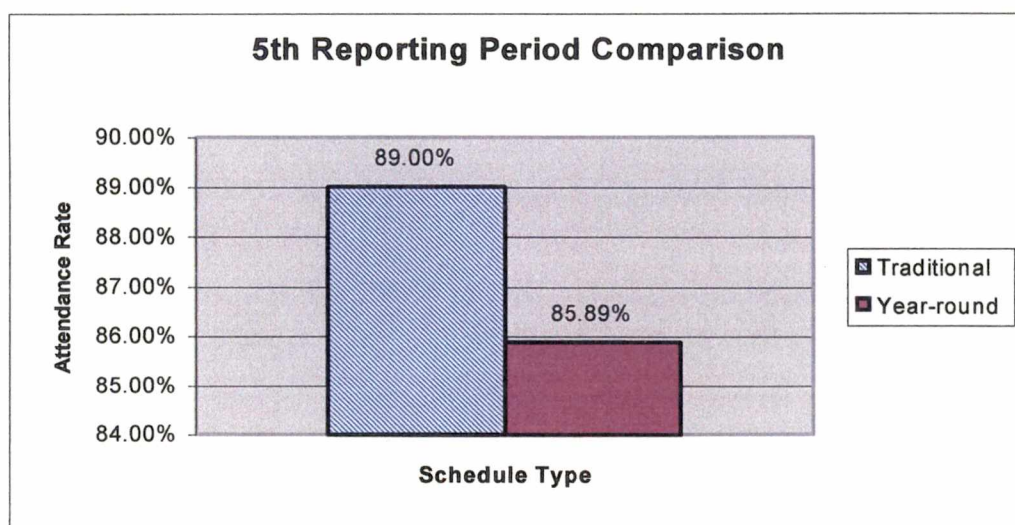


Figure 12.

Comparison of the Traditional Schedule and Year-round Schedule for the 5th Reporting Cycle

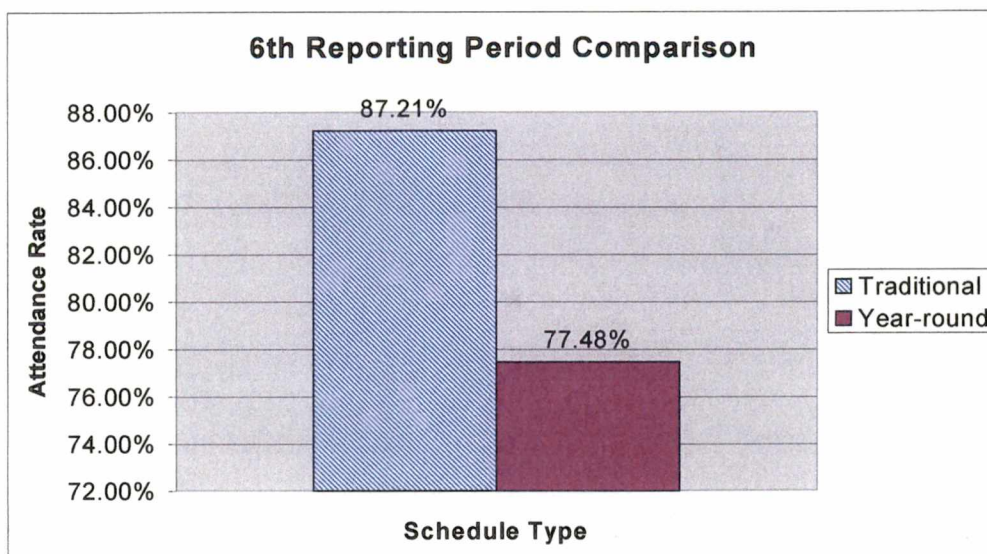


Figure 13.

Comparison of the Traditional Schedule and Year-round Schedule for the 6th Reporting Cycle

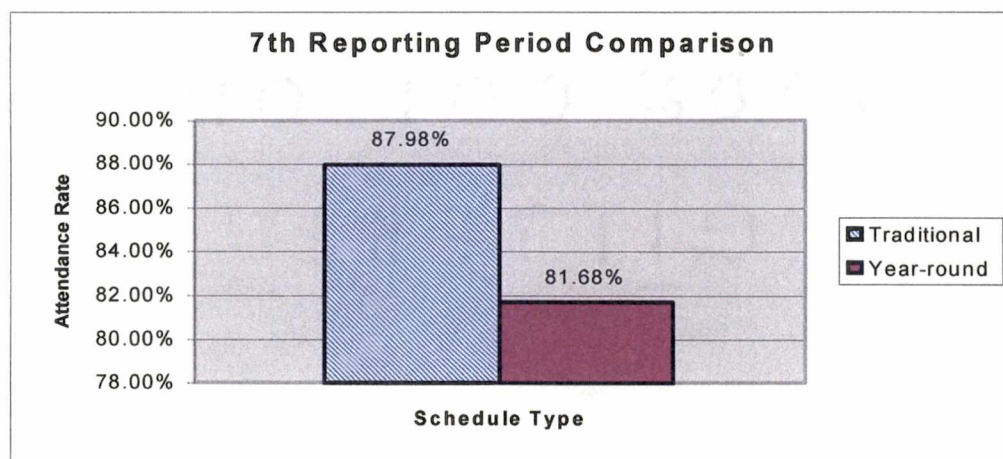


Figure 14.

Comparison of the Traditional Schedule and Year-round Schedule for the 7th Reporting Cycle

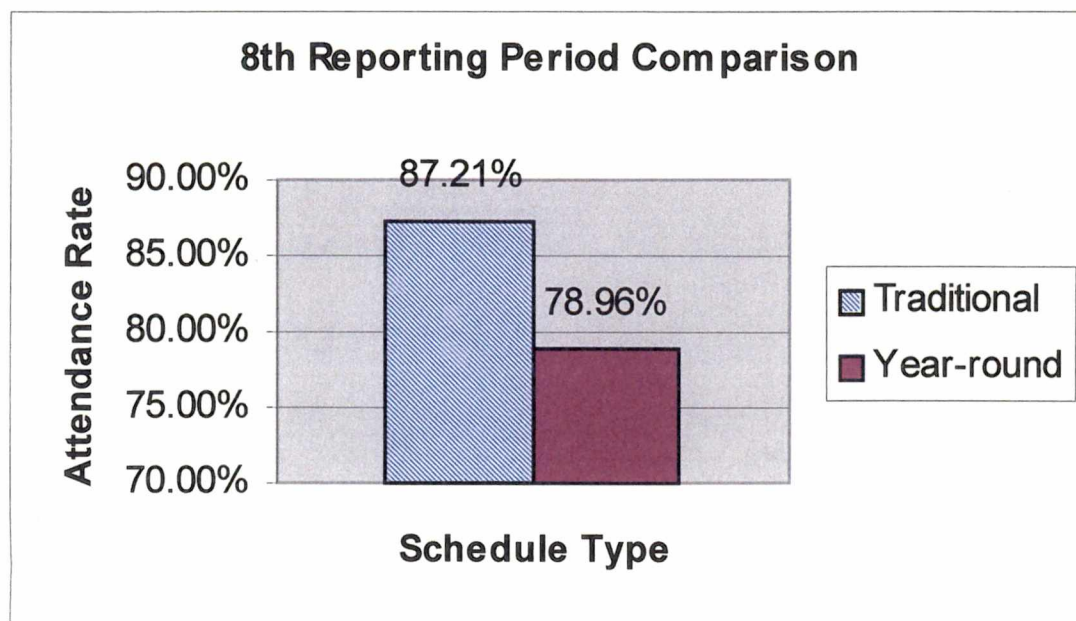


Figure 15.

Comparison of the Traditional Schedule and Year-round Schedule for the 8th Reporting Cycle

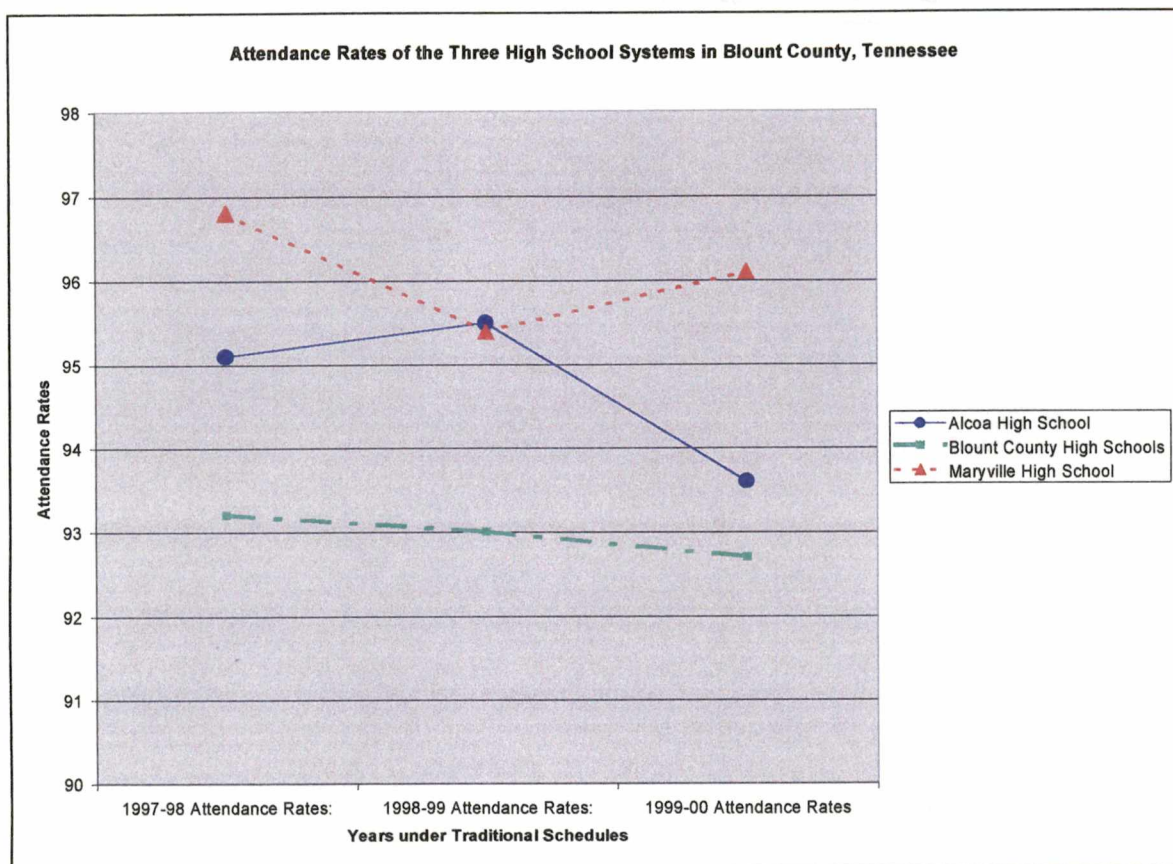


Figure 16.

Attendance Rates of the Three High School Systems in Blount County, Tennessee

VITA

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