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Year-Round Education and Student Learning: A Case Study of Stakeholders' Perceptions

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YEAR-ROUND EDUCATION AND STUDENT LEARNING:
A CASE STUDY OF STAKEHOLDERS' PERCEPTIONS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

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Title: Year-Round Education and Student Learning: A Case Study of Stakeholders' Perceptions

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Yearly, school districts across the United States debate and vote upon a school calendar. Although most school districts elect a traditional calendar, several districts utilize a year-round calendar. A year-round calendar evenly spreads a traditional 180 school day and 12-week summer vacation, thus creating a balanced approach. Does a year-round education calendar produce student learning?

The school district's teachers and administrator perceptions provided the basis of this study by examining their experiences with student learning in a year-round education calendar. This qualitative study examined one Michigan public school of which has worked under a single-track year-round calendar since 1983. Teacher and administrator participants shared their lived experiences, perceptions and details of how student learning is supported by a year-round calendar approach. This study identified themes of which the participants perceived to be relevant with student learning within a year-round education calendar. Additionally, study data were applied to the theoretical framework of Carroll and Spearitt's (1967) Model of School Learning and Dempster's (1988) Spacing effect. The researcher concluded that participants have an overall positive perception of student learning within a year-round education calendar.

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The amount of time dedicated to this journey comes with sacrifice. Sometimes, this sacrifice involved treasured family time. To my wife and children, I thank you for your unconditional love, support, and understanding. You allowed me to start and finish this journey. You stood by me every step of the way. I dedicate this work to my wife, Lindsay, and children, Maddox and Brady. May this inspire you to become life-long learners. Never stop chasing and achieving your dreams.

TABLE OF CONTENTS

Chapter		Page
I	INTRODUCTION	1
	Background	1
	Statement of the Problem.....	2
	Research Questions	4
	Purpose of the Study	5
	Research Design.....	6
	Significance of the Study	7
	Definition of Terms.....	8
	Theoretical Framework.....	9
	Limitations	11
	Summary	11
II	REVIEW OF LITERATURE	13
	Time Allocation	13
	Theoretical Framework.....	15
	Model of School Learning and Spacing Effect.....	16
	Types of Year-Round Education Calendars	18
	Year-Round Education Impact on Student Learning.....	21
	Summer Learning.....	22
	Summer Vacation.....	24
	Intersessions.....	27
	Year-Round Education and Student Learning	29
	Year-Round Education Students Who are Historically Disadvantaged or Considered to be At-Risk.....	36
	Year-Round Education Perceptions of Stakeholders.....	40
	Summary	45
III	METHODOLOGY	47
	Introduction.....	47
	Research Questions	47
	Population	47
	Research Setting.....	48
	Research Instrument.....	50
	Interview Questions for Administrator	50
	Interview Questions for Teacher.....	51
	Research Procedures	53
	Summary	56

Chapter		Page
IV	ANALYSIS OF DATA	58
	Participants.....	59
	Interview Responses Aligned to Research Question One.....	62
	Theme One: Retention of Material Taught.....	63
	Theme Two: Intersessions	65
	Theme Three: Continuation of Learning	68
	Summary of Research Question One.....	71
	Interview Responses Aligned to Research Question Two.....	72
	Theme One: Continuation of Learning.....	74
	Theme Two: Intersessions	77
	Theme Three: Reflection	78
	No Impact.....	80
	Summary of Research Question Two	80
	Interview Responses Aligned to Research Question Three.....	81
	Retention of Material Taught.....	81
	Intersessions.....	84
	Collaboration.....	87
	Breaks and Transitions.....	90
	Summary of Research Question Three	96
	Summary	97
V	SUMMARY, CONCLUSIONS, RECOMMENDATIONS	99
	Summary of Study	99
	Findings	100
	Research Question One.....	100
	Conclusions Regarding Research Question One	105
	Research Question Two	106
	Conclusions Regarding Research Question Two.....	109
	Research Question Three	109
	Conclusions Regarding Research Question Three.....	112
	Findings Aligned to Theoretical Framework.....	113
	Discussion of Year Round Education Themes	115
	Recommendations for Further Research.....	116
	Recommendations for Future Research	117
	Conclusions and Recommendations	117
	REFERENCES	119

Chapter	Page
APPENDICES	134
Appendix A - IRB Approval Letter	134
Appendix B - Voluntary Consent Letter	136
Appendix C - Consent Form	138
Appendix D - Administrator Interview Questions.....	140
Appendix E - Teacher Interview Questions.....	142

LIST OF TABLES

Table	Page
1 Matrix of Research Questions to Interview Questions	53
2 Demographic Information on Study Participants 2017	60
3 Themes for Research Question One	72
4 Apple Elementary Students of Historically Underperforming M-STEP Scores.....	73
5 Themes for Research Question Two	81
6 Administrator and Teacher Perceptions with YRE and Student Achievement	97

LIST OF FIGURES

Figure	Page
1 Carroll model of school learning	16
2 Traditional school calendar.....	19
3 Single-track calendar	20
4 45/15 multi-track calendar	20
5 Emergent themes of YRE perspective impact with student achievement.....	81

CHAPTER I

INTRODUCTION

Background

Dating back to the 1900s, discussions of school calendars have been on agendas of school boards. School districts typically operate with a traditional school calendar while others operate with a year-round education (YRE) calendar. A traditional school year consists of 180 days and a twelve-week summer vacation. Instead of a twelve-week break, YRE school calendars spread breaks throughout the school year, so learning continues without the interruption of a long summer. Across the United States, YRE schools continue to grow, and as of 2015, more than 3,700 public schools operate on a year-round school calendar (Skinner, 2014).

As defined by the National Association for Year-Round Education (NAYRE), YRE reorganizes the traditional school calendar into instructional periods and vacation weeks that are evenly balanced. A YRE school calendar usually consists of anywhere from 180 to 189 days of school. By using this calendar, districts can create a single-track or multi-track YRE calendar. In a single track, all students finish the school year at the same time. In a multi-track calendar, students are divided into numerous scheduled tracks and rotated throughout the school year. In regard to number of YRE schools, available data are varied. According to David Hornak, the 2017 executive director of NAYRE, the database of information associated to YRE is in process of being updated.

Skinner (2014) stated the most recent data available on the number of United States' YRE schools is derived from the 2011-2012 report by the U.S. Department of Education. Data within the report showed that 3,700 or 4.1% of public schools operate on

a YRE calendar. The majority (40.5%) of schools that operate on a YRE calendar are in the southern United States while 24.3% are located in the western United States (Skinner, 2014). Though most year-round education schools can be found in the south, California leads with the most public schools on YRE school calendar with over 1,400 schools.

Despite most U.S. schools operating on a traditional calendar, a YRE calendar is an option for school boards to explore. Research supports a YRE school calendar in lessening overcrowded schools (Graves, 2010; Huffman, 2013; McMullen & Rouse, 2012). However, research remains inconclusive on student learning gains because sources show little to no increase in achievement (Bray, 2013; Cuban, 2008; Cooper, Nye, Charlton, Lindsay & Greathouse, 1996). Arguments can be formed as to whether or not a YRE calendar positively impacts student learning.

Statement of the Problem

Administrators, educators, parents, and students hold varying positions on a YRE calendar. Most people who favor a YRE school calendar emphasize the importance of continued student learning because it lessens summer learning loss by removing summer vacations (Hamilton, Johnston, Marshall, & Shields, 2006; Naylor, 2012). Additional benefits of YRE include continued learning opportunities for students who are economically-disadvantaged, reduced operating costs, and elimination of school overcrowding (Green, Lewis, Kent, Feldman, Motley, & Baggert, 2011). Continued opportunities for student acceleration, enrichment, and remediation can be enhanced with this modified calendar.

On the other hand, school directors, administrators, and parents against a YRE calendar avidly oppose the loss of extended summer vacation. (Fischel, 2006; O'Sullivan,

2013; Sum, Khatiwada, & McLaughlin, 2008). In addition, there is evidence that shows inconsistent results of student academic achievement, as well as, an increase in the cost of facility maintenance by operating year-round (Winter 2005, Wu & Stone 2010). With a shorter summer vacation, schools have increased scheduling conflicts and students have difficulty securing a summer job (Fischel, 2006; O’Sullivan. 2013; Sum, Khatiwada, & McLaughlin, 2008). Thus, the dilemma exists.

A YRE evenly schedules vacation breaks throughout the calendar year, so students do not have extended time away from learning. Research finds mixed and inconclusive results on a YRE calendar’s academic impact. Sexton’s (2003) quantitative study of 118 grade 8 students attending a YRE urban middle school in Virginia found no statistical difference in reading, mathematics, writing, or history achievement when compared to similar students attending nine consecutive months in a traditional schedule. In South Carolina, Mitchell-Hoeffer’s (2010) qualitative study of teachers, administrators, and grade 3–5 student test data found inconclusive results on overall school academic achievement with a YRE calendar rather than a traditional school calendar. According to Darling (2008), research on closing the achievement gap concluded that YRE is neither a short nor a long-term remedy.

With emphasis on student time-on-task, school districts continue to find ways to increase learning opportunities within the context of a 180-day school calendar. Little research exists with YRE and academic advantages for students, as well as, the perceptions of professional staff members on the impact of a YRE calendar on student achievement. There are many questions surrounding the use of this calendar and the impact on student achievement, thus research into this topic is vital.

There is a need to continue examining the effects of a YRE calendar on student learning. This study will focus on data collection from a YRE school located in Michigan. The YRE school's perceived impact on student learning will be investigated to determine its effectiveness. This study will examine students' English/language arts and mathematics standardized test scores, as well as, interviews with the principal, teachers, and intervention teachers within the YRE school. Completion of this research will add additional data and input into the body of research for a YRE calendar and its perceived impact on student learning.

Research Questions

The research questions were formulated from the current literature on year-round schooling. By investigating stakeholders' perceptions of year-round schooling, the following research questions will be discussed:

1. What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?
2. What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming/underserved populations in English/language arts and mathematics achievement?
3. How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

These questions formed the basis of a descriptive analysis of stakeholders' perceptions within a YRE calendar setting.

Purpose of the Study

The purpose of this research is to determine the perceived effectiveness of YRE on student achievement through the analysis of the perceptions of an administrator and teachers in one Michigan elementary school. Particular focus areas under study are learning, academic achievement on English/language arts and mathematics standardized tests, and specific impact on students who historically under-perform on school assessments. In an effort to increase student academic performance, school districts would benefit from additional research on a YRE calendar and its perceived impact.

First, with current inconclusive academic findings, school districts looking to use a YRE calendar versus their current traditional calendar could benefit from additional data on its perceived effectiveness on academic performance. For example, according to the National Center for Educational Statistics (2008), there are no Pennsylvanian public school districts operating with a YRE calendar. Thus, with a traditional calendar in Pennsylvanian public schools, holiday breaks are embedded as well as a 12–13 week summer recess before beginning the next school year. Could the use of a YRE calendar promote student academic achievement?

Secondly, with Pennsylvania's use of the Pennsylvania Value Added Assessment System (PVAAS) growth model, districts have shifted their focus from student proficiency to student academic growth over the course of a school year. Thus, does extended time away from academics (ex: summer break) positively or negatively impact student retention of information? Could shorter but spaced breaks, as evident in a YRE calendar, help increase student learning retention rates? Additional research pertaining to

the impact of a traditional school calendar versus a YRE calendar could provide useful data to districts exploring this option.

Lastly, the issue of efficient use of class time and student engagement with learning continues to be a topic of conversation among school district administrators. The National Commission on Time and Learning (1993) released “Prisoners in Time” to emphasize the importance of student learning time. In exploring student engagement, could the solution be rearranging the traditional school calendar to one of YRE for students? The data collected will aid in determining how YRE impacts perceived student learning.

Research Design

A single-case study of methodology was applied for the basis of this study. Yin (2009) defined a case study methodology as an investigation of a contemporary phenomenon, in depth and within its real-life context. The methodology consists of a descriptive qualitative design. The qualitative methodology will investigate perceptions of an elementary principal and teachers who are stakeholders within a Michigan public elementary school, having implemented a YRE calendar. By using the qualitative approach, interviews, both professional and personal stories in relation to experience working with a year-round school calendar and its impact on student learning will be explored.

To conduct the descriptive, qualitative research, the researcher conducted interviews with the principal and teachers within an elementary school using a YRE calendar (See Appendix D-E). In addition to interviews, a review of students’ English/language arts and mathematics standardized test scores will be applied to help

validate the data collection. With the accumulation of data, the results of this study will provide additional evidence into the effectiveness of a YRE calendar impact on student learning.

Significance of the Study

Looking to increase student academic performance, school districts may benefit from additional research on a YRE calendar. As the school of focus for this study is located in Michigan, there are several similarities with student achievement in both Michigan and Pennsylvania. First, due to inconclusive academic findings of YRE student achievement, Michigan and Pennsylvania school districts looking to implement a YRE calendar versus a traditional school calendar could benefit from additional data on its effectiveness. Secondly, both Michigan and Pennsylvania utilize a growth model to measure school districts' student achievement. To calculate student growth, both states use student achievement on standardized state tests over consecutive years. In Michigan, the growth model applied to districts is entitled student growth percentiles (SGP) of which measures student cohort growth over a period of time in relation to similar scoring students within the same time frame. In Pennsylvania, use of the Pennsylvania Value Added Assessment System (PVAAS) growth model, districts have shifted their focus from student proficiency to student growth over the course of a school year. Lastly, both Michigan and Pennsylvania school districts encounter the issue of efficient class time use and student engagement with learning. Therefore, the findings of this study will be an addition to the body of literature related to a YRE calendar and its impact on student achievement.

Definition of Terms

For the purpose of the study, the following terms and definitions are applied.

Intersession. A break from regular classes of which extended or year-round schools may be closed. The option for enrichment or remedial classes can occur. During intersession, student attendance may or may not be required (Lundquist, 2001).

Multi-track year-round school. Year-round school in which all students attend school on varying schedules. This type of calendar is implemented when overcrowding is a problem. This model allows more students to attend the same school at different sessions. Multi-track calendars often consist of four different schedules (Pfeiffer, 2011).

Single-track year-round school. This model is a year-round school of which all students attend school at the same time. Students attend school for 45 consecutive days and then have a 15-day break (Pfeiffer, 2011).

Student achievement. Status of subject matter knowledge, understandings and skills at one point in time (National Board of Professional Teaching Standards, 2011).

Student attitude. Personal beliefs, feelings, and tendencies of education that are based upon past experiences (Thorton, 2006).

Students At-Risk. Students are not experiencing success in school and are low-academic achievers. (Pfeiffer, 2011)

Students of historically underperforming/underserved populations (Michigan).

The Michigan Department of Education cites four groups as historically

disadvantaged: students eligible for free/reduced lunch, minority students, students with disabilities, English Language Learners. (Michigan Department of Education, 2017)

Student learning. Growth in subject-matter knowledge, understandings, and skill over time (National Board of Professional Teaching Standards, 2011).

Sub-group. The Michigan Department of Education cites ten sub-groups of students who include: Native American, Asian, Black, Hispanic, Two or More Races, White, Economically Disadvantaged, Limited English Proficiency, Students with Disabilities. (Michigan Department of Education, 2017)

Traditional school calendar. A nine-month school calendar that requires students to attend school for 180 days of which school is closed for 12-13 weeks during the summer (Anderson, 2009).

Year-round education (YRE). This model reorganizes the traditional school calendar into instructional periods and vacation weeks that are evenly balanced. Typical schedule includes 45 – 60 days of instruction with 15 – 20 days off (Backman, 2008).

Theoretical Framework

Carroll's (1963) Model of School Learning stated that students have the ability to learn when provided with instruction. Carroll (1963) mentioned that when learning tasks are separated into smaller tasks, students can learn more effectively. Within this model, measuring student learning rate is based upon the amount of student success attained over a period of fixed time. Carroll and Spearitt (1967) defined learning rate as: Learning Rate

= Time Spent Learning/Time Needed to Learn. Theoretical studies on spacing effect, including Dempster (1988) and Cepeda, Pashler, Vul, Wixted, and Rohrer (2006), supported the spacing of student learning to benefit student-learning retention. This study is grounded in the theories of model of school learning and student retention of learning over time or spacing effect.

Two recent studies of a YRE calendar support the theoretical framework. Abakwue (2011) examined eighth grade Tennessee Comprehensive Assessment Program (TCAP) scores among students in both a traditional and YRE calendar. The study found that students who attended YRE schools scored higher on TCAP reading than students who attended traditional calendar schools.

Bray (2013) conducted a similar study researching the academic achievement of 12 YRE Title I high schools. The research utilized both 2010 ACT and SAT scores for comparison. The four dependent variables included Average ACT Score, Average SAT Reading Score, Average SAT Math Score, and Average SAT Writing Score. The mean ACT score for year-round school students was 19.68 compared to 19.31 for traditional-calendar school students. Bray's study connects to the theoretical framework of Carroll's Model of School Learning in that all research schools utilized a YRE calendar and reflected time spent learning plus time needed to learn.

In another study tied to spacing effect due to spaced learning opportunities, Helf, Konrad, and Algozzine (2008) found the effects of a ten-week summer vacation did not have a negative impact on the reading ability of a sample group of children, most of whom were struggling readers. During extended breaks, families take advantage of

maintaining student academic exposure through libraries, summer camps, and activities at home.

Limitations

This study is limited in scope to one Michigan suburban public elementary school utilizing a single-track YRE calendar. Therefore, the results of this study may not be representative of other urban public schools. Interviews were conducted with the principal and teachers, within this single YRE public elementary school. Additionally, for participants of this study, it is feasible that perceptions formed of a YRE calendar may be different than those who were not selected to participate in this study. Generalized statements of the benefits of YRE should be moderated with the fact that many study participants perceived intersessions as a significant part of keeping students from learning regression. As this study found the use of intersessions to be an important component of YRE and student learning, it was not documented if the school provided financial assistance to families unable to afford the cost associated with intersessions. The scope of this study will allow the research data to be compared to other areas with similar demographics.

Summary

Investigating the impact of a YRE on student learning can provide evidence into the effectiveness of this type of school calendar. This study seeks to find answers through a single-case study methodology. Findings and results of this study can have an impact on school districts' decisions on whether or not to operate on a traditional academic calendar or a YRE calendar.

The next section reviews the body of research available on YRE. First, school time allocation through the National Education Commission on Time and Learning will be reviewed. Both theoretical frameworks of model of school learning (Carroll, 1963) and spacing effect (Dempster, 1988; Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006) will be examined. In addition, the researcher reviewed literature associated to YRE learning and perceptions of stakeholders on this model and its impact on student learning.

CHAPTER II

REVIEW OF LITERATURE

The literature review will examine available research on a YRE calendar and its impact on student learning. The review will be presented in five sections. Section one will examine research on school time allocation. Section two will investigate the theoretical framework as the foundation for this study. Section three will examine the different types of YRE calendars. Section four will review YRE calendar impact on student learning. Within this section, emphasis is placed on summer learning, summer vacations, YRE positive impact on student learning, and YRE mixed/inconclusive impact on student learning. The final section will examine stakeholders' perceptions of YRE and its relationship to this study.

Time Allocation

With fear that United States' students were academically trailing students from other countries, Congress created the National Education Commission on Time and Learning (NECTL). The commission released the 1994 report "Prisoners of Time" of which concludes that schools need to reinvent their use of time into new and better ways. This report was an extension from the 1983 report "A Nation at Risk," of which also examined United States school time and academic achievement compared to the world (Patel, Cooper, & Allen, 2010). In the United States, students typically spend 180 days in school compared to those in Europe (190 – 210 days) and Japan (240 days) (Patel, Cooper, & Allen, 2010). Given this, schools began to research how to increase learning time within school.

After observation, opinion polls, and data collection about education time use from over 150 school teachers, parents, students, administrators, and experts and visiting over 19 foreign schools (specifically within Japan and Germany), the NECTL commission arrived at several key conclusions. After 24 months' data collection, results showed that people learn at different speeds and rates and learning varies depending upon the subject. The studies concluded that reform efforts fail unless they are attached to more time-on-task with learning. Recommendations from the commission included: better use of school time, establishment of the academic day to meet community and student needs, and keeping schools open longer throughout the school year. Additional findings included teacher use of time to address student needs, technology investment, and a shared vision for responsibility of schools as compared to blaming others for problems. On a national stage, it can be argued that the government studies appear to support YRE or extending the school year.

In 2009, in speaking with the Hispanic Chamber of Commerce in Washington, President Barack Obama stated, "Our children spend a month less in school than children in South Korea—every year. That is no way to prepare them for a 21st century economy" (Clark, 2010). Additionally in 2010, speaking to the National League of Cities, former Education Secretary Arne Duncan stated, "[I] would like to see public schools open 12, 13, 14 hours a day, year round" (Clark, 2010).

Research on government studies involving the effective use of time supports the need for schools to reform time use (Silva, 2007; Cuban, 2008). Cuban (2008) purported that government studies, academic institutions, and others have provided the usual suggestions for school time: year-round calendar, add more time to school day, and add

additional days to the school calendar. He found that the argument is constructed on the basis that cost, lackluster research, and conservative social goals have undermined the United States' effort to fix school time. Cuban stated that increasing more days and time in school would not make better students. He concluded the real issue is fixing what happens during the time students are being instructed compared to extending the school year. In the educational and political arenas, time reform can be of benefit for enhancing student learning.

Using a grant from the Broad Foundation, Silva (2007) examined both educational and political areas of time reform. There has never been a controlled or longitudinal experimental study that measures the effect of extending time on student learning. Silva found that time research can be sub-divided: school time, class time, instructional time, and academic learning time. Silva stated all students could benefit by teachers extending and improving the use of instructional time. Some studies suggest that extended time may only benefit some students compared to others (Dessoiff, 2011; Wilmore-Dafonte, 2013). The final recommendations of the study included improving how we collect and use data on school time. Using this school data can determine weaknesses in curricula, align curricula with assessments, and help design professional development that reflects the real needs of teachers as they strive to improve instruction.

Theoretical Framework

Mertz and Anfara (2014) stated that theoretical framework connections of concepts, constructs, and propositions are significant component parts in research. From these components, one can make sense of the research rationale and research outcomes. This study of the year-round school is aligned with theoretical frameworks connected to

the model of school learning and spacing effect. The following narrative examines both theories as they apply to a year-round school calendar and student learning.

Model of School Learning and Spacing Effect

Cited through Anderson (1984), the Carroll (1963) Model of School Learning purports that students can learn over time. Thus, over a fixed period of time, a student's learning rate can be impacted by several variables. In turn, these variables were studied by Carroll and Spearitt (1967) who stated that learning rate is impacted by five variables separated into two categories including: student and school-related variables.

Carroll and Spearitt (1967) stated student-related variables as the following: student aptitude, student ability to understand instruction, and student perseverance with instruction. Carroll and Spearitt (1967) defined school-related factors as: quality of instruction and opportunities to learn. Carroll's theory served as a platform for future school learning theories including Bloom's Mastery Learning techniques (Anderson, 1984). The following figure conceptualizes Carroll's student and school-related variables.

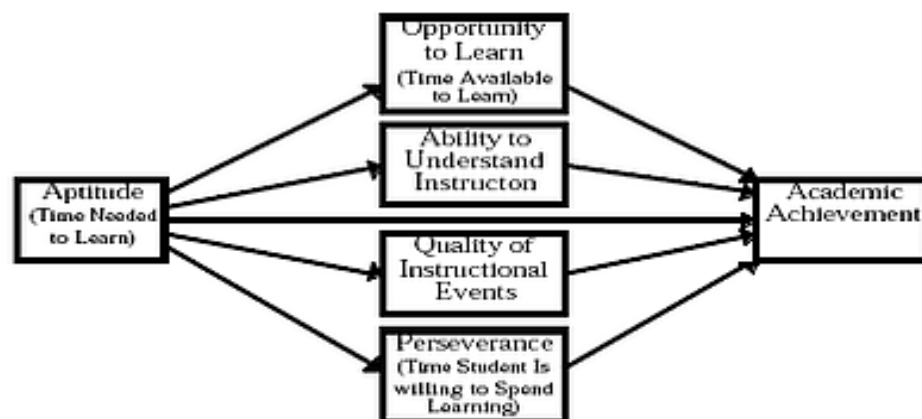


Figure 1. Carroll model of school learning. Reprinted from <https://www.researchgate.net>

In 1989, Carroll expanded upon decades of research on the model of school learning. Within the book “*The Carroll Model: A 25-Year Retrospective and Prospective View*,” Carroll (1989) stated that the assumption is that the time needed to learn is different for each student, thus classroom management is important for each teacher. As previously mentioned, measuring student learning rate is based upon the amount of student success attained over a period of fixed time. Carroll and Spearitt (1967) defined learning rate as: $\text{Learning Rate} = \text{Time Spent Learning} / \text{Time Needed to Learn}$

In expanding upon Carroll’s theory, empirical research exists, which supports the model of learning. In the book “*The Dimensions of Time and The Challenge of School Reform*,” Gandora (2000) cited a research of empirical studies by Anderson (2000).

These studies concluded:

- time needed to learn and time spent learning were related to student achievement
- the more time students were engaged with learning the higher their achievement.
- The more time allocated to a specific content area the greater the student achievement in that content area.

Other studies can theoretically be tied into spacing effect and impact on student learning (Dempster, 1988; Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006).

Dempster (1988) defined the spacing effect as spaced presentations over a period of time compared to mass presentation of materials. Dempster’s research summarized decades of research on the spacing effect and the potential for positive impact on students in a school. In theorizing of this effect, Dempster (1988) concluded that by spacing effect

of presenting information over time would have an impact with improving student classroom performance.

Cepeda, Pashler, Vul, Wixted, and Rohrer (2006) studied spacing of learning and student retention. Over the course of one year, the researchers studied over 1,350 individuals by instructing a set of informational facts. During the study, the individuals experienced gaps with instruction ranging from several weeks up to several months, then were brought back and reviewed the same information instructed from the previous learning. After returning from the second gap, individuals' retention was assessed. The researchers found that the retention of information among the individuals increased when learning occurred within proportioned gaps throughout the year. Cepeda, Pashler, Vul, Wixted, & Rohrer (2006) concluded that timing of learning sessions can impact student learning retention. In addition, the researchers stated that despite the information gained from this research study, over time, individuals must study information on multiple occasions.

Types of Year-Round Education Calendars

A review of the current literature indicates that there are several options available for school districts' administration looking to implement a YRE calendar. According to the National Association for Year-Round Education, these options include: Single-Track Calendar or Multi-Track Calendar. The Single-Track option provides students and staff with a balanced school year calendar (NAYRE, 2017). Single-Track Calendars can consist of the following schedules (not including weekends): 45 instructional days -15 intersession days, 60 instructional days – 20 intersession days, 90 instructional days – 30 intersession days (NAYRE, 2017).

The Multi-Track Calendar model is utilized for districts facing school overcrowding or less classroom space (Oppel, 2007). Students and teachers are divided into different tracks of similar proportions (NAYRE, 2017). There are similar characteristics of Single-Track Calendars including academic days and intersession days. The concept of Multi-Track Calendars creates a “school within a school”(NAYRE, 2017). Thus, with different tracks, numerous students can be served within one school building.

Within each model of YRE, there are different configurations of intersessions, or breaks between school sessions (Oppel 2007). Intersessions vary in year-round school districts but allow for continued extension or remediation of student learning (Oppel 2007). A 2017 example of intersessions, as used within the Turill Elementary School (Lapeer School District, Lapper, MI), includes five-day sessions in October, February, March, and June. Within each session are opportunities for field trips, art projects, technology projects, and academic activities for reading, mathematics, and writing.

Figures 2–4 demonstrate a traditional 180-day school calendar, a single-track YRE calendar, and a multi-track YRE calendar, respectively.

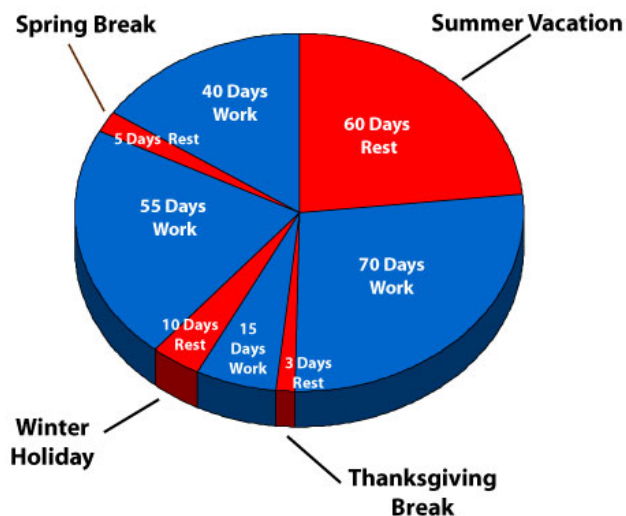


Figure 2. Traditional school calendar. Reprinted from the National Association for Year-Round Education, <http://www.nayre.org/>

The National Association for Year-Round Education stated traditional school calendars as having a nine-month instructional session followed by a twelve-week summer vacation. Figure 2 demonstrates a typical YRE school calendar.

The National Association for Year-Round Education stated that single-track year-round school calendars usually consist of 45 instructional days with 15 days off during the intersession. Figure 3 demonstrates a multi-track YRE school calendar.

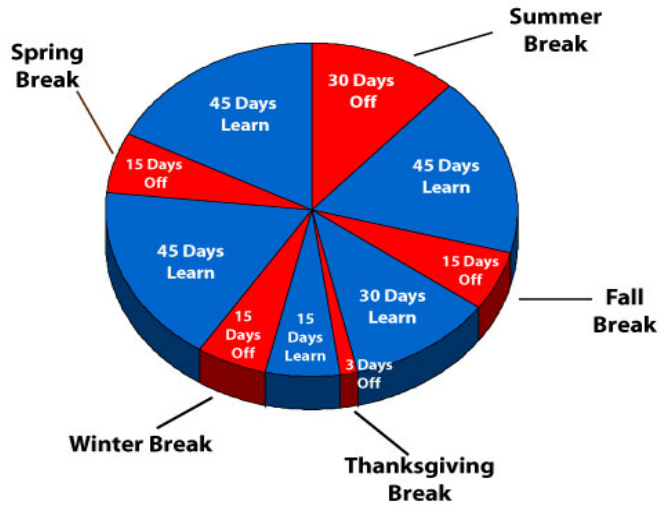


Figure 3. Single-track calendar. Reprinted from the National Association for Year-Round Education, <http://www.nayre.org/>

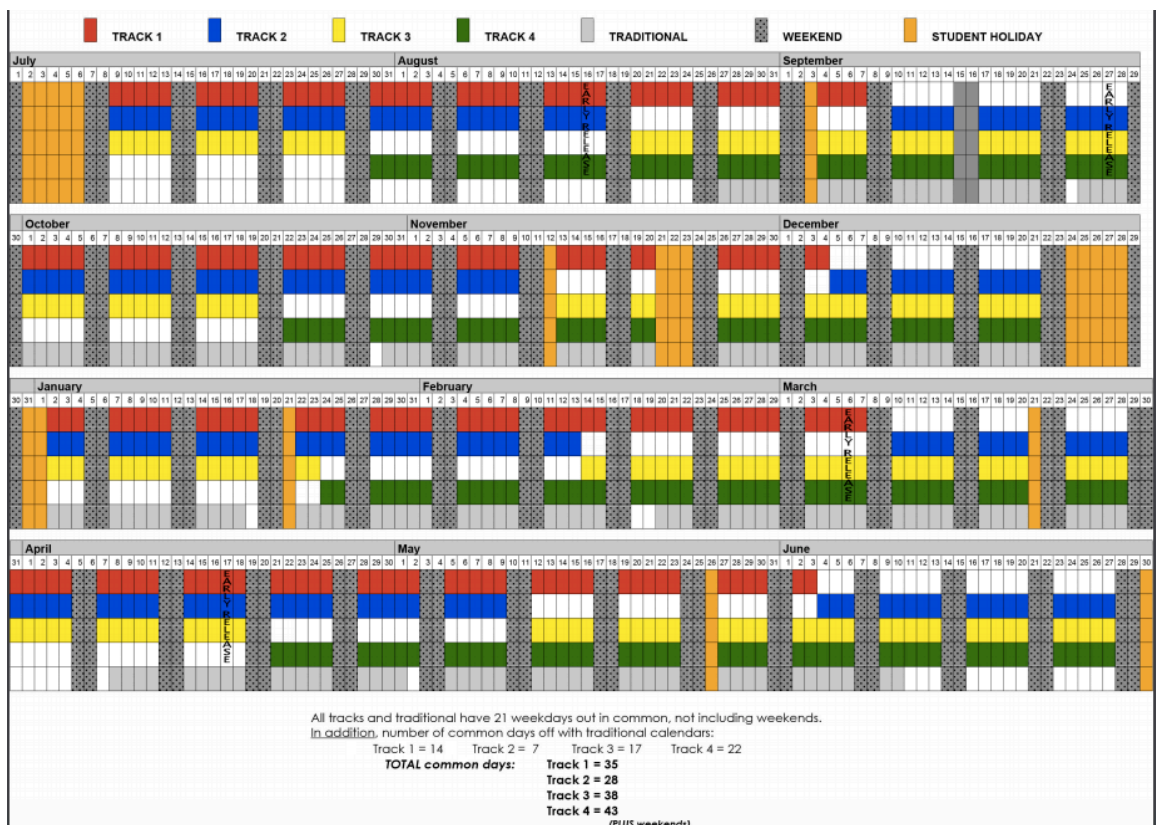


Figure 4. 45/15 multi-track calendar. Reprinted from the National Association for Year-Round Education, <http://www.nayre.org/>

Year-Round Education Impact on Student Learning

Available research on the impact of YRE on student performance is varied; there are data that indicate positive, mixed, and inconclusive results. With a majority of the literature showing mixed impact, it can be argued for or against the benefits of a YRE calendar (Cooper, Valentine, Charlton, & Melson, 2003; Lindsay-Brown, 2010). Pitcock (2018) stated that public schools are essential for all students. Whether wealthy, middle-class, or of low income, all students have the opportunity to achieve at the same rate when schools are in session. When school buildings are closed, the achievement gap widens. Pitcock (2018) argued that research supported schools' use of summer months for enrichment and remediation of students. When schools are closed, students, especially from low-income backgrounds, can have academic, health, and well-being losses. The following section is divided into three sections including: summer learning, summer vacation, and student learning within a YRE calendar.

Summer Learning

Research acknowledged student academic learning loss over the traditionally-long summer break (Huebner, 2010; O'Sullivan, 2013). Huebner (2010) discussed how research supports summer learning loss, especially among students who are disadvantaged. The researcher found that although two meta-analytical studies of academic impact of YRE calendar on student performance are mixed, addressing summer learning loss could be remediated with a YRE calendar.

O'Sullivan (2013) stated many districts resist implementation of a YRE calendar due to various concerns including: funding, tourism, non-formalized summer learning, and impact on family life. The research focused on three parts including: history of the

traditional school calendar with summers off, the need to revamp the “outdated” traditional school calendar, and an argument that a YRE calendar is needed and necessary. The study contested that American students need to be prepared to be global citizens and students are either “getting dumber or everyone else’s students are getting smarter” (O’Sullivan, 2013, pg.402). O’Sullivan purported that the way to achieve this is through a YRE calendar which would lessen the amount of time students are away from academics, decrease student summer “unproductive time,” and prepare American students to be contributors of a global society. Summer learning can aid student-learning retention.

One study addressed summer learning loss by providing a summer reading program to grade one and two students who were economically-disadvantaged and found it was effective (Allington, McGill-Franzen, Camilli, Williams, Graff, Zeig, J., ... & Nowak, 2010). The longitudinal study was conducted over three consecutive summers. The authors found that students who received three consecutive years of free, self-selected summer reading books scored statistically higher on reading test scores than students who did not receive summer reading books. The reported effect size of 0.14 is similar to moving a student four to five percentile rank higher than previous standardized scores. The authors deduced from the research that family involvement with student summer learning is important for student learning success.

Darling (2008) reviewed how parental involvement, no matter what socio-economic status, makes a positive impact on student literacy gains. Darling reviewed YRE studies on student literacy gains and found that students in a year-round school do not necessarily learn more than those of a traditional school calendar. Reference is made

to the Family and Child Education Program and National Center for Family Literacy (with emphasis on Hispanic and immigrant families). Data compiled between 2003 and 2006 showed both programs succeeded with increased reading test scores for students attending their summer reading program. The main reason for such increase was due to the introduction of specific reading strategies for parents to become involved with their children's reading.

Additional research found yearly cumulative achievement gains with student learning through the use of a summer learning program (Alexander, Entwisle, & Olson, 2007; Dessoiff, 2011). Alexander, Entwisle, and Olsen (2007) compared data from the Baltimore Beginning School Study Youth Panel. After deconstructing the study from the entry of high school back to first grade, several findings included cumulative achievement gains over the first nine years of school. Any learning gaps that occurred, most likely took place in the elementary years, where corrective intervention would be most beneficial. Another finding was that once in school, students who are disadvantaged need year-round and supplemental-type learning to counter any family or community influences that may keep them from progressing. The authors concluded that extra summer school could benefit student learning (Alexander, Entwisle, & Olson, 2007). Dessoiff (2011) supported Alexander, Entwisle, and Olson's findings with evidence from the Bardstown Schools (Kentucky) in which a YRE calendar implementation has reduced "summer slide" of over two-thirds of the students considered learners at-risk in reading and mathematics.

Summer Vacation

Research showed various academic impacts of summer vacation for students attending a traditional calendar school compared to YRE. Helf, Konrad, and Algozzine, (2008) reviewed a select group of first and second-grade students to study the effects of a summer vacation on early literacy skills. Emphasis was placed on the students who were considered at-risk, with one group not participating and another participating in a summer reading program. Using standard deviation, it was found that no significant summer slide/set backs were prevalent with the controlled group of student at-risk readers when compared to those who did not participate with the program. The authors contended that unlike other studies, this study shows that summer reading regression was not present with the group, with gains made in four different literacy areas: oral reading fluency, comprehension, decoding, and word recognition (Helf, Konrad, & Algozzine, 2008). Instruction over the summer can positively impact student learning.

In a qualitative review of research on YRE schools, St. Gerard (2007) examined how school districts are shrinking the summer vacation and adopting more of a year-round approach. Data from 2005–2006 National Association of Year-Round Education showed 2.2 million students enrolled in over 3,000 public YRE schools across the United States. This statistic was an increase of schools adopting a year-round model (+11% compared to 2000 and +39% compared to 1995). St. Gerard argued that reasons for adopting a YRE calendar vary, but the long-term benefit is a better use of time and resources for all involved stakeholders. Similar to Helf, Konrad, and Algozzine (2008), St. Gerard (2007) concluded that year-round schools help address the problem of summer learning loss, use of intersessions to support year-round enrichment and remediation, as

well as help to ease overcrowding schools with the use of multi-track YRE calendars (St. Gerard, 2007).

Contrary to Helf, Konrad, and Algozzine (2008) and St. Gerard (2007), Cooper, Nye, Charlton, Lindsay, and Greathouse (1996) found no evidence of academic growth for students participating in a summer learning program compared to students who did not participate. Within the research, 39 studies focused on summer vacation and achievement score decline. Using a meta-analytic procedure, the researchers took the 13 most recent studies and found that the typical learning loss over the summer equals one month on a grade equivalency scale. Relative to spring testing scores, this result would be approximately one-tenth of a standard deviation. When looking at sub-groups over the summer, students from lower socio-economic families showed a reading deviation of -.21 compared to students from middle-income families who gained in deviation with .06. Because the deviations were insignificant, the researchers concluded at the best students show no academic growth over the summer, while the students who are struggling lose one month of grade equivalency scores compared to national norms (Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996).

Supporting the work of Cooper, Nye, Charlton, Lindsay, and Greathouse, von Hippel (2007) found that YRE students learn more than traditional school students who are on vacation during the summer, but learn less during the school year as compared to traditional calendar students. A total of 27 YRE schools were compared to public traditional calendar schools. The study used data from the Early Childhood Longitudinal Study, a national survey conducted by the U.S. Department of Education. The author examined reading and math test scores of children in kindergarten and first grade in 748

public schools and 244 private schools from around the country. Over a twelve-month period, average test score gains were less than one percent larger in YRE schools than in traditional schools (von Hippel, 2007).

Von Hippel (2007) followed up the previous study with another study supporting that summer vacation has a negative effect on student learning, especially for students who are economically-disadvantaged or students who have uneducated parents. The author argued that during the summer, students who are poor lose ground to their middle-class peers due to non-exposure to academic, experiential experiences. The report investigated research on YRE as spreading the traditional 180 days over a 12-month period. By doing so, the possibility of having summer learning loss is decreased. Von Hippel cited a longitudinal study of 27 YRE schools. Data on YRE student learning rates both during the summer and traditional nine-month school calendar were examined. The data showed that during the traditional calendar school year, students have about 20% more school days per month than YRE schools. Nine-month schools have about 19 school days per month (178 days over 9.3 months), while YRE schools have about 15½ days per month (176 days over 11.3 months). First graders in a traditional calendar school (average of 22 students) have a reading rate achievement rate of 2.56 points per month gain. The report stated this is .53 points per month, or 21%, faster than students in a year-round school. For math, when traditional calendar students are in first grade, their mathematics learning is at a rate of 1.55 points per month. This increase is .14 points per month, or 9%, faster than students of a year-round school. The results of this research show that YRE school spreads achievement data over the school year but does not necessarily have an advantage over traditional-school calendars (von Hippel, 2007).

Intersessions

The use of intersessions in between breaks of YRE calendar allow continued enrichment, intervention, and extended learning opportunities for all students. Various studies have shown positive, negative, and inconclusive effects of intersessions (Evans, 2007; Hamilton, Johnston, Marshall, & Shields (2006); Jacobsen, Bonds, Medders, Saenz, Stasch, & Sullivan (2002); McMillen, 2001; Spieth, 2006).

Hamilton, Johnston, Marshall, and Shields (2006) mentioned that the use of intersessions within the Roberta Bonder Public School in Toronto, Ontario allowed four – six weeks of remedial intervention for high school students. In particular, students of English Language Learning benefitted from such offering. Similar to this study, McMillen (2001) stated that increasing evidence suggested that students at-risk benefit from intersession use within a YRE calendar. Within the research “It’s About Time,” McMillen (2001) found that student achievement might increase with intersession use due to opportunity of enrichment, intervention, and continued student exposure to curriculum. As stated within the article, “A Statewide Evaluation of Academic Achievement in Year-Round School” McMillen (2001) cited a study by Ballinger (1995) which found that students who receive enrichment and intervention within intersessions are more likely to have improved test scores due to continued exposure to curriculum.

In regard to intersession use and student learning retention, Byrd (2001) cited intersessions use between sessions of a YRE calendar as having a positive impact on students who are considered to be historically underperforming. Evans (2007) stated that the use of intersessions throughout the YRE calendar allows teachers to target specific remediation skills, thus increasing the chances for learning retention.

Jacobsen, Bonds, Medders, Saenz, Stasch, and Sullivan (2002) revealed that the use of an accelerated literacy program moved over 40% of student participants within the Visalia Unified School District in California. Of the 242 elementary students enrolled, over 40% were back on track after use of this program within intersessions. Along the line of Jacobson's findings, Spieth (2006) stated that the Lanesville Community Schools experienced an increase in student achievement scores. Specifically, Lanesville's use of intersessions helped to contribute to a 14% increase in most grades 5–11 classes with math achievement.

At least one study found little to no impact of a YRE's use of intersessions. Trinis (2007) mentioned that the use of a YRE calendar and intersessions impacted high school music departments. Trinis (2007) mentioned this was due to interrupting of music lessons as well as music schedule for groups preparing for band and other musical groups as students would voluntarily attend during intersessions.

Year-Round Education and Student Learning

Research on YRE impact on student learning compared to traditional calendars on student learning has yielded mixed results (Lindsay-Brown, 2010; McMillen, 2001). Lindsay-Brown (2010) examined achievement within two YRE schools and two traditional calendar schools located in north central South Carolina. The study collected over 256 grade-four student data on the PACT (Palmetto Achievement Challenge Test). The study concluded no significant statistical differences among students in grade four in both schools (English/language arts and mathematics – PACT). McMillen's linear-model study (2001), conducted during the 1997–1998 school year, is parallel to Lindsay-Brown's findings. After examining over two years worth of data and 345,000 YRE grade

three - eight public school and YRE students in South Carolina, academic achievement among students attending a year-round schooling were no higher than students attending a traditional school (McMillen, 2001). By adjusting the school calendar, no significant academic achievement data were found among YRE students.

Wu and Stone (2010) examined YRE in California and the impact on student academic growth as measured with the Academic Performance Index (API). The aim was to conduct some type of statistical analysis, as previous YRE school research lacked in data rigor. Over a six-year period (2000–2005), data were collected from combined traditional and YREs school (4,569 total) via a mixed-analysis involving covariance growth on API scores. The data were published via California’s Standardized Testing and Reporting Program (STAR). Wu and Stone (2010) found that the API mean of the traditional schools across five years ($M = 739.19$) was significantly higher than that of the YRE schools ($M = 651.53$). The researchers used a second data model (Latent Growth Model–Structural Equation Model) and found that year-round schools and traditional-calendar schools’ overall API performance over five years was not statistically different. Wu and Stone (2010) stated, “there is a general consensus that [year-round education] has no effect or a small positive effect on student performance, the methodology of many studies had left copious room for more rigorous verification” (pg. 83).

Winkleman’s (2010) quantitative research reviewed academic achievement of students in Chicago Public Schools, both traditional-school calendar and YRE calendar. Data collected included 2008–2009 third grade Illinois Standard Achievement Test (ISAT) scores for both reading and mathematics. Studying 39 YRE schools and 39

traditional-calendar schools and utilizing a matched-subject design approach with a T-test, the researcher found a mean reading passing score of 51.66 for YRE students compared to 51.91 for students of a traditional calendar (Winkleman 2010). Mathematics mean scores for YRE students included 63.08 compared to traditional calendar students of 65.95. Both data sets were found to be statistically-insignificant. Winleman (2010) stated for subgroup students including low socio-economic status, there was no statistically-significant difference between YRE school and traditional-calendar school students.

Bray (2013) conducted a similar study to Winkleman's, by researching the academic achievement of 12 YRE Title I high schools. The research utilized both 2010 ACT and SAT scores for comparison. The four dependent variables included Average ACT Score, Average SAT Reading Score, Average SAT Mathematics Score, and Average SAT Writing Score. The mean ACT score for year-round school students was 19.68 compared to 19.31 for traditional-calendar school students. The mean SAT score for year-round school students was 451 compared to 441.33 for traditional-calendar school students. T-test findings concluded that despite higher scores by those attending the YRE school, there was not enough for a statistically-significant difference (Bray, 2013). Positive academic gains can occur within a YRE school.

Abakwue (2011) examined eighth-grade Tennessee Comprehensive Assessment Program scores among students in both a traditional and YRE school calendar. The researcher's hypotheses included a significant difference in mathematics and reading achievement scores as measured by TCAP between eighth-grade students attending a YRE school and eighth-grade students attending a traditional calendar school. The study

found that students who attended YRE schools scored higher on TCAP reading than students who attended traditional calendar schools. YRE school students achieved higher scores in reading comprehension and fluency. The research points to additional remediation within a YRE school as a factor for increased reading achievement. Findings showed that students who are in regular education and students who are mainstreamed differ significantly in mathematics scores within both schools. Abakwue noted that students who are minority and attended traditional calendar schools scored lower on the mathematics TCAP compared to students who attended YRE schools.

Palmer and Bemis (1999) reviewed available research on YRE. The study looked at data for 75 YRE school achievement analyses. The researchers found that 42 studies revealed no significant academic impact for students attending YRE schools and 27 studies revealed significant academic impact of YRE schools on student academic achievement (Palmer & Bemis, 1999). Other studies revealed inconclusive data results of YRE schools on family impact, stakeholder attitudes, and staff professional development. The research concluded with both authors reasonably supporting academic gains for students of YRE schools, especially within the upper elementary schools.

Following Palmer and Bemis (1999), other studies showed positive academic achievement could occur with select subgroups of students in YRE schools (Smith, 2011, Wilmore-Dafont, 2013). Smith's (2011) quantitative research of Wake County Schools within North Carolina compared academic achievement of students attending a YRE school and those attending a traditional-school calendar. The author utilized a micro-level longitudinal database to compare academic achievements of both (2004 – 2009 school years via North Carolina Department of Public Instruction - NCDPI). Findings from the

study revealed YRE schools improved student achievement for students with special needs and low socio-economic status, but students of English Language Learning did not benefit from YRE schools (Smith, 2011.)

Similar to Smith, McMullen, Rouse, and Haan's research (2015), students' math and reading scores in grades three – eighth from 2006 – 2008 within Wake County Public Schools in North Carolina were investigated. The researchers quantitatively reviewed the data of 22 YRE calendar schools through a quantile regressions approach. The researchers concluded that YRE academic gains within reading and math were found among students of low-income status while mixed and inconclusive results for all other students. The researchers stated the findings should provide both optimism and concern for use of a YRE calendar to encourage student progress.

Similarly, Wilmore-Dafont (2013) studied the academic impact of Texas fifth-grade students attending a YRE school compared to fifth-grade students attending a traditional-calendar school. The author examined the Texas Assessment of Knowledge and Skills (TAKS), as well as, variables including student ethnicity and economic disposition. The authors applied a casual-comparative research design. This quantitative examination of student achievement across English, mathematics, and science achievement from 2004 – 2011 school years, found grade five students who are Hispanic and economically-disadvantaged academically benefitted from YRE by scoring higher on the TAKS reading, mathematics, and science mean scale scores compared to students who are White and/or Black (Wilmore-Dafont, 2013). Students who attended a traditional school with a 180-day calendar scored higher on the TAKS than students who attended a

YRE school. Mixed results were found for students who receive learning support in both traditional calendar schools and YRE schools.

Additional research shows inconclusive and mixed results of achievement with select subgroups of students in a YRE school (Graves, 2010, Graves, 2011). Graves (2010) utilized a longitudinal study of multi-track YRE schools in California and provided results toward effectiveness of programing. When compared to national percentile rank associated with reading, mathematics, language, multi-track YRE calendars scored one-two percentile points lower than traditional calendar schools (Graves, 2010). Following up on this study, Graves (2011) examined the impact of YRE schools on students who are traditionally-disadvantaged within California. The students who are traditionally-disadvantaged include English-Language Learners, African American, low-socio economic, and Hispanic-Latino. The findings included significant negative effects on all groups located within a multi-track YRE calendar (Graves, 2011). When compared to students at the 25th and 50th percentile on nationally-standardized tests, students who are traditionally-disadvantaged scored much lower with a one or two years' difference. A multi-track YRE school configuration can negatively impact student learning according to this study.

Similar studies to Graves showed negative academic achievement within multi-track year-round schools (McMullen & Rouse, 2012). In this study, McMullen and Rouse (2012) examined student achievement data sets within multi-track YRE schools in Wake County, NC. Data were reviewed from the North Carolina Department of Instruction in conjunction with Duke University. Results showed that overly-crowded multi-track YRE schools have a negative impact on reading achievement, as well as no significant data

difference among math achievement. The authors discovered that a small negative impact on student achievement occurred when using mobile classrooms (McMullen & Rouse, 2012).

Mitchell and Mitchell's (2005) case study of California's elementary YRE schools found 25% to be operating on a multi-track schedule. This case study revealed substantial differences in the characteristics of students and teachers across four of the eight attendance tracks in a large California school district. The researchers reviewed Stanford Achievement Test data and revealed a strong association of achievement with student demographics (Mitchell & Mitchell, 2005). The researchers contended that some students may not have access to remediation efforts that students in a single-track YRE school calendar may have, thus leading to negative academic impact.

More recent research found statistically inconclusive results of YRE's impact with student achievement (Huband, 2015; Morin, 2017). Huband (2015) conducted a quantitative study of 33 YRE calendar schools and 33 traditional calendar schools where the student population had at least 40% free/reduced lunch. Study findings included academic achievement of students within grade four. After review of student achievement data, Huband (2015) concluded there was no statistical difference between achievement data of students within grade four of the YRE calendar schools compared to students in grade four within a traditional calendar school, thus stating that both schools are equally important in terms of student academic success. Similar to Huband, Morin (2017) studied a group of 100 seniors each from a YRE calendar high school and traditional calendar high school in Virginia. Each set of seniors shared similar demographics. In comparing achievement data from the Virginia required Standards of

Learning (SOL) exam for reading, mathematics, science, and social studies, Morin (2017) concluded that there is no statistically-significant difference with SOL achievement with seniors in a YRE calendar school and seniors in a traditional calendar school.

Through additional quantitative research, Johnson and Wagner (2017) compared data of students within YRE calendar schools and traditional calendar schools. The data were obtained from the National Center for Educational Statistics (NCES) and compared the beginning and end of year ECLS-K reading and mathematics assessment given to kindergarten students. Among the findings, Johnson and Wagner (2017) concluded that students within a YRE calendar school did not academically achieve or grow as well as kindergarten students within a traditional calendar setting. Johnson and Wagner (2017) stated the findings challenged the theory of spacing effect and how YRE calendars attempt to balance learning days and time off school.

Year-Round Education and Students Who Are Historically Disadvantaged or Considered to Be At-Risk

For purpose of this study and in defining students who are historically-disadvantaged students, the Michigan Department of Education cites four groups: 1) students eligible for free/reduced lunch, 2) students who are minority, 3) students with disabilities, and 4) English Language Learners. Within the available research, there are limited studies on the impact a YRE school has on students who are historically underperforming or “at-risk” (Pfeiffer, 2011). According to Pfeiffer (2011), it becomes challenging to measure positive or negative academic impact due to lack of available research on these student groups.

Thigpen (2004) studied elementary students of low socioeconomic status and who attended a YRE school within Mississippi. Students' achievement data were studied for a three-year period running from 2001--2003. The researcher concluded that there was no statistically-significant difference with low socioeconomic students' learning and the learning of other student groups in a YRE school. Additionally, the researcher found no statistically-significant difference in year-round schools for low socio-economic students' test scores in both mathematics and language, as measured by the Mississippi Curriculum Test.

Similar to Thigpen's study, Schumacher (2015) examined data from the 2011 – 2014 school years in regard to academic achievement of students who are low socio-economic within third, fourth, and fifth grade. Utilizing a one-way ANOVA comparison of data, Schumacher (2015) found no statistically significant difference in reading, math, and guided reading scores for students of low socioeconomic status within a YRE school. The researcher emphasized the lack of research on YRE school academic impact with students of low socioeconomic as well as the need for additional studies.

Mitchell-Hoefer (2010) analyzed the academic achievement of students attending a high-poverty YRE school within South Carolina. From 2005-2007, the researcher analyzed reading and mathematics scores from the Palmetto Achievement Challenge Test. Mitchell-Hoefer (2010) concluded that there were no statistically-significant differences in student achievement with students attending a high-poverty YRE school when compared to students attending a similar school on a traditional calendar. Similar to Thigpen and Schumacher's studies, Mitchell-Hoefer (2010) suggested additional studies

to determine YRE school academic impact with students of low socioeconomic status, special needs, and limited English proficiency (ELL).

Coopersmith (2011) studied fifteen Texas YRE public schools and the academic effect on grade six through eight middle school students. The researcher reviewed student sub-groups including: low socio-economic status, special education, and Limited English Proficiency within various reading, mathematics, writing, social studies, and science assessments. After comparing data of these schools to similar schools utilizing a traditional calendar, Coopersmith (2011) found average mean scores were higher for students of low socioeconomic status attending year-round schools. With the exception of grade six mathematics, YRE students of special education average mean scores were lower than students of special education scores who attended a traditional calendar school. Coopersmith (2011) stated year-round grade six students who had Limited English Proficiency (LEP) mean mathematics scores were higher than those of a traditional calendar school, while other academic comparisons of this sub-group contained mixed results.

Several studies concluded that YRE calendars should be mandated for low-performing schools in an effort to close the achievement gap (Graves, 2011; O'Sullivan, 2013). Graves (2011) stated that students who are considered historically disadvantaged and minority would academically benefit within a YRE calendar as the summer break would be shorter as compared to a longer summer break, widening the academic achievement gap. Similarly, O'Sullivan (2013) stated that YRE calendar shortens the amount of time students are away from school, as well as, consistently provides resources to students who are underachieving and their families.

In reference to students with disabilities and the YRE calendar, there is a significant lack of available research (Pfeiffer, 2011). This study references several previous research findings related to students with disabilities and learning (Chalfant & Whalen, 2017; Chou, Wehmeyer, Palmer & Lee, 2017). Chalfant and Whalen (2017) reference a Centers for Disease Control (CDC) 2016 report that one in every 68 children born has some type of Autism Spectrum Disorder (ASD). As the number of students with Autism is on the rise, both researchers stated the difficulties these students have with organizing information, linking concepts, and their need for routine. Chou, Wehmeyer, Palmer, and Lee's (2017) study examined students with Autism Spectrum Disorder (ASD), students with intellectual disabilities (ID), and students with learning disabilities (LD). The researchers examined four dependent variables of each group including autonomy, psychological empowerment, self-regulation, and self-realization. The researchers found that students with Autism had significant lower levels of autonomy when compared to the other student groups.

In another study of students with Autism, Ricon, Sorek, and Yeger (2017) studied 20 age five to seven students with high-functioning Autism Spectrum Disorder (HFASD) and 30 similarly-matched typical-developing students who all attend a regular school. After completing a short sensory profile survey, within the findings, the researchers concluded that students with HFASD had significantly more sensory processing difficulties compared to the typical-developing students. Ricon, Sorek, and Yeger (2017) stated that the findings correlate to HFASD students' need for routine as an essential part of their daily schooling.

In reference to YRE and positive behavior interventions and strategies (PBIS), the researcher noted a lack of available research studies on this topic. Previous research exists in comparing PBIS and overall student achievement within traditional school settings (Houchens, Zhang, Davis, Niu, Chon & Miller, 2017; Reno, Friend, Caruthers, & Smith, 2017). Houchens, Zhang, Davis, Niu, Chon, and Miller (2017) examined PBIS and student achievement within Kentucky schools in which the school either applied PBIS or did not apply such system. The researchers concluded that there was no significant differences in student achievement within a PBIS or non-PBIS school. High to medium schools implementing PBIS were found to have higher levels of student achievement compared to others. Reno, Friend, Caruthers, and Smith (2017) examined a mid-western kindergarten-fifth grade elementary school's reading and math academic achievement of 71 students who were identified as Tier II PBIS. Researchers concluded no statistically-significant findings related to Tier II PBIS students and academic achievement.

Miller's (2016) PBIS study of a school within north central Washington sought to examine students in grade five, the level of PBIS, and academic achievement. Miller (2016) examined the school's implementation of "The Leader in Me" PBIS program. The researcher concluded when compared to available baseline data, there was no correlation of the students enrolled in the PBIS tiers and their academic achievement.

Year-Round Education Perceptions of Stakeholders

Research of previous YRE studies shows positive, mixed, or inconclusive academic gains, yet positive stakeholders' perceptions of YRE (Cooper, Valentine, Charlton, & Melson, 2003; French, 2013; Hamilton, Johnson, Marshall, & Shields, 2006;

Worthen & Zsiray, 1994). Cooper, Valentine, Charlton, and Melson (2003) argued that a credible study on calendar modification effects has yet to be conducted. In reviewing previous research, the effect of a modified school calendar on student achievement was small (.05 standard deviation) when compared to other means of learning intervention. French's (2013) study conducted in the 2012-2013 school year concluded that a Michigan school district's decision to operate a YRE school produced positive standardized test scores compared to a neighboring school district operating on a traditional calendar. Hamilton, Johnson, Marshall, and Shields, (2006) found positive academic gains within select YRE schools in Toronto, Canada and Maine, and Kentucky. Worthen and Zsiray's (1994) study concluded that students in YRE schools do as well or slightly better in academic achievement than students in traditional schools. Both studies found that students, parents, and teachers who participate in YRE tend to have positive perceptions about the experience.

Similar YRE studies on stakeholder perceptions support both positive views of calendar and academic gains (Huffman, 2013; Rule 2009). Within Huffman's quantitative study, 106 public school teachers from both traditional calendar schools and YRE schools across North Carolina were examined. By using a 37-item questionnaire, data findings included a statistically-significant relationship between the perceptions of teachers regarding the type of calendar adopted by a school and their perceptions of student achievement (Huffman, 2013). The research stated that positive teacher perceptions of a balanced YRE calendar strongly correlated with positive teacher perceptions of improved student achievement as well as a feeling of motivation working within this calendar due to more frequent breaks.

Expanding on Huffman's research, Rule's (2009) T-test data within Blount and Sevier counties in Tennessee showed both teachers and parents within a YRE school have a more favorable view of their school compared to those of a traditional calendar. Perceptive data showed teachers of a traditional school calendar did not have a strong correlation with teacher perceptions of student achievement.

In using descriptive surveys, George (1999) examined attitudes and levels of satisfaction among 75 administrators and teachers within Georgia's YRE schools. Findings showed that there was no significant difference between the overall attitudes of administrators and teachers toward YRE in Georgia. George found a significant difference between administrators' and teachers' levels of satisfaction on the effect of the YRE. George concluded that administrators and teachers are satisfied with YRE effectiveness in Georgia schools with teachers preferring this calendar more so than administrators.

Additional YRE perceptive research finds positive view by stakeholders. This study includes Hasser and Nasser (2003) who mentioned that teachers who have taught in both traditional and YRE calendars feel less fatigue, as well as, less student burn out. Cooper's (2003) research of 50 YRE calendar schools concluded that stakeholders' perceptions were that YRE calendar was both a positive experience, as well as, having a positive impact with student learning.

Lundquist (2001) conducted a YRE school perceptive study and found that stakeholders find value in both calendar use and positive academic impact. Lundquist's (2001) descriptive qualitative study of Irving Elementary School in Indianola, Iowa, included 38 structured interviews and 19 informal conversations with stakeholders in the

school. Perceptive findings from the study found that most teachers and students believed learning was enhanced through the year-round school. The YRE school concept was believed to be of value for all stakeholders and they suggested continuation of this type of schooling.

Lasater (2005) conducted qualitative descriptive research on perceptions of both teachers and students within Maury County in Tennessee's YRE schools and traditional-calendar schools. In the study, 521 students and 546 teachers were part of the sample and unpaired T-test data. Lasater (2005) found a statistically-significant benefit and perceived satisfaction between both students and teachers within a YRE school. There was no statistical difference between both YRE school perceptions and those of traditional calendar school perceptions. Lasater suggested future studies involving test scores of the YRE schools and traditional-calendar schools within Maury County.

Mannarino's (2003) qualitative study of schools in southeastern Virginia examined administrators' perceptions of implementing YRE. Sixteen administrators were interviewed and discussed how a year-round school program was developed and implemented within twelve schools. After seeking information on how the programs were developed, Mannarino investigated if perceptions impacted the implementation, the researcher concluded that administrators supported the implementation of a YRE school. To overcome difficulties, Mannarino discovered through additional research that administrators looked for and found support from school stakeholders to successfully implement a YRE school.

Similar to Mannarino's study, Smith (2002) interviewed 136 YRE high school principals within the United States, Guam, and Puerto Rico. The research focus included:

What are the principals' experiences and perceptions of the implementation and effectiveness of the year-round schedule? Do principals' experiences and perceptions of the implementation process and assessment methods, problems since implementation, and motivation in adopting the year-round schedule differ according to the size of school, type of school community, type of school, and type of year-round calendar? Smith reported in his study that a majority of high schools operated on a single-track 45-10, 45-15-type schedule. A majority of the YRE high school principals believed adoption of the YRE calendar was to help increase both students' achievement and students' learning retention. Smith concluded that the study found 67.1% of YRE high school principals were satisfied with the implementation of YRE for their students.

Weatherford (2001) quantitatively examined attitudes of community stakeholders within the Maury County School District and its implementation of YRE calendar. After surveying over 1771 stakeholders, data were divided into perceived need, perceived student benefit, and perceived implementation of a YRE school. Results of the data showed significant support for YRE school implementation. Specifically, females and those with higher degrees of education demonstrated support for the year-round school implementation within Maury County.

Additional studies show positive perceptions from students, teachers, and community members of YRE school application (Egan, 2001; Morris, 2002; Naylor 2012; Winter 2005). Egan (2001) utilized a mixed-method approach to examine parent perceptions from the first year of piloting a YRE calendar within Rutherford Elementary School in Minnesota. The research included four focus groups of eight participants from both YRE school and traditional-calendar schools. Results of data analysis showed

parents participating with YRE school were satisfied with the shorter summer and more frequent breaks spread throughout the school year. One hundred percent of the respondents wanted to see YRE continuation (Egan, 2001). Morris's (2002) case study of Laurel Ridge (pseudonym) year-round school located in Virginia, found stakeholders' perspectives to be positive of both YRE calendar and academic gains. Naylor (2012) referenced a 2009 study on teacher wellness within Spul'u'kwuks Elementary in Canada that supported positive teacher perceptions of a YRE school. Winter's (2005) qualitative study of early year educators within Ontario, Canada, supports Morris and Naylor's findings, as stakeholders' perceptions of YRE school were positive for attitude, sense of well-being and continuation of YRE school calendar.

Although YRE perceptive research shows a positive view by stakeholders, limitations to research and the need for additional literature were evident (Cooper, Valentine, Charlton, & Melson, 2003; French, 2013; Lundquist, 2001; Palmer & Beamis, 1999; Winter 2005). Cooper, Valentine, Charlton, and Melson (2003) suggested additional longitudinal studies on YRE and overall impact on stakeholders' perceptions and student learning are necessary. Supporting Cooper, Valentine, Charlton, and Melson's suggestion, French (2013) stated that although no one was certain if changing to a YRE within Horizon Elementary in Michigan helped instruction, a longitudinal study of stakeholders' perceptions and student achievement would provide more data. Similar to French's study, Lundquist's (2001) research of Irving Elementary School in Iowa supported the need for more research on YRE impact on academic learning. Although perceptions of stakeholders within a primary grade YRE school in Ontario, Canada, found positive support for this type of calendar, Winter (2005) stated the need for

additional action-based research on perceptions and impact of YRE on student learning. Palmer and Bemis (1999) reviewed 75 YRE articles in professional journals and found inconsistencies with methodology with incomplete data to support conclusions of its effectiveness. Through the findings, some studies revealed inconclusive data results of YRE impact on family and stakeholders' attitudes. Palmer and Bemis (1999) agreed that the need for additional YRE perception studies is necessary.

Summary

This chapter reviewed available research on YRE in the areas of 1) time allocation, 2) types of YRE, 3) impact on student achievement, 4) summer learning, 5) summer vacation, 6) intersessions, 7) student learning, 8) students who are historically disadvantaged, 9) perceptions of stakeholders. Previous research on YRE has found some positive results related to student achievement, while most have concluded mixed or inconclusive results as to its impact on student achievement (Cooper, Valentine, Charlton, & Melson, 2003; Mitchell & Mitchell, 2005; von Hippel, 2007). The literature on stakeholders' perceptions of YRE confirmed a positive view of this type of calendar (Eagan, 2001). In a review of the professional literature on YRE, the need for additional studies on stakeholders' perceptions and the impact on student achievement is needed (Palmer & Bemis, 1999). Within the next chapter, a detailed description will be provided on the methods used to collect and to analyze the data for this study.

CHAPTER III

METHODOLOGY

Introduction

The purpose of the study was to gather information on perceptions from an administrator and teachers within a Michigan public elementary school who utilize and participate in a YRE school calendar. To gather in-depth perceptions of a YRE and impact on student learning, semi-structured interviews were conducted with the elementary principal and teachers within this YRE elementary school.

Research Questions

In gathering perceptions from YRE elementary school principal and teachers, the following research questions were developed:

1. What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?
2. What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming /underserved populations in English/language arts and mathematics achievement?
3. How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

Population

The researcher utilized purposeful sampling to select a YRE school for this case study. As Creswell (2012) stated, purposeful sampling can best be used to help understand a phenomenon. The research questions of this study required that the target population be well-represented. Mira (2006) stated that the researcher establishes

relationships with the participants to help extract information that would be of benefit to the research. In addition, Mira (2006) mentioned that a small number of interviews can facilitate the researcher's association with participants, as well as, aid in the inquiry process to obtain information. Initially, the researcher sought for a total of 13 study participants. After recruiting participants for this study, 11 total participants volunteered including the principal, five kindergarten through third grade regular-classroom teachers and five intervention teachers.

Research Setting

Apple Elementary School (pseudonym) is a suburban, single-track YRE public elementary school located in a suburb setting in Michigan. Apple Elementary School is one of ten elementary and high schools located within the district. The area comprising Apple Elementary School consists of over 23,000 citizens. According to available 2016 census data on race, the population consists of approximately 82% white, 11% African-American, and 7% Asian. Management, manufacturing, and sales-related professions comprise a majority of occupations found within the enrollment area of Apple Elementary School. According to 2016 census data, the estimated median household income was \$61,000. Apple Elementary School is within several miles of colleges and universities, with over 23% of its citizens having a bachelor's degree.

In reference to student grade levels, the elementary school represents kindergarten through fourth-grade students. The researcher chose this site due to Apple Elementary School operating on an YRE calendar since 1983. Apple Elementary School is the only school within this district utilizing a YRE calendar. In addition, the study site was chosen due to similarities with use of student growth models in both Pennsylvania

(PVAAS) and Michigan (SGP). According to the Michigan Department of Education as of 2017, Apple Elementary School's population was 457 students. According to the Apple Elementary webpage, the school's mission is for students to be "safe, respectful responsible, and kind." The Michigan Department of Education 2017 demographic information for Apple Elementary School is as follows: the student population is comprised of .5% (2 students) American Indian, 5% (21 students) Black, 8.5% (36 students) two or more races, 9% (38 students) 3.1% (13 students) Asian, 11.1% (47 students) Hispanic, and 70.8% (300 students) White. The school has a free/reduced lunch population of 27.2% (124 students). Michigan's state assessment is entitled the Michigan Student Test of Educational Progress (M-STEP) in ELA (Reading) and mathematics. Apple Elementary students in grades three and four participated with English/language arts (ELA) and mathematics. The overall 2016-2017 Apple Elementary M-STEP scores include the percent of students who scored proficient or advanced: grade 3-4 ELA of 53% and grade 3-4 mathematics of 55%. Permission to include Apple Elementary School in this study was obtained through the school district's superintendent and Apple Elementary School's current building principal.

Apple Elementary was chosen for this study because the school has implemented and continued a YRE calendar of instruction for over 30 years. Since 2014, Apple Elementary School students have scored above the Michigan state average with ELA and mathematics assessment scores. The 2016–2017 Apple Elementary grade 3-4 M-STEP scores in ELA and mathematics averaged 10-15% higher than the 2016 - 2017 Michigan State average of all schools' scores. With these achievement scores, it is essential that research be conducted to obtain information related to the effects of YRE on students'

performance. The results of this study may have implications for school district personnel of similar demographics that are considering implementation of a YRE model.

Research Instrument

Permission was granted to use and to modify the research instrument interview questions from Backman's (2008) qualitative study in which perceptions of stakeholders within two Georgia YRE schools were examined. Backman (2008) validated the interview instrument through piloting within the Taliaferro County Schools, which operates under a YRE calendar configuration. According to Backman's (2008) study, experienced YRE administrators, teachers, and parents provided feedback on how to make the process and interview instrument more effective. The interview questions are as follows:

Interview Questions for Administrator (adapted from Backman, 2008)

1. Suppose I were a new parent coming to your school. What would you tell me about YRE?
2. In your perception, what do you like or dislike about working at this school?
3. What has been the most important experience you have had with YRE and student achievement?

Probe Question A: When did that happen?

Probe Question B: Who else was involved?

Probe Question C: How did that come about?

4. How has YRE impacted student achievement with ELA? Mathematics?

Probe Question A: Are there more opportunities for enrichment activities under a YRE schedule?

Probe Question B: How has YRE impacted student retention of material taught?

Probe Question C: When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on track?
How or why not?

5. How has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming/underserved populations?

Probe Question A: Are there more opportunities for intervening with students of historically or considered to be underperforming/underserved populations?

6. How does YRE impact the relationship of teachers with the school administration in accomplishing student achievement?

7. How has YRE impacted the necessary time and resources you have to accomplish your teaching objectives?

8. Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?

9. How does YRE impact with scheduling of classes?

10. Do you have any additional information as to how YRE can improve student achievement?

Interview Questions for Teachers (adapted from Backman, 2008)

1. Suppose I were a new parent coming to your school. What would you tell me about YRE?

2. In your perception, what do you like or dislike about working at this school?
3. What has been the most important experience you have had with YRE and student achievement? (RQ3)

Probe Question A: When did that happen?

Probe Question B: Who else was involved?

Probe Question C: How did that come about?

4. How has YRE impacted student achievement with ELA? Mathematics?

Probe Question A: Are there more opportunities for enrichment activities under a YRE schedule?

Probe Question B: How has YRE impacted student retention of material taught?

Probe Question C: When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on track?
How or why not?

5. How has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming/underserved populations?

Probe Question A: Are there more opportunities for intervening with students of historically underperforming/underserved students? (RQ2)

6. How does YRE impact the relationship of teachers with the school administration in accomplishing student achievement?

7. How has YRE impacted the necessary time and resources you have to accomplish your teaching objectives?

8. Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?
9. Do you have any additional information as to how YRE can improve student achievement?

Table 1

Matrix of Research Questions to Interview Questions

Research Question	Interview Question Number
1. What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?	4, 6, 7, 8, 9, 10
2. What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming/underserved populations in English/language arts and mathematics achievement?	4, 5, 6, 7, 8, 9, 10
3. How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?	1, 2, 3, 4, 8, 10

Research Procedures

After contacting the school district, a formal email was sent to the district of Apple Elementary School seeking approval to conduct a study about YRE within Apple Elementary School. Upon approval from the school district and Institutional Review Board of Indiana University of Pennsylvania (see Appendix A), the researcher phoned and emailed the elementary principal with information related to the study. Information

was shared regarding conducting interviews with the principal and willing teacher participants. Via email notification, this researcher contacted all regular and intervention teachers within Apple Elementary. The email notification contained information related to the study, the recruitment of willing classroom and intervention teacher volunteers, and the researcher's contact information. The researcher initially sought a total of 12 teacher participants. Based upon teacher responses in the timeframe, the researcher was able to recruit five regular classroom teachers in kindergarten through third-grade and five intervention teachers (special education, reading-math support, behavior support).

For purpose of this study, administrator and teachers who have had at least one year's exposure to YRE were included. Each willing administrator and willing teachers were contacted by phone and email to take part in this case study. E-mail written and phone communication included the proposed study, its purpose, and the interview protocol. Via email, the administrator and teachers were given a summary of the proposed study, consent form, and assurance of anonymity (See Appendix B-C). Prior to interviews, participants completed consent forms that outlined permission to participate in the study. After receiving written consent from all interview participants, a date was established to conduct a phone interview. As opposed to face-to-face interviews and lessen any concerns, the phone interview was used, as it proved more confidential, convenient, and cost-effective for both participants and the researcher (Oltmann, 2016). After securing an interview date via email and prior to interview, the researcher provided each participant with an electronic copy of the interview questions.

Kruger and Casey (2014) emphasized creating an environment where all participants feel comfortable speaking about the topic. To assure anonymity and freedom

of expression, each participant was coded with an assigned number (ex: Administrator One/ Teacher One). By phone, the researcher utilized a semi-structured interview model using interview and follow-up questions. Based upon responses, follow-up questions were asked to promote additional thoughts, opinions, and perceptions of participants. Interviews were recorded using an iPad audio application. While audio recording, structured notes were taken. At the conclusion of interviews, the researcher thanked each participant. After the interviews, the researcher immediately transcribed the audio-recorded responses and each participant was provided with a copy of the transcribed interview. Participants reviewed the transcribed copy and reported any errors in the transcription.

To code the data, the researcher analyzed the audio of the responses and transcribed interview notes via inductive content analysis of the data. After transcribing all interview audios and notes, the data obtained from the transcribing was manually categorized in alignment with the research questions. To assure all information was categorized, this process was repeated three times. By doing so, themes were identified. From the information, participants' statements were aligned with the research questions. The themes were categorized into three types: consensus, supported, and individual. These statements helped to understand the participants' perceptions of the phenomenon. For purpose of this study, a consensus theme was shared by at least 80% of participants. Supported themes were shared by at least 50% of participants, while one or two participants made up the individual themes. These themes were aligned to the research questions to analyze perceptions of stakeholders within a YRE school. After alignment of themes to the research questions, this study provided information related to an

administrator's and teachers' perceptions of the impact that YRE has on student achievement, the effect of YRE on students who are underperforming or are part of underserved populations in English/language arts and mathematics achievement and how the principal's and teachers' perceptions of YRE student achievement differ or agree.

Similar to Backman's study (2008), the researcher wanted the study to provide quality, accurate, and trustworthy information. This study applied processes to check for internal validity, external validity, and reliability of data findings. Merriam (1990) was cited for internal validity. The internal validity process included involving participants with all stages of the interview and checking interpretations with all interviewed individuals (Backman, 2008; Merriam, 1990). Merriam (1990) was also cited for the reliability of the data process. The reliability component included leaving an audit trail describing in detail how the research findings and conclusions were extracted from the data (Backman, 2008, Merriam, 1990). The external validity was addressed through providing a description of Apple Elementary, as well as analysis of the data in forming themes and generalizations (Backman, 2008; Merriam, 1990).

Summary

The qualitative study of perceptions of stakeholders within a Michigan suburban public YRE elementary school involved a case study in which data were gathered through semi-structured interviews. Interviews of the elementary school principal and teachers were analyzed. Gathered interview audio were transcribed and coded through inductive content analysis. After coding, alignment with the research questions occurred, gleaning pertinent information of the participants' perceptions of year-round schooling and its impact on student achievement. Consensus, supported, and individual themes

related to YRE and student achievement was aligned to research questions. Internal and external validity, as well as reliability of data, assured accurate, quality, and trustworthy data. Through word analysis in the responses, themes were identified and categorized as consensus, supported, or individual themes.

Within Chapter IV, the data gathered through interviews will be presented and analyzed. Alignment of the data to the research questions will allow for qualitative analysis of stakeholders' perceptions related to principal's and teachers' perceptions of the impact that YRE has on student achievement; the effect of YRE on students who are underperforming or are part of underserved populations in English/language arts and mathematics achievement; and how an administrator's and teachers' perceptions of YRE student achievement differ or agree

CHAPTER IV

ANALYSIS OF DATA

The purpose of this case study research is to determine the perceived effectiveness of YRE on student achievement through the analysis of the perceptions of an administrator and teachers in one Michigan elementary school. Particular focus areas under study are learning, academic achievement on English/language arts and mathematics standardized tests, and specific impact on students who historically underperform on school assessments. In an effort to increase student academic performance, school districts would benefit from additional research on a YRE calendar and its perceived impact.

The research questions guiding this study will be discussed. In gathering perceptions from YRE elementary school principal and teachers, the following research questions were developed:

1. What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?
2. What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming / underserved populations in English/language arts and mathematics achievement?
3. How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

This chapter will examine the data obtained from interviews conducted during the Fall 2017. The researcher interviewed the principal and teachers of a Michigan elementary school using a single-track year-round education calendar. The interviews

were semi-structured to allow all participants to share their perceptions for approximately 30 minutes. All academic achievement data were gathered from the Michigan Department of Education's website. The academic data and participants' perceptions served as the evidence for this case study research.

Participants

The researcher contacted the superintendent of Apple Elementary School and was granted permission to contact the school for study participation. Apple Elementary School is located in a suburban setting in Michigan and has utilized a single-track YRE calendar since 1983. Through voluntary participation, the researcher sought for a total of 13 interviews. To recruit participants, the researcher emailed all teaching staff and the principal of Apple Elementary School. In addition, the researcher emailed all teachers at least three more times to recruit study volunteers. After a set period of time, the researcher was able to interview five regular classroom teachers, five intervention teachers, and the building principal, thus totaling 11 interviews. To protect the names of all participants, the researcher used a pseudonym for the elementary school, and coded names of the principal and teachers. The researcher found it important to note that both the building principal and six of the 10 teacher participants have experience working in both traditional and YRE school calendars. The building principal has served at Apple Elementary School for two years while also having at least three years previous within a traditional calendar school. In order to conceptualize demographic information, the researcher created a table below outlining information related to each study participant.

Table 2

Demographic Information on Study Participants 2017

Administrator, Teacher, or Intervention Teacher	Number of Years in YRE	Grade Level or Subject Taught
Administrator One	2	Principal
Teacher One	13	Kindergarten All Subjects
Teacher Two	7	Kindergarten All Subjects
Teacher Three	22	First Grade All Subjects
Teacher Four	26	First Grade All Subjects
Teacher Five	4	Third Grade All Subjects
Intervention Teacher One	3	ELA/Math Intervention All Grades
Intervention Teacher Two	21	Learning Support Grades K - 4
Intervention Teacher Three	10	Speech Intervention Grades K - 4
Intervention Teacher Four	8	Behavior Intervention Grades K - 4
Intervention Teacher Five	6	Behavior Intervention Grades K - 4

Apple Elementary School is a kindergarten-fourth grade school consisting of 457 students within a suburban setting in Michigan. The school has operated under a single-

track YRE calendar since 1983. Yearly, Apple Elementary School participates with Michigan's state assessment entitled the Michigan Student Test of Educational Progress (M-STEP) in ELA (Reading) and mathematics. Apple Elementary students in grades three and four participated with English/language arts (ELA) and mathematics. The overall 2016-2017 Apple Elementary M-STEP scores include the percent of students who scored proficient or advanced: grade 3-4 ELA of 53% and grade 3-4 mathematics of 56.1%. The overall 2016 – 2017 Apple Elementary M-STEP scores for students of historically or considered to be underperforming / underserved populations includes a grade 3 – 4 ELA of 36.7% proficient or advanced and a grade 3 – 4 mathematics of 38% proficient or advanced.

All Apple Elementary teacher participants have worked under a YRE calendar for a minimum of two years and a maximum of 26 years. During the Fall of 2017, the researcher interviewed each participant by phone on a date and time of their choice. After the interviews, the researcher immediately transcribed the audio-recorded responses. Each participant was provided with a copy of the transcribed interview. Participants reviewed the transcribed copy and reported any errors in the transcription.

In coding the transcribed data, the researcher analyzed the transcribed audio of the responses. Interview data obtained from the transcribing was categorized in alignment with the research questions. In aligning responses to the research questions, the researcher highlighted responses of significance and made notes within the margins. To assure all information was categorized, this process was repeated three times, thus aligning themes from the data. Themes were categorized into three types: consensus,

supported, and individual. These statements helped to understand the participants' perceptions of YRE and student learning.

For purpose of this study, a consensus theme was shared by at least 80% of participants. Supported themes were shared by at least 50% of participants, while one or two participants made up the individual themes. These themes were aligned to the research questions to analyze perceptions of stakeholders within a YRE school. After alignment of themes to the research questions, this study will provide information related to an administrator's and teachers' perceptions of the impact that YRE has on student achievement, the effect of YRE on students who are underperforming or are part of underserved populations in English/language arts and mathematics achievement and how the administrator and teachers' perceptions of YRE student achievement differ or agree.

Interview Responses Aligned to Research Question One

What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?

Research question one focused on the perceptions of administrator and teachers as to how a YRE calendar can affect student achievement, specifically within English/language arts and Mathematics. The researcher used administrator and teacher interview questions 4, 6, 7, 8, 9, 10 (see Appendix D-E). The overall 2016-2017 Apple Elementary M-STEP scores include the percent of students who scored proficient or advanced: grade 3-4 ELA of 53% and grade 3-4 mathematics of 56.1%. Both Apple Elementary ELA and mathematics scores are 10 – 21% higher than the Michigan State average. To examine responses, available YRE research on academic impact was applied. From the interview data, three consensus themes were evident. The themes

were: retention of instruction, intersessions, and continued curriculum exposure. An individual theme was captured including YRE's impact on students with Autism can be challenging due to more frequent breaks during the school year (see Table 3).

Theme One: Retention of Material Taught

The first consensus theme to be analyzed was participant's view that YRE helps improve student retention of material taught. A majority of the participants spoke specific to how the YRE calendar is more of a balanced approach to school scheduling, thus lessening a traditional summer break. In more detail, participants spoke of their perception that the YRE approach affords less time spent on reviewing previously-instructed materials and more time to instruct grade level content. In response to the interview question of how has YRE impacted student achievement with ELA and Mathematics, Teacher One recorded an example of a consensus theme of retention of material taught. This response was evident among the other participants. Teacher One elaborated as follows:

I believe that student achievement has improved in both ELA and mathematics.

Allowing for that time has impacted student achievement positively also because the learning just keeps moving along so to speak. And there isn't that long period of time where children aren't reading or children aren't using their mathematical skills. First grade has told us that they don't spend as long in their "review" portion at the beginning of the year because students are only gone for six weeks.

Teacher Four shared the perception that the shorter summer break allows for students to retain more of what was instructed. The teacher responded as follows:

It's been my experience for year-round education that children do much better with a short break in the summer. They're ready to come back. We start really hard into curriculum right away because there hasn't been a long break over the summer. And so, I would tell parents that it is very helpful for their children retaining information.

Intervention Teacher Three shared perceptions that YRE positively impacts students through literacy intervention and retention of language instruction intervention. In remarks to the question of how YRE can improve student achievement, Intervention Teacher Three shared the following:

I feel that the year-round education, the kids don't have the downtime. It seems to help them because there are not all of these big breaks. I do see kids moving. I don't see them forgetting especially my kids that have difficulty with understanding the use of language.

Administrator One shared perceptions that YRE calendar affords less regressions with students in relation to available literacy data. Responding to the question of how YRE impacted student achievement with ELA and Mathematics, Administrator One mentioned:

I noticed that this year we started from where we left off in June and started back up in August that there was less of a regression based off of spheres that we were doing with the AIMSweb data – our benchmarking data. Just as a first thing that I was able to notice coming back and looking at screener data. From June when we left to screener data when we came in August just wasn't regression that we

normally would have if we have extended and had a typical ten to twelve-week summer.

In responding to the question of any additional information as to how YRE can improve instruction, Teacher Five perceived that the lack of a summer gap helps with students retaining more information. In addition, Teacher Five has experience working in both traditional and YRE calendar. Teacher Five stated the following:

There isn't that huge gap of the summer months that they have in a traditional calendar – it's only six weeks. So, they really tend to retain more of their knowledge for the upcoming year.

Ten of the eleven participants shared their perceptions that student retention of material taught was improved using a YRE calendar. Administration, teachers, and one intervention teacher spoke of how less time between breaks and shorter summer allowed for students to continue with their learning and less time spent on review of previously-instructed materials. Participants spoke that with less time spent on review, students can be exposed to current grade level instruction, thus aiding with retention of material taught.

Theme Two: Intersessions

Among participants, data analysis indicated a second consensus theme that use of intersessions within a YRE calendar has a positive effect on all learner types. The intersession consensus theme indicated that participants believe this provides additional learning experiences for all students and opportunities for teachers to evaluate available student data. Within Apple Elementary School and during two-week breaks throughout the YRE school year, intersessions are available to all students. According to the

building principal, intersessions are voluntary for students to attend, but usually attract anywhere from 60 – 70 Apple Elementary student participants per session. For families who elect for their children to attend, there is a \$20 fee per day or \$100 per week per child. Intersessions have both an enrichment, academic and behavior intervention-based approach for students whose families elect to participate. Emphasis is placed on hands-on student learning activities, as well as, field trips. During the 2017 – 2018 school year, intersessions occurred within a two-week break in October, one-week break in February, and two-week break in April. Intersessions are organized and operated by Apple Elementary School teachers and paraprofessionals who receive compensation for their service. Speaking to how has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming/underserved populations, Teacher One provided a response that was similar to the impact of intersessions within a YRE:

Children in our school are given a chance during our two-week breaks (intersession) to come back to school do some enrichment activity with ELA and with mathematics so there isn't a large lull in learning. It's differentiated instruction-those students aren't spending a lot of time out of school. They're still coming to school during that time. There's some enrichment activities, there's some fun activities that go along with some learning that they're doing during that time.

Intervention Teacher Three shared experience with intersessions and its impact with students and their behaviors. Intersessions allowed students to continue working on behavior goals with available services. Speaking to how YRE intersessions has impacted

student achievement with ELA/mathematics, Intervention Teacher Three mentioned the following:

I see a growth with them (students) because they don't fall back. They have that time and when we do have our breaks, there is some intervention time so that those kids could have extra services during that time to not slide back even farther.

Similar to participant's responses, Administrator One shared how intersessions provide opportunities for continued learning, especially for students who need enrichment or hands-on-type activities. Intersessions allowed project-based type learning to occur. Administrator one shared as follows:

We do have something that's called intersession to where students can still attend school. The main focus isn't necessarily academics though they do academics during those blocks of time. But, that's where we do a lot of more of our project-based learning. Kids do a lot of hands-on activities. This is more of an opportunity for students to really investigate to project-based learning.

Teacher One spoke of intersessions and how it keeps students learning. Intersessions provide continued movement of students and an opportunity for teachers to evaluate data to see what is working or not working for students. Remarking to the question of any additional information on how YRE can improve student learning, Teacher One shared the following perception of intersessions impact with students:

We have intersessions...but it keeps kids at school and in the realm of learning. We have more time to prepare....we can reassess what we've done with them, what has worked, and what hasn't so we can plan because when you're at school

every day, you don't have the time to look back into the scores and see where the child is struggling.

In all, nine out of eleven participants responded that intersessions provide additional learning experiences for all students and opportunities for teachers to evaluate available student data.

Theme Three: Continuation of Learning

Analysis of the data indicated a third consensus theme among the participants. YRE shorter breaks impact ability for students and staff to have continuation of learning. A majority of participants believed that a YRE calendar allows for continued instruction exposure as well as it helps keep instruction moving. Participants alluded to coming back from shorter breaks affords less time spent on review and more time spent with continuation of curriculum. A shorter break lessens the chance of students to lose what they have learned. Regarding the question of how YRE has impacted the necessary time and resources one has to accomplish teaching objectives, Intervention Teacher One responded to the impact shorter break has with students, staff, and curriculum.

Intervention Teacher One elaborated as follows:

Everybody seems to do a little bit better with shorter breaks throughout the year. It's not like it's a big break where after the summer you have to gear all up again and redo my room or redo my progress monitoring on kids or start new goals. It's not a start and stop and with time or resources. It's just a continuation. It's better so you don't waste time in trying to accomplish our objectives. It's continuing to do so instead of having to go backwards and regroup.

Teacher Two perceived that shorter breaks supports the flow of curriculum for students and staff, thus positively impacting use of time. Teacher Two shared the following for the question of how YRE has impacted student achievement with ELA and mathematics:

I think at the point we are in education, it's high stakes testing all the time, the calendar supports the flow of the curriculum. There's not a lot of breaks in between things and like I said earlier, you don't have to go back and re-teach a lot of things. So, a lot of it is spiral anyhow, but it seems to flow a lot nicer with the balanced calendar.

Having worked in both a traditional and YRE calendar, Teacher Four mentioned that retention levels are higher with students within a YRE. This retention level is due to the continuation of learning within a YRE calendar. Remarking to the question of how has YRE impacted student retention of material taught, Teacher Four perceived the following:

Retention is much higher because I've been able to work in both calendars and I've moved from kindergarten to first grade. I've seen the impact that continuous learning has had on them. We've even in whole had to reduce first grade our six weeks review to three weeks because they just didn't need it anymore. They didn't need the whole six weeks of review coming from kindergarten to first. So, we've seen a very positive impact.

Teacher Five believed that a YRE calendars' shorter breaks lessens the gap in learning. With a shorter break, students have less of a chance to lose what they have learned in mathematics or language arts. Referencing how YRE has impacted student

achievement, Teacher Five stated the following perception regarding shorter breaks and impact on students within a YRE calendar:

As I've stated before, I feel like they don't lose that. There's no gap in the learning. Since we only have five and a half or six weeks off from a summer, they don't have as much time to forget what they've learned in Math and Language Arts. And so, I notice that kids are more able to have maybe quicker recall. We don't have to do as much review at the beginning of the year. We can jump right in a little quicker than I had to do when I taught traditional calendar.

Along the lines of shorter breaks, one individual theme from participants focused on students with Autism. With a YRE having more frequent but shorter breaks, one participant perceived that students with Autism sometimes have difficulties due to break in their routine. Intervention Teacher One shared the following:

I think year-round has helped because it's not months off that they're not in school where we can't intervene. I will say there are some things not working with kids with Autism that has not been good with so many breaks. Some of the teachers feel that has not been helpful with kids with Autism to have so many breaks.

Along the lines of previous participants' statements, Intervention Teacher Five believes a YRE calendar has impacted student achievement with ELA and mathematics by allowing for continuation of learning. Responding to the question, Intervention Teacher Five perceived the following:

With the English/language arts, I just believe continuing on with the lessons – we just seem to be able to keep going at a little bit faster pace. We don't have to

backtrack after a break or anything like that. I feel like it does help them retain more.

From gathered data, all eleven participants eluded to their perception that shorter breaks promote student continuation of learning and less of a chance for students to lose what they have learned from the previous school session. In all, participants felt very strongly that a YRE calendar's more frequent and shorter breaks can positively impact student instruction and student learning.

Summary of Research Question One

The focus of interview questions 4, 6, 7, 8, 9, and 10 examined participant perceptions of what are an administrator's and teachers' perceptions of the impact that YRE has on student achievement. From the interview data, the researcher found several coinciding themes and one individual theme. Below is summary of findings from the participants' perceptions:

- Ten of 11 participants shared perceptions that student retention of taught material was improved.
- Nine out of 11 participants perceived that intersessions provide additional learning experiences for all students.
- All 11 participants perceived the benefit of having shorter breaks, allowing for continuation of student learning.
- One participant perceived breaks as not helpful for students of Autism

Table 3

Themes for Research Question One

Consensus Themes	Supported Themes	Individual Themes
<ul style="list-style-type: none"> Retention of material taught Intersessions Continuation of learning 		<ul style="list-style-type: none"> More frequent breaks can hinder students with Autism

Interview Responses Aligned To Research Question Two

What are administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming/underserved populations in English/language arts and mathematics achievement?

Research question two sought to examine participants' perceptions of how a YRE impacts historically-underperforming students. In gathering data, the researcher utilized administrator and teacher interview questions 4, 5, 6, 7, 8, 9, and 10. It is important to note that participants responding to the questions posed for students of historically or underperforming/underserved populations did not necessarily specify to which student groups their perceptions may have applied (ex: students of economically-disadvantaged). The overall 2016 – 2017 Apple Elementary M-STEP scores for students of historically or considered to be underperforming / underserved populations includes a grade 3 – 4 ELA of 36.7% proficient or advanced and a grade 3 – 4 mathematics of 38% proficient or advanced. Both Apple Elementary ELA and mathematics scores for this student group

are four – 14% higher than the Michigan State average of similar student group. In order to identify Apple Elementary students who were historically/economically/disadvantaged the researcher created a table below outlining 2016 – 2017 M-STEP scores for this student group:

Table 4

Apple Elementary Students of Historically Underperforming M-STEP Scores

Ethnicity	ELA % Proficient/Advanced	Mathematics % Proficient/Advanced
Black	33%	27%
Hispanic	36%	50%
Economically Disadvantaged (ED)	32%	34%
Individualized Education Plan (IEP)	12%	5%
English Learner (EL)	67%	67%
2 or More Races	40%	45%

The researcher correlated interview data with available research related YRE and students who are underperforming. From the data, two consensus themes evolved as to how YRE impacts students who are underserved. The consensus themes are continued learning and availability of intersessions. One Supportive Theme was that the YRE calendar promotes teachers to be reflective with instructional practices related to students of historically or considered to be underperforming / underserved populations. Two participants identified an individual theme that they did not perceive any difference with

the use of YRE and having an impact with students of historically or considered to be underperforming/underserved populations.

Theme One: Continuation of Learning

In regard to YRE and perceived impact on students of historically or considered to be underperforming/underserved populations, data analysis of the participants indicated a consensus theme of continuation of learning. A consensus among the participants who responded was that a YRE calendar promotes students of historically or considered to be underperforming/underserved populations to continue with their learning thus increasing chances of material retention. Intervention Teacher Five exemplified a consensus response regarding continued learning among the students.

We have seen a definite increase in performance in both reading and mathematics.

And again, I think a lot of it has to do with kids don't get burned out, their engagement seems to be better. The opportunity for continued practice in those areas occurs and we can specifically let parents know this is an area of difficulty...may target those areas more than some of the other ones.

Teacher Two spoke of how a YRE calendar impacts students of historically or considered to be underperforming/underserved populations by allowing learning to be consistent, both at home and in school. Responding to the question of when a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on track, Teacher Two elaborated as follows:

I try to do my best as far as getting those parents and getting them the resources they need when we're not in school. So, I would say necessarily that the calendar would benefit them more one way or the other except for they would be getting

more consistent schooling instead of a twelve-week summer block with no kind of support other than what you get at home. At least you are getting something from the schools.

Administrator One indicated that YRE calendar not only provides continued learning opportunities for students of historically or considered to be underperforming/underserved populations, but also allows outside resources to be applied continuously throughout the school year. Remarking to the question of how has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming/underserved populations, Administrator One stated:

It's something that our building leadership team is doing to where we can actually have teachers and outside parents or volunteers mentor students to help and gets to be one more person in that kid's life. That's a positive. Whether it's helping them with the reading skills and math skills, writing skills, but not only do that on just a staff of teachers but also what outside resources can we use to help try to close that gap especially with those ones that are low performing.

Intervention Teacher One stressed how the YRE calendar promotes consistency with intervening with students of historically or considered to be underperforming/underserved populations. Intervention Teacher One responded as follows.

If they are underserved populations instead of sitting home in front of a TV or in front of a screen, I think year-round has helped because it's not months of that and they are in school where we can intervene. Being able to intervene at a more consistent manner has seemed to help these students.

Intervention Teacher Five believed that students come back from summer break ready to learn with less summer slide. Responding to the question of how has YRE impacted student achievement with ELA and mathematics, Intervention Teacher Five perceived the following:

I think there's less time spent during the summer. There's a lot less of the summer slide that teachers worry about. The frequent breaks refresh the kids and they come back to school. So, I think they look forward to the structure of school and the learning. And I just think from that view, the balanced calendar serves students better.

Continuing with the question of how YRE can improve student achievement, Intervention Teacher Five spoke of the belief that a YRE calendar lends to a more positive attitude among students and staff, thus leading to achievement. Having worked in both a traditional and YRE calendar school, Intervention Teacher Five perceived the following:

I come from a traditional calendar and I actually came from an alternative high school position to elementary just six years ago. So for me, it's been a big change when I go from traditional calendar and into a balanced calendar building. I feel more of a positive attitude from the kids and the staff in the balanced calendar. I think that towards learning, towards getting along together, I think it's because you're there year-round and not having those long breaks – I see a more positive attitude. And I think a more positive attitude leads to better achievement for students and teachers are more invested in that.

Nine of the eleven participants perceived to the consensus theme that YRE calendar has an impact on historically underperforming students by maintaining continued learning through the school year.

Theme Two: Intersessions

Among the participants, ten out of the eleven commented that YRE helps students of historically or considered to be underperforming/underserved populations by providing intersessions throughout the scheduled breaks. The consensus theme was that intersessions allow for reinforcement of specific skills and continuation of services for students who are underperforming. Teacher Three described how intersessions are a great opportunity for continued remediation for retention of materials among students of historically or considered to be underperforming / underserved populations. Teacher Three stated the following:

Our building provides what's called intersessions. Parents have the opportunity to enroll their children in intersession. Intersession was structured such as that the morning would be remedial and the afternoon would be more enrichment. If I have students that are attending, the person in charge has reached out to me and asked if I could provide classroom materials that we've used in the past for certain subject areas so that they could borrow them for that two-week period and to continue to help the child in that area with the familiar classroom materials. So, with remediation or retention of materials for those struggling kids, I think that's a great opportunity.

Teacher Three continued on the importance of intersessions for students of historically or considered to be underperforming/underserved populations by stating that

this opportunity is something the students may not have at home. Teacher Three elaborated as follows:

I think for those kids, having intersession breaks it out in a way that is a great – a great thing for kids who are struggling and home life may not be the greatest – their home environment. School is sometimes their safest place where they feel the most comfortable. And so, having the opportunity to come to intersessions is another benefit for kids that might not have the greatest opportunity on breaks.

Intervention Teacher Four mentioned how intersessions allow students of historically or considered to be underperforming/underserved populations to continue with their learning in a less rigorous setting compared to regular school. Intervention Teacher Four perceived the following:

When we have a couple of week breaks, they do have programs. And a lot kids with challenges come to these programs and it's less rigorous than being in a regular school day – more fun-centered but I think they're still learning throughout that time also.

Theme Three: Reflection

The participants identified time for reflection as to how a YRE calendar impacts the ability for teachers and staff to intervene with students of historically or considered to be underperforming/underserved populations. As a supported theme, seven of eleven participants stated that breaks between sessions allow time for reflection on data, instruction, and future lesson planning. In response to the question of how does YRE impact the relationship of teachers with the school administration in accomplishing

student achievement; Teacher Three provided a typical response of supportive theme of reflection:

I have a list of things that I want to accomplish in my classroom that require a lot of time without students for me to accomplish, to organize and craft before it could even be used when the kids are here. Being on a balanced calendar and having those breaks throughout the year, you get to rest and reenergize. As a result, I bring it back to my classroom and I'm impacting student learning which impacts student outcomes. So, for instance, I might make teaching slides for the next unit. I might make my teaching slides using the smartboard and to personalize them for myself and my grade level to get deeper into the content area. That's how I get those types of things accomplished that impact students and impact student learning.

Teacher Four perceived that YRE's impact on students of historically or considered to be underperforming/underserved populations allows for reassessment of what learning has occurred. Teacher Four elaborated as follows:

Well, during those times, we're more in touch with parents to keep those kids on a learning cycle. We have more time to prepare. When the breaks come up, we can reassess what we've done with them, what has worked and what hasn't so we can plan because when you're at school everyday, you don't have the time to look back into the scores and see where the child is struggling. So, the breaks give us more time to catch up.

No Impact

Two study participants shared an individual theme that the YRE calendar does not have an impact on students of historically or considered to be underperforming/underserved populations. Intervention Teacher Five elaborated the following:

As far as student achievement goes, I worked in both a traditional building one day a week and the balanced calendar. So, I don't see much difference between underserved kids and either of those calendars for underserved populations.

Summary of Research Question Two

The focus of interview questions 4, 5, 6, 7, 8, 9, 10 focused on administrator's and teachers' perceptions of the impact a YRE has on students in English/language arts and mathematics achievement, referring to students who historically underperform. From the interview data, the researcher found several consensus themes and one supported an individual theme. Below is summary of the findings from the participants' perceptions:

- Nine of 11 participants perceived that YRE calendar impacts students of historically underperforming by maintaining continued learning through the year.
- Ten of 11 participants viewed intersessions as helpful due to availability during scheduled YRE breaks.
- Seven of 11 participants referenced reflection as important part of intervening with these students.
- Two study participants perceived no impact of YRE with students of historically underperforming.

Table 5

Themes for Research Question Two

Consensus Themes	Supported Themes	Individual Themes
<ul style="list-style-type: none"> Continuation of Learning Intersessions 	<ul style="list-style-type: none"> Reflection 	<ul style="list-style-type: none"> No Impact

Interview Responses Aligned To Research Question Three

How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

Research question three focused on similarities or differences between an administrator's and teachers' perceptions of YRE impact with student achievement. Interview questions 1, 2, 3, 4, 8, and 10 were utilized to identify themes. Within this section, the researcher compared and contrasted participants' views of the major themes, as well as the providing of specific participant responses in relation to the themes.

Retention of Material Taught

The researcher analyzed questions 1, 2, 3, 4, 8, and 10 and noted that participants' perceptions of the YRE calendar is that it does have a positive impact on student achievement in the area of retention of material taught. In analysis of agreement or disagreement with administrator and teachers' YRE academic impact, a majority perceived that less time is spent re-teaching material thus allowing grade level content to be emphasized. The researcher noted that six of the 11 participants have had experience

working in both a traditional calendar and YRE calendar school. As a result, these individuals maintained a comparative view of observing material retention from students of both calendars. In responding to the question of do you have any additional information as to how YRE can improve student achievement, Administrator One elaborated as follows:

The only real basic information I have is I can see a little bit of trend data from when they left in June and when they came back in August that from my experience of being in a traditional calendar to where it felt like the regression piece was much, much greater when we left in June and came back in September. I can just see that there's a difference. There's less regression and that's the only piece at this point I have been able to identify.

In comparison of Administrator One's perception, Teacher Two shared that YRE is good for students as it allows students to retain knowledge of what was instructed through the school year. Commenting on the question of "Suppose I were a new parent coming to your school, what would you tell me?", Teacher Two stated the following:

I would tell you that year-round education is good for students not only in giving them breaks when they need the breaks from school but also in keeping their retention of all of their knowledge that they've learned over the course of the school year. But, I would advocate that it definitely helps the student retention scores and the data shows it does. If you look at the elementary school where I work, it has been a balanced calendar, year-round school since it opened and it still is. There are only two that I know of in the area. A couple of other districts neighboring to us had them in the past, but they just didn't make them work. But,

I think that's one of the most important experiences is that the data shows that it helps; that summer slide, you don't have to spend all that extra time teaching. So, it's good for the kids.

In relation to Administrator One and Teacher Two, Teacher Four commented that YRE promotes student retention of material by promoting a life-long learning attitude. Responding to the question of "What has been the most important experience you have had with YRE and student achievement?", Teacher Four perceived the following:

I see the students coming from kindergarten and then their scores – still there when they come back and retested when they come back six weeks later. There's not the gap that I was seeing when I was on the traditional calendar when they were gone eleven weeks. I have just seen that student's skills remain very close to the same. I haven't seen the big downward swing. Our kids are taught that learning is year-round. It does not because you're not in school or you are in school. It's lifelong learning. And we get them in that attitude that they want to learn so it doesn't matter what area we're looking into. Once kids are taught from the very beginning that they're in charge of their learning and it should be continuous, it works very well.

Along the lines of previous participants' views, Teacher Three spoke of the impact a shorter summer has with student retention. Teacher Three stated:

Over the years of being a teacher that YRE has shown less student learning loss and more material retention due to the shorter summer break. The calendar lends opportunity for purposeful materials to be sent home for student-parent review.

Continuing discussion and in remark to the question of how has YRE impacted student retention of material taught, Teacher Three perceived the following:

I think there's less learning lapse with the shorter summer. I also believe that a lot of our teachers – even when we do have those breaks whether they're two week breaks or breaks in between – teachers send very purposeful material home for children to continue to practice and it's familiar so it's nothing new. It's nothing the parents have to read / teach for the first time. It just keeps their skills going.

Similar to previous participants' views of material retention, Intervention Teacher Four believed that YRE contributes to student retention of material. Responding to the question of “What has been the most important experience you have had with YRE and student achievement?”, Intervention Teacher Four mentioned the following:

I guess just seeing some of the growth. Even over the course of the summer. I work with a bunch of different kids but they seem to retain more over the summer break and their growth sometimes-just surprises me.

Intersessions

In comparison of administrator and teacher perceptions of agreement or disagreement of YRE's academic impact, participants' overall view of intersessions' positive impact was noted. Administrator and teachers' statements reflected that intersessions provided all students, whether academic or behavior as a focus, the opportunity to continue with their learning. One Teacher perceived that more could be done to assist students with special needs during intersessions. Administrator One believed intersessions allow for more project-based learning type activities for all

students. In remark to the question of “Suppose I were a new parent coming to your school, what would you tell me about YRE?”, Administrator One stated the following of intersessions:

We do have something what’s called intersession to where students can still attend school. The main focus isn’t necessarily academics though they do academics during those blocks of time. But, that’s where we do a lot more of our project based-learning. Kids do a lot of hands-on activities, they do field trips. But, there is an opportunity to do more enrichment where it’s more hands-on learning activities, it’s project based rather than throwing a Reading Street curriculum or a Go Math curriculum which is really scripted for the teachers. This is more of an opportunity for students to really investigate to project-based learning.

Teacher One believed intersessions allowed students additional opportunities to achieve by offering students enrichment opportunities. Additionally, students who attend intersession can have instruction differentiated to their specific learning needs. In response to the question of “When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on-track?”, Teacher One perceived the following:

We offer enrichment activities for students to come during those two weeks and they are given instruction based on where they’re at. It’s differentiated instruction – those students aren’t spending a lot of time out of school. They’re still coming during that time. It’s a little bit different during that time. There are some enrichment activities, there’s some fun activities that go along with some learning

that they're doing during that time. I think one of the important things is that enrichment time is keeping that group of children in the school and learning rather than maybe not doing some of those things at their own home. It's just giving them more opportunities to learn rather than being at home for three weeks during the summer.

Teacher Two's perception is in agreement with Administrator One and Teacher One that intersessions provide additional learning experiences for students, especially enrichment-type activities. Teacher Two perceived the following:

We still do have what's called an intersession. We're making it work so those enrichment opportunities are happening during the school calendar year. Our intersessions that we have would offer outside of the curriculum like when they do the Solar System or this last time they did artists, famous artists. We go to places in the community. We travel and do field trips during this time and that's one thing that helps.

Similar to previous participants' views, Intervention Teacher One viewed intersessions as an additional opportunity for students to continue achieving within a YRE calendar. More so, teachers expect students to read, even during the breaks. In remarks to "How has YRE impacted student achievement with ELA and mathematics?", Intervention Teacher One perceived the following:

The classroom teachers are also expecting students to read during the weeks – the weeks that we're gone and stuff. It is a combined effort of students being expected to read during weekly breaks or even our two week breaks, which I think we get a lot more families doing. I think there are more opportunities for

enrichment. We do provide enrichment activities here at school. We always have throughout our breaks; we have teachers working with students. Again, containing the curriculum with some enrichment opportunities.

Contrary to what many participants see as a positive outcome with intersessions and student academic opportunities, Intervention Teacher Three believed more can be done with intersessions and how they can be used for specialized intervention with students. In responding to the question of “When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on-track?”, Intervention Teacher Three stated the following:

I think that we could do better with that, personally, because during those times, we do have intersession. So, some of our students – some of my ASD (Autism) with parent support continued, don’t have that break. But, I think that we could intervene more to have specialized instruction during those times. And right now, I don’t think we’re making the most of that. And so, I think it’s something that should be looked at in the future of using that time to help build kids up.

Collaboration

Analysis of agreement or disagreement with administrator and teachers’ YRE academic impact showed that the majority agreed that YRE promotes a sense of collaboration between administration and teachers in achieving student academic goals. Several participants spoke of the activeness of parents in supporting both students and school staff. More specifically, participants perceived that there is a collective effort among all stakeholders in achieving student success. Administrator One elaborated on the collective effort to accomplish student achievement. Administrator One stated:

I think the relationship with teachers and administration, again, is that collective efficacy of understanding that we do have well-performing students and we can't change necessarily the home lives of these children, but it's quite the group of educators that can change the whole depth of the same expectation of someone who is socially/economically disadvantaged. But, collectively as a group, we're overcoming that to understand they are all kids and they all can learn at the same rate regardless of their economic status.

Similar to Administrator One, Teacher Three believed collaboration of administrator and staff within a YRE allows all adults to work toward learning goals, to reflect, and to assess student success. Responding to the question of "Suppose I were a new parent coming to your school, what would you tell me about YRE?", Teacher Three stated the following:

I believe it helps create a positive relationship – not that the traditional calendar wouldn't. You're constantly getting time to reflect; it allows for more balance in reflection. So, you've got time to improve and tweak what you need to tweak, try it for another four to six weeks. If that doesn't work, you could try it again.

We're constantly progress monitoring and doing all this testing so you could see if it working or not.

Contrary to previous responses, Intervention Teacher Five was unsure if a difference existed in collaboration among administration and teachers in a YRE calendar. Intervention Teacher Five perceived the following:

I really don't know if I see a difference. I'm looking at our district – we all have the same district-wide goals whether we're on a traditional calendar or balanced

calendar. So, I really don't see the difference there except that we in the balanced calendar – we have kind of a head start because we start three weeks earlier.

In response to the question of “Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?”,

Intervention Teacher Five perceived the following:

Our parents here are really involved. I don't know if that's because of the socioeconomic area that we're in or if it's the year-round. But I do know that the parents who come here love the calendar so they are invested in the school and want the communication.

Teacher Three believes this collaboration demonstrates how it takes a village to raise a student. In response to the question of “Does YRE impact on academic information with all stakeholders including students, teachers, and parents?”, Teacher Three perceived the following:

If a parent is reaching out to me for a question, to me, I feel like, ‘Hey, this is just one more way that they're supporting their child.’ Which, in turn, is going to help me because it “takes a village.”

Teacher Five believes that communication from staff helps to create a more active parent base. In response to the question of “Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?”, Teacher Five stated:

I think we communicate much more with parents just to make sure they understand what we're doing and why we're doing it. And we want a more active parent base that helps with our year-round teaching. We communicate a lot and

we are always promoting the year-round concept because we feel it does so much for the students.

Breaks and Transitions

Analysis of agreement or disagreement with administrator and teachers' YRE academic impact uncovered perceptions regarding breaks and transitions. Administrator One and six teachers identified that a YRE calendar has many breaks and transitions throughout the school year. Deeper analysis uncovered several positive effects with having more breaks and transitions and one negative effect in relation to transitions and students with behavioral or special needs. In regard to the positive effect of transitions, Administrator One perceived that the breaks occur at the right time when both students and teachers need a break. Responding to the question of "What do you like or dislike about working at this school?", Administrator One elaborated as follows:

There are a lot of transitions that are created in a year-round calendar with having more time off. You create more transitions for children by having more frequent breaks where you're going to school and then you're off for a period of time and you're back going to school and then you're off. I do like the breaks. You go to school for about eight weeks and then you get a couple off. By that time, everyone needs a little bit of a break and then you get a couple off for Thanksgiving and a couple weeks in the holidays in December and January.

Administrator One stated that the transitions between breaks within a YRE calendar has impacted behavior needs with students. Continuing to discuss the question of "What do you like or dislike about working at this school?", Administrator One stated the following:

I do like the breaks – it just feels like based on some of our behavior data, our SWIS data being a PBIS school, we can show data where student referrals go up right before breaks and we come back and hit our PBIS hard when kids return with expectation and our PBIS data shows that’s been effective by doing that to help with some of those transitions for kids coming back.

Similar to Administrator One and other positive views with transitions, Intervention Teacher Two’s experience with breaks and transitions is that breaks are rejuvenating for both students and teachers. Remarking to the question, “Suppose I were a new parent coming to your school, what would you tell me about YRE?”, Intervention Teacher Two perceived the following:

It’s good for students and teachers as far as their perspective of school. Because just when they feel like they need a break, there is one – it’s six on, two off.

When teachers are starting to get a little frustrated or feel like they need a break there is one – same with students. We have seen a definite increase in performance in both reading and mathematics. And again, I think a lot of it has to do with kids don’t get burned out, their engagement seems to be better.

Intervention Teacher Two continues to discuss “What do you like or dislike about working at this school?” Speaking as a parent, the focus of breaks provides time for family was a focal point. Intervention Teacher Two mentioned the following:

Again, I love the fact that there are more breaks in between. My kids are on different schedules so I like the fact that it gives me some individual time with each one of them. Vacations are also easier to take and often occurs at times that it’s cheaper to go. The only negative impact that I can think of is our school is

not air-conditioned. Although that's going to be changing, that sometimes makes it a little difficult and uncomfortable for the kids and staff

Intervention Teacher Four believes the frequent breaks are beneficial to both students and staff. Responding to the question of "Suppose I were a new parent coming to your school, what would you tell me about YRE?", Intervention Four stated:

Well I would say that I think it is awesome. My kids went to school on the regular calendar and they were a little too old for this by the time I was transferred to this building and started getting used to it. But, I really like the schedule. I feel like it's really beneficial to kids. My original thoughts were, "Oh my gosh, every time they come back from a break, they're going to be crazy like they are with the regular calendar." But, I find that's not true and it seems to refresh everybody and the kids seem to do really well on it. And I as a staff member do really well on it.

Along the lines of previous participants' statements, Intervention Teacher Five spoke of how the breaks and transitions help reduce the pressure that students and teachers face with academic expectations. Commenting to the question of "Suppose I were a new parent coming to your school, what would you tell me about YRE?", Intervention Teacher Five perceived the following:

I think the frequent breaks are a good thing, especially today. Now we have all these legislatives – people telling us that we have to test a lot so there's a lot of pressure on kids. So, I think that the balanced calendar – it gives you enough breaks from the pressure of that it's better for kids and the teachers.

Teacher Five believes that a YRE calendar has an impact on the time and energy levels due to the breaks and shorter summer. Responding to the question of "How has

YRE impacted the necessary time and resources you have to accomplish your teaching objectives?”, Teacher Five stated:

I feel like with year-round teaching, I don’t necessarily think I have more time, but I feel like I can accomplish things a little more effectively because of the fact that I’m not gone so long in the summer. And it feels like I don’t have the gap of having to try to recharge myself. I feel like I am already set to go.

Data analysis uncovered an area of disagreement among administrator and teachers’ perceptions with breaks and transitions. Several teachers perceived that the more frequent breaks and transitions had a negative effect on students with behavior and special needs. Although Administrator One believed the breaks and transitions were helpful to all students, Teacher One perceived that more frequent breaks were challenging for students with special needs. Teacher One elaborated as follows:

I think the one thing that I dislike are more for a certain group of students than myself. I do find though with some students with IEP’s (individualized education plan), students in special education sometimes it can be difficult for them to have so many frequent breaks. That is the one thing that I can see from a teacher perspective that maybe it’s something – I guess that would be a dislike for me is that it doesn’t work for every single child.

Similar to Teacher One, Intervention Teacher One and Intervention Three believed that the more frequent breaks interrupted consistent intervention with students with a diagnosis of Autism. Intervention Teacher One mentioned the following:

I will say there are some things working with kids with Autism that has been not good with so many breaks. Some of the teachers feel that has not been helpful with kids with Autism to have so many breaks.

Following Intervention Teacher One, Intervention Teacher Three perceived the same negative impact with more frequent breaks and students with Autism. Intervention Three spoke of the following:

The only thing I can say is for Autistic students – sometimes it's hard because there are a lot of changes because we do have breaks throughout the year.

Responding to the question of “When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on-track?”, Teacher Two stated the following for students with Autism:

We've got a population of students becoming more prominent in schools who have some form of Autism who like to have those routines and structures. And when they don't have them – when you have those breaks in the middle, it throws them off when they come back. Students of that nature navigate to their routines and breaks cause them some difficulties

In analyzing the data regarding breaks and transitions, the researcher found it important to note that seven of the 11 participants mentioned that within a YRE calendar, breaks would occur at just the right time, thus aiding with teacher and student energy levels and motivation for instruction. Administrator One held the perception that breaks happen when needed. Responding to the question of “What do you like or dislike about working at this school?”, Administrator One stated the following:

I do like the breaks. You go to school for about eight weeks and then you get a couple off. By that time, everyone needs a little bit of a break and then you get going again and you get another break for Thanksgiving and a couple weeks in the holidays in December and January and then you get rolling again in the winter months. You get a week off in February and the two in April is really nice as well when spring starts to roll around.

Paralleling Administrator One's perception, Teacher Two stated that breaks allow for reflection of instruction and several opportunities to visit other colleagues' classrooms to observe particular lessons and resources. Remarking to the question of what do you like or dislike about working at this school, Teacher Two mentioned the following:

I'll spend four days or so reflecting on what I can do better in my classroom – what worked, what didn't work, how I could go back and tweak it; and not that I wouldn't do that on a traditional calendar, it just allows me some more time to really dig deeper in some other ways that I can handle things. It also gives me an opportunity – in our district, we have some traditional schools. I can go into those schools and I can watch some of my colleagues teach and see what they are doing.

Teacher Five perceived that the breaks within a YRE calendar positively impact students and teachers by allowing them to “recharge.” Prior to working within a YRE calendar, Teacher Five spent the previous 19 years working within a traditional-calendar school and believed there is no comparison between energy levels within a YRE calendar compared to traditional. Commenting on “Suppose I were a new parent coming to your school, what would you tell me about YRE?”, Teacher Five perceived the following:

I feel like the more breaks that they have throughout the year allows them to recharge and makes them a little more able to learn and it's just helpful. I've taught in a school in the same district that is not year round – it's just a traditional calendar and the difference is huge in child participation and the way that kids seem as they're not burnt out but also with the teachers too.

In disagreement with previous participants' views, several participants viewed breaks and transitions as having a negative impact on students with behavioral needs or special needs. Teacher One believed students with behavioral or special needs sometimes had difficulty transitioning to the learning environment after scheduled breaks within a YRE calendar. In response to "What do you like or dislike about working at this school?", Teacher One perceived the following

I think the one thing that I dislike are more for a certain group of students. I do find though with some students with IEP's, students in special education, sometimes it can be difficult for them to have so many frequent breaks; it doesn't work for every single child.

Summary of Research Question Three

The focus of interview questions 1, 2, 3, 4, 8, 10 focused on an administrator's and teachers' perceptions of YRE student achievement, differing or agreeing. From the interview data, the researcher closely compared perceptions of all participants. Below is summary of findings from the participant's perceptions:

- The majority of administrator and teachers agreed that less time is spent re-teaching material (retention of taught material).

- The majority of administrator and teachers agreed that intersessions are positive for all students.
- The majority of administrator and teachers agreed that YRE promotes a sense of collaboration in achieving student academic goals.
- The administrator and six teachers agreed that YRE breaks and transitions have positive effects on students and staff.
- Several teachers disagreed that breaks and transitions were helpful for students of special needs.

Table 6

Administrator and Teacher Perceptions with YRE and Student Achievement

Agree	Disagree
<ul style="list-style-type: none"> Retention of Material Taught Intersessions Collaboration Breaks and Transitions 	<ul style="list-style-type: none"> Intersession impact with students of special needs (ex: Autism) Breaks and impact with students of special needs Collaboration

Summary

Within this chapter, the researcher provided data from participants' perceptions of student learning in a YRE calendar setting. For this study, the researcher interviewed the

building principal and ten teachers from Apple Elementary School. The interviews provided the researcher with participants' views on how a YRE school calendar affects student learning. Through these perceptions, the researcher gathered and analyzed the data and coded it in alignment with the three research questions. In aligning the data, the themes emerged from the participants' perceptions of the YRE's academic impact on students. Themes were categorized into consensus, supported, and individual themes. The researcher found consensus themes of retention of material, intersession, and continuation of learning. In addition, data analysis yielded supportive and individual themes from participants in a comparative analysis of administrator and teachers' perceptions with YRE. Within Chapter V, the researcher provides analysis of how data answer the three study research questions. The researcher will also align the data with the theoretical framework of model of school learning and spacing. The final component will contain professional reflections and recommendations for future studies

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

School calendars are a yearly discussion within the agendas of school boards. School districts typically operate with a traditional school calendar while others operate with a year-round education (YRE) calendar. A traditional school year consists of 180 days and a twelve-week summer vacation. Instead of a twelve-week break, YRE school calendars spread breaks throughout the school year, so learning continues without the interruption of a long summer. Across the United States, YRE schools continue to grow, and as of 2015, more than 3,700 public schools operate on a year-round school calendar (Skinner, 2014).

As defined by the National Association for Year-Round Education (NAYRE), YRE reorganizes the traditional school calendar into instructional periods and vacation weeks that are evenly balanced. A YRE school calendar usually consists of anywhere from 180 to 189 days of school. By using this calendar, districts can create a single-track or multi-track YRE calendar. In a single track, all students finish the school year at the same time. In a multi-track, students are divided into numerous scheduled tracks and rotated throughout the school year. As to the academic impact of this type of calendar, review of available YRE research has shown mixed results (Lindsay-Brown, 2010; McMillen, 2001).

Summary of the Study

The purpose of this research is to determine the perceived effectiveness of YRE on student achievement through the analysis of the perceptions of administrator and teachers in one Michigan elementary school. Particular focus areas under study are

learning, academic achievement on English/language arts and mathematics standardized tests, and specific impact on students who historically under-perform on school assessments. In an effort to increase student academic performance, school districts would benefit from additional research on a YRE calendar and its perceived impact.

To collect data, the researcher conducted semi-structured phone interviews with all participants. Each participant was questioned, as well as probed with follow-up questions. This chapter used the analyzed and presented data from chapter 4 to answer the three study research questions:

1. What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?
2. What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming/underserved populations in English/language arts and mathematics achievement?
3. How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

The next section will answer the above-mentioned research questions, as well as provide concluding information related to each research question. The analyzing of research findings to the theoretical framework, suggestions for further research, and the study's conclusion will be discussed.

Findings

Research Question One

What are an administrator's and teachers' perceptions of the impact that YRE has on student achievement?

Research question one examined perceptions of an administrator and teachers as to how a YRE calendar can affect student achievement, specifically within English/language arts and mathematics. The researcher used administrator and teacher interview questions 4, 6, 7, 8, 9, 10 (see Appendix D-E). To examine responses, available YRE research on academic impact was applied. From the interview data, three consensus themes were evident. The themes were: retention of material, intersessions, and continuation of learning.

Researcher analysis of the data for research question one indicated YRE supports student retention of material taught. Participants perceived that less time is spent on review and more time with grade level content. As Teacher Two stated, teachers believed they do not have to go back and reteach as much, thus allowing for lessons to progress. Teacher Two perceived:

I think it helps them immensely because, like I said, you're not having to go back and reteach. The kids are able to hold that knowledge that they learned and either get a deeper understanding of it or you're able to progress through the lessons a lot quicker than you would have otherwise.

A majority of participants spoke of the shorter summers and balanced approach in scheduling of breaks helps to lessen schedule gaps between breaks where students are not in school, thus helping with retention of material. One participant, Administrator One, referenced literacy and math benchmark data via the AIMSweb benchmarking system. The perception from the AIMSweb data was that students showed less regression from when they left for the break and returned. Administrator One stated:

And I noticed again that this year we started from –when we left in June and started back up in August, that there was less regression based off spheres that we were doing with AIMSweb data – or benchmarking data. From June when we left to screener data when we came in August, it just wasn't regression we normally would have if we extended and had a typical ten to twelve-week summer.

In relating the theme of retention of taught material to available YRE research, the findings of this theme are similar to previous YRE studies with student achievement. Participants' views of students having less time away from their learning is similar to Pitcock (2018) statement that public schools are essential for all students, no matter wealthy, middle-class, of low income due to the fact that when open, student have the opportunity to achieve at the same rate compared to when schools are closed; the achievement gap widens. O'Sullivan's (2013) conclusion that to achieve continued student learning schools must lessen the amount of time away from academics and they must decrease unproductive time in the summer. Study findings of how Apple Elementary applied a YRE calendar aligned to St. Gerard (2007) argument that YRE long-term benefits includes better use of time for all stakeholders. A majority of study participants spoke of a shorter summer and students retaining previously instructed material. This perception matched both the Huebner (2010) study findings that addressing summer learning loss could be obtained through use of a YRE calendar and Dessoff's (2011) study findings that a YRE calendar can reduce summer slide especially among students at-risk. Other previous YRE studies of impact with student learning aligned to researcher findings of student retention of material, thus improving student learning. These studies included Bray (2013), who spoke of positive academic gains

occurring within a YRE, and Abakwe's (2011) findings that YRE school students achieved higher reading comprehension and fluency scores.

From data analysis, in regards to YRE and perceived impact with student achievement, a second consensus theme was the use of intersessions. A majority of participants perceived that the use of intersessions positively impacted students. Participants stated that intersessions provided students with opportunities for continued enrichment, intervention, and other learning opportunities. Intervention Teacher One stated the following:

The classroom teachers are also expecting students to read during the weeks – the weeks that we're gone and stuff. It is a combined effort of students being expected to read during weekly breaks or even our two week breaks, which I think we get a lot more families doing. I think there are more opportunities for enrichment. We do provide enrichment activities here at school. We always have throughout our breaks; we have teachers working with students. Again, containing the curriculum with some enrichment opportunities.

Several participants spoke of the use of intersessions in working with students and specific behavior goals. One participant mentioned of how intersessions help build upon project-based learning type of activities. Nine of the eleven participants perceived that the use of intersessions positively impacted student learning within a YRE calendar.

In relating the theme of intersession to available YRE research, study findings support these previous YRE studies of intersessions academic impact. Participants' perceptions that intersessions provide continued learning opportunities for all students are similar to the Oppel (2007) study of the importance of intersessions providing continued

learning opportunities in the areas of art, technology, field trips, and other academic activities. Study findings support the McMillen (2001) study of how intersession use provides continued enrichment and remediation opportunities for all students and the Spieth (2006) deduction that the use of intersessions helps to increase student achievement, especially in the area of mathematics.

From data analysis, the third consensus theme of continuation of learning was perceived by participants in supporting student learning within a YRE calendar. A majority of participants spoke that due to the shorter but more frequent breaks, students have the opportunity to continue with their learning and implementation of curriculum. Several participants spoke in reference to how continued learning allows for less time in reviewing and more time spent on grade level content. Teacher Four stated the following:

Retention is much higher because I've been able to work in both calendars and I've moved from kindergarten to first grade. I've seen the impact that continuous learning has had on them. We've even in whole had to reduce first grade our six weeks review to three weeks because they just didn't need it anymore. They didn't need the whole six weeks of review coming from kindergarten to first. So, we've seen a very positive impact.

Study participants perceived that the YRE calendar allows for curriculum to be spiraled within the school year and due to shorter breaks, teachers do not have to spend as much time on reviewing previously-instructed material. From analyzed data, all eleven participants eluded to the continuation of learning as a positive effect YRE has with student achievement.

In relating the consensus theme of continuation of learning to previous YRE literature, several prior studies support this consensus theme. Participants' perceptions that the YRE spacing of breaks has a positive impact in allowing for continuation of student learning align to both Huffman (2013) and Rule (2009) whose studies revealed positive stakeholder perceptions regarding the use of YRE and gains with student achievement. Other previous studies that support this research finding include the Winter (2005) study revealing positive stakeholders' perceptions with YRE calendar and student continuation of learning, as well as the Morris (2002) perceptive study that found positive academic perceptions from YRE stakeholders.

Conclusions Regarding Research Question One

Through analysis and synthesizing of data, the researcher concludes that the three consensus themes of retention of instruction, intersessions, and continuation of learning are perceived to positively impact student learning within a YRE calendar. The themes align to previous YRE literature that supports student achievement. All of the consensus themes provide an opportunity for students to learn and to achieve within a YRE calendar. In addition, participants perceived that the shorter, more frequent breaks built into a YRE calendar promotes less learning loss, more learning retention, and efficient time use to focus on grade-level content. Participants mentioned on how intersessions provide continued learning opportunities to students during breaks. These learning opportunities promote enrichment, intervention, as well as other continued learning experiences to all students. Given that since 2014, Apple Elementary has scored 10 – 15% above Michigan state averages for grade 3 – 5 ELA and mathematics, it was apparent to both the researcher and study participants that the above mentioned themes

contribute to Apple Elementary students and academic achievement within a YRE calendar.

Research Question Two

What are an administrator's and teachers' perceptions of the impact a YRE has with students of historically or considered to be underperforming/underserved populations in English/language arts and mathematics achievement?

Research question two examined perceptions of an administrator and teachers as to how a YRE calendar can affect student achievement with students of historically or considered to be underperforming/underserved populations. The researcher used administrator and teacher interview questions 4, 5, 6, 7, 8, 9, 10 (see Appendix D). To examine responses, available YRE research on academic impact with students of historically or considered to be underperforming/underserved populations were applied. From the interview data, two consensus themes were evident. The themes were continuation of learning and use of intersessions.

Data analysis in relation to research question two found the first consensus theme that YRE helps students of historically or considered to be underperforming/underserved populations by allowing for continuation of learning. Participants perceived that a YRE calendar can impact these students by continuing their exposure to instruction and lessening time not working on specific learning skills. Several participants believed students of historically or considered to be underperforming/underserved populations excel within a YRE calendar due to continued practice with areas of need. Intervention Teacher One shared the following

Everybody seems to do a little bit better with shorter breaks throughout the year.

It's not like it's a big break where after the summer you have to gear all up again and redo my room or redo my progress monitoring on kids or start new goals. It's not a start and stop and with time or resources. It's just a continuation. It's better so you don't waste time in trying to accomplish our objectives. It's continuing to do so instead of having to go backwards and regroup.

Some participants perceived that a YRE calendar helps these students by providing a more consistent approach to schooling compared to having large gaps of time out of school (longer summer break). A majority of participants perceived that as a team, all stakeholders work together in helping these students close gaps with their learning.

Previous YRE literature supports the research finding that YRE positively impacts students of historically or underperforming/underserved populations due to the calendar promoting continuation of learning. The consensus theme aligns to the previous findings of other perceptive studies, including Hamilton, Johnson, Marshall, and Shields' (2006) Their study concluded that YRE schools tend to have positive learning perceptions among stakeholders and student achievement. Coopersmith's (2011) study found that YRE helps to increase student achievement within underperforming/underserved populations. More recent research aligned to this study findings including O'Sullivan's (2013) argument that YRE calendar shortens the amount of time students are away from school. Graves' (2011) study stated that students who are historically considered disadvantaged and minority would academically benefit within a YRE calendar with shorter summer breaks.

Study participants perceived a second consensus theme in that the use of intersessions positively contributed to learning in students of historically or considered to be underperforming/underserved populations. A majority of participants stated that intersessions allowed for specific reinforcement of both academic and behavior goals for students of historically or considered to be underperforming/underserved populations. Several participants mentioned that various intervention services, including from outside agencies, continue during this time. Administrator One shared the following:

It's something that our building leadership team is doing to where we can actually have teachers and outside parents or volunteers mentor students to help and gets to be one more person in that kid's life. That's a positive. Whether it's helping them with the reading skills and math skills, writing skills, but not only do that on just a staff of teachers but also what outside resources can we use to help try to close that gap especially with those ones that are low performing.

One participant spoke of how intersessions afford students of historically or considered to be underperforming/underserved populations the opportunity for learning that they may not have at home.

Alignment of the consensus theme of intersessions with available YRE literature finds correlations in the area of positive impact with intersession use and students of historically or considered to be underperforming/underserved populations. Previous YRE studies, including Hamilton, Johnston, Marshall, and Shields' (2006) study of the positive effects intersession had with high school students at-risk. Study participants viewed that students of historically or considered to be underperforming/underserved populations can continue with learning and intervention are similar to McMillen's (2001) revelation of

intersession use as an opportunity for enrichment, intervention, and continued student exposure of curriculum. This consensus theme was also supported by the previous studies of Evans (2007) and Byrd (2001) in which both studies concluded that the use of intersessions had a positive learning impact with students of historically or considered to be underperforming/underserved populations.

Conclusions Regarding Research Question Two

Through analysis and the synthesizing of data, the researcher concludes that the two consensus themes of continuation of learning and intersessions are perceived to positively impact students of historically or considered to be underperforming/underserved populations and learning within a YRE calendar. The themes align to previous YRE literature that supports student achievement with these types of students. Both consensus themes provide an opportunity for students of historically or considered to be underperforming/underserved population to continue with their learning, as well as intervention for specific literacy and mathematics skills. Study participants believed that the YRE calendar affords these students the opportunity to have continued learning experiences that they may not have at home. Via data from this study, the researcher noted that the continuation of learning and deliberate use of intersessions for extended learning opportunities can positively impact student learning with students of historically or considered to be underperforming/underserved populations

Research Question Three

How do an administrator's and teachers' perceptions of YRE student achievement differ or agree?

Research question three examined similarities or differences between an administrator's and teachers' perceived impact of YRE and student achievement. Administrator and teacher interview questions 1, 2, 3, 4, 8, and 10 were analyzed (see appendix). To examine responses, available YRE research on academic impact was applied to the data. From the interview data, several commonly-agreed perceptions were derived including: retention of material, intersessions, collaboration, breaks and transitions. The researcher noted the differences of participants' perceptions in the area of intersession impact with students of special needs, breaks and impact with students of special needs, and impact of YRE and collaboration among administrators and teachers. Several teachers perceived that students with Autism had difficulty returning from breaks. Within these perceptions, the researcher sought for participant agreement or variations on these perceived YRE impact with student achievement.

Data analysis of research question three found that a majority of participants agreed that students retain more learning within a YRE calendar. Participants spoke of spending less time with re-teaching students and more time dedicated to instruction of grade-level content. A majority of participants agreed that intersessions provided all students with the opportunity for continued learning in the areas of literacy and mathematics enrichment, project-based learning, and individual work on student behavior or learning goals. Several participants disagreed whether intersessions impact with all students, specifically citing if enough was being done for specific groups of students including students with special needs (ex. Autism). For collaboration, a majority of participants agreed that YRE impacts student achievement by promoting a sense of collaboration between administrators and teachers in achieving student academic goals.

One participant disagreed in that it was unclear if YRE impacted collaboration with all stakeholders. A majority of participants believed breaks and transitions positively impacted student achievement in several ways including allowing time for reflection of teaching and learning, allowing stakeholders to recharge, and helping to increase both student and teacher energy levels. Administrator one mentioned that breaks and transitions were helpful for all students including those who were part of the PBIS intervention:

I do like the breaks – it just feels like based on some of our behavior data, our SWIS data being a PBIS school, we can show data where student referrals go up right before breaks and we come back and hit our PBIS hard when kids return with expectation and our PBIS data shows that’s been effective by doing that to help with some of those transitions for kids coming back.

In relating participants’ perceived YRE impact to available literature, previous studies support the research findings of an overall positive view. As each participant’s positive view has been shaped by their YRE experience, these experiences align to the studies of French (2013) and Hamilton, Johnson, Marshall, and Shields (2006) of whom found overall positive stakeholder perceptions with perceived academic impact of a YRE calendar. Study participants’ agreed perception that students retain more learning and the use of intersessions positively impacts all students aligned to the studies of Hamilton, Johnston, Marshall, and Shields (2006). They mentioned that the use of intersessions benefitted specific groups of students. McMillen (2001) stated that student achievement might increase with intersession use due to opportunity for continued learning. Participants agreed that breaks and transitions positively impacted

student achievement by providing time for reflection of teaching and learning, time to recharge, and increasing student and teacher energy levels. Participants' perceptions were found to be consistent with previous YRE studies including Winter's (2005) qualitative study of stakeholders' perceptions of YRE school of which were positive for attitude and sense of well-being. Research findings were also similar to the perceptive studies of Lasater (2005) and Morris (2002) in which stakeholders' perceptions of YRE's impact on student achievement were both positive and created a sense of satisfaction among stakeholders. In referring to transitions, several teachers' perceptions indicated that breaks and transitions were difficult for students with Autism. These perceptions align to recent research on Autism including a study by Ricon, Sorek, Yeger (2017). These researchers concluded that a need exists for consistent routine to support students with Autism.

Conclusions Regarding Research Question Three

Through analysis and synthesizing of data, the researcher concludes that both the administrator and teachers agree that a YRE calendar has a positive impact on student learning. The participants' experiences with student retention of learning, intersessions, collaboration, and breaks and transitions help to create a perceived belief that all stakeholders within a YRE calendar positively benefit with achievement. These beliefs align to previous YRE perceptive literature that supports overall stakeholder satisfaction of the benefits of a YRE calendar and student achievement. In spite of a few areas of disagreement related to perceived impact with intersessions and breaks with students of behavior or special needs, a majority of study participants believed that the YRE calendar affords all students the chance to continue with their learning. The researcher asserts that

stakeholders within a YRE calendar have a perceived positive view of its benefits in supporting student achievement.

Findings Aligned to Theoretical Framework

The researcher found several emergent themes that consistently were mentioned within the study: retention of material, intersessions, continuation of learning, breaks and transitions. Carroll and Spearitt's (1967) Model of School Learning, Dempster's (1988) and Cepeda, Pashler, Vul, Wixted, and Rohrer's (2006) studies on the model of spacing effect served as the theoretical framework for this research. In attempt to capture themes within a conceptual theoretical framework, the researcher placed data findings within the following figure:

Model of School Learning					
Retention of Material		Intersessions	Continuation of Learning		Breaks and Transitions
Model of Spacing Effect					

Figure 5. Emergent themes of YRE perceptive impact with student achievement.

Study participants spoke of the perceived positive impact that the reoccurring themes of retention of material, intersessions, continuation of learning, breaks and transitions have with student achievement within a YRE calendar. The themes support Carroll and Spearitt's (1967) model of school learning in that each theme is considered to have an impact on student learning rate in the form of being a variable. Carroll and

Spearitt (1967) concluded that student-related variables, including student aptitude and student ability to understand instruction, contribute to student learning. Additionally, this model defined school-related factors as being quality of instruction and opportunities to learn. In the alignment of research findings to the model of school learning, study participants spoke of the perceived positive impact of student retention of material and intersession use within a YRE calendar. It was the perceived belief that students retain more learning, as well as having opportunities to learn, even throughout scheduled breaks. Both of these themes align to the Model of School Learning, focusing on student variables and school-related factors. As the research findings involve student and school use of time, each variable can be linked to Carroll and Spearitt's (1967) defined learning rate as: $\text{Learning Rate} = \text{Time Spent Learning} / \text{Time Needed to Learn}$

In relating the research themes of retention of material, intersessions, continuation of learning, breaks and transitions to the theoretical framework, study participants perceived that this has a positive impact on student achievement. Study participants noted that breaks and transitions benefited all stakeholders in various ways including providing the opportunity for reflection, planning, and recharging of all stakeholders. These research findings support the theoretical framework of the spacing effect (Dempster, 1988; Cepeda, Pashler, Vul, Wixted, & Rohrer, 2006). Dempster (1988) theorized that by spacing information over a period of defined time, student classroom performance would improve. As a YRE calendar attempts to balance the amount of time students are in school and on break, the research findings of retention of material, breaks and transitions as having a positive impact with student achievement supports Dempster's theory. Similar to Dempster's theory, Cepeda, Pashler, Vul, Wixted, and Rohrer's (2006)

theory of spacing and student learning concluded that retention of information among students increased when learning was proportionally-established within a school year. As study participants continually spoke of the benefits of a balanced approach to the calendar, their experiences of the benefits supported the notion that students retain more learning due to the equal proportion of time spent in school and on break. Further theories aligned with these research findings include Gandora's (2000) review of previous empirical research on school time. Within the book, *The Dimensions of Time and the Challenge of School Reform*, Gandora (2000) referenced studies which concluded:

- time needed to learn and time spent were related to student achievement
- the more time students were engaged with learning the higher their achievement
- the more time allocated to a specific content area the greater the student achievement in that content area

Study findings support previous research in this area as participants continually perceived that students within a YRE calendar benefited from the balanced approach, as well as continual opportunities for students to continue learning during breaks with use of intersessions.

Discussion of Year-Round Education Themes

From data analyzed, the three themes of retention of material, intersessions, breaks and transitions emerged. These emergent themes were perceived by stakeholders as to having a positive impact with students and achievement within a YRE calendar school. The research study found a majority of positive participant views on how YRE impacts student achievement. The administrator and teachers studied shared similar

experiences and perceptions of how students benefit from the balanced approach that YRE calendar presents. Participants emphasized the opportunity for continued learning within intersessions, the opportunity for reflection of teaching and learning during breaks, and the positive effect breaks and transitions has on students' and teachers' energy levels as contributors to student achievement within a YRE calendar. The researcher was surprised of how many participants spoke of the YRE calendar's breaks and transitions playing an important role with student, teacher, and administrator energy levels. As collaboration was perceived to be essential among administrator and teacher responses, the overall belief was that a YRE calendar can positively impact student achievement.

Recommendations for Further Research

By design, qualitative research may not produce a generalization to other settings and participants. In rich detail, qualitative research describes participants' lived experiences within a particular setting. From these experiences, qualitative research provides a detailed understanding as to how participants' experiences have shaped their lives. In an effort to uncover deeper understanding, the consensus and individual themes of this study can be further explored in understanding how a YRE calendar can impact student achievement. The researcher would recommend that school boards who are considering implementing a YRE calendar conduct the following:

1. School districts that are investigating the use of the YRE calendar should conduct a perceptive study of stakeholders' views of a YRE calendar. The results of this study could be used to compare findings.

2. School districts investigating the use of or continued use of a YRE calendar should examine the findings of this research as it can provide insight into how stakeholders perceive the calendar and its impact with student achievement.

Recommendations for Future Research

1. Replicate this study within other suburban elementary schools
2. Replicate this study and compare to other YRE calendar schools
3. Replicate this study within a rural setting
4. Replicate this study within a YRE middle or high school
5. Replicate this study with a kindergarten-twelfth grade setting
6. Replicate this study with emphasis on YRE and students with special needs

Although this study was limited to one suburban elementary school in Michigan, future studies could investigate the research themes found within this study. Specifically, the research findings of how intersessions impact student achievement could be further explored. As some participants differed in their perception that intersessions benefited all students, future studies could investigate the impact intersessions have with student achievement. Additional future research could investigate how YRE impacts student learning among students with special needs.

Conclusions and Recommendations

This qualitative research investigated stakeholders' perceptions as to how a YRE impacts student achievement. Through descriptive analysis of participants' perceptions, the researcher uncovered the consensus themes of how participants viewed a YRE calendar in impacting student achievement:

- Retention of taught material
- Intersessions
- Continuation of learning
- Breaks and transitions.

The research findings aligned to the theoretical framework of Carroll and Spearitt (1967) Model of School Learning, Dempster (1988) and Cepeda, Pashler, Vul, Wixted, and Rohrer's (2006) studies on the model of spacing effect. As participants spoke positively of the perceived impact with student achievement, it was evident to the researcher that a majority of participants believed that the balanced approach to learning benefited all stakeholders. In addition to this, several individual themes, including impact of intersessions with students with special needs and the perceived impact of YRE calendar and stakeholder collaboration would require future studies, as this study found both individual themes to be inconclusive.

Although this study was contained to one suburban elementary school located within Michigan, the researcher would recommend that school districts take a further look as to how a school calendar is derived, can be altered, and later implemented, if desired. Via the research findings, it was apparent to the researcher that the perceived benefits of utilizing a YRE calendar has a positive effect on stakeholders in the form of the consensus themes found within. As school districts continue to gauge student growth and achievement, it would be beneficial to investigate how balancing or altering a school calendar could impact student learning.

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Appendix A

IRB Approval Letter



Indiana University of Pennsylvania

www.iup.edu

Institutional Review Board for the
Protection of Human Subjects
School of Graduate Studies and Research
Stright Hall, Room 113
210 South Tenth Street
Indiana, Pennsylvania 15705-1048

P 724-357-7730
F 724-357-2715
irb-research@iup.edu
www.iup.edu/irb

September 22, 2017

Dear Francis Sciullo:

Your proposed research project, “Year-Round Education and Student Learning:

A Case Study of Stakeholders' Perceptions,” (Log No. 17-236) has been reviewed by the IRB and is approved. In accordance with 45CFR46.101 and IUP Policy, your project is exempt from continuing review. This approval does not supersede or obviate compliance with any other University requirements, including, but not limited to, enrollment, degree completion deadlines, topic approval, and conduct of university-affiliated activities.

You should read all of this letter, as it contains important information about conducting your study.

Now that your project has been approved by the IRB, there are elements of the Federal Regulations to which you must attend. IUP adheres to these regulations strictly:

1. You must conduct your study exactly as it was approved by the IRB.
2. Any additions or changes in procedures must be approved by the IRB before they are implemented.
3. You must notify the IRB promptly of any events that affect the safety or well-being of subjects.
4. You must notify the IRB promptly of any modifications of your study or other responses that are necessitated by any events reported in items 2 or 3.

The IRB may review or audit your project at random or for cause. In accordance with IUP Policy and Federal Regulation (45CFR46.113), the Board may suspend or terminate your project if your project has not been conducted as approved or if other difficulties are detected

Although your human subjects review process is complete, the School of Graduate Studies and Research requires submission and approval of a Research Topic Approval Form (RTAF) before you can begin your research. If you have not yet submitted your RTAF, the form can be found at <http://www.iup.edu/page.aspx?id=91683> .

While not under the purview of the IRB, researchers are responsible for adhering to US copyright law when using existing scales, survey items, or other works in the conduct of research. Information regarding copyright law and compliance at IUP, including links to sample permission request letters, can be found at <http://www.iup.edu/page.aspx?id=165526>.

I wish you success as you pursue this important endeavor.

Sincerely,

Jennifer Roberts, Ph.D.
Chairperson, Institutional Review Board for the Protection of Human
Subjects
Professor of Criminology

JLR:bkj

Cc: Dr. Sue Rieg, Faculty Advisor

Appendix B

Voluntary Consent Letter



Indiana University of Pennsylvania

www.iup.edu

**Department of Professional Studies
in Education**

Davis Hall, Room 303
570 South Eleventh Street
Indiana, PA 15705-1050

P 724-357-2400

F 724-357-2961

www.iup.edu/pse

Informed Consent Form (Administrator/Teacher)

Project title: Year-Round Education and Student Learning:
A Case Study of Stakeholders' Perceptions
Principal Investigator - Francis R. Sciullo

Dear _____

You are invited to participate in a study to be conducted by Francis R. Sciullo under the supervision of Dr. Sue Rieg, Dean's Associate for Educator Preparation at Indiana University of Pennsylvania. The purpose of this study is to examine the perceptions of administrators and teachers of student achievement within a year-round education school. This qualitative research will add data to schools looking to operate with a year-round education calendar.

The interview will take approximately 30 to 45 minutes. A series of questions will be asked focusing on student achievement and perceptions within a year-round calendar school.

On your behalf, participation in this study is voluntary and no known risks are involved. You are free to decide to participate or not participate with this study or withdraw at any time. As the study begins, you are free to withdraw at any time. If you choose to withdraw, please inform either the principal investigator or project coordinator. After withdrawing, all information pertaining to you will be destroyed. If you choose to participate, all identifiable information about you and your elementary school will be kept private and confidential. The information obtained in this study may be published or presented within a conference, but you and your school's identity will be kept strictly confidential. In compliance with federal regulations, all data will be retained for at least three years.

If you are willing to participate in this study, please sign the voluntary consent form provided. Prior to the interview, please electronically return via email or mail to principal investigator address below. (Continued on next page)

Please do not hesitate to contact me with any specific questions or clarifications you may have concerning participation in this worthwhile study.

Sincerely,

Francis R. Sciullo

Principal Investigator

Francis R. Sciullo
Doctoral Student, IUP
Holiday Park Elementary School
313 Holiday Park Drive
Pittsburgh, PA, 15239
P: 412-657-7388
Email – sciullofamily@gmail.com

Project Coordinator

Dr. Sue Rieg
Dean's Associate for Educator Preparation, IUP
104 Stouffer Hall
Indiana, PA 15705
P: 724-357-2485

**THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF
PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE
PROTECTION OF HUMAN SUBJECTS (PHONE 724.357.7730)**

Informed Consent Form (continued on next page)

Appendix C

Consent Form



Indiana University of Pennsylvania

www.iup.edu

**Department of Professional Studies
in Education**

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VOLUNTARY CONSENT FORM (Administrator/Teacher)

I have read and understand the information on the Informed Consent Form and I consent to volunteer to be a subject in this study. I understand that my responses are confidential and anonymous. I understand that I have the right to withdraw from this study at any time. I have received an unsigned copy of the Informed Consent Form to keep for my files.

Name (PLEASE PRINT)

Signature

Date

Phone Number

email

Best days and time to be reached and method (phone, email, both)

Current Position (principal, teacher, parent)

I certify that I have explained to the above individual the nature, the purpose, the potential benefits and the possible risks associated with participating in this research study. I have answered any questions that have been raised and have witnessed the above signature.

Date

Principal Investigator's Signature

**THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF
PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE
PROTECTION OF HUMAN SUBJECTS (PHONE 724.357.7730)**

Appendix D

Administrator Interview Questions

Interview Questions for Administrator

1. Suppose I was a new parent coming to your school. What would you tell me about YRE?
2. In your perception, what do you like or dislike about working at this school?
3. What has been the most important experience you have had with YRE and student achievement?

Probe Question A: When did that happen?

Probe Question B: Who else was involved?

Probe Question C: How did that come about?

4. How has YRE impacted student achievement with ELA? Mathematics?

Probe Question A: Are there more opportunities for enrichment activities under a YRE schedule?

Probe Question B: How has YRE impacted student retention of material taught?

Probe Question C: When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on track?
How or why not?

5. How has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming / underserved populations?

Probe Question A: Are there more opportunities for intervening with students of historically or considered to be underperforming / underserved populations?

6. How does YRE impact the relationship of teachers with the school administration in accomplishing student achievement?
7. How has YRE impacted the necessary time and resources you have to accomplish your teaching objectives?
8. Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?
9. How does YRE impact with scheduling of classes?
10. Do you have any additional information as to how YRE can improve student achievement?

Appendix E

Teacher Interview Questions

Interview Questions for Teacher

1. Suppose I was a new parent coming to your school. What would you tell me about YRE?
2. In your perception, what do you like or dislike about working at this school?
3. What has been the most important experience you have had with YRE and student achievement? (RQ3)

Probe Question A: When did that happen?

Probe Question B: Who else was involved?

Probe Question C: How did that come about?

4. How has YRE impacted student achievement with ELA? Mathematics?

Probe Question A: Are there more opportunities for enrichment activities under a YRE schedule?

Probe Question B: How has YRE impacted student retention of material taught?

Probe Question C: When a student is struggling academically, does YRE impact the ability of teachers and parents to keep this student on track?
How or why not?

5. How has YRE impacted the ability for teachers and staff to intervene with students of historically or considered to be underperforming / underserved populations?

Probe Question A: Are there more opportunities for intervening with students of historically underperforming / underserved students? (RQ2)

6. How does YRE impact the relationship of teachers with the school administration in accomplishing student achievement?
7. How has YRE impacted the necessary time and resources you have to accomplish your teaching objectives?
8. Does YRE impact on academic information dissemination with all stakeholders including students, teachers, and parents?
9. Do you have any additional information as to how YRE can improve student achievement?