

11-1-2018

A Correlational Study of Factors That Contribute to Private School Enrollment: School Culture and Physical Facilities

David Warmbier

Concordia University - Portland, davidwarmbier@gmail.com

Follow this and additional works at: https://digitalcommons.csp.edu/cup_commons_grad_edd



Part of the [Elementary and Middle and Secondary Education Administration Commons](#), and the [Elementary Education Commons](#)

Recommended Citation

Warmbier, D. (2018). *A Correlational Study of Factors That Contribute to Private School Enrollment: School Culture and Physical Facilities* (Thesis, Concordia University, St. Paul). Retrieved from https://digitalcommons.csp.edu/cup_commons_grad_edd/260

This Dissertation is brought to you for free and open access by the Concordia University Portland Graduate Research at DigitalCommons@CSP. It has been accepted for inclusion in CUP Ed.D. Dissertations by an authorized administrator of DigitalCommons@CSP. For more information, please contact digitalcommons@csp.edu.

11-2018

A Correlational Study of Factors That Contribute to Private School Enrollment: School Culture and Physical Facilities

David Warmbier

Concordia University - Portland

Follow this and additional works at: <https://commons.cu-portland.edu/edudissertations>



Part of the [Elementary and Middle and Secondary Education Administration Commons](#), and the [Elementary Education Commons](#)

CU Commons Citation

Warmbier, David, "A Correlational Study of Factors That Contribute to Private School Enrollment: School Culture and Physical Facilities" (2018). *Ed.D. Dissertations*. 198.

<https://commons.cu-portland.edu/edudissertations/198>

This Open Access Dissertation is brought to you for free and open access by the Graduate Theses & Dissertations at CU Commons. It has been accepted for inclusion in Ed.D. Dissertations by an authorized administrator of CU Commons. For more information, please contact libraryadmin@cu-portland.edu.

Concordia University–Portland

College of Education

Doctorate of Education Program

WE, THE UNDERSIGNED MEMBERS OF THE DISSERTATION COMMITTEE
CERTIFY THAT WE HAVE READ AND APPROVE THE DISSERTATION OF

David Russell Warmbier

CANDIDATE FOR THE DEGREE OF DOCTOR OF EDUCATION

James Therrell, Ph.D., Faculty Chair Dissertation Committee

Sisay Teketele, Ed.D., Content Specialist

Clayton Alford, Ed.D., Content Reader

Concordia University–Portland

2018

A Correlational Study of Factors That Contribute to Private School Enrollment:
School Culture and Physical Facilities

David Warmbier
Concordia University–Portland
College of Education

Dissertation submitted to the Faculty of the College of Education
in partial fulfillment of the requirements for the degree of
Doctor of Education in
Administrative Leadership

James Therrell, Ph.D., Faculty Chair
Sisay Teketele, Ed.D., Content Specialist
Clayton Alford, Ed.D. Content Reader

Concordia University–Portland

2018

Abstract

Private schools all over the country are declining and closing whereas many schools are growing and flourishing (Gilmore & Rush, 2013). Since competition is so strong, it is important to understand the key factors that contribute to enrollment (Frost, 2014). This study explored two factors in particular: the condition of the physical facilities and the culture and climate of the school. The purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate. The researcher surveyed 245 private, elementary school administrators in California using the online distribution program Qualtrics. Data gathered from the participants were analyzed using descriptive and inferential statistics. Using Pearson's correlation coefficient, no statistically significant relationship was found between enrollment and physical facilities, $r(1, 245) = -1.00, p > 0.05$. However, a mild statistically significant relationship was found between enrollment and school culture, $r(2, 245) = 0.175, p < 0.05$. Limitations include possible bias of the participants, accuracy of the participants' knowledge, and the inability of the researcher to control who participated in the study. However, these limitations likely did not affect the outcome of the study. Results of this study could foreseeably benefit school decision-makers when deciding on how to best allocate limited resources and maximize growth potential.

Keywords: private school, enrollment, physical facilities, school culture, school climate, private school enrollment, private school culture, private school facilities

Acknowledgements

First and foremost, I would like to thank my wife, Amanda. Your patience and support over the past five years has been critical for my success – I couldn't have done it without you! I would also like to thank all the administrators of the California-Nevada-Hawaii district for looking over my survey instrument and helping me hone my questions. Finally, I would like to thank my dissertation committee, Dr. Therrell, Dr. Alford, and Dr. Teketele. I was not always the easiest person to get along with, so thank you for sticking with me!

Table of Contents

| | |
|---|------|
| Abstract | ii |
| Acknowledgements | iii |
| List of Tables | viii |
| List of Figures | ix |
| Chapter 1: Introduction | 1 |
| Introduction to the Problem | 1 |
| Background, Context, History, and Conceptual Framework for the Problem..... | 2 |
| Statement of the Problem..... | 4 |
| Purpose of the Study | 4 |
| Research Questions | 5 |
| Hypotheses | 5 |
| Rationale, Relevance, and Significance of the Study | 6 |
| Definition of Terms..... | 7 |
| Assumptions, Delimitations, and Limitations..... | 7 |
| Summary | 8 |
| Chapter 2: Literature Review | 10 |
| Introduction..... | 10 |
| Opening..... | 10 |
| Study Topic | 10 |
| Context..... | 11 |
| Significance..... | 12 |
| Problem Statement | 12 |
| Organization..... | 13 |

| | |
|--|----|
| Conceptual Framework | 13 |
| Review of Methodological Issues | 17 |
| Synthesis of Research Findings | 19 |
| Parent Perception | 20 |
| Facilities | 21 |
| Culture and Climate | 23 |
| Analysis and Critique of Previous Research..... | 25 |
| Summary | 32 |
| Chapter 3: Methodology | 34 |
| Introduction..... | 34 |
| Purpose..... | 35 |
| Research Questions..... | 35 |
| Hypotheses | 36 |
| Research Design..... | 36 |
| Target Population, Sampling Method, Power Analysis, and Related Procedures | 39 |
| Instrumentation | 40 |
| Pilot Study..... | 42 |
| Data Collection | 43 |
| Operationalization of Variables | 44 |
| Data Analysis Procedures | 46 |
| Limitations and Delimitations of the Research Design | 48 |
| Internal and External Validity..... | 49 |
| Expected Findings..... | 50 |
| Ethical Issues | 51 |
| Summary | 52 |

| | |
|---|----|
| Chapter 4: Data Analysis and Results..... | 54 |
| Introduction..... | 54 |
| Description of the Sample..... | 55 |
| Summary of the Results | 61 |
| Research Question 1 | 62 |
| Research Question 2 | 63 |
| Detailed Analysis: Research Question 1 | 63 |
| Detailed Analysis: Research Question 2..... | 65 |
| Summary | 67 |
| Chapter 5: Discussion and Conclusion | 69 |
| Introduction..... | 69 |
| Summary of the Results | 70 |
| Research Question 1 | 70 |
| Research Question 2 | 71 |
| Discussion of the Results | 71 |
| Limitations | 73 |
| Discussion of the Results in Relation to the Literature..... | 76 |
| Community of Practice | 78 |
| Community of Scholars | 79 |
| Implication of the Results for Practice, Policy, and Theory | 79 |
| Practice..... | 79 |
| Policy | 81 |
| Theory | 81 |
| Recommendations for Further Research..... | 82 |

| | |
|---|-----|
| Competition..... | 84 |
| Quality Teachers | 85 |
| Economics and Demographics..... | 85 |
| Marketing..... | 87 |
| Conclusion | 88 |
| References..... | 91 |
| Appendix A: Survey Instrument | 100 |
| Appendix B: Permission to Use Survey Questions for Condition of Facilities..... | 105 |
| Appendix C: Permission to Use School Triage Survey | 106 |
| Appendix D: Click to Consent Form | 107 |
| Appendix E: Email Introduction Letter | 108 |
| Appendix F: Statement of Original Work..... | 109 |
| Appendix G: Conceptual Framework | 111 |

List of Tables

| | | |
|---------|--|----|
| Table 1 | <i>Question 1: Please identify your ethnic category</i> | 57 |
| Table 2 | <i>Question 2: Please identify your age group</i> | 58 |
| Table 3 | <i>Question 3: Please identify your gender.....</i> | 59 |
| Table 4 | <i>Question 4: What is your job title</i> | 60 |
| Table 5 | <i>Internal Consistency Results.....</i> | 62 |
| Table 6 | <i>Pearson's Correlation for Enrollment and Facilities.....</i> | 64 |
| Table 7 | <i>Regression Analysis for Enrollment and Facilities</i> | 65 |
| Table 8 | <i>Pearson's Correlation for Enrollment and Culture and Climate.....</i> | 66 |
| Table 9 | <i>Regression Analysis for Enrollment and Culture and Climate.....</i> | 67 |

List of Figures

| | |
|--|----|
| Figure 1. <i>Frequency chart showing ethnic category distribution of participants.</i> | 57 |
| Figure 2. <i>Frequency chart showing age group distribution of participants.</i> | 58 |
| Figure 3. <i>Frequency chart showing gender distribution of participants.</i> | 59 |
| Figure 4. <i>Frequency chart showing job title distribution of participants.</i> | 60 |
| Figure 5. <i>Scatterplot of enrollment by facilities</i> | 65 |
| Figure 6. <i>Scatterplot of enrollment by culture and climate</i> | 67 |

Chapter 1: Introduction

Introduction to the Problem

Those who run private religious schools should recognize that they work in a competitive industry. Gone are the days where members of a local church would automatically send their children to private school. Gone are the days of free tuition. Gone are the days of steady enrollment. In the past 20 years, the role of a private, religious elementary school has changed drastically. Private religious schools face fierce competition from desirable public schools, a wave of new charter schools, the advent of online programs, and an increase in other private schools in nearby areas. Graduates from private religious schools are projected to decrease by over 25% by the year 2030 (Enrollment Management Association). Since competition is strong, it is important to understand the key components to running a successful school (Frost, 2014).

Existing literature is primarily focused on school parent choice programs such as vouchers, tax credits, or other educational incentives (Bulman, 2004; Goldring & Phillips, 2008; Mainda, 2002; Parker, Cook, & Pettijohn, 2007; Schneider, Marschall, Teske, & Roch, 1998). These studies tend to gather data from both public and private schools rather than just private schools. Therefore, elementary private schools could benefit from further research that focuses on aspects which drive families to or away from their schools. The existing literature does, however, shed light on some of the aspects that parents consider when looking at schools and serves as a backbone for further research.

Through a careful review of the literature, along with personal experience, two specific factors were identified. The two factors, or independent variables, are the physical condition of the facilities and the culture and climate of a school. This study examined what type of relationship, if any, exists between the two identified factors and private elementary school

enrollment. This study sought to answer the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?”

Background, Context, History, and Conceptual Framework for the Problem

Most private schools derive funding primarily from tuition (Scott, 2018), and maintaining a healthy enrollment is fundamental to survival as an institution. Therefore, it is essential for school officials to understand the factors that affect private school enrollment, whether they are positive or negative. It is not an easy task to convince parents to enroll their children in private schools; it is a significant decision not to be taken lightly. However, each parent possesses a unique story with unique attitudes and unique backgrounds. It is, therefore, very difficult for private school decision-makers to quantify the factors that contribute to enrollment. Yet, parents and schools share commonalities. Private schools in Idaho, for example, are predominantly Caucasian (87.4 %); Non-denominational Christian, Protestant, and Catholic (62%); and charge an average tuition of \$4,219 for elementary school (Catt, 2014). It is possible, then, to find common factors that correlate with enrollment.

A deep understanding of enrollment factors is critical to the survival of any private school. It stands to reason that if factors that contribute to the decline of enrollment can be reversed, enrollment in private elementary schools will slowly and steadily increase. Such an outcome from this study could foreseeably have a significant impact on enrollment at any private school. Results may validate or invalidate common assumptions about enrollment and help school officials make better decisions and potentially avoid common pitfalls.

School decision-makers may presume that certain factors contribute directly to changes in private school enrollment, either positively or negatively. Through informal research and

personal experience, combined with a careful review of the literature, I have identified two specific factors (the independent variables) that appear to be prime causes that affect school enrollment: condition of facilities and culture and climate of a school. In order to provide private schools better with information about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate.

First, the physical conditions of the facilities may be an important factor that contributes to school enrollment. This study sought to show, in part, that schools with stable or growing enrollment tend to have new, well-maintained facilities, whereas schools that are declining have older or poorly maintained facilities. Understanding this relationship between condition of facilities and enrollment could have significant impact on school planning. Schools with declining enrollment may wish to allocate more resources to maintenance, repairs, and improvements. For example, my current school has recently engaged in extensive improvements and remodeling of our facilities. The result in a short time has been a growth of enrollment and a higher retention rate. The cause-and-effect relationship between facilities and enrollment is unclear, but a correlation appears to exist in my situation.

The second factor considers the importance of school culture and climate on enrollment. A school with a positive culture and climate has social norms built around unity of purpose and collaboration (Thompson, 2004). These norms could affect expectations of teachers, both professionally and personally. High expectations and a positive culture, therefore, contribute to teacher efficacy (Goddard, Hoy, & Hoy, 2000). This has important significance to private school

enrollment. In other words, school norms, culture, and climate, may not only impact teacher efficacy, but also the enrollment of the school. The relationship between culture and climate of a school and enrollment, therefore, was included in my research project.

Statement of the Problem

Student enrollment in some private schools all over the country are declining and closing, whereas some are growing and flourishing (Gilmore & Rush, 2013). The main problem is that educators at these institutions may not understand why. This raises the question: what are declining schools doing that can be avoided, and what are growing schools doing that can be replicated? As a way of partially addressing this problem, this study sought to answer the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?”

Purpose of the Study

In order to provide better information to private schools about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate and their measures:

- School enrollment as measured by percentage of students gained or lost during a five-year period.
- Physical conditions of facilities as measured through a rating of the ability to support learning, comfort, appearance, physical space, condition of equipment and furniture, maintenance, and cleanliness (Uline & Tschannen-Moran, 2008).

- School culture as measured by a rating of professional collaboration; affiliative and collegial relationships; and efficacy or self-determination (Wagner, 2006).

Research Questions

The following two research questions guided the study:

- RQ1. What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?
- RQ2. What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

Hypotheses

Based on the research questions, two factors were synthesized that should demonstrate a correlation to enrollment. These relationships are stated in two alternate hypotheses.

- H_{01} : No statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.
- H_{a1} : A statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.
- H_{02} : No statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.
- H_{a2} : A statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.

Rationale, Relevance, and Significance of the Study

The outcome of this study could have significant impact on private schools all over the country. If decision-makers understood what factors contributed to decline in enrollment, they could avoid making common pitfalls and mistakes. Likewise, if school decision-makers understood what factors contribute to growth of enrollment, they could make better decisions regarding the allocation of resources. The following is an explanation of how each independent variable could contribute to the existing research. For further discussion on the variables and their measurements, see the sections on Instrumentation and Operationalization of Variables in Chapter 3.

The first independent variable, condition of facilities, was expected to demonstrate a correlation to enrollment. Schools with newer and well-maintained facilities will likely demonstrate steady enrollment or enrollment growth. In contrast, schools with aging facilities will likely demonstrate declining enrollment. Discovering a link between the condition of facilities and school enrollment would expand the understanding of the impact that facilities have on education.

It was expected that culture and climate of a school, the second independent variable, would also show a correlation to school enrollment. Schools that score well on the School Culture Triage Survey (Wagner, 2006) will likely demonstrate growth, whereas schools that perform poorly will show decline in enrollment. Each administrator of a private school needs to make choices on vision and direction. Improving the culture of a school may sometimes take a back seat to other goals. Understanding the link between enrollment and culture will help decision-makers to set a more effective course of action.

Definition of Terms

A dependent variable and two independent variables were the variables of this study. These variables were drawn from experience and a careful review of existing literature. For expanded analysis of each variable, see Chapter 2: Literature Review. Each variable has its own unique construct and therefore needs to be defined closely. Some of the construct attributes for each variable are subjective and based on opinion of the school administrator or school representative filling out the survey. The following is a list of terms and definitions that will be useful for this study.

Culture and Climate: The general atmosphere of a school and attitude of teachers, students, and parents; a shared set of norms, experiences, and traditions within an organization (Wagner, 2006).

Enrollment: The number of students that attend a particular school.

Facilities: Any physical space used by a school. This includes, but is not limited to, classrooms, bathrooms, offices, playground, landscaping, parking lot, library, gymnasium, and lab facilities, equipment, and furniture.

Private School: “one that is neither operated nor funded by an agency of government” (Fox & Buchanan, 2017, p. 96). For purposes of this study, the term private school shall refer to private elementary schools, grades K–8, in the state of California.

Assumptions, Delimitations, and Limitations

The following assumptions were necessary for this study:

- Participants have intimate understanding of their schools and have sufficient experience within their schools to answer the questions.
- Participants will give accurate and honest information regarding their school.

- Participants understand the occupational specific terms and how they relate to education (Dillman, Smyth, & Christian, 2014, p. 118).

The following delimitations existed:

- The study is delimited to K–8 private schools in the state of California. Homeschools and online schools are excluded from the population.
- The study is delimited to administrators of K–8 private schools in the state of California. Other school officials such as principals or admissions directors will also be considered. Non-administrative personnel such as secretaries or teachers will not be considered.

The following limitations include:

- Personal interpretation of the survey instrument by the individuals participating in the study.
- Participants' knowledge and their access to the required statistical information.
- The inability to control who is participating in the survey.
- Honesty or bias of the participants.

Summary

Private schools are typically funded through tuition dollars (Enrollment Management Association, 2017). As enrollment increases or decreases so does income. Without steady income, private school decision-makers face difficult choices regarding programs, staffing, maintenance, and improvements. Therefore, understanding factors that affect private school enrollment is beneficial to any private school stakeholder or decision-maker.

Existing literature investigating the relationships between the independent and dependent variables is incomplete. Much of what exists looks at parent choice factors, but not specific

perception factors that contribute to decline or increase of enrollment. In other words, the existing literature does not provide solid evidence to help school officials make better use of their resources.

The purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate. The use of a quantitative study will allow for data analysis that compares the independent variables with the dependent variable of private elementary school enrollment. These factors, expressed as independent variables, are:

- The physical conditions of the facilities
- The culture and climate of the schools

In Chapter 2, the Literature Review, parent choice factors are explored in depth. The two independent variables are also investigated and a justification for further research is concluded through the review of existing literature. Chapter 2 also includes a conceptual framework that outlines the basic framework for this study. In addition, a review of methodological issues is explored, justifying the use of a quantitative, correlational study.

Chapter 2: Literature Review

Introduction

Opening

The California Department of Education (CDE) estimated that about 7.4% of school-aged children in California attended private schools during the 2015–2016 school year (“Private schools,” 2018). Although this accounts for a small percentage of children, the total number of students is significant. Likewise, the number of private schools in California is also significant. With so many schools, competition can be fierce. Private schools must, in many respects, operate as a business, and school decision-makers must, therefore, make business decisions in addition to educational ones. As a business, it is extremely important to understand clientele and what drives customers to your business. Students and their parents are, in this case, the customers expressed through enrollment. Therefore, it is beneficial for private school decision-makers to better understand the factors that motivate parents to enroll their children in a private school. This study investigates the unique factors that affect enrollment so that decision-makers may better understand their customers.

Study Topic

The purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate. Through research, two key components have been identified that will likely demonstrate a connection to enrollment decline and/or growth. These factors are:

- The physical conditions of the facilities
- The culture and climate of the schools

First, it was expected that schools with aging facilities would continue to decline unless such schools make significant repairs and improvements. Conversely, schools with newer facilities or facilities in good repair would demonstrate healthy enrollment. Second, it was expected that the basic culture and climate of the school would have an impact on enrollment trends. Schools with a higher rating on the School Triage Survey (Wagner, 2006) would demonstrate a growth of enrollment whereas schools with a lower rating would demonstrate a decline in enrollment.

Context

A deep understanding of enrollment factors is critical to the survival of many private schools. During my 20 years in education, I have worked at four Lutheran elementary schools, all of which have faced a significant decline in enrollment. Leaders at one school, in an effort to sustain enrollment, relocated the campus to a more affluent area, changed the name, and combined with the local Lutheran high school. Leaders at another have continued to cut back teachers and staff and operate with a fraction of the student body it once had. The school board at the third school closed its elementary school, keeping the preschool program only. My current school has shown a steady decline in enrollment over the past 10 years, likely due in part to the two factors identified earlier.

Each school closed for its own, unique reasons. The lessons learned from one school do not necessarily apply to another. Nonetheless, commonalities also exist. For example, private schools in Idaho, for example, are predominantly Caucasian (87.4 %), Christian and Catholic (43%), and charge an average tuition of \$4,219 for Elementary School (Catt, 2014). If commonalities like these exist in one place, it is not unreasonable to believe they exist elsewhere as well. It should be possible, then, to find common factors that correlate with enrollment.

Significance

Because many private schools are funded almost exclusively from tuition, maintaining a healthy enrollment is fundamental to their survival (Enrollment Management Association, 2017). Therefore, understanding the factors that affect enrollment is essential, whether they are positive or negative. It is not an easy task to convince parents to enroll their children in a private school - it is a significant decision that cannot be taken lightly. However, each parent possesses a unique story with unique attitudes and unique backgrounds. In other words, everyone is different. It is, therefore, very difficult to quantify the factors that contribute to enrollment.

This study could foreseeably have a significant impact on other private schools in similar situations. It should help leaders and stakeholders make better decisions when deciding how to best allocate resources. It may validate or invalidate common assumptions about enrollment that will help school officials make better choices and avoid common pitfalls. In addition, it stands to reason that if factors that contributed to the decline of enrollment can be reversed, enrollment will slowly and steadily increase.

Problem Statement

These stories are not unique – private schools all over the country are declining and closing whereas many are growing and flourishing (Gilmore & Rush, 2013). This raises the question: what are the declining schools doing that can be avoided, and what are the growing schools doing that can be replicated? This study answers the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?”

This research project is a quantitative study that looks at correlations with enrollment. Using two pre-established survey instruments, the study compared a school’s enrollment to the

two factors identified earlier. Data analysis, using correlational analysis and multiple regression analysis, explored a relationship between the dependent variable of enrollment, and the two independent variables previously identified. In order to show commonalities among schools, one needs a quantitative approach. In contrast, qualitative studies suffer from the inability to generalize – what works at one school does not necessarily apply to another. In comparison, a quantitative study will be able to compare aspects across different environments, locations, and demographics.

Organization

The following literature review explored the conceptual framework for this study. First is a summary of the existing research followed by an analysis of existing research. After that, a review of the methodological issues involved in the existing research justified the methodological approach of this study. Finally, the literature review concluded by laying the groundwork for the necessity and method of this study.

Conceptual Framework

Being the principal of a private elementary school is not easy. Beyond the typical tasks of an administrator, principals of private schools must deal with maintaining a steady enrollment. The very vitality and sustainability of a private school is conditional upon its student body – without students, there is no school. Therefore, it is argued that for sake of the school, its staff, parents, and students, the duty of maintaining a healthy enrollment is the most important task.

For private school leaders, the task of growing enrollment is typically a primary responsibility. It is what Covey, McChesney, and Huling (2016) refer to as a “wildly important goal.” The urgency of growing enrollment is fundamental to the livelihood of my school. In the book *Learning from the Best Vol. 2: Growing Greatness that Endures in the Christian School*,

Frost (2014) discussed these challenges. The author wrote, “We must focus our energy on the places in which we will get the most impact. This is especially important for the smaller or struggling Christian school” (p. 72). Since growing enrollment is at the forefront of urgency, then this is where many school leaders will spend their energies. It can be presumed that certain factors contribute directly to changes in private school enrollment, either positively or negatively. Through informal research, personal experience, and a careful examination of the literature, two factors were identified that appear to be prime causes that affect school enrollment: condition of facilities and culture and climate of a school.

First, the physical conditions of the facilities may be an important factor that contributes to school enrollment. The idea of “if you build it, they will come” might be true. Uchendu, Nwafor, and Nwaneri (2015) suggested, “A well designed school environment, modern equipment and infrastructures can also serve as a strategy to attract patronage in terms of students’ enrolment to institutions” (p. 216). White (2012) pointed out the importance of the perception of quality facilities among stakeholders. It was anticipated that schools with stable or growing enrollment tend to have new, well-maintained facilities, whereas schools that are declining have older facilities. The cause-and-effect relationship between the two is unclear, but a strong correlation between facilities and enrollment was thought to exist.

Current research on how condition of facilities affects student enrollment is slim. A study by Gauatm (2011) identified “school appearance” as a factor that contributed to school enrollment in private schools, but the study only looked at successful schools in a region in India and may not apply to other areas. Multiple studies discuss the connection between student achievement and facilities. Uline and Tschannen-Moran (2008), for example, showed a connection with quality facilities, school climate, and student achievement. If a correlation

between enrollment and culture and climate of a school exists, and if there is a strong connection between culture and climate of a school and the physical facilities, then it stands to reason there is also a connection between facilities and enrollment.

The second factor considers the importance of school culture and climate on enrollment. Goddard, Hoy, and Hoy (2000), for example, determined that social norms such as culture, climate, and teacher expectations impact teacher efficacy. Social norms are essentially the behaviors that are expected of teachers. This could be the way they present themselves in front of students and parents, or how they interact with other teachers. A school with a positive culture and climate has social norms built around mutual respect and collaboration. These norms also dictate expectations of teachers, both professionally and personally. High expectations and a positive culture, therefore, contribute to teacher efficacy.

These expectations have important significance to private school enrollment. Goddard et al. (2000) wrote “whereas an individual teacher may be highly ineffectual, that teacher might perform differently depending on whether the majority of teacher colleagues in a school share strong perceptions of collective efficacy” (p. 498). If school norms, culture, and climate, impact teacher efficacy, then enrollment of the school might also be a side effect. The relationship between culture and enrollment, therefore, is included in this research project.

Although only two factors are explored in this study, several other factors that can influence enrollment in private schools likely exist. The economy, demographics, the use of marketing, the quality of teachers, school accreditation, test scores, location, and competition could also influence enrollment. Goldkind and Farmer (2013) looked specifically at school size and parent involvement. They stated, “Enrollment size is directly related to parents' perceptions of the extent to which schools provide opportunities for parents to participate in school

activities” (p. 233). However, it would be infeasible to conduct a study to account for all of these factors. Therefore, in order to bring the list down, two factors were identified as most likely to affect private school enrollment: condition of facilities and culture and climate of a school. Ultimately, existing research shows that these two factors are closely linked to test scores, so it seems logical that they may also correlate to private school enrollment.

Socioeconomic status (SES) is also a known factor that correlates to test scores, but since private schools typically do not serve lower SES communities, it is not included in this study. Further explanation of these two factors can be found in the section on Synthesis of Research Findings.

Five studies served as a basis on which a theoretical framework was created, Bulman (2004), Goldring and Phillips (2008), Mainda (2002), Parker et al. (2007) and Schneider et al. (1998). Each of these studies looks at specific factors that parents look for when choosing a school. An analysis of each study provided multiple factors to consider as potential influencers of private school enrollment. These studies point to a connection between school enrollment and parent choice. For a graphical representation, see Appendix G.

Two specific attributes of these studies drove the formation of this study. The first attribute is the tendency to compare public and private schools equally, often exploring why parents would choose one over another. For purposes of this study, it is assumed that parents have already chosen a private school. Therefore, taking the concept of connecting parent choice and enrollment, this study narrowed the focus specifically to private schools. The second attribute focuses on the methodology of each study. Many of the previously listed studies is either qualitative or mixed-methods. Rather than repeat previous studies, this study sought to examine a quantitative approach. As explored later, the quantitative approach offers many advantages, but could not happen without the basic foundation of previous qualitative studies.

Although this study did not specifically emulate the exact structure and methodology of the previous studies, this study was designed to build upon previous work, serving as an extension from that basic framework. An in-depth critique of these five studies appears later in this chapter.

Review of Methodological Issues

Three types of methodology are available for empirical research: qualitative, quantitative, and mixed-methods. This is a quantitative study utilizing an online survey that was analyzed using a variety of data analysis procedures. Qualitative studies are useful for developing theories (Creswell, 2014) whereas quantitative studies more suited for testing theories. Because theories about enrollment are plentiful, any future research needs to test the validity and accuracy of those theories. In contrast, qualitative studies tend to be narrow in scope, employing a limited sample of the population. For this study, participants were drawn from all private schools in California, a relatively large sample that also follows trends of other quantitative studies that draw samples from an entire state (Chakrabarti & Roy, 2011; Goldring & Phillips, 2008).

In the existing qualitative literature on private school enrollment, studies have typically used case studies (Brennan, 2012; Foody, 2012; Gauatm, 2011; Saporito & Lareau, 1999) which suffers from problems of external validity. For example, Colling (2010) discussed what one school did to become successful. Two examples in particular were opening a preschool and upgrading technology in the classrooms. The problem is that many schools already do this, therefore such an investment would not be applicable. Research that looks at a larger population and draws from multiple schools is needed in order to be generalized to a greater population. The justification, then, for a quantitative study begins to take shape.

The literature also contains several quantitative studies (Buddin, 2012; Goldkind & Farmer, 2013; Greenwald, Hedges, & Laine, 1996; Lackman, 2013; Saporito & Lareau, 1999; Setari & Setari, 2016; Uchendu et al., 2015). Quantitative studies have two main goals: reliability and validity. Reliability is the consistency of your results, whereas validity is the accuracy (Adams & Lawrence, 2015, p. 69). Greater reliability means that the results are more likely to repeat when replicated. This has tremendous advantages for private schools that are wishing to grow enrollment because consistent results can be repeated. Greater validity, also, is advantageous because it means the questions and answers to a survey, for example, accurately measure what is being asked and may potentially be more generalizable.

The question then becomes: what type of quantitative study will be the most effective for helping to answer the research question? In order to answer this, one must look at the intent of the study: to discover a correlation between enrollment change and two predetermined factors. One way to do this is through a correlation coefficient such as Pearson's Correlation Coefficient (r). According to Adams and Lawrence (2015), this type of data analysis is useful to describe a linear relationship between two variables. For example, Pearson's r (the statistical test) might show a positive relationship between the condition of facilities and enrollment – as one increases, so does the other. In order to account for the correlational relationship, linear regression analysis was also used. The use of regression analysis is useful when a relationship is discovered using a correlation coefficient such as Pearson's r (Adams & Lawrence, 2015, p. 248). The use of regression analysis is also common among existing studies (Goldring & Phillips, 2008; Mainda, 2002; Uline & Tschannen-Moran, 2008).

Researchers assert two main advantages for deploying such a correlational study. First, “correlational designs provide us with a legitimate method to examine the relationships of these

uncontrollable variables with other variables” (Adams & Lawrence, 2015, p. 226). For this study, it would be the dependent variable of enrollment compared to the two independent variables. Second, correlational studies have an increased external validity and therefore are more accurate and applicable to a larger population. Adams and Lawrence (2015) wrote that correlational studies “are more easily generalized to everyday life and thus may have greater external validity than findings from experimental studies in an artificial laboratory environment” (p. 227).

Of course, correlational studies have disadvantages. The most notable disadvantage, though not typically sought after, is the lack of causation. In other words, a cause and effect relationship cannot be determined through this kind of study because causation is confounded by the presence of a plethora of factors. For example, it was hypothesized that a relationship between condition of facilities and enrollment would exist. The data typically do not reveal whether or not aging facilities cause decreased enrollment, or whether decreased enrollment somehow causes aging facilities (i.e. due to lack of income for repairs). Along the same lines, correlational studies show that a relationship exists, as well as the strength or weakness of that relationship, but are unable to explain the relationship. It is possible that a third, unknown variable is acting as an influence, but a correlational study can only compare the relative strength of the variables presented.

Synthesis of Research Findings

When looking at existing research on private school enrollment, a substantial degree of separation seems to exist between the empirical and the theoretical. The theoretical literature is practical in nature but based on advice and lacking significant data. In other words, the theoretical is more like good advice rather than real research. Little rigorous research about the

factors that demonstrate a correlation to private school enrollment exists whereas anecdotal and theoretical evidence abound. For example, Mychajluk (2011) stated “search-engine placement – along with a cutting-edge website – needs to be top priorities for any organization” (para. 9). Statements like this may be well meaning, but correlation is rarely demonstrated. What is true for one school is not necessarily true for another, but researchers may find commonalities and generalizations. A great need exists for quantifiable evidence that can be applied and generalized to all private schools.

Parent Perception

After reviewing the existing literature, one common theme seems to keep reoccurring: parent perception. How a parent perceives a school is the greatest determiner for enrollment. This highlights the need for further research to illuminate factors that affect parent perception. Considerable research on parent choice programs such as vouchers or tax credits exists, and much can be learned from it. For example, Goldring and Phillips (2008) list factors such as parent satisfaction with their previous school, academics, discipline, safety, and social networks. Schneider et al. (1998) investigated academics, values, discipline, and racial composition of a school as factors for consideration. Parker et al. (2007) identified eleven characteristics that parents consider when choosing a private school: academics, college prep classes, the number of teachers with advanced degrees, location, atmosphere, feeling of community, cost, class size, reputation, the “extras” that private schools typically provide, and extracurricular activities. Nichols (2010) identified four main factors that parents considered when enrolling in a private school: safety, teacher quality, school responsiveness, and communication between the home and school. Finally, Mainda (2002) looked at factors in Seventh-Day Adventist schools and

identified “spirituality, academic rigor, cost, peer influence, social factors, proximity, safety, and awareness” (pp. 192–193).

In the end, existing literature has one thing in common: they all create a perception in the mind of the parent. Each factor, when considered separately, is not enough to explain enrollment trends or decisions. When put together, however, a bigger picture forms. Unfortunately, gaps in the research also exist. For example, the researcher is unaware of any published research on why parents leave or stay at a school. Although it can be hypothesized, study in this area is needed.

Therefore, based on the existing literature as well as personal experience, two key components were identified that will demonstrate a connection to enrollment decline and/or growth. These factors are:

- The physical conditions of the facilities
- The culture and climate of the schools

These factors are considerably different in some ways from factors identified in previous studies and will be described further in the analysis section.

Facilities

One problem that all schools face is the difficulty in maintaining their physical facilities (Private Education, 2014). Gauatm (2011) goes so far as to write, “The appearance of a school plays a critical role in attracting prospective students” (p. 65). Physical aesthetics and the condition of the building is a logical perception that a parent could have. Many people believe that updating and replacing older schools will help schools. Fuller et al. (2009) claims that new schools will “attract a new mix of students, recruiting stronger teachers, or raising the motivation and performance of existing teachers and students” (p. 336). However, much of this research deals solely with public schools. Lavy and Nixon (2017), for example, looked at rebuilt schools

in the Houston Independent School District, and found, “there was no observable effect on magnet applications as evidenced by building composite score and building age” (p. 134).

Public schools, however, are free and therefore the results of this study may very well not apply to private schools.

Some studies have investigated how the condition of facilities impacts school culture (Bishop, 2009; Gislason, 2010; Higgs & McMillan, 2006; Uline, Tschannen-Moran, & Wolsey, 2009; White, 2012). Gislason stated, “a school's built environment inevitably interacts with the school organisation culture, and student dynamics” (p. 142). Gislason also stated, “different types of school design are typically associated with certain approaches to teaching and learning which, in turn, are linked with distinct cultural assumptions and values” (p. 130). Other researchers would agree. Uline et al. stated that physical spaces "encourage a sense of belonging and foster a collective commitment to shared learning goals" (p. 408). White (2012) looked at the perception that facilities have on various stakeholders. White found that the condition of the facilities can “inspire pride and emotional comfort leading to learning success” (p. 162).

However, many researchers failed to mention physical facilities when investigating factors that attract families to private schools (Mainda, 2002; Parker et al., 2007, Why They Come, 2015). Yet, it seems reasonable to assume that in a competitive market, the physical condition of a school's building could have an effect on business. Although no known research exists on the impact that facilities have on private school enrollment, research does show the effect that the physical conditions of the facilities has on academic achievement. (Blincoe, 2008; Brooks, 2015; Fuller et al., 2009; O'Donnell, 2016; Picus, Marion, Calvo, & Glenn, 2005; Taylor, 2009; Uline & Tschannen-Moran, 2008). Schneider (2002) examined not only the physical facilities but also how environmental climate such as temperature and lighting can

affect student learning. Higgins, Hall, Wall, Woolner, and McCaughey (2005) conducted an extensive review of the literature and found significant evidence for the connection between physical environment and student “achievement, engagement, affective state, attendance and well-being” (p. 6). If the physical condition of the facilities affects both student achievement and culture, it stands to reason that it may also affect enrollment.

Culture and Climate

Educators define the concept of school culture in many ways. Wagner (2006) defined it as “the shared experiences both in school and out of school (traditions and celebrations) that create a sense of community, family, and team membership” (p. 41). Similarly, Johnson and Stevens (2006) defined school climate as “a shared social system of both norms and expectations, the viewpoints of students, teachers, and administrators” (p. 112). Another element of culture includes the physical and emotional health of an organization (John & Stevens, 2006). Tschannen-Moran, Parish, and DiPaola (2006) also mention health, but include openness and “likens school climate to the personality of a school” (p. 388).

All researchers seem to agree that school culture and climate are important factors related to parent choice in schools. Goldring and Phillips (2008) mention safety and social networks; Schneider et al. (1998) identified values; Parker et al. (2007) recognizes atmosphere and feeling of community; Mainda (2002) looked at spirituality, social factors, and safety; and Bulman (2004) pinpoints religious faith. Goldkind and Farmer (2013) discovered “parents’ perceptions of safety and of respect from the school mediated the relationship between school size and perceptions of the extent of the invitations for involvement provided by the school” (p. 223). Thompson (2004) looked at ways “to create a more welcoming environment” (p. 52). Also, Bulman (2004) found, “the school-choice decision is influenced by the past educational

experiences of the parents and by their religious faith” (p. 492). Therefore, it is safe to say that the culture and climate of a school are significant determining factors for parents when choosing a school. The importance of school culture is palatable. Gislason (2010) stated, “culture holds organisational structure together, and brings a sense of collective purpose to diverse school activities” (p. 129).

Much like physical facilities, research connects school culture to student achievement (Smallwood, 2014; Taylor, 2008). Johnson and Stevens (2006) surveyed 1106 teachers from 59 elementary schools, comparing school climate, student achievement, and community and school context. When comparing scores from the teacher questionnaire and standardized test scores, they found “a positive and statistically significant relationship between school mean teachers' perception of school climate and student achievement” (p. 118). Tschannen-Moran et al. (2006) also compared teacher culture survey data to standardized test scores. They found “compelling connections... between school climate and student achievement at the high school and middle school levels” (p. 392). Another study by Barile et al. (2012) looked at student perception of the teachers. They found, “schools with better student perceptions of the teaching climate were associated with lower student dropout rates” (p. 256). It stands to reason that if a clear connection between school culture and student achievement exists, a connection to private school enrollment might also exist.

Unfortunately, no known research exists as to how culture and climate may impact enrollment. In other words, do schools with low teacher morale, negative attitudes, and a generally poor climate experience a decline in enrollment? Do schools that are open and healthy attract new families? Along the same lines, will changing the climate result in growth? One example is from Most Holy Trinity Catholic School in Phoenix, Arizona, that implemented the

house system to “foster stronger communal relationships” (Brennan, 2012, p. 325). Although the article showed that the house system was successful in changing the school climate, it did not say how that change impacted enrollment. More study on the matter is clearly needed.

Analysis and Critique of Previous Research

After reviewing the existing literature, little research exists on the topic of private school enrollment. What does exist typically involves parent choice programs such as vouchers or tax credits (Bulman, 2004; Goldring & Phillips, 2008; Mainda, 2002; Parker et al., 2007; Schneider et al., 1998). This may be useful for private schools that participate in such programs but does little for private schools that do not. Another problem is that school choice data looks at both public and private schools equally, whereas little of it dealt directly with factors that drive people either to or away from a particular private school.

The one exception that looks at direct factors is from Bulman (2004) who interviewed 88 parents of 9th graders at two public school districts near the Bay Area in California. The author looked specifically at six families and concluded, “the school-choice decision is influenced by the past educational experiences of the parents and by their religious faith” (p. 492). Unfortunately, the data presented only helps to explain a parent’s thought process, especially when choosing a public school as opposed to a private school, and does not examine specific reasons for choosing one private school over another. Bulman’s methods, however, are strictly qualitative. This is useful for determining particular factors, but a quantitative study would show how statistically significant these factors are.

In addition to Bulman (2004), four other articles to highlight deal directly with school choice attributes. These studies each had a significant impact by providing a theoretical framework from which this study was formed. The first article is from Mainda (2002), who

investigated “factors influencing school choice among the Seventh-day Adventist population in Southwest Michigan” (p. 187). The author identified the following eight attributes: “spirituality, academic rigor, cost, peer influence, social factors, proximity, safety, and awareness” (pp. 192–193). Through data analysis based on parent surveys, Mainda concluded:

Whereas Adventist parents with children in public schools have a high positive attitude toward the Adventist system of education, they tend to choose public schools for their children because of their relatively lower perception of the worth of education relative to the cost, availability of financial aid, academic quality, the number of courses available for selection, and the lack of adequate pertinent information. (p. 211)

The material presented in Mainda (2002) is useful for this study. One problem, however, is that the sample includes only Seventh-day Adventists in Southwest Michigan. Since the Seventh-day Adventist network of schools only represents a small fraction of private schools in the entire country, many conclusions may not transfer to other schools and denominations. Second, the research only looks at reasons why people first choose a private school, not for reasons to reenroll or to leave. Finally, and most importantly, none of the data looked at enrollment trends. Mainda’s study does not compare successful schools with struggling schools but rather evaluates them all equally.

Mainda’s (2002) methodology, however, can be quite useful. The mixed-methods study used both “fixed and open-ended questions” that surveyed 535 parents (p. 191). The questionnaire contained 57 Likert scale questions plus an open-ended section for comments. Before engaging in a full study, a pilot study was conducted to determine independent variables, or the school choice factors. Once the full study was completed, a regression analysis helped

determine the most significant variables or factors. This type of analysis is suitable when looking at relationships and will be included in this study.

The second article that looks specifically at parent choice is from Schneider et al. (1998), who looked at the decision-making process for school choice programs. The article surveyed “400 residents in each of four school districts in the New York metropolitan area...was limited to parents/decision-makers with children in grades K–8...and included parents with children in both public and private schools” (p. 493). The survey looked at four factors: “the academic quality of the school, the racial composition of its student body, the values espoused by the school, and the school’s disciplinary code” (p. 495).

The idea of considering racial makeup when choosing schools may be an important one. The authors concluded, “our work shows that the prevailing wisdom – that school choice will lead to increased segregation because parents from racial minority groups will focus on race in choosing schools – should be considered” (Schneider et al., 1998, p. 499). Any private school looking to grow therefore needs to consider the demographics and ethnic population of the immediate area. Schneider et al. noted, “minority or lower SES parents stress a different set of values in education and choose schools that reflect the fundamental (and different) dimensions of education they view as important” (p. 499).

Although the material in this study is important to consider, three main flaws become evident when looking at private school growth. First, it compares public and private schools rather than private vs. private. Although public schools certainly offer competition, the reasons for choosing public as opposed to private are frequently different. Secondly, this article suffers from the same flaw as the others: it does not look at enrollment trends and fails to compare growth verses decline. Finally, the age of the research may be a factor. Conducted 20 years ago,

today's millennial parents are likely to have different viewpoints and values when looking at schools. The methodology used in Schneider et al. (1998), however, seemed well suited to the purpose of this study. The results from the survey were analyzed using multiple methods, ranging from chi-squared to pseudo R^2 regression analysis. These types of analyses are common in quantitative, correlational studies and will be used in this study.

The third study is from Goldring and Phillips (2008), which identified several factors that draw parents to a school: "demographics, satisfaction with previous school, parental involvement, educational priorities, and social networks" along with "parent education, family income, and student race" (p. 211). To analyze data, the researchers looked at "school choice survey data from the Metropolitan Nashville Public Schools" (p. 209). Of all the factors listed, Goldring and Phillips found that all were determining factors for parents with the exception of previous school satisfaction, stating, "we find that parent satisfaction with their child's previous school was not a predictor of considering private school" (p. 209).

This study suffers some of the same flaws as the others, at least when considering only private school enrollment. First, it looked at multiple school choice options such as "magnet schools, charter schools and private schools" (p. 210). School choice research lumps public and private schools together, offering little insight into specific private school enrollment. A private school wanting to grow enrollment will need information relevant to this context. This type of article may be helpful for school choice programs such as vouchers or tax credits, but that is not the case for most private schools in the country. When finances do not become an option, parents may tend to have different priorities for choosing schools. When private schools compete against each other, one can assume that parents have already ruled out public options. Finally, the researchers only interviewed parents who had applied for public magnet schools.

Although there may be some commonalities between the appeal of magnet schools and private schools, the two are fundamentally different, especially for the religious schools.

For data analysis, Goldring and Phillips (2008) also use multiple regression analysis, which seems common for these types of studies. One issue, however, may be how data was gathered. The researchers conducted phone interviews with applicants and received a response rate of 56.7%. However, it is possible that the 43.3% of applicants refused to participate simply because of the means of the survey. Many families may feel less inclined to participate in phone interviews, as they are unsolicited and unwelcomed. This mindset could be statistically significant to alter the responses. Nonetheless, the data collected is still useful for schools when considering enrollment factors.

The final study is from Parker et al. (2007). The purpose of their study was to help “in defining the primary concerns of parents when considering whether to choose a private school over public schools in their areas” (p. 26). To gather data, trained interviewers conducted a telephone interview of 304 randomly selected respondents from a city in the Midwest. After data was collected and analyzed, it was discovered that parents with annual income of over \$75,000 had different priorities than parents with annual incomes under \$75,000, where:

the higher income groups seem to be seeking the criteria in which the private schools are perceived to excel, namely holding higher academic standards; offering college preparatory courses; the perception that more teachers hold advanced degrees, and the reputation of the private school in a significantly greater proportion than do their lower income counterparts. (p. 31)

The implications of the Parker et al. (2007) study may have the biggest impact on this study. The authors note, “given this competitive environment, if an increasing number of private

schools are going to experience growth, ...they must understand which criteria are being used by parents in the selection of a school for their children” (p. 23). Some factors, however, are missing. First, not all private schools offer college preparatory courses—only high schools can offer this. Therefore, the results of this study may not necessarily apply to early education, elementary, or middle schools. Second, it does not explain why parents would choose one private school over another, nor does it explore the factors that cause parents to leave one private school and attend another. When private schools all over the country have declining enrollments, other factors need to be considered.

Finally, the sample in this study did not wholly represent private schools. Seventy-nine percent had children in public schools, 12% in private schools (non-religious), only 6% in parochial schools (religious), and 3% in homeschool or somewhere else. This is significant, especially for private schools and even more so for parochial schools due to underrepresentation. When researching enrollment in private schools, getting the majority of the data from parents whose children attend public school is less than ideal. The data analysis did complete a *t*-test analysis to show the difference between the two groups and “significant differences were found between private and public school respondents” (p. 28). One suggestion for improving this study would be only to sample parents with children who attend private schools, especially early education, elementary, and middle schools because those are more common than private high schools.

These five research articles are the most applicable to this study because they deal with general, overall factors that parents consider. Other research, however, looks at individual factors such as how school culture or the physical condition of facilities effects student

achievement. Because my study will be quantitative in nature, it is prudent to look at the methods of existing quantitative studies.

The existing research includes several quantitative studies (Buddin, 2012; Goldkind & Farmer, 2013; Greenwald et al., 1996, Lackman, 2013; Mainda, 2002; Saporito & Lareau, 1999; Setari & Setari, 2016; Uchendu et al., 2015). Unfortunately, few of these studies use methods that will accomplish the research goals. For example, Buddin (2012), the largest study, uses statistical analysis based on actual enrollment numbers provided by “the Private School Universe Survey (PSS) and the Common Core of Data (CCD) maintained by the national Center for Education Studies” (p. 11). The data looks at enrollment in private and charter schools between the years of 2000–2008. Although Buddin could be described as a correlational study, it utilizes a random effects model, a type of regression analysis. Although my study will not use this particular analysis, more appropriate types of regression models will be used.

Another study, Greenwald et al. (1996), used “two meta-analytic methods – combined significance testing and effect magnitude estimation” (p. 365). This analysis is certainly correlational in method, but does not show a positive or negative relationship, just whether or not the data is statistically significant. In contrast, Uchendu et al. (2015) used Pearson’s correlation coefficient along with mean and population *t*-tests. It also looks at data and results in the same way. For their study, Uchendu et al. (2015) looked at the effect that marketing had on enrollment. Although this factor is not one of the same issues that I will be investigating, it is closely related and therefore it makes sense to use similar methods.

In conclusion, existing research, as it applies to this study, can be summarized into two categories: general research and specific studies. The general research (Bulman, 2004; Goldring & Phillips, 2008; Mainda, 2002; Parker et al., 2007; Schneider et al., 1998) consists of articles

that identify general factors that parents consider when looking to enroll their children in a school. Unfortunately, most of this research deals with parent choice programs such as vouchers or tax credit incentives and does not look specifically at private school enrollment. Specific research, however, looks at only one specific factor such as culture or the physical condition of facilities. Due to the importance of my study, both will need to be included.

It is clear that very little research exists that will directly benefit private schools, particularly religious schools. Religious schools play an important part in the educational structure of our country. These schools provide a safe, academic learning environment within a religious context. However, the livelihood of these schools is typically due primarily to tuition, and tuition is tied directly to enrollment. Therefore, rigerous research needs to be conducted that will illuminate factors that contribute to enrollment. Such research will benefit schools that wish to grow enrollment, or avoid pitfalls that lead to decline.

Summary

Private schools perform an important role in our society. These schools, however, are not funded through tax dollars, but must seek income through various means. The most significant form of funding for any private school comes through tuition dollars (Scott, 2018). Since tuition income is determined by the number of students enrolled in a school, private schools must make a considerable effort to assure heathy enrollment. Therefore, it is essential for any private school to understand factors that show a correlation to enrollment.

Ultimately, the reason why parents choose to enroll their children in a particular private school comes down to perception: does that parent perceive the school to be the best choice, given all the circumstances? Based on existing parent-choice literature as well as personal

experience, two factors were identified that will demonstrate a correlation to enrollment. These factors are:

- The physical conditions of the facilities
- The culture and climate of the schools

The existing literature on school enrollment, unfortunately, is limited. What does exist deals primarily with parent choice programs such as vouchers or tax credits. The problem with school choice programs is that they compare private and public schools equally. This type of information, although useful, is incomplete. Private schools likely compete primarily with other private schools, and the factors that drive parents to or from a private school vary significantly from factors that parents consider when choosing a public school. Therefore, investigation into that relationship will be included in my study.

Much literature exists that supports the two proposed factors. However, most of that is tied to student achievement rather than enrollment. There is also a demonstrated link between quality of facilities and school culture (Gislason, 2010, Uline & Tschannen-Moran, 2008; Uline, Tschannen-Moran, & Wolsey, 2009). Although research connects these two factors to student achievement, little research exists that links these factors to enrollment. Given what is known about factors that contribute to student achievement, it is likely that these factors also significantly contribute to enrollment. Based on a review of existing literature, there is sufficient cause to examine which factors, if any, demonstrate a correlation to private school enrollment. A quantitative study that uses correlation and regression analysis should yield significant results. Therefore, the literature review has provided a strong foundation to ask the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?”

Chapter 3: Methodology

Introduction

Although most schools explore alternative sources of funding such as endowment building or fundraising efforts, student tuition still makes up the bulk of funding dollars (Ferguson, 2018). Therefore, administrators, leaders, and stakeholders of private schools need to pay special attention to factors that contribute to the decline and increase of enrollment. Through a correlational study, the following question was answered: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?” Understanding these factors could help stop the downward spiral of falling enrollment of struggling private elementary schools. The results of this study could help school leaders make better decisions when allocating resources.

In order to illuminate these enrollment connections, this study was a quantitative study that used correlational statistics with linear regression analysis. A quantitative study has several advantages. The most significant advantage is the reliability of the study. In other words, assuming study validity, the results can be generalized and applied to private schools in particular (as well as other educational institutions) with certain statistical assurances and validity. Therefore, in order to create a study that can be generalized to other private schools, a quantitative study makes sense. Related studies such as Mainda (2002), Parker et al. (2007), and Schneider et al. (1998), took a similar approach. Each is a quantitative study that deals with parent choice factors. In addition, Picus et al. (2005) and Tschannen-Moran et al. (2006), two quantitative studies that compared condition of facilities and student achievement, used similar data analysis methods.

This chapter is broken up into sections that discuss methodology and methods in detail. It will first discuss the purpose of this study in greater detail, then examine the research questions and hypotheses. Next, it will then go into the specific design of the study along with descriptions of the population and instrumentation. Finally, it will look at the ethical considerations, expected outcomes, and limitations of the research design.

Purpose

In order to provide better information to private schools about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate and climate and their measures:

- School enrollment as measured by percentage of students gained or lost during a five-year period.
- Physical conditions of facilities, as measured through the ability to support learning, comfort, appearance, physical space, condition of equipment and furniture, maintenance, and cleanliness (Uline & Tschannen-Moran, 2008).
- School culture as measured by professional collaboration; affiliative and collegial relationships; and efficacy or self-determination (Wagner, 2006).

Administrators from approximately 2,500 private K–8 schools in California were asked to participate in an online survey, which will provide the data to be analyzed.

Research Questions

Two research questions will address the purpose of this study:

- What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?
- What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

Hypotheses

Based on the research questions, two factors were synthesized that should demonstrate a correlation to enrollment. These relationships are stated in two null hypotheses.

- H_{01} : No statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.
- H_{a1} : A statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.
- H_{02} : No statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.
- H_{a2} : A statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.

Research Design

The justification for the use of a quantitative, correlational study comes from the purpose of the study. Creswell (2014) pointed out how “quantitative research is an approach for testing objective theories by examining the relationship among variables” (p. 4). Several key ideas in this phrase are applicable to this study, which seeks to test “objective theories” (Creswell, 2014, p. 4). First, it was hypothesized that the two independent variables would each demonstrate a

relationship with private elementary school enrollment. Second, quantitative research also examines “the relationship among variables” (Creswell, 2014, p. 4). Since the focus of this study was to show a relationship between variables, then a quantitative approach is appropriate. In addition, the strength of these relationships can also be determined through correlational analysis. Finally, quantitative studies offer generalizations of the data. In other words, results from the data analysis are meant to apply to the target population of this study. This increased validity and reliability make quantitative analysis preferable to a qualitative study.

Correlational design is an effective method to meet the purpose of the study. Adams and Lawrence (2015) pointed out how “correlational design goes beyond the description of a relationships and uses hypothesis testing process... to consider whether the relationship we find is significantly different from what we would expect by chance alone” (p. 225). This study offers two null hypotheses and alternate hypotheses; therefore, a desired method for testing those hypotheses and relationships is through a correlational design.

Two main types of data analysis were used. Pearson’s correlation coefficient was well suited to determine a correlational analysis. It “is used to determine the strength and direction of a linear relationship between two continuous variables” (Laerd Statistics, 2017, “Introduction,” para. 1). Along with that, linear regression analysis was also used to determine the direction and magnitude of the correlation. These analyses could be invaluable to school decision-makers. For example, it could forecast school enrollment based on the culture and climate of a school. Knowing the strength of the relationship through correlational analysis, school officials can better determine how to best allocate funds. In other words, school officials could determine how to achieve the most effective enrollment strategy with the fewest financial resources.

Qualitative research, in comparison, is useful for developing theories rather than testing them (Creswell, 2014). Qualitative studies are useful for “exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Creswell, 2014, p. 4). This study does not seek to accomplish any of those goals. Therefore, it makes sense to reject a qualitative design in favor of a quantitative approach.

Data were collected using an online survey hosted by Qualtrics. The online format allows for easy data collection and analysis using Statistical Package for the Social Sciences (SPSS) software. Likert-type and frequency scales were used. The types of questions for these scales make it easier for researchers to understand the value of their answers, and also make systematic data analysis possible. Measurements for each variable are described in detail in the sections on Operationalization of Variables, Instrumentation, and Data Analysis Procedures.

Likert-type and frequency scales have disadvantages when analyzing data. Dillman et al. (2014) wrote:

A common ordinal scale asks about levels of satisfaction... where each category represents a higher degree or level of satisfaction but the exact interval between categories is unknown. Someone who is “completely satisfied” is more satisfied than someone who is “very satisfied,” but it is not known how much more satisfied. (p. 112)

Nonetheless, frequency scales, if treated as true ordinal variables, can still be used. Adams and Lawrence (2015) clarified that Likert-type scales are interval scales where the difference between values is equally the same. In other words, in a 1–5 scale with 1 being strongly disagree and 5 being strongly agree, the difference between a score of 2 and a score of 3 is the same as the difference between a score of 3 and a score of 4. “This quality allows us to perform mathematical operations and statistical analysis on the values from the interval scale”

(Adams & Lawrence, 2015, p. 82). A frequency scale used in the survey acts in the same way as a Likert-type scale. Surveys were distributed to administrators of all private elementary schools in the state of California.

Target Population, Sampling Method, Power Analysis, and Related Procedures

The population for this study was all current administrators of private elementary schools in the State of California. Participants were school administrators or other representatives with administrative duties (such as a superintendent, head of school, or executive director) of a private (non-public or charter) elementary (K–8) school within California. Administrators at private high schools were not included in this study unless the school also operates a middle and/or elementary school. In this case, the population of this study comes only from middle and/or elementary schools. This exclusion of high schools is to ensure better reliability of the study. In addition, homeschools and online schools were also excluded. The survey instrument was designed to filter out these three categories of schools.

Approximately 2,500 administrators or other representatives of private elementary schools in the state of California were surveyed to provide information about their schools. California was chosen because it offers a large population size to survey and includes administrators representing a large variety of private schools. California is also the state where the researcher resides. Some identifying information about the participants (such gender, race, and age) was also collected for purposes of descriptive statistics.

Every year the CDE collects statistical information on private schools through the Private School Affidavit. All private schools in California are required to submit enrollment numbers through the affidavit every fall. Access to their database is free and publicly available online. According to the CDE, California has over 2,500 private elementary and middle schools.

Fincham (2008) recommends a 60% response rate for participants as a goal for a survey. However, a response rate of 15% was the target. According to a common confidence interval table (Adams & Lawrence, 2015, p. 562), 15% would have yielded a sufficient sample size of at least 333 with a confidence interval of 95% and a margin of error of 5% based on a sample of 2,500. The actual response rate was closer to 10%, yielding a sample size sufficient for a confidence interval of 95% and a margin of error of 10%.

Instrumentation

The use of a survey is advantageous for data analysis. Surveys allow for systematic collection of numeric data that can be exported to SPSS software for analysis. Online surveys allow participants to be anonymous, they are less time-intensive than manual surveys, and they allow multiple participants to complete the survey at the same time (Adams & Lawrence, 2015, p. 108). For a full examination of the survey instrument, see Appendix A.

A five-point Likert-type scale along with a frequency scale was used to gather information on the two independent variables. Numerical scales like these allow for systematic data analysis, allowing for either the acceptance of the null hypothesis, or the rejection of the null hypothesis in favor of the alternative hypothesis. See section on Data Collection for further explanation.

Research questions were assigned using two different scales, each with values ranging from one to five. The first scale is a Likert-type scale as follows: 1 – Strongly agree; 2 – Agree; 3 – Neither agree nor disagree; 4 – Disagree; 5 – Strongly disagree. The frequency scale is as follows: 1 – Never; 2 – Rarely; 3 – Sometimes; 4 – Often; 5 – Very Frequently. The use of two different scales is strategic. Dillman et al. (2014) wrote: “One of the fundamental writing tools that exist for creating survey questions is to shift questions from one format to another” (p. 113).

The varying scales were intended to keep the participants focused. If the same scale was used again and again, the participant could become bored and begin answering questions automatically, without putting much thought or effort into the responses. Levenson (2014) points out that varying the question format “breaks the monotony of the survey and decreases the chance that they will quickly run through the survey choosing responses that are all the same” (p. 35). Such a phenomenon could cause reduced reliability and validity of the instrument. Rather, varied questions are suggested “in order to improve measurement and ensure the usefulness of the final data” (Dillman et al, 2014, p. 114). Open-ended questions were not used to collect data because such questions would not be associated with a numeric indicator in this research.

Two other existing surveys were used to create the final survey instrument. First, the questions regarding the condition of physical facilities are modified slightly from a study conducted by Uline and Tschannen-Moran (2008). The modifications were made to avoid ambiguity and to ensure all the questions were worded in the positive. The positive wording allows for a calculation of a composite score that was used for data analysis. In addition, the questions were changed from a frequency scale (never, rarely, sometimes, often, frequently) to a five-point Likert-type scale. The change in scale was deemed more appropriate to fit the reworded questions.

Second, the section on school climate was taken from the School Culture Triage Survey (Wagner, 2006). This survey is made of 17 questions covering three domains: Professional Collaboration; Affiliative Collegiality; and Self-Determination/Efficacy. The same frequency scale from the original survey was used except that the ranking of “always or almost always” was changed to “very frequently” in order to create consistency among survey sections. Both sections yielded a single composite score that was used for data analysis.

Data for the dependent variable was collected through a similar five-point scale. The single enrollment question asked participants to rate their enrollment by percentage of change: declined by 15% or more, declined by less than 15% but at least 5%, changed by less than 5%, increased by less than 15% but at least 5%, increased by 15% or more.

Pilot Study

A pilot study was conducted to evaluate the survey instrument and determine validity and reliability. A pilot study serves the purpose of establishing content validity and to “improve questions, format, and scales” (Creswell, 2014, p. 161). Upon review of the pilot study by committee members, the pilot study was deemed sufficient to test data analysis methods, reliability, and validity of the study (Hertzog, 2008).

Using an online random number generator, 188 people were randomly selected from the population. From the 188 participants, only 11 responded. Four additional responses were solicited from personal contacts for a total of 15 responses. In addition, a second survey was sent out to the initial 11 respondents, asking for specific feedback on the survey instrument. The second survey looked at each section and asked two questions. First, “Is each term in this question clear to you?” If the respondent answered no, they were asked “What different term or changes would you make so that the question is more clear?”

After analyzing data and survey feedback, changes were made to the survey instrument. Feedback provided was sufficient to validate the survey instrument. Only one respondent mentioned clarifying a term. That clarification was addressed by expanding the section so that terminology was more prevalent and consistent. Other changes included eliminating unnecessary descriptive data questions, and narrowing the survey to address only two of the original six research questions.

Data Collection

An original survey instrument was designed for data collection procedures in this study, but borrowed from two existing surveys, Wagner (2006) and Uline and Tschannen-Moran (2008). Permission was granted from both authors to use their surveys (Appendix B and Appendix C). The survey was conducted online using Qualtrics. The survey instrument consisted of 17 questions with no open-ended question to collect data from participants. Two scales were primarily used to gather information, a Likert-type scale and a frequency rating scale. The Likert-type scale measures from 1–5 with one being “Strongly agree” and 5 being “Strongly disagree.” The frequency rating scale also measures from 1–5 with one being “Never” and five being “Very frequently.”

According to Adams and Lawrence (2015), the online format offers several benefits. First, it makes it easier for participants to respond to the survey. Second, it is less expensive than mailed surveys that require a self-addressed, stamped return envelope. Third, it is far less time consuming than phone interviews. Fourth, answers are anonymous because no face to face interaction between researcher and participants occurs. This anonymity reduces social desirability and acquiescence bias where participants may feel obligated to answer a question according to social norms and expectations (Adams & Lawrence, 2015, p. 108; Dillman et al., 2014, p. 100). Finally, multiple participants can complete a survey simultaneously, saving time for the researcher. Added benefits include the ability to import data into SPSS for data analysis.

The survey was administered online through e-mail for a three-week period. No incentive for participation was offered. One disadvantage of the online format is the reduced number of survey respondents that is possible from an online survey. A phone survey might

yield a better response rate, especially if made during operating hours. However, given the time commitment necessary to call nearly 2,500 schools, a short, online survey was the best option.

E-mails for every school in the study were provided by the CDE. Every year, private schools in California are required by law to submit a Private School Affidavit. This affidavit primarily asks for name and contact of the primary administrator, and enrollment numbers for every grade from Kindergarten through grade twelve. Data collected through the affidavit is available online to the public on the CDE webpage. This database provided email contacts that were imported into Qualtrics for distribution of the survey.

Operationalization of Variables

This study utilized three variables, one dependent variable and two independent variables. The dependent variable was measured as a change in enrollment over a five-year period as expressed through percentage of change. The first independent variable is a rating of physical condition of facilities. The second independent variable is a rating of the culture and climate of a school. These variables were drawn from experience and a careful review of existing literature. For expanded analysis of each variable, see Chapter 2: Literature Review. Each variable had its own unique construct and therefore needed to be defined closely. Some of the construct attributes for each variable were subjective and based on the opinion of the school administrator or school representative filling out the survey. For specific wording for each identifier, see the survey instrument in Appendix A.

IV₁. Independent variable measuring physical facilities. It was hypothesized that a relationship between the condition of a school's physical facilities and enrollment exists. Physical facilities can be defined as any physical space used by a school. This includes, but is not limited to, classrooms, bathrooms, offices, playground, landscaping, parking lot, library,

gymnasium, and lab facilities, equipment, and furniture. It is difficult to measure the condition of a building. Other studies use age of a facility (Lavy & Nixon, 2017) as an identifier, but some researchers argue against the validity of such a method (Picus et al., 2005). Some studies use building analysis performed by an outside organization (Picus et al., 2005). Because the researcher did not have the resources to personally evaluate each facility, and since age of a building is disputed as an identifier, the researcher chose to use an existing survey from Uline and Tschannen-Moran (2008). Seven identifiers were used to measure physical facilities. The first identifier is based on facilities as a way to support learning. The second identifier is an evaluation of a building's comfort. The third identifier is an evaluation of the building's appearance. The fourth identifier is based on adequate space for teaching and learning. The fifth identifier is an evaluation of classroom equipment and furniture. The sixth identifier is an evaluation of frequency of maintenance. The seventh identifier is an evaluation of the cleanliness of the building.

IV₂. Independent variable measuring culture and climate. It was hypothesized that a relationship between climate and culture and enrollment exists. Climate and culture of a school is defined by the general atmosphere of a school and attitude of teachers, students, and parents. Wagner (2006) suggested three domains on which to focus: professional collaboration, affiliative and collegial relationships, and efficacy or self-determination. These domains also serve as the three identifiers. Seventeen questions reflecting the three domains were taken directly from Wagner and used in the survey instrument.

DV. Dependent variable measuring enrollment. Enrollment is defined as the number of students that attend a particular school. Since each school is different, so is the total capacity of a school. It is also difficult to measure whether or not enrollment is healthy, sustainable, or

declining because what is sustainable for one school is not necessarily sustainable for another. In addition, multiple sources of income other than tuition can help a school be financially sound even if enrollment declines. The strategy of this study was to look at enrollment trends, not necessarily financial sustainability. The identifier looks at enrollment changes over the last five years, and data was collected through a single question on the survey instrument.

Data Analysis Procedures

Data were collected through the use of an online survey hosted by Qualtrics. The survey responses were automatically stored in a secure cloud-based database that was available only to the researcher. Once the survey was completed, the data was checked for errors and inputted into SPSS software for data analysis. Descriptive statistics (means, standard deviations, and medians) were calculated to determine if data were relevant or not, as well as if data were lost during the collection and transfer process.

Two main types of data analysis were appropriate for this study. The first type of analysis was Pearson's correlation coefficient, which set up a correlational relationship between the dependent variable and the independent variables. Adams and Lawrence (2015) stated, "The Pearson product-moment correlation coefficient, commonly referred to as Pearson's r , is the statistical test used to determine whether a linear relationship exists between two variables" (p. 233). Pearson's r is able to measure both the direction of the relationship (positive or negative) as well as the strength. For example, it was hypothesized that a positive correlation between enrollment and culture of a school existed. A correlation would mean that as one increases, so does the other. A strong relationship would mean that the enrollment and school culture follow each other very closely with little variation. However, correlation does not show cause and

effect. Does a positive school culture cause enrollment to increase, or does increased enrollment cause the school culture to improve? This is why a linear regression was also used.

This second type of analysis, linear regression analysis, looked at a cause and effect relationship between the dependent and independent variables. Once correlation was established, linear regression analysis was used to “understand the direction and magnitude of any relationship” (Laerd Statistics, 2015, “Introduction,” para. 1). Adams and Lawrence (2015) stated “if we find a significant relationship using Pearson’s r , then we can compute a regression equation that allows us to predict any Y from a given X ” (p. 248). In other words, linear regression analysis looks at a predictive relationship between the dependent and independent variables and acts as a natural companion to correlational analysis. It “assesses the linear relationship between two continuous variables to predict the value of a dependent variable based on the value of an independent variable” (Laerd Statistics, 2015, “Introduction,” para. 1). For example, this type of analysis would help us better understand the relation between enrollment and school culture. Knowing the cause and effect relationship may help school stakeholders make better decisions on how to use resources, and where to focus improvement efforts.

Exploration of the results of the data analysis indicated which relationships exist, if any, between the dependent variable and the independent variables as listed below:

- School enrollment as measured by percentage of students gained or lost during a five-year period.
- Private elementary school enrollment and the independent variable of condition of facilities as measured through the rating of physical conditions of school facilities in California over a five-year period.

- Private elementary school enrollment and the independent variable of school culture as measured by the rating of school culture in California over a five-year period.

Limitations and Delimitations of the Research Design

The most significant limitation is the personal interpretation of the survey instrument by the individuals participating in the study. This means that each participant may have answered questions differently based on personal definitions, understandings, and bias. For example, when asked to evaluate if a building is pleasing in appearance, one person's understanding was likely to be different than another person's understanding of the same concept. The use of a Likert-type and frequency scales asks for consistent responses and thus helps reduce this limitation. Open-ended questions, in contrast, would make it difficult for a researcher to code and compare in a quantitative study.

Another limitation is the knowledge of the participant. Enrollment numbers might be handled by a superintendent, but the survey could be filled out by a principal who deals primarily with discipline. No way to control for this exists, but it is hoped that the problem was not widespread enough to skew the results. The inability to control who is participating in the survey is also a limitation. Although it is designed for administrators, that does not necessarily mean that an administrator will be the one participating. All contacts are supplied by the state of California Department of Education and cannot be reasonably verified. This is in and of itself also another limitation, so it is likely that a small percentage of the contacts were not valid.

A final limitation is the honesty or bias of the participants. Although it was not expected that participants were purposefully dishonest, responses can have reflected bias. The independent variable regarding culture and climate of the school is one example of where this

might occur. Participants may be reluctant to acknowledge that their school has low teacher morale, for example.

One particular delimitation is the choice to use schools only in California. Although this scope makes sense in context of the study and researcher, it does not necessarily mean that results will be applicable to other schools in other states. However, California does have its advantages. The large population, for instance, offers a significant sample size. California also offers a mix of rural and urban areas with mixed political, economic, and ethnic populations. It is hoped that the mix of schools strengthened the validity of the study by allowing for greater generalization of the results.

A second delimitation is the inclusion of K–8 private elementary schools. High schools and preschools were not considered. Homeschools and online schools were also not included. Finally, the study is delimited to administrators of K–8 private schools in the state of California. Other school officials such as principals or admissions directors are also considered. Non-administrative personnel such as secretaries or teachers were not considered.

Internal and External Validity

Validity is defined simply as “accuracy of findings or measures” (Adams & Lawrence, 2015, p. 600). Two types of validity exist, internal and external. Internal validity is when a dependent and independent variable are compared to test if changes in the dependent variable are due to the independent variable or some outside forces. External validity is the ability to generalize the findings to a greater population. Creswell (2014) defined threats to internal validity as “experimental procedures, treatments, or experiences of the participants that threaten the researcher’s ability to draw correct inferences from the data about the population in an experiment” (p. 174). Some of these threats can occur when a study is done over extended

periods of time, when participants change their answers, or when a pretest knowledge influences scores on a post test. This study, as a simple, one-time survey, does not succumb to these types of internal threats. By performing the survey at a single time rather than over a period, data can be analyzed with a reasonable assurance of internal validity.

External validity was probably a greater threat to this study. Creswell (2014) stated “external validity threats arise when experimenters draw incorrect inferences from the sample data to other persons, other settings, and past or future situations” (p. 176). For this study, a wide scope of private schools from the state of California was used as a purposeful sample. A purposeful sample helps to ensure that participants fit the required characteristics to participate in the study, in this case, administrators of private K–8 schools. When all the participants are administrators, it increases the validity and reliability of the results. If a purposeful sample was not used, one could not guarantee that the participant had access to the necessary data, and therefore validity and reliability would be decreased.

Expected Findings

The researcher expected a direct correlation between private elementary school enrollment and each of the independent variables would occur. In order to insure no researcher bias occurred, all expected findings are listed as rejecting the null hypothesis in favor of the alternative hypothesis.

The first independent variable, condition of facilities, was thought to likely demonstrate a correlation to enrollment. Schools with newer and well-maintained facilities would likely demonstrate steady enrollment or enrollment growth. In contrast, schools with poorly maintained facilities would likely demonstrate declining enrollment. Existing literature suggests that a link exists between the conditions of facilities and student achievement (Greenwald et al.,

1996) and school culture (Uline & Tschannen-Moran, 2008). Discovering a link between the condition of facilities and school enrollment may expand the understanding of the impact that facilities have on education.

It was expected that culture and climate of a school, the second independent variable, would also show a correlation to school enrollment. Schools with a positive culture where parents feel safe and satisfied would likely demonstrate growth, whereas schools with low morale would show decline in enrollment. Multiple studies show that school atmosphere and safety are considerations for parents when choosing a school (Bulman, 2004; Goldkind & Farmer, 2013; Goldring & Phillips, 2008; Mainda, 2002; Parker et al., 2007; Thompson, 2004). None of these studies, however, looked at the negative impact of culture on a school. This study anticipated how a negative culture may lead to decline in enrollment.

Ethical Issues

Few ethical concerns exist with regards to this study. The Belmont Report (National Institutes of Health, 1979), which sets the framework for ethical considerations in research, outlines three principals for consideration: respect of persons, beneficence, and justice. However, these considerations are primarily a concern in behavioral or biomedical research. This study, in contrast, simply collects data for analysis and poses minimal ethical concerns while maximizing benefit.

A general Consent for Anonymous Survey description began the survey. Concordia University–Portland provided this description, and the researcher modified it slightly (Appendix D). Participants gave their consent by continuing with the study. Because of the nature of the survey, no inherent risk to the participants was present. Participants supplied basic identifying information about themselves such as age, gender, and ethnicity. All data were kept securely

online through Qualtrics and not accessible to the general public. Therefore, it is unlikely that any identifying information could be used to trace back to the participants. The only identifying information that is available, such as name and email addresses, is already publicly available from the CDE.

Researcher bias is not likely as it is more prevalent qualitative studies (Adams & Lawrence, 2015). Also, an open and forthright discussion of the data will be included in chapters 4 and 5. Interaction with participants was minimal. Initial email contact was only used to introduce the researcher and nature of the study rather than for personal interaction. Through the course of the study, several participants contacted the researcher using the given email address. The researcher responded to each inquiry, answering any pertinent questions. Most inquiries were to wish the researcher good luck, or to ask for a copy of the results when the study was finished. Other emails informed the research that they were ineligible to participate (e.g. a homeschool or high school). Of course, the survey instrument is designed to filter out these categories, but participants would not know that unless they began the survey. One inquiry was concerned about the use of identifying information. The researcher answered the question and informed the participant that a click to consent page begins the study and outlines all the ethical considerations. In addition, the researcher used a Concordia University–Portland email address for this study in order to minimize personal interaction with the participants and prevent future contact outside of the study.

Summary

Enrollment is a fundamental component for private schools because it generates the primary source of funding. Declining enrollment means loss of income, cutbacks, and closures. Increased enrollment, on the other hand, means growth. It is essential, then, for decision-makers

at private elementary schools to understand the factors that contribute to growth or decline of enrollment. This study sought to investigate factors that contribute to private elementary school enrollment.

This study sought to answer the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?” A quantitative study was used to investigate this question. Both correlative and regression analysis were used to analyze the data to determine if a relationship between an independent variable and dependent variable of school enrollment existed. The dependent variable is private, elementary school enrollment, and the independent variables are: condition of the facilities and culture and climate of a school.

Administrators of all K–8 private schools in California received an online survey. Using a whole state as a sample is in keeping with other similar studies (Lopez & de Cos, 2004; Picus et al., 2005). Participants answered questions about each of the variables using a five-point Likert-type scale or frequency scale. The online survey allowed for easy distribution of the survey instrument and collection of data, as well as the ability to import and analyze data using SPSS. It was expected that each of the independent variables demonstrated a correlation to the dependent variable of school enrollment. Detailed analysis of the data will be a major focal point of chapter 4.

Chapter 4: Data Analysis and Results

Introduction

In order to provide better information to private schools about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate.

As discussed earlier, two research questions addressed the purpose of this research:

- What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?
- What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

Administrators from approximately 2,500 private K–8 schools in California were asked to take part in an online survey, which provided the data to be analyzed. A survey was created measuring the dependent variable as the percentage of change of enrollment over a five-year period. A ranking of the two independent variables of physical facilities and school culture was also included in the survey. The survey portions for physical facilities and school culture were borrowed from Uline and Tschannen-Moran (2008) and Wagner (2006) respectively. Data were analyzed using SPSS statistical software. Two basic types of data analysis were appropriate for this study: correlation analysis using Pearson's r and linear regression. Both were performed to

measure the type and strength of relationships between the dependent variable and the two independent variables.

This chapter explores the results of the study. First is a detailed description of the sample. Then, a summary of the results is presented. Finally, a detailed analysis of the data is presented along with appropriate tables, charts, and graphs. A discussion of the results will be included in Chapter 5.

Description of the Sample

To answer the research question, the researcher chose to survey administrators of all the private elementary schools in the state of California. Names and contact information were taken from the 2017–2018 California Private School Affidavit and provided by the CDE, a publically available database. The affidavit for the 2017–2018 school year contains 3,106 schools. High schools were filtered out by looking at the lowest grade taught. Any school listing ninth grade or higher was eliminated from the study. This left 2,861 schools. Contacts were imported into Qualtrics for distribution, and surveys were sent out. Of the 2,861 contacts, nearly 200 were bounced back or rejected. There were also 32 duplicate e-mails. This brought the actual population size to 2,531.

Based on an estimated population of 2,500, it was calculated that the study needed 334 surveys in order to maintain an error level of 5% and a confidence interval of 95%. The survey lasted three weeks and yielded 301 completed and partially completed surveys. This yielded a response rate of 11.9%. In contrast, the original expectancy was 15% response rate, a difference of almost 4%. Of the 301 submitted surveys, only 245 were deemed usable. This number was sufficient to maintain an error level of 10% and a confidence interval of 95%.

The number of usable surveys was reduced to the actual sample size of 245 for several reasons. Nearly 50 of the submitted surveys were identified as being a homeschool or online school. Two questions on the survey identified these types of schools. Participants were first asked “are you a homeschool?” The next question asks, “do you offer online classes?” If anyone answered yes to either of those questions, the survey automatically ended. Of the remaining surveys, two were identified as high schools and were subsequently deleted. Additionally, a few surveys were left completely blank, meaning the participant started the survey, but did not answer any of the questions. Any surveys with partially missing data were completed by substituting the mean value for the individual question.

Each of the variables were evaluated on a five-point scale. The mean average of responses on enrollment, the dependent variable was 2.99 and the Standard Deviation was 1.47. The mean average of responses on school facilities was 4.24 and the standard deviation was 0.76. The mean average of responses on culture and climate was 4.18 and the standard deviation was 0.53.

Tables 1–4 summarize the results of the first four questions of the survey and describe the individuals that took part according to gender, ethnicity, age, and title or job description. Table 1 shows that over 77% of the participants were Caucasian while Hispanic or Latino made up the second largest group at only 7.3%. Other nationalities account for the remaining 15.6% of participants. A frequency chart is expressed in Figure 1.

Table 1

Question 1: Please Identify Your Ethnic Category

| Answer Options | Frequency | Percentage |
|---|-----------|------------|
| American Indian/Alaska Native | 2 | 0.8% |
| Asian | 8 | 3.3% |
| Black or African American | 5 | 2.0% |
| Hispanic or Latino | 18 | 7.3% |
| More than one race | 11 | 4.5% |
| Native Hawaiian or other Pacific Islander | 1 | 0.4% |
| White | 189 | 77.1% |
| Prefer not to answer | 11 | 4.5% |
| Totals | 245 | 100.0% |

* Values in table does not add to 100% due to rounding.

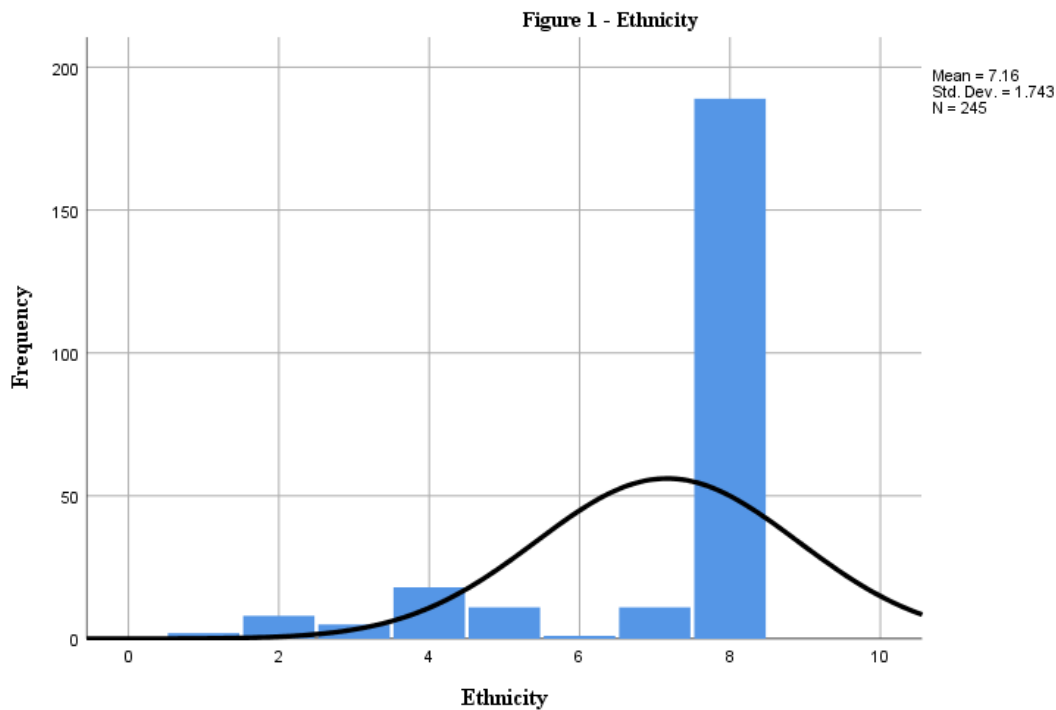


Figure 1. Frequency chart showing ethnic category distribution of participants.

Table 2 shows the distribution of ages among participants. The highest concentration was in the 56–65 year-old group, at 33.9% of the participants identifying with that range. The next highest concentration comes in the 46–55 year-old range at 29%. Third highest is the 36–45 year-old range at 18%. These three categories account for nearly 81% of the sample. Figure 2 is a frequency graph of the age distribution.

Table 2

Question 2: Please Identify Your age Group

| Answer Options | Frequency | Percentage |
|----------------------|-----------|------------|
| 18–25 years old | 1 | 0.4% |
| 26–35 years old | 10 | 4.1% |
| 36–45 years old | 44 | 17.9% |
| 46–55 years old | 71 | 29.0% |
| 56–65 years old | 83 | 33.9% |
| 66+ | 31 | 12.7% |
| Prefer not to answer | 5 | 2.0% |
| Totals | 245 | 100.0% |

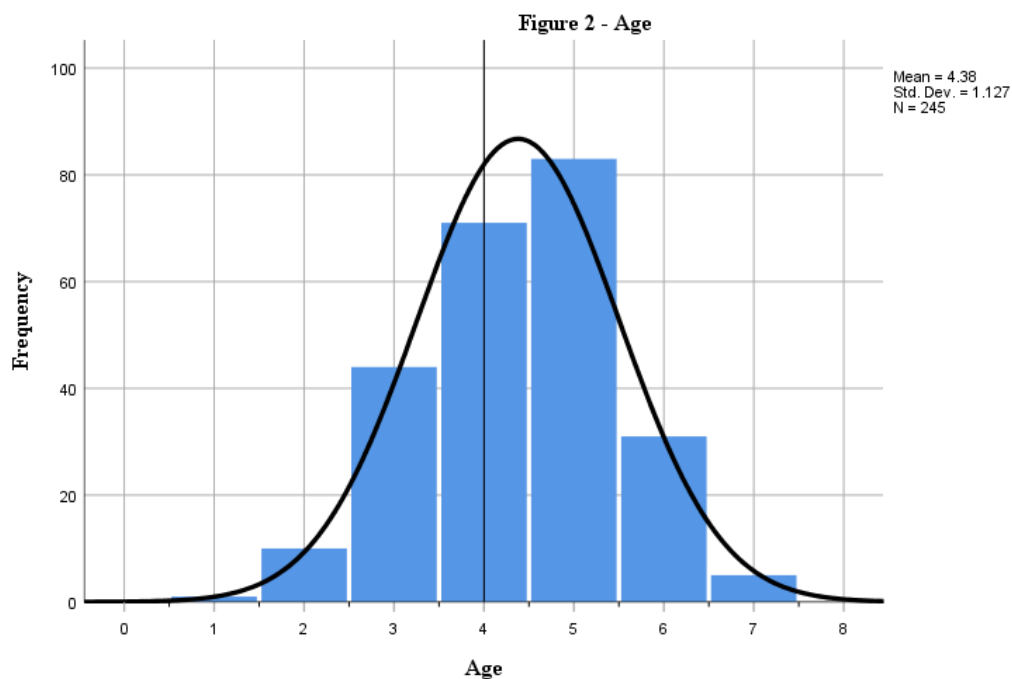


Figure 2. Frequency chart showing age group distribution of participants.

Table 3 shows the distribution of gender among participants. Overwhelmingly, participants identified as female with 69.8% of the total. Males accounted for 28.2% and the remaining 2% declined to answer. Figure 3 is a frequency chart of gender distribution.

Table 3

Question 3: Please Identify Your Gender

| Answer Options | Frequency | Percentage |
|----------------------|-----------|------------|
| Female | 171 | 69.8% |
| Male | 69 | 28.2% |
| Prefer not to answer | 5 | 2.0% |
| Totals: | 245 | 100.0% |

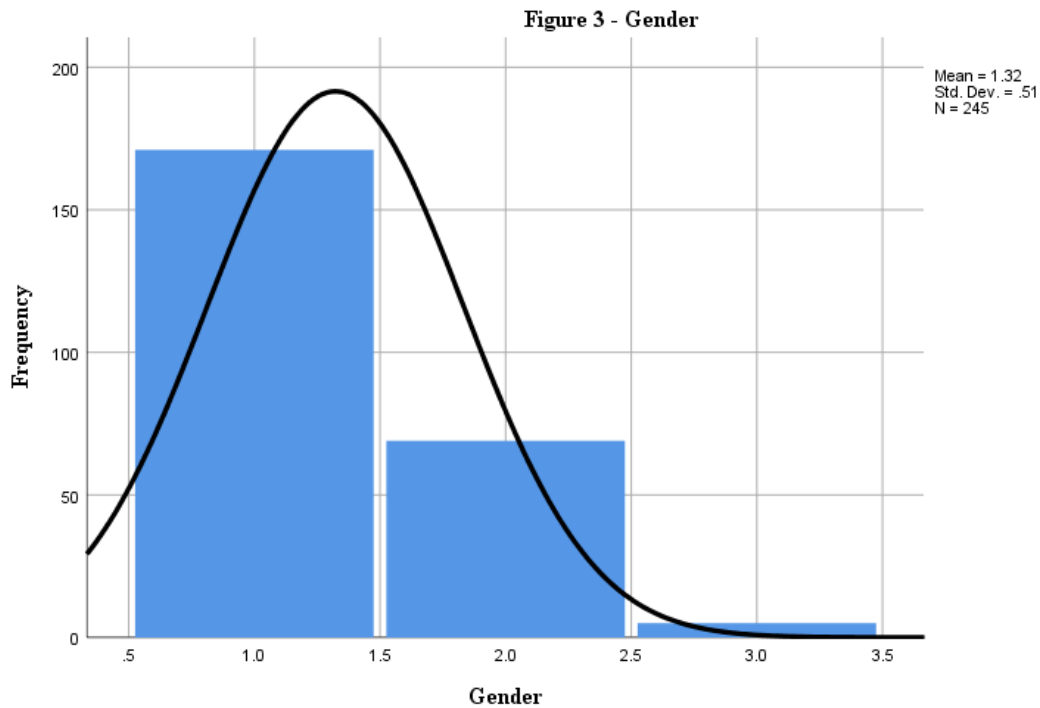


Figure 3. Frequency chart showing gender distribution of participants.

Table 4 demonstrates the varying degree of job titles among participants. The most common response was “principal” accounting for 40.4% of the participants. Next was

“administrator” with 19.2%, then “head of school” with 18.8%. These three categories account for more than 75% of the participants. Figure 4 shows a distribution of job titles.

Table 4

Question 4: What is Your job Title?

| Answer Options | Frequency | Percentage |
|----------------------|-----------|------------|
| Administrator | 47 | 19.2% |
| Director | 20 | 8.2% |
| Executive Director | 14 | 5.7% |
| Head of School | 46 | 18.8% |
| Headmaster | 3 | 1.2% |
| Other | 7 | 2.9% |
| President | 3 | 1.2% |
| Principal | 99 | 40.4% |
| Superintendent | 5 | 2.0% |
| Prefer not to answer | 1 | 0.4% |
| Totals | 245 | 100.0% |

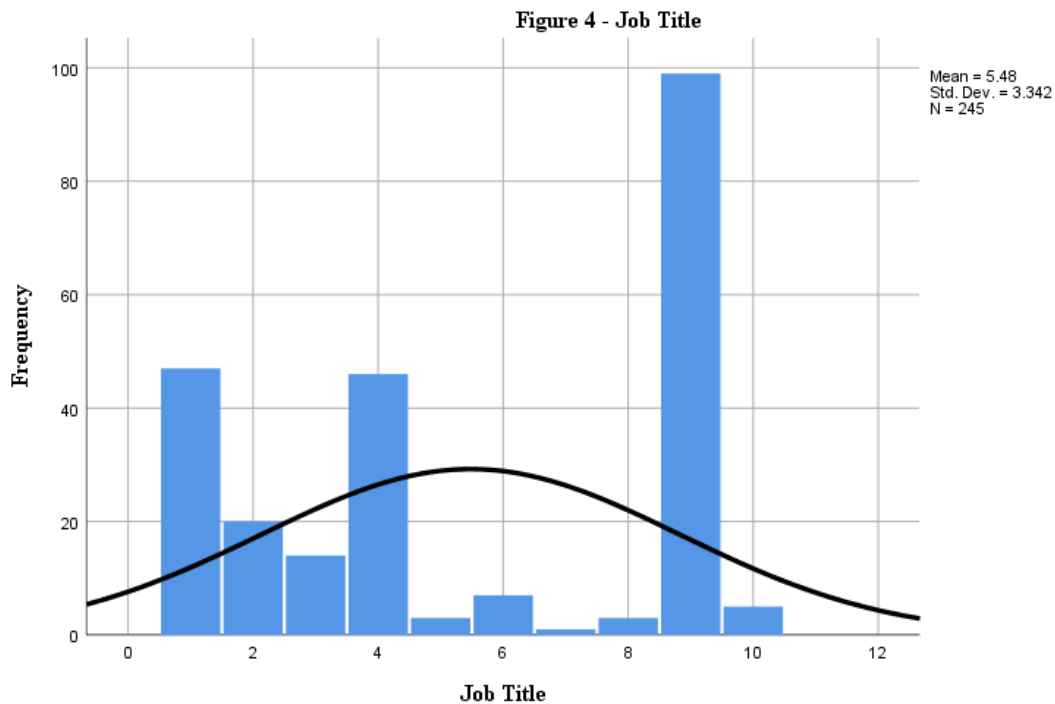


Figure 4. Frequency chart showing job title distribution of participants.

Summary of the Results

Two hypotheses were tested using correlational analysis and linear regression with SPSS statistical software. Pearson's r was used to examine the direction and strength of the relationship between each of the independent variables (1) physical facilities and (2) school culture and the dependent variable of school enrollment. Linear regression was also used to examine the strength of the relationship between the dependent variable and independent variable. Regression analysis (R^2) calculated the "proportion of variance in the dependent variable that can be explained by the independent variable" (Laerd Statistics, 2015, "Determining How Well the Model Fits," para. 6). R^2 , otherwise known as the coefficient of determination is the "proportion of variability accounted for by knowing the relationship (correlation) between two variables" (Adams & Lawrence, 2015, p. 585). R^2 values range between zero and one, with zero indicating no linear relationship and one indicating a perfect linear relationship. The coefficient of determination shows the *degree* of the relationship between the dependent and independent variable.

Data used to evaluate the null and alternative hypotheses came directly from the survey instrument. Enrollment data is expressed as an integer from 1–5. The question asks participants to rate their enrollment by percentage of change: declined by 15% or more, declined by less than 15% but at least 5%, changed by less than 5%, increased by less than 15% but at least 5%, increased by 15% or more. A value of 1 stands for the first option, decline of enrollment by 15% or more whereas a value of 5 stands for increase of enrollment by the same percentage. Data for the independent variables are also expressed as values ranging from 1–5. These values, however, are expressed as decimals rather than whole integers. These composite values were calculated by finding the mean value of each item in a question. For example, the question of

physical facilities has seven items. The participants responses are added together and divided by the total number of items, in this case seven, and a composite score is created. The composite scores act as the data for analysis. In each case, the higher the value, the more positive the response. In contrast, a lower score is a negative response.

The internal consistency, or reliability, was calculated using Cronbach's reliability coefficient. The first independent variable, physical facilities, demonstrated a relatively high coefficient (0.89). The second independent variable, culture and climate, demonstrated a high coefficient (0.92). Cronbach's reliability coefficient, alpha (α), ranges from 0 to 1 sale. When the scale of items in the survey instrument are entirely independent from one another, then $\alpha = 0$; and, when all 1 of the scale of items in the survey instrument have high co-variances, then $\alpha = 1$. The higher the α coefficient, the more the items in the survey instrument share co-variance and measure the same underlying concept. Results are shown in Table 5.

Table 5

Internal Consistency Results

| Factor | Alpha reliability coefficient (α), |
|----------------------------|---|
| Physical Facilities | 0.89 |
| School Culture and Climate | 0.91 |

Research Question 1

What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?

The purpose of this question was to examine whether a statistically significant relationship exists between the dependent variable of enrollment and the independent variable of physical facilities. The null and alternative hypothesis 1 addressed the relationship between enrollment and physical facilities. The Pearson correlation resulted in a statistically insignificant

relationship between the two variables ($r(1, 245) = -1.00, p > 0.05$). Linear regression results indicated an R^2 value of 0.010, indicating no significant relationship between the criterion and predictor variables.

Research Question 2

What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

The purpose of this question was to examine whether a statistically meaningful relationship exists between the dependent variable of enrollment and the independent variable of school culture. The null and alternative hypothesis 2 addressed the relationship between enrollment and school culture. The Pearson correlation resulted in a statistically significant relationship between the two variables ($r(2, 245) = 0.175, p < 0.05$). Linear regression results indicated an R^2 value of 0.031, indicating no significant relationship between the criterion and predictor variables.

Detailed Analysis: Research Question 1

Research question 1: What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?

Hypothesis 1

- H_{01} : No statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.
- H_{a1} : A statistically significant relationship between the rating of facilities and change in private elementary school enrollment exists.

In order to assess hypothesis 1, the researcher conducted a Pearson correlation analysis to examine the first research question. The results reveal that no significant relationship between the independent variable of physical facilities and the dependent variable of enrollment exists ($r(1, 245) = -1.00, p > 0.05$). Because the correlation coefficient was so low, clearly no relationship between enrollment and physical facilities exists. The results are summarized in table 6.

Table 6

Pearson's Correlation for Enrollment and Facilities

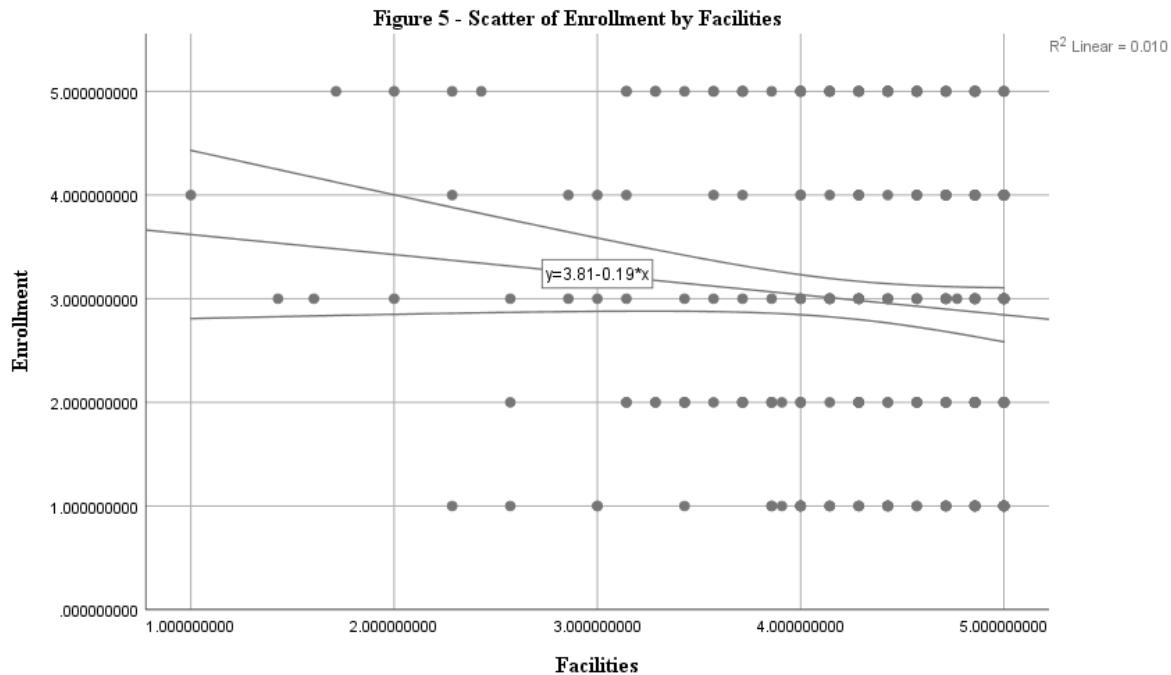
| | Enrollment | Facilities |
|---------------------|------------|------------|
| Pearson Correlation | 1 | -0.100 |
| Sig. (2-tailed) | | .199 |
| <i>N</i> | 245 | 245 |

A linear regression was conducted and validated the results of the Pearson correlation. Linear regression was used to examine how much of a variance in enrollment could be explained by physical facilities. The results of the regression were not significant ($F(1, 245) = 2.466, p > 0.05, R^2 = 0.010$) and the independent variable accounted for only 1% variance of the dependent variable (Table 7). A scatter plot for facilities presents these results (Figure 5). The scatter plot shows the distribution of responses based on enrollment (the dependent variable). The scatter plot includes the line of best fit as well as the corresponding confidence interval. As you can see from the graph, the line of best fit is mostly horizontal, indicating no correlation between condition of facilities (X axis) and school enrollment (Y axis).

Table 7

Regression Analysis for Enrollment and Facilities

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.100 | 0.010 | 0.006 | 1.461104169 |

*Figure 5.* Scatterplot of enrollment by facilities.**Detailed Analysis: Research Question 2**

Research question 2: What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

Hypothesis 2

- H_{02} : No statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.
- H_{a2} : A statistically significant relationship between the rating of culture of a school and change in private elementary school enrollment exists.

To assess hypothesis 2, the researcher conducted a Pearson correlation analysis to examine the second research question. The results reveal that a mild statistically significant relationship between the independent variable of school culture and the dependent variable of enrollment exists ($r(2, 245) = 0.175, p < 0.05$). The correlation coefficient is significant enough to call for a relationship between enrollment and school culture. Table 8 displays a summary of the results.

Table 8

Pearson's Correlation for Enrollment and Culture and Climate

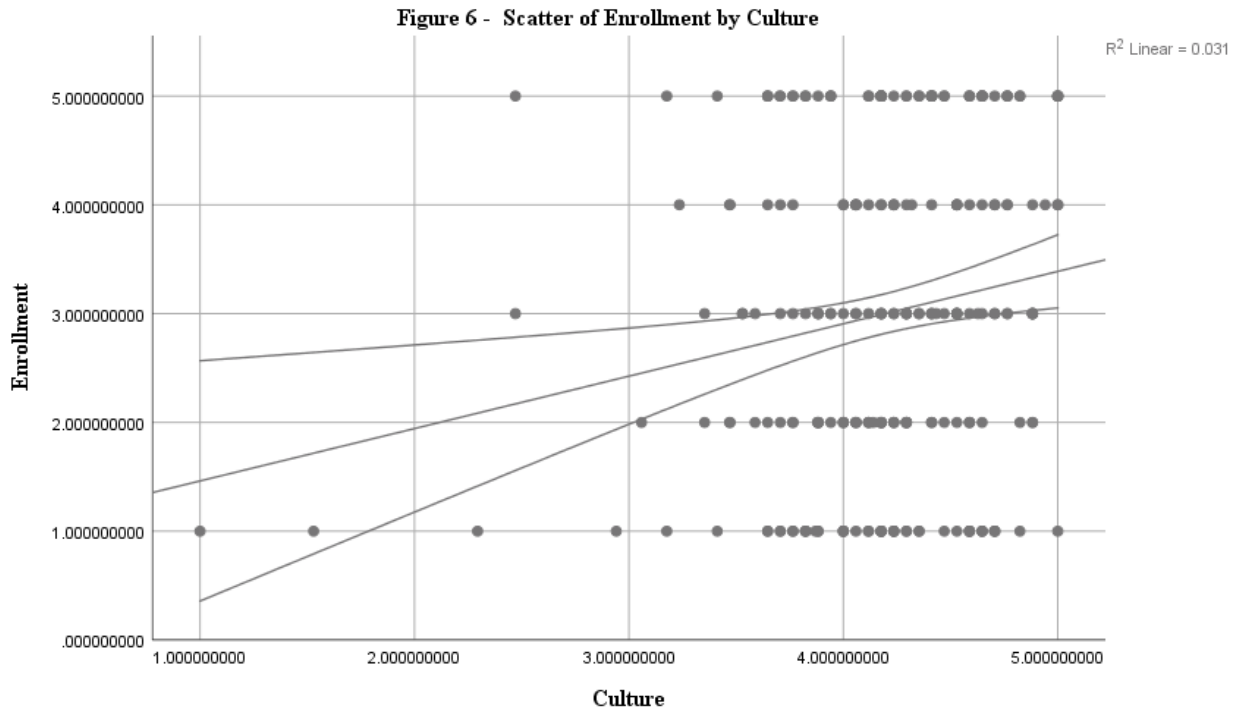
| | Enrollment | Culture and Climate |
|---------------------|------------|---------------------|
| Pearson Correlation | 1 | 0.175 |
| Sig. (2-tailed) | | 0.006 |
| <i>N</i> | 245 | 245 |

Linear regression was used to examine how much of a variance in enrollment could be explained by school culture and climate. The results of the regression were not significant ($F(2, 245) = 7.649, p > 0.05, R^2 = 0.031$) and the independent variable accounted for only 3.1% variance of the dependent variable (Table 9). A scatter plot for school culture and climate is presents these results (Figure 6). The scatter plot shows the distribution of responses based on enrollment (the dependent variable). The scatter plot includes the line of best fit as well as the corresponding confidence interval. As you can see from the graph, the line of best fit appears along a positive slope, indicating a mild correlation between climate and culture (X axis) and school enrollment (Y axis).

Table 9

Regression Analysis for Enrollment and Climate and Culture

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1 | 0.175 | 0.031 | 0.027 | 1.445860219 |

*Figure 6.* Scatterplot of enrollment by culture and climate.

Summary

This study answers the question: “Does the condition of physical facilities and/or school culture demonstrate a significant correlation to private elementary school enrollment?” A study was conducted of private elementary school administrators in the state of California.

Approximately 2,500 emails went distributed using Qualtrics. The researcher received 301 responses, which was reduced to 245 after the data was cleaned. The study examined the

relationships between the dependent variable of private elementary school enrollment and the two independent variables, physical facilities and school culture and climate.

The researcher performed a correlational analysis using Pearson's r as well as linear regression to determine the strength of the relationships. After careful review of the data, the researcher found no statistically significant relationship between enrollment and physical facilities. However, a mild correlation was found between enrollment and school culture.

Chapter 5 will discuss the meaning and application of these results. These results will be interpreted in light of the literature review. Limitations of the study will be examined, and implications for practice, policy, and theory will also be discussed. Finally, the chapter will conclude with exploration and recommendations for future research.

Chapter 5: Discussion and Conclusion

Introduction

Private schools offer a unique service to the community. Similar to any other service, private schools are also a business, deriving most of their funding through tuition dollars. Private schools, then, must spend considerable time and resources on maintaining enrollment in order to be sustainable. Therefore, it is imperative for schools to understand the factors that contribute to private school enrollment. Through a careful review of the literature, two key factors were identified as likely to contribute to private, elementary school enrollment: physical conditions of the facilities and culture and climate of a school. In order to provide private schools better information about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate.

To answer these research questions, the researcher conducted a quantitative study to examine the relationship between the dependent variable of enrollment and the independent variables of conditions of facilities and school culture. The study surveyed 245 private, elementary school administrators in the state of California. Using the online distribution program Qualtrics, the survey collected data from participants on each of the three variables. The data were imported into SPSS for analysis using correlational analysis and linear regression. After careful review of the data, the researcher found no statistically significant relationship between enrollment and physical facilities, $F(1, 245) = 2.466, p > 0.05$. However, a mild correlation was found between enrollment and school culture, $F(2, 245) = 7.649, p > 0.05$.

This chapter will discuss the results of this study in light of current research, and how the study contributes to the growing body of knowledge. First, results will be summarized, then the theoretical and practical implications of the research will be discussed. Next, the results will be compared to existing literature. Third, the proposed and actual limitations of the study will be analyzed and discussed. Finally, the chapter concludes with a discussion of implications of the results as well as recommendations for future research.

Summary of the Results

In order to provide better information to private schools about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate.

Two research questions addressed the purpose of this research:

- What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?
- What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

Research Question 1

What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?

The purpose of this question was to examine whether a statistically significant relationship exists between the dependent variable of enrollment and the independent variable of physical facilities. The null and alternative hypothesis 1 addressed the relationship between enrollment and physical facilities. The Pearson correlation resulted in a statistically insignificant relationship between the two variables ($r(245) = -1.00, p > 0.05$). Linear regression results indicated an R^2 value of 0.010, indicating no significant relationship between the criterion and predictor variables.

Research Question 2

What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

The purpose of this question was to examine whether a statistically significant relationship exists between the dependent variable of enrollment and the independent variable of school culture. The null and alternative hypothesis 2 addressed the relationship between enrollment and school culture. The Pearson correlation resulted in a mild statistically significant relationship between the two variables ($r(245) = 0.175, p < 0.05$). Linear regression results indicated an R^2 value of 0.031, indicating no significant relationship between the criterion and predictor variables.

Discussion of the Results

This research study was conducted in order to examine the relationship between private elementary school enrollment and conditions of facilities and school culture. Results of the data analysis to address the first research question demonstrated no statistically significant relationship between private school enrollment and the conditions of facilities. Based on these results, the researcher accepted the first null hypothesis (H_0I) and rejected the first alternative

hypothesis (H_{a1}). However, data analysis of the second research question demonstrated a statistically significant relationship between private school enrollment and school culture. Based on these results, the researcher rejected the second null hypothesis (H_{02}) in favor of the second alternative hypothesis (H_{a2}).

Many reasons could explain the unexpected results of the first research question. One reason for the discrepancy between results and expected outcomes could be participant bias. In this scenario, administrators would rate their school facilities higher than what an unbiased participant would. Bias has always been a limitation of the study, but may not likely be a factor considering the results of research question 2. If bias was present in one evaluation, it stands to reason that it would also be present in another.

Another reason for the difference between expected outcomes and actual results could be the survey instrument used. The instrument used was taken from the work of Uline and Tschannen-Moran (2008). Although the use of an existing survey increases the validity of the results, the instrument itself is by no means an exhaustive measure of evaluation. For example, age of the facility was not included in the survey. Since age does not necessarily translate to quality of condition and was not part of the research question, age was left out of the survey. The use of the facilities could also be a factor. A school with a drama program may garner increased enrollment even though the stage and sound equipment is in less than ideal condition.

A final reason for the difference between expected outcomes and actual results could be the existence of other, unknown factors. For example, competition between schools could be a consideration. Parents might look at the facilities of a school only if significant competition exists. For schools with little competition, the condition of facilities might not be a factor. Other possible factors are discussed at the end of this chapter.

It was expected that culture and climate of a school, the second independent variable, would also show a correlation with school enrollment. Schools with a positive culture where parents feel safe and satisfied were expected to demonstrate growth, whereas schools with low morale would show decline in enrollment. Careful analysis of the data supports these theories. This could have significant impact on private schools. Administrators and school leaders may wish to invest in creating a more positive environment knowing that it could translate directly to increased enrollment. There are many ways of creating a better school environment that does not cost money and will not drain school resources. For example, Hallowell (2011), in the book *Shine: Using Brain Science to get the Best from Your People*, suggests “a positively connected work environment in which people feel understood and safe to be authentic is critical for employees to do their best” (p. 35).

Limitations

Chapter 3 identified four limitations prior to the beginning of the study:

- Personal interpretation of the survey instrument by the individuals participating in the study.
- Participants’ knowledge and their access to the required statistical information.
- The inability to control who is participating in the survey.
- Honesty or bias of the participants.

The possibility of bias may have played a part in the results for the first research question. Participants’ knowledge may have also played a part. For example, during the duration of the study, the researcher received an email from one of the participants saying that they had not been at the school long enough to answer the questions accurately. Although this participant was mindful of the limitation, this does not mean that other participants were as well.

One way of accounting for bias would be to compare enrollment to age of facilities rather than condition. Age is a far less subjective number than a facilities ranking. Other studies on student achievement and physical facilities have included age in their studies (Lavy & Nixon, 2017), so it could be included in future research.

The inability to control who is participating could have also been a factor. The survey asked participants to identify their job title. The specific choices listed were taken from the CDE Private School Affidavit and should be fairly inclusive. Nonetheless, seven participants answered “other” and one participant declined to answer. Although these account for less than 4% of the respondents, that could be enough to affect the validity of the results.

Another limitation of the study was the accuracy of the data. Although similar to bias, accuracy of the data reflects longitudinal considerations rather than personal interpretations. Since the study looks at enrollment changes over a five-year period, the exact timing of those changes is unknown. For example, school enrollment may appear as a decline when looking at five years’ worth of data, but that does not mean that enrollment declined during each of those five years. In this example, a school could hypothetically have positive growth over the past three years, but a large loss of students in the first two years would still show a negative balance. Likewise, a school may have invested in a significant facility improvement plan, even adding new buildings during that same five-year period. The facilities would garner a positive rating on the survey instrument, but compared to negative enrollment numbers, the data analysis would be incorrect. Of course, there is a basic assumption that this was not the case for most schools.

Two additional limitations, closely related, also became apparent after the study was concluded. The first is the amount of time needed to conduct the study, and the second is the number of responses received. The study was conducted over a three-week period. Initially, it

was designed for two weeks, but extending it another week yielded approximately another 75 responses. Having more time to complete the study would likely yield a greater response rate, though extended time may also threaten external validity.

A power analysis of the population called for 333 responses in order to maintain a 95% confidence level with a margin of error of 5%. Total responses used for data analysis was 245, well below the required 333. This amount was, however, sufficient to offer a 90% confidence level with a margin of error of 10%. These numbers, however, bring up a final limitation.

One difficulty in conducting this study was the inability to know the exact size of the population. The CDE Private School Affidavit yielded over 2,500 possible participants. However, many of those are homeschools or online schools and not were part of this study. Since it is unknown how many of these 2,500 participants are actually private elementary schools, calculating a necessary sample size was difficult. The California Homeschool Network (CHN) suggested that about three percent of school-aged children are homeschooled (“About homeschooling,” n.d.). In addition, the CDE estimated that about 7.4% of school aged children in California attended private schools during the 2015–2016 school year (“Private schools,” 2018). If these numbers are correct, then the number of private schools listed in the CDE Private School Affidavit could be significantly less than reported.

One way to calculate the possible number of homeschools versus private schools was to look at the raw data collected for this study. As discussed earlier, the first question of the survey instrument asks if a school was a homeschool. After gathering the data, it was calculated that about 6.7% of the respondents identified as homeschools. This number fits within the range suggested by CHN and CDE. In addition, another 9% of the respondents identified as being online schools, or having online classes. These numbers are certainly relevant to further

research, but in the end have little effect on the outcome of the study. Even subtracting the approximate number of homeschools and online schools from the total population, the number of responses needed to maintain a 95% confidence level only decreases slightly, and not by nearly enough to affect the validity of the data. In the end, one important aspect that could be done differently with further research would be to increase the time allowed for the study. This would likely yield a larger response rate and increase validity.

Discussion of the Results in Relation to the Literature

The findings of this study add to the breadth of school research in a way that builds upon previous work and research methods, but addresses a question that has hitherto been absent. Existing literature on physical facilities and school culture look at the effect they have on student achievement, not private school enrollment. Other related studies look at parent choice factors with relation to public schools. No known studies exist that explore how physical facilities and school culture relate to private school enrollment. This section explores how the results of this study fit within the wider range of research.

Two areas of previous literature provided a basis for this study. The first was qualitative research on factors that parents rate as important in private schools (Bulman, 2004; Nichols, 2010; Parker et al., 2007; Schneider et al., 1998). Unfortunately, these studies tend to look at school choice programs such as vouchers, which compare public and private schools, or reasons why a parent would choose a private school over public school. For example, Bulman (2004) interviewed 88 parents of 9th graders at two public school districts near the Bay Area in California. The author looked specifically at six families and concluded, “the school-choice decision is influenced by the past educational experiences of the parents and by their religious faith” (p. 492). Although this type of research is very helpful to private school decision-makers,

it misses one critical component: why does a parent choose one private school over another?

When parents come to tour a private school, they have already all but decided to send their child to a private school, the only question is, which one? Clearly, research is needed to investigate this unique perspective.

Another consideration is that these studies are mostly qualitative in nature. In order to show a direct relationship between parent choice factors and school enrollment, quantitative analysis was deemed necessary. The existing research listed above contains numerous factors that parents consider when choosing a private school. Researching each proposed factor would be impractical. Originally, this study explored eight different aspects for research: teacher certification, competition, demographics, facilities, accreditation, marketing, teacher quality, and culture and climate of a school. These eight categories were reduced to six research questions and later to the two questions featured in the final study. The final two factors were chosen based on results of a pilot study, strength of existing literature, and accessibility to existing survey instruments. The survey portions for physical facilities and school culture were borrowed from Uline and Tschannen-Moran (2008) and Wagner (2006) respectively. Permission to use these instruments is included in Appendix B and Appendix C.

The second area of research to provide a basis of this study came from quantitative studies on physical facilities and school culture, the two independent variables. One main reason why physical facilities and school culture were chosen as the independent variables is because of the considerable amount of research that exists about both, particularly how they affect student achievement. No known research exists that looks at how facilities or culture influence private school enrollment. However, these two factors are known to have a considerable impact upon

student achievement. It stands to reason that they may also have influence on student enrollment.

Physical condition of facilities has a direct impact on student achievement (Blincoe, 2008; Brooks, 2015; Fuller et al., 2009; O'Donnell, 2016; Picus et al., 2005; Taylor, 2009; Uline & Tschannen-Moran, 2008). However, contrary findings related to the same study do exist (Lavy & Nixon, 2017; Picus et al., 2005). The presence of contrary findings from these studies could help explain the results of this study. Since results from different studies on physical facilities revealed inconsistent findings, then the outcome of this study does not seem as surprising.

Other studies demonstrate that school culture has a direct correlation to student achievement (Barile et al., 2012; Johnson & Stevens, 2006; Smallwood, 2014; Taylor, 2008; Tschannen-Moran et al., 2006). In light of existing research, it is not surprising that the researcher found a correlation between school culture and private school enrollment. These results validate existing assumptions about the importance of school culture. For example, Goldkind and Farmer (2013) noted “parents’ perceptions of safety and of respect from the school mediated the relationship between school size and perceptions of the extent of the invitations for involvement provided by the school” (p. 223).

Community of Practice

The study of private elementary school enrollment is a relatively new concept. With competition between schools growing, and economic conditions ever changing, private schools must make a concerted effort to understand enrollment. As the emphasis on student enrollment grows, interest and demand for understanding enrollment trends also increases. Therefore, in order to understand these trends, one must also investigate the associated relationships. In other

words, investigating the causes and effects of enrollment trends will add to the understanding of these same trends.

Community of Scholars

The field of study on private school enrollment offers new avenues to be explored. For example, Mychajluk (2011) stated “search-engine placement – along with a cutting-edge website – needs to be top priorities for any organization” (para. 9). Whereas once this line of thinking was strictly subjective, results of this study and ones like it can create a more objective perspective. No longer do schools need to rely on theories and anecdotes. Quantitative studies on private school enrollment can offer greater generalization and further increase the impact of existing theories.

Other researchers such as Bulman (2004), Goldring and Phillips (2008), Mainda (2002), Parker et al. (2007) and Schneider et al. (1998) provided a foundation for this study. Taking the concepts and theories proposed by these researchers, this study sought to investigate their ideas, attempting to quantify and generalize the results. It is hoped that future researchers will take a similar approach. For example, if a “cutting-edge website” (Mychajluk, 2011) is recommended, how effective is it, and what impact will it have on enrollment? Or if parents desire a safe environment (Goldkind and Farmer, 2013; Goldring and Phillips, 2008; Mainda, 2002; Nichols, 2010), what types of safety policies and procedures will result in the greatest enrollment growth? These are all concepts that could be explored by future scholars and researchers.

Implication of the Results for Practice, Policy, and Theory

Practice

Anyone who runs a private school, or any business really, knows that resources are not infinite. Decisions need to be made that will maximize the resources available to achieve the

greatest result. There are many ways for schools to generate income. Ferguson (2018) offers ideas such as endowment building, planned giving, major gift programs, fundraising, consignment or spirit shops, facility rental agreements, or tutoring services. Yet even Ferguson admits that these efforts are met with “varying levels of success” (para. 2). Even with alternative forms of fundraising, schools must rely primarily on income from fees and tuition.

This emphasis on tuition inevitably leads back to student enrollment. The Enrollment Management Association (2017) stated, “independent schools, which are highly tuition-dependent institutions, need to look seriously at their long-term enrollment strategy.” Understanding enrollment and developing enrollment strategies, therefore, should be a major concern for any private school, especially one that struggles financially. The results of this study could have significant impact on school enrollment strategies. Understanding the power of a positive school culture, for example, might be a major component of marketing tools, or a highlight of a parent tour.

This study could also be beneficial for schools when deciding on how to best allocate limited resources. For example, although taking care of the facilities is clearly important, should a school spend \$35,000 on painting the exterior of the buildings, or on hiring classroom aides? Ultimately, those decisions are up to the individual school leaders and beyond the purpose of this study. However, the results of this study could foreseeably provide valuable data to better equip school leaders to make those decisions. In the book *Learning from the Best Vol. 2: Growing Greatness that Endures in the Christian School*, Frost (2014) discusses these challenges. Frost wrote, “We must focus our energy on the places in which we will get the most impact. This is especially important for the smaller or struggling Christian school” (p. 72).

Policy

Before the study began, the researcher expected to find a correlation between the independent variables of physical facilities and school climate and the dependent variable of school enrollment. Careful examination of the data showed no correlation between physical facilities and enrollment, but a mild correlation between school culture and enrollment. These conclusions can have important implications for private school decision-makers. For example, a school may choose to invest resources in professional development and effective leadership practices rather than improving facilities. The types of development and leadership training necessary to accomplish this is beyond the scope of this study.

Caring for physical facilities is still important, however. Broken light fixtures, for example, need to be repaired simply for the sake of functionality. In addition, existing studies do suggest a relationship between physical facilities and school culture exists (Bishop, 2009; Gislason, 2010; Higgs & McMillan, 2006; Uline et al., 2009; White, 2012). Therefore, school leaders need to carefully decide what aspects of the physical facilities would best impact school culture and what aspects are less important. These questions are beyond the scope of this study, but could certainly be a suggestion for future research.

Theory

A wealth of research identified aspects that parents look for when choosing a school (Bulman, 2004, Goldring & Phillips, 2008; Mainda, 2002; Nichols, 2010; Parker et al., 2007; Schneider et al., 1998). However, two things should be considered when looking at these studies. First, they deal with school choice programs, such as vouchers or tax credits. These programs evaluate all schools equally, public and private. Parents who enroll their child in a private school are typically not comparing a private school to a public school. Rather, they are

comparing private schools to one another. The second consideration is that these studies are typically qualitative. Although qualitative studies certainly add knowledge to the field of study, they are anecdotal and not necessarily generalized. Private school research simply lacks quantitative studies to firmly identify factors that parents consider when enrolling their children in a private school.

The conceptual framework for this study was based on two theories. The first theory proposes a connection between the condition of the physical facilities and private elementary school enrollment. The second theory, closely related, proposes a connection between school culture and climate and private elementary school enrollment. Both theories were based on research connecting to student achievement, but both expanded upon prior work to propose and test two original hypotheses. The testing of these two hypotheses, or theories, suggested one to be correct and another false. Knowing these results can help officials better understand enrollment trends, allowing them to make well informed decisions.

This study has significant implications for private school decision-makers because it tests and explores the two theories about facilities and culture and climate of a school. No longer must schools rely on just theories. Now, quantified data provides a better understanding of enrollment, allowing school stake holders a greater assurance when making enrollment decisions. Private school decision-makers now have a wider range of tools when deciding on allocating resources, setting policy, or creating vision and direction for a school.

Recommendations for Further Research

If this study is to be replicated, several particular changes would be made. First, more time would be allotted to gain a larger sample size. Second, age would be considered when researching facilities. A rating of facility age would likely eliminate bias because age is far less

subjective than the condition. Another change would be the use of a different survey instrument. Separate surveys that generate the same results could validate the original data analysis of this study. Lastly, the timing of the study should be moved to the month of November. This study was conducted in August when many schools are still in session. Contact information for participants for this study was already a year old at the time of the study. Also, enrollment information supplied by the participants might not reflect the most recent data. Since the CDE Private School Affidavit is submitted in October of each year, November would provide the most recent, and therefore accurate data.

Research like this is greatly needed to help private school leaders decide how to best allocate available resources. However, the results of this study have a limited scope. Considering existing research, it is reasonable to conclude that multiple factors that ultimately affect private school enrollment exist. Some of these may be well out of the control of school decision-makers. Basic economic conditions of an area, for example, could have an adverse effect on enrollment, but school leaders can do little to change that. In contrast, other areas may be feasible. Proper marketing techniques, for example, likely play an important part in private school enrollment.

Through a careful examination of the research, the following areas are recommended as possible factors for further research: Competition, Teacher Quality, Economics and Demographics, and Marketing.

Competition

Private schools are, in many ways, a business and therefore compete for clients in order to be economically sustainable. The largest competitors of private schools are other private schools. Gauatm (2011) stated, “for the schools, education is main service, and education quality is the main competitive tool with which they can fight with their competitors” (p. 64). Although this may be true, it is a simplistic viewpoint. All schools at least attempt to provide a quality education. Therefore, other factors that draw parents and students to one school over another must also exist. Collins and Porras (as cited in Frost, 2014, para. 12) point out a concept first called the “genius of the AND.” According to this principal, private schools need to offer quality education *and* something else. As to what the “and” needs to be is left open and is partly the purpose of this study.

Other than other private schools, another big competitor is charter schools. Buddin (2012) wrote, "Overall, about 8 percent of charter elementary students are drawn from private schools, while about 11 percent of middle and high school students are drawn from private schools" (p. 23). According to the study, the percentage is the highest in urban districts, pulling up to 32% of private students. A study by Lackman (2013) looked at all Catholic schools in New York. According to Lackman, "during the past decade, one Catholic school closed for every charter school that has opened" (p. 3). However, evidence in this area is mixed.

Chakrabarti and Roy (2011) looked at the impact of charter schools in Michigan over a 10-year period and found “the introduction of charter schools negatively impacted enrollment in private schools, but the effect was mostly modest in size” (p. 3). They go on to state that a charter school within a 2-mile radius of a private school only decreased private school enrollment by an average of 1.19% each year (p. 3).

Even though Chakrabarti and Roy (2011) found little evidence for the impact of charter schools on private school enrollment, they did highlight an important aspect of school choice. They write “we argue that such movements of students between schools reflect the relative attractiveness of these schools, as perceived by parents” (p. 5). This is important because it highlights how parent perception is a major theme in the literature.

Quality Teachers

Although academics is listed as a key factor for parents (Gauatm, 2011; Goldring & Phillips, 2008; Mainda, 2002; Schneider et al., 1998) only Parker et al. (2007) listed teachers with an advanced degree as a possible factor that parents consider when enrolling their children. Goddard et al. (2000) investigated how teacher efficacy can positively impact student achievement. However, no research seems to exist to connect quality teachers as a determining factor when growing enrollment. It is likely that parents assume a school has quality teachers. It is also likely that good teachers contribute to a positive school climate and increased parent satisfaction, which in turn affects enrollment. Goddard et al. say as much: “collective teacher efficacy is a way of conceptualizing the normative environment of a school and its influence on both personal and organizational behavior” (p 496). Therefore, a connection may be made that quality teaching leads to enrollment growth. Likewise, a poor teacher can logically lead to loss of school enrollment, and past personal experiences would confirm that theory.

Economics and Demographics

Cost of tuition is often one of the biggest factors listed when parents are considering enrolling their children into a private school (Parker et al., 2007). Because of this, many private schools offer some sort of scholarship or tuition break to entice families. Some have also argued that the recent recession has had a significant impact on enrollment (Foody, 2012; Gilmore &

Rush, 2013). However, the recession had an impact not only on private schools, but also on public and charter schools. During that time, public spending was significantly cut in many states. Setari and Setari (2016) write, “This decrease in funding forced schools of all types to make difficult decisions about how to spend their limited income” (p. 5). Hagemann and Espenshade (1979) and Husted and Kenny (2002) showed that as spending in public school decreases, so does enrollment.

This raises the question: where do all those children go? Some might simply drop out in order to support their parents economically; others might move to private schools. If the latter was the case, then it might be expected to see an increase in private school enrollment during a recession. Gilmore and Rush (2013) looked at average enrollment in National Association of Independent Schools (NAIS) between the years of 2005–2010, or immediately before and after the recession. They did not find any significant increase or decrease in enrollment over those years. While some schools did experience a decline in enrollment, others experienced increases. What they found was:

...that families were waiting later to enroll children in the school, that it took longer for families to sign contracts, and that efforts to counteract potential drops in enrollment sometimes led to imbalances in the number of students in each grade level. (Gilmore & Rush, 2013, para. 9)

In a related study, Williams (2013) hypothesized that earning potential (the state of the economy) can directly impact enrollment in community colleges. In other words, as minimum wage increases, more people would opt to work rather than attend college. Williams looked at data from the years 1989–2009 but the findings were inconclusive. During economically tough times, it seems, not every school struggles.

The impact that economics has on enrollment is unclear. Other related factors, however, also contribute, namely racial and ethnic backgrounds of families. Three studies in particular highlighted the differences. First, Arteaga (2015) stated, “variations in parental education and income explain most of the ethnic, racial, and immigrant difference in private school attendance” (para. 1). Second, Saporito and Lareau (1999) found that white and black families make considerably different choices when it comes to choosing a school. Finally, Setari and Setari (2016) showed that enrollment of Black and Hispanic students to Catholic secondary schools actually increased during the recession of 2007–2009. Even though evidence considering economic and ethnic conditions is mixed, it should still be considered as a possible factor that affects enrollment.

Marketing

Proper marketing strategies may play the single largest role in private school growth. The types of marketing strategies vary between researchers, but all agree that it is important. Researchers and experts agree that marketing is essential for success (Bohman, 2014; Gauatm, 2011; Gilmore & Rush, 2013; Haanen, n.d.; Schultz & Zimmerman, 2016; Uchendu et al., 2015). Dillard (2014) stated “a strong, sustained marketing plan will help grow and sustain your enrollment, allowing you to provide a faith-based learning program for the families in your community for years to come” (para. 10). Mychajluk (2011) adds, “two areas have had the biggest impact on creating growth – community service involvement and innovative marketing programs” (para. 6).

Barriers to marketing also exist. Suss (2013) surveyed principals and teachers in Israel and found that educators faced great fears when adopting marketing plans. This could explain why some schools do not engage in significant marketing plans. However, one question seems

to be unanswered by the existing research: is marketing enough? Will aggressive and innovative marketing work if you have a poor climate or aging facilities? Can marketing overcome demographic and economic challenges? Is marketing effective when competing private schools also engage in similar marketing strategies? Finally, do schools that do not actively market their schools experience decline in enrollment? By including marketing in this research, some of these questions could be answered.

Conclusion

Running a private religious school is a competitive enterprise. Without public dollars to cover operating costs, private schools must rely primarily on tuition dollars, driven by enrollment, to cover expenditures. It is fundamental to the operation of a private school, then, to be able to effectively allocate appropriate resources to maintain a healthy enrollment. However, determining how to best allocate those resources can be difficult. In order to provide better information to private schools about the key factors that may impact their enrollment, the purpose of this quantitative correlational study was to examine what type of relationship, if any, exists between the dependent variable of change in private school enrollment and each of the two independent variables: the rating of condition of facilities and the rating of school culture and climate.

Two research questions addressed the purpose of this research:

- What relationship, if any, exists between the rating of physical conditions of facilities and the change in student enrollment of K–8 private schools in California over a five-year period?

- What relationship, if any, exists between the rating of culture and climate of a school and the change in student enrollment of K–8 private schools in California over a five-year period?

In order to answer these questions, a study was conducted that surveyed administrators of private elementary schools in the state of California. A 17-question survey was distributed using Qualtrics to approximately 2,500 private school administrators. Participants returned 301 surveys, but after cleaning the data, the sample size was 245. Both Pearson's r and linear regression were used for data analysis to determine and evaluate the relationship between the dependent variable and the two independent variables.

After careful review of the data, the researcher found no statistically significant relationship between enrollment and physical facilities, $F(1, 245) = 2.466, p > 0.05$. However, a mild correlation was found between enrollment and school culture, $F(2, 245) = 7.649, p > 0.05$. Based on these results, the researcher can accept the first null hypothesis (H_{01}) and reject the first alternative hypothesis (H_{a1}). However, data analysis of the second research question demonstrated a statistically significant, although mild, correlation between private school enrollment and school culture. Based on these results, the researcher can reject the second null hypothesis (H_{02}) in favor of the second alternative hypothesis (H_{a2}).

Based on these results, this study could be beneficial for schools when deciding on how to best allocate limited resources. Understanding the relationship (or lack thereof) between physical facilities and school enrollment can better direct decision-makers to plan facility additions, improvements, or maintenance more effectively. Likewise, knowing the impact that school culture has on enrollment may help direct leaders to invest in professional development or team building in order to foster a better community.

Of course, these two factors are not in any way an end-all list; presumably, countless factors can impact enrollment. Other factors such as quality of the teaching staff, socioeconomic makeup of the surrounding area, the impact of competition, or marketing efforts could also play a valuable role. Future research in this area is recommended. Running a private school is not easy and takes copious patience, skill, and love for education. Knowing how to best serve the various stakeholders of any school is often a primary goal of any administrator. Hopefully, this study and more like it can be a valuable resource to private school leaders and decision-makers when considering key factors that impact enrollment.

References

- About homeschooling. (n.d.). Retrieved from: <http://www.californiahomeschool.net/how-to-homeschool/faq/>
- Adams, A., & Lawrence, K. (2015). *Research methods, statistics, and applications*. Los Angeles, CA: SAGE Publications.
- Arteaga, N. (Mar 2, 2015). Closing the private school enrollment gap: Are education vouchers enough? *Chicago Policy Review* (Online).
- Barile, J. P., Donohue, D. K., Anthony, E. R., Baker, A. M., Weaver, S. R., & Henrich, C. C. (2012). Teacher-student relationship climate and school outcomes: Implications for educational policy initiatives. *Journal of Youth and Adolescence*, 41(3), 256–267. DOI <https://doi.org/10.1007/s10964-011-9652-8>
- Bishop, M. E. (2009). *A case study on facility design: The impact of new high school facilities in Virginia on student achievement and staff attitudes and behaviors* (Doctoral dissertation, George Washington University). Retrieved from: search.proquest.com
- Blincoe, J. M. (2008). *The age and condition of Texas high schools as relation to student academic achievement* (Doctoral dissertation, The University of Texas and Austin). Retrieved from: search.proquest.com
- Bohman, E. (2014). Attracting the world: Institutional initiatives' effects on international students' decision to enroll. *Community College Journal of Research and Practice*, 38(8), 710–720.
- Brennan, M. C. (2012). Fostering community through the house system at Most Holy Trinity Catholic School. *Journal of Catholic Education*, 15(2), 325–356.

- Brooks, E. B. (2015). *The relationship between the condition of Colorado elementary school facilities and student achievement* (Doctoral dissertation, University of Northern Colorado). Retrieved from: search.proquest.com
- Buddin, R. (2012). The impact of charter schools on public and private school enrollments. *Cato Institute Policy Analysis* (707), 1-64.
- Bulman, R. C. (2004). School-Choice stories: The role of culture. *Sociological Inquiry*, 74(4), 492–519.
- Catt, A. D. (2014). A survey of Idaho's private schools. *Friedman Foundation for Educational Choice*.
- Chakrabarti, R., & Roy, J. (2011). Do charter schools crowd out private school enrollment? Evidence from Michigan. *Federal Reserve Bank of New York Staff Report*, no. 472.
- Colling, K. (2010). Thriving in lean times. *Christian School Education*, 14(2), 44–45.
- Covey, S., McChesney, C., & Huling, J. (2016). *The 4 disciplines of execution: Achieving your wildly important goals*. New York, NY: Simon & Schuster.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage Publications.
- Dillard, S. J. (2014). Sustainability for Christian schools. *Christian School Education*, 18(1), 27.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). Hoboken, NJ: John Wiley & Sons.
- Enrollment Management Association. (2017). *What your head needs to know about enrollment management*. Princeton, NJ: The Enrollment Management Association. Retrieved from: www.enrollment.org/EMheads

- Ferguson, J. (2018, February 15). *Becoming more affordable: The pursuit of third-income sources*. Retrieved from: <https://blog.acsi.org/christian-schools-pursuit-third-income-source-acsi>
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the journal. *American Journal of Pharmaceutical Education*, 72(2), 1–3.
- Foody, K. (2012, Aug 19). Recession may have caused drop in private school enrollment. *Herald Times Reporter*.
- Fox, R. A., & Buchanan, N. K. (2017). *The Wiley handbook of school choice*. West Sussex, UK: John Wiley & Sons.
- Frost, G. (2014). *Learning for the best volume two: Growing greatness that endures in the Christian school*. Colorado Springs, CO: ACSI.
- Fuller, B., Dauter, L., Hosek, A., Kirschenbaum, G., McKoy, J., & Vincent, J. M. (2009). Building schools, rethinking quality? Early lessons from Los Angeles. *Journal of Educational Administration*, 3(47), 336–349.
- Gauatm, V. (2011). The impact of promotion on enrollment of students into private schools. *International Forum of Teaching and Studies*, 7(2), 63–69.
- Gilmore, B., & Rush, M. J. (2013, Spring). When mission and market forces intersect: How independent schools navigated economic uncertainty. *Independent School Magazine*. Retrieved from: <http://www.nais.org/Magazines-Newsletters/ISMagazine/Pages/When-Mission-and-Market-Forces-Intersect-.aspx>
- Gislason, N. (2010). Architectural design and the learning environment: A framework for school design research. *Learning Environment Research*, 13(2), 127–145.

- Goddard, R. D., Hoy, W. K., & Hoy, A. W. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, 37(2), 479–507.
- Goldkind, L., & Farmer, G. L. (2013). The enduring influence of school size and school climate on parent's engagement in the school community. *School Community Journal*, 23(1), 223–244.
- Goldring, E. B., & Phillips, K. J. (2008). Parent preferences and parent choices: The public–private decision about school choice. *Journal of Education Policy*, 23(3), 209–230.
- Greenwald, R., Hedges, L. V., & Laine, R. D. (1996). The effect of school resources on student achievement. *Review of Educational Research*, 66(3), 361–396.
- Hallowell, E. M. (2011). *Shine: Using brain science to get the best from your people*. Boston, MA: Harvard Business Review Press.
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health*, 31(2), 180–91.
- Haanen, J. (n.d.). *The communication flow: Increasing enrollment through strategic conversation* [video file]. Retrieved from:
<https://enrollment.org/resources/marketing/item/208-increasing-enrollment-through-strategic-conversation>
- Hagemann, R. P., & Espenshade, T. J. (1979). The impact of changing state economic conditions on public school enrollments. *Socio-Economic Planning Sciences*, 13(5), 265–273.
- Higgs, A. L., & McMillan, V. M. (2006). Teaching through modeling: four schools experiences in education. *The Journal of Environmental Education*, 38(1), 39–53.

- Higgins, S., Hall, E., Wall, K., Woolner, P. & McCaughey, C. (2005), The Impact of school environments: A literature review, *The Design Council*, London, retrieved from: [www.designcouncil.org.uk/resources/assets/assets/pdf/Publications/The%20Impact%](http://www.designcouncil.org.uk/resources/assets/assets/pdf/Publications/The%20Impact%20of%20School%20Environments.pdf)
- Husted, T. A., & Kenny, L. W. (2002). The legacy of Serrano: The impact of mandated equal spending on private school enrollment. *Southern Economic Journal*, 68(3), 566–583.
- Johnson, B., & Stevens, J. J. (2006). Student achievement and elementary teachers' perceptions of school climate. *Learning Environment Research*, 9(2), 111–122
- Lackman, A. M. (2013). The collapse of Catholic school enrollment: The unintended consequence of the charter school movement. *Albany Government Law Review*, 6(1), 1–20.
- Laerd Statistics. (2015). Simple linear regression using SPSS Statistics. *Statistical tutorials and software guides*. Retrieved from <https://statistics.laerd.com/>
- Laerd Statistics. (2017). Pearson's product-moment correlation using SPSS Statistics. *Statistical tutorials and software guides*. Retrieved from <https://statistics.laerd.com/>
- Lavy, S., & Nixon, J. L. (2017). Applications, enrollment, attendance, and student performance in rebuilt school facilities: A case study. *International Journal of Construction Education and Research*, 13(2), 125–141.
doi:<http://dx.doi.org.cupdx.idm.oclc.org/10.1080/15578771.2016.1245687>
- Levenson, A. (2014). *Employee surveys that work: Improving design, use, and organizational impact*. San Francisco, CA: Berrett-Koehler Publishers.
- Lopez, E. S., & de Cos, P. L. (2004). *Preschool and childcare enrollment in California*. California Research Bureau. Retrieved from: <https://www.library.ca.gov/crb/04/03/04-003.pdf>

- Mainda, P. O. (2002). Selected factors influencing school choice among the Seventh-Day Adventist population in southwest Michigan. *Journal of Research on Christian Education*, 11(2), 185-218.
- Mychajluk, C. (2011). Growing in economically tough times. *Christian School Education*, 14(2), 8–9.
- National Institutes of Health. (1979). *The Belmont report: Ethical principles and guidelines for the protection of human subjects research*. Retrieved from:
<https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html>
- Nichols, M. K. (2010). *Parents' perceptions of private Christian schools and why parents pay when public education is free* (Doctoral dissertation, Capella University). Retrieved from:
search.proquest.com
- O'Donnell, P. A. (2016). *Building student success: School conditions and student achievement* (Doctoral dissertation, Wilmington University). Retrieved from: search.proquest.com
- Parker, R. S., Cook, S., & Pettijohn, C. E. (2007). School choice attributes: Positioning a private school. *Services Marketing Quarterly*, 28(4), 21–33.
- Picus, L. O., Marion, S. F., Calvo, N., & Glenn, W. J. (2005). Understanding the relationship between student achievement and the quality of educational facilities: Evidence from Wyoming. *Peabody Journal of Education*, 80(3), 71–95.
- Private schools* (2018, August 28). Retrieved from:
<https://www.cde.ca.gov/sp/ps/cefprivinstr.asp>
- Saporito, S., & Lareau, A. (1999). School selection as a process: The multiple dimensions of race in framing educational choice. *Social Problems*, 46(3), 418–439.

- Schneider, M. (2002), "Do school facilities affect academic outcomes?", *National Clearinghouse for Educational Facilities*, retrieved from: www.edfacilities.org/pubs/outcomes.pdf
- Schneider, M., Marschall, M., Teske, P., & Roch, C. (1998). School choice and culture wars in the classroom: What different parents seek from education. *Social Science Quarterly*, 79(3), 489–501. Retrieved from <http://www.jstor.org/cupdx.idm.oclc.org/stable/42863813>
- Schultz, A., & Zimmerman, K. (2016). Winning one program at a time: A systemic approach. *Online Journal of Distance Learning Administration*, 19(2).
- Scott, P. (2018, February 13). *Can you outsource your school operations*. Retrieved from: <https://blog.acsi.org/outsource-school-operations>
- Setari, A. P., & Setari, R. R. (2016). Trends in Catholic school minority enrollment and higher education entrance over the recession. *Journal of Catholic Education*, 19(3), 4–19. <http://dx.doi.org/10.15365/joce.1903022016>
- Smallwood, G. W. (2014). *The impact of school climate on the achievement of elementary school students who are economically disadvantaged* (Doctoral dissertation, Tennessee State University). Retrieved from: search.proquest.com
- Suss, G. (2013). The next revolution will be in education: A new marketing approach for schools. *Journal of International Education Research*, 9(1), 47–54.
- Taylor, D. E. (2008). *The influence of climate on student achievement in elementary schools* (Doctoral dissertation, George Washington University). Retrieved from: search.proquest.com

- Taylor, R. G. (2009). *School facilities in the nation's capital: an analysis of student achievement, attendance, and truancy* (Doctoral dissertation, George Washington University).
Retrieved from: search.proquest.com
- Tschannen-Moran, M, Parish, J., & DiPaola, M. (2006). School climate: The interplay between interpersonal relationships and student achievement. *Journal of School Leadership*, 16(4), 386–415.
- Thompson, D. R. (2004). Organizational learning in action: Becoming an inviting school. *Journal of Invitational Theory and Practice*, 10, 52–72.
- Uchendu, C. C., Nwafor, I. A., & Nwaneri, M. G. (2015). Marketing strategies and students' enrollment in private secondary schools in Calabar municipality, Cross River State, Nigeria. *International Journal of Education Practice*, 3(5), 212–223.
- Uline, C., & Tschannen-Moran, M. (2008). The walls speak: The interplay of quality facilities, school climate, and student achievement. *Journal of Educational Administration*, 46(1), 55–73.
- Uline, C., Tschannen-Moran, M., & Wolsey, T. D. (2009). The walls still speak: The stories occupants tell. *Journal of Educational Administration*, 47(3), 400–426.
- Wagner, C. R. (2006). The school leader's tool for assessing and improving school culture. *Principal Leadership*, 7(4), 41–44.
- White, J. T. (2012). *Foundations of school stakeholders perceptions related to school building conditions and learning* (Doctoral dissertation, Walden University). Retrieved from: <https://scholarworks.waldenu.edu/dissertations/1018/>

Why they come: SSATB survey of parents of incoming students (2015). *Independent school*, 74(4), 20. Retrieved from: <http://www.nais.org/Magazines->

[Newsletters/ISMagazine/Pages/Why-They-Come.aspx](http://www.nais.org/Magazines-Newsletters/ISMagazine/Pages/Why-They-Come.aspx)

Williams, B. (2013). *Minimum wage and community college attendance: How economic circumstances affect educational choices*, presented at SREE Spring 2013 Conference,

Evanston, IL: Society for Research on Educational Effectiveness. Retrieved from:

<https://files.eric.ed.gov/fulltext/ED563384.pdf>

Appendix A: Survey Instrument



Home or Private School

Is your school a home school?

Yes

No

Online School?

Does your school offer classes online?

Yes

No

Personal Descriptive Statistics

Personal Descriptive Questions

The following set of questions is about you, the participant, and is for descriptive analysis only.

Please identify your gender

Male

Female

Prefer not to answer

Please identify your age group

Under 18

46 - 55 years old

18 - 25 years old

56 - 65 years old

26 - 35 years old

66 +

36 - 45 years old

Prefer not to answer

Please identify your racial category

American Indian/Alaska Native

Asian

Black or African American

Hispanic or Latino

Native Hawaiian or other Pacific Islander

White

More than one race

Prefer not to answer

Please identify your job title or the job title that most closely resembles yours.

Administrator

Director

Executive Director

Head of School

Headmaster

President

Principal

Superintendent

Other

Prefer not to answer

School Descriptive Information

School Descriptive Information

The following section asks basic descriptive information about your school.

What is the lowest grade offered at your school?

Kindergarten 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

What is the highest grade offered at your school?

Kindergarten 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th

Compared to five years ago, how has your enrollment (number of students) changed?
(Please respond with K-8 enrollment only)

Declined by 15% or more

Declined by less than 15% but at least 5%

changed by less than 5%

Increased by less than 15% but at least 5%

Increased by 15% or more

Condition of Facilities

Condition of Physical Facilities

The following section deals with the physical condition, age, and upkeep of your school.

For the following questions, please mark your answers on a scale from Strongly agree to Strongly disagree.

| | Strongly Agree | Somewhat Agree | Neither Agree nor Disagree | Somewhat Disagree | Strongly Disagree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| The facilities here support learning. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The building(s) are a comfortable and welcoming place to be. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The building(s) are pleasing in appearance. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There is more than enough space for teaching and learning. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | Strongly Agree | Somewhat Agree | Neither Agree nor Disagree | Somewhat Disagree | Strongly Disagree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Classroom equipment and furniture are in excellent shape and working well. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The facilities here are well maintained. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The building(s) are neat and clean. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Culture and Climate

Culture and Climate

The following section is about the culture and climate of your school. This portion of the survey is taken from the School Culture Triage Survey. (© 2006 Christopher R. Wagner.

For the following question, please assess how frequently you perceive each statement to be true.

| | Never | Rarely | Sometimes | Often | Very Frequently |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Teachers and staff discuss instructional strategies and curriculum issues. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers and staff work together to develop the school schedule. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Teachers and staff are involved in the decision making process with regard to materials and resources. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The student behavior code is a result of collaboration and consensus among staff. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The planning and organizational time allotted to teachers and staff is used to plan as collective units/teams rather than as separate individuals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Teacher and staff roles of

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------------|
| Teachers and staff tell stories or celebrations that support the school's values. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| Teachers and staff visit/talk/meet outside of the school to enjoy each others' company. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our school reflects a true "sense" of community. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our school schedule reflects frequent communication opportunities for teachers and staff. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Our school supports and appreciates the sharing of new ideas by members of our school. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There is a rich and robust tradition of rituals and celebrations including holidays, special events, and recognition of goal attainment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When something is not working in our school, the faculty and staff predict and prevent rather than react and repair. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| School members are interdependent and value each other. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Members of our school community seek alternatives to problems/issues rather than repeating what we have always done. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Members of our school community seek to define the problem/issue rather than blame others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The school staff is empowered to make instructional decisions rather than waiting for supervisors to tell them what to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| People work here because they enjoy and choose to be here. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Powered by Qualtrics

Appendix B: Permission to Use Survey Questions for Condition of Facilities



David Warmbier <[REDACTED]@gmail.com>

Permission to use Quality of School Facilities Survey

Cynthia Uline <culine@sdsu.edu>

Fri, Jul 27, 2018 at 9:13 AM

To: David Warmbier <[REDACTED]@gmail.com>

Hi David,

Thanks for being in touch. Of course you are welcome to use our survey. This email serves as permission to do so. I have attached the survey instrument here. The facility items are included along with the social processes items (see notes on page 3).

Feel free to be in touch if you have questions.

I wish you all the best in your research,

Cynthia

Cynthia L. Uline, Ph.D.
Professor Emeritus and Director
National Center for the 21st Century Schoolhouse

College of Education
Educational Leadership
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1190

Appendix C: Permission to Use School Triage Survey

CENTER FOR IMPROVING SCHOOL CULTURE
CREATING BETTER PLACES TO LEARN
Box 737
Cloquet, MN 55720-3317

REGARDING PERMISSION TO USE THE SCHOOL CULTURE *TRIAGE* SURVEY FOR RESEARCH PURPOSES

Your request for permission to use the School Culture *Triage* Survey in your research is hereby granted with the following stipulations:

- The School Culture *Triage* Survey is to be used solely for your research study and shall not be sold or used with any compensated consultative activities;
- The copyright shall appear on all copies of the School Culture *Triage* Survey instrument;
- Your research study and one copy of reports, articles, and other printed materials that make use of the School Culture *Triage* Survey data shall be promptly sent to the Center for Improving School Culture;
- This agreement is not transferable to other researchers without the express consent of the Center for Improving School Culture.

Please sign and return this document to CISC, Box 737, Cloquet, MN 55720-3317

Best regards,

Christopher R. Wagner, Ph.D.
President and Founder, Center for Improving School Culture

I, David Warmbier understand the above conditions of use and agree to abide by these terms and conditions.

Signed  Date 7/26/16

Appendix D: Click to Consent Form

Thank you for taking the time to complete a short survey about enrollment at your school. Information you provide will help understand what relationship, if any, exists between school enrollment and physical facilities, competition, teacher quality, school culture, demographics, and/or marketing. This information could benefit private schools and help them make better informed decisions regarding resources and enrollment.

Please include information about your school for grades K–8 only. If you offer preschool or high school, please do not include those numbers. All data collected is confidential and no identifying information will be shared with outside parties. By taking this survey, you are giving your consent to have your information included in the research data.

The purpose of this study is to examine what type of relationship, if any, exists between private elementary school enrollment and six predetermined factors. Approximately 350 volunteers are expected. No one will be paid to be in the study. Enrollment will end two weeks from receipt of this e-mail. This survey will ask you questions about your school enrollment, physical facilities, competition, teacher quality, school culture, demographics, and marketing. To be in the study, you will complete this online survey.

There are no risks to participating other than providing your information. However, the collection of this information is done in a manner that is linked to your email address. This allows for proper data collection and analysis. No personal identifying information will be included in any publication or report. Any data you provide is held privately and securely. The only personal information collected basic demographic information such as gender, age, ethnicity, or work experience. If you do not wish to answer any of these questions, you may choose "prefer not to answer."

You are free at any point to stop the study. This study is not required, and there is no penalty for not participating. If you are unable to finish the survey, you may exit the survey and continue at a later time. If you do so, please make sure to use the same computer and web browser as before. All incomplete responses will automatically be recorded after two weeks.

Completing this survey should take between 5–10 minutes of your time. Please provide answers to the best of your abilities.

Click the button below to consent to take this survey.

Appendix E: Email Introduction Letter

Dear Educator,

My name is David Warmbier and I'm a Doctoral Candidate at Concordia University—Portland. Currently I am conducting a study on factors that contribute to private elementary school enrollment. Results obtained from my study will help schools make better informed decisions regarding resources and enrollment in K–8 private schools.

Your involvement is completely voluntary, but your participation would be greatly appreciated.

Typically the survey takes between 5–10 minutes to complete. You do not have to complete the survey all at once – you may access your survey at any time by following the unique link listed below.

The pilot study will be open for two weeks; any surveys submitted after that time will not be counted towards the pilot study. However, if I have not received a response within one week, I will send out a reminder.

The deadline to participate is Thursday, August 16, 2018!

I appreciate your help with my study! If you have any questions, you may contact me at [email redacted]. You may also contact my faculty advisor, Dr. James Therrell, at jtherrell@cu-portland.edu.

Thank you,

-David Warmbier

Follow this link to the Survey:

[\\${!://SurveyLink?d=Take the Survey}](#)

Or copy and paste the URL below into your internet browser:

[\\${!://SurveyURL}](#)

Follow the link to opt out of future emails:

[\\${!://OptOutLink?d=Click here to unsubscribe}](#)

Appendix F: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously- researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does “fraudulent” mean?

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

What is “unauthorized” assistance?

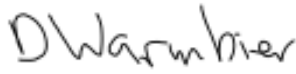
“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another’s work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Appendix F: Statement of Original Work (continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University-Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*



Digital Signature

David Warmbier

Name (Typed)

12/10/2018

Date

Appendix G: Conceptual Framework

