University of Kentucky

UKnowledge

Theses and Dissertations--Science, Technology, Engineering, and Mathematics (STEM) Education

Science, Technology, Engineering, and Mathematics (STEM) Education

2019

THE STAKEHOLDER GAP LENS: TEACHER AND PARENTAL PERCEPTIONS OF THE ACHIEVEMENT GAP IN KENTUCKY'S PUBLIC SCHOOLS

Heather Renee Brown Chapman
University of Kentucky, heather.chapman1@uky.edu
Author ORCID Identifier:
https://orcid.org/0000-0002-8463-8698
Digital Object Identifier: https://doi.org/10.13023/etd.2019.306

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Recommended Citation

Chapman, Heather Renee Brown, "THE STAKEHOLDER GAP LENS: TEACHER AND PARENTAL PERCEPTIONS OF THE ACHIEVEMENT GAP IN KENTUCKY'S PUBLIC SCHOOLS" (2019). *Theses and Dissertations--Science, Technology, Engineering, and Mathematics (STEM) Education*. 12.
https://uknowledge.uky.edu/stem_etds/12

This Master's Thesis is brought to you for free and open access by the Science, Technology, Engineering, and Mathematics (STEM) Education at UKnowledge. It has been accepted for inclusion in Theses and Dissertations--Science, Technology, Engineering, and Mathematics (STEM) Education by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

STUDENT AGREEMENT:

I represent that my thesis or dissertation and abstract are my original work. Proper attribution has been given to all outside sources. I understand that I am solely responsible for obtaining any needed copyright permissions. I have obtained needed written permission statement(s) from the owner(s) of each third-party copyrighted matter to be included in my work, allowing electronic distribution (if such use is not permitted by the fair use doctrine) which will be submitted to UKnowledge as Additional File.

I hereby grant to The University of Kentucky and its agents the irrevocable, non-exclusive, and royalty-free license to archive and make accessible my work in whole or in part in all forms of media, now or hereafter known. I agree that the document mentioned above may be made available immediately for worldwide access unless an embargo applies.

I retain all other ownership rights to the copyright of my work. I also retain the right to use in future works (such as articles or books) all or part of my work. I understand that I am free to register the copyright to my work.

REVIEW, APPROVAL AND ACCEPTANCE

The document mentioned above has been reviewed and accepted by the student's advisor, on behalf of the advisory committee, and by the Director of Graduate Studies (DGS), on behalf of the program; we verify that this is the final, approved version of the student's thesis including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Heather Renee Brown Chapman, Student

Dr. Jonathan Thomas, Major Professor

Dr. Molly Fisher, Director of Graduate Studies

THE STAKEHOLDER GAP LENS:
TEACHER AND PARENTAL PERCEPTIONS OF THE ACHIEVEMENT GAP IN KENTUCKY'S PUBLIC SCHOOLS

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in Education in the
College of Education
at the University of Kentucky

By

Heather Renee Brown Chapman

Lexington, Kentucky

Director: Dr. Jonathan Thomas Associate Professor of Mathematics Education

Lexington, Kentucky

2019

Copyright © Heather Renee Brown Chapman 2019
https://orcid.org/0000-0002-8463-8698

ABSTRACT OF THESIS

THE STAKEHOLDER GAP LENS:
TEACHER AND PARENTAL PERCEPTIONS OF THE ACHIEVEMENT GAP IN KENTUCKY'S PUBLIC SCHOOLS

The research around the achievement gap is extensive. However, regardless that the term "achievement gap" is so widely used in academia today, there is often confusion surrounding what the achievement gap is. This study seeks to answer three research questions: (1) To what extent does an achievement gap exist among different subgroups of students in Kentucky's K-12 public schools? (2) How do the perceptions of parents and teachers interact with decision-making? (3) How do the ideas of parents and teachers regarding closing the achievement gap compare?

This research examines perceptions of the existence of an achievement gap in Kentucky's public schools from the perspectives of two groups of stakeholders: parents and teachers. This study aims to identify trends in thinking about the existence of an achievement gap, how information is communicated, and how stakeholders think gaps can be closed.

The results of this study indicate that stakeholders have a general understanding of the achievement gap; however, methods of communication with parents need strengthening. Findings show that Kentucky schools with gaps tend to have multiple subgroups, rather than a single group, performing lower than their peers, but stakeholders have mixed ideas on closing these gaps.

KEYWORDS: achievement gap, rural, urban, perception

Heather Renee Brown Chapman

07/18/2019
Date

THE STAKEHOLDER GAP LENS:
TEACHER AND PARENTAL PERCEPTIONS OF THE ACHIEVEMENT GAP IN KENTUCKY'S PUBLIC SCHOOLS

By
Heather Renee Brown Chapman

Dr. Jonathan Thomas
Director of Thesis

Dr. Molly Fisher
Director of Graduate Studies

07/18/2019
Date

DEDICATION

To my friend and colleague, Robin Foster, for your encouragement and motivation along the way. You helped more than you know.

ACKNOWLEDGMENTS

The following thesis, while an individual work, was a group effort in completion and publication. First, my Thesis Chair, Dr. Jonathan Thomas provided insight, direction, and constructive criticism along the way. In addition, Dr. Molly Fisher provided valuable assistance throughout my studies in the STEM program. Next, I wish to thank Dr. Cindy Jong who volunteered her time in the summer to serve on my Thesis Committee.

In addition to the technical and instrumental assistance above, I received equally important assistance from family and friends. My husband, Steven Chapman, provided on-going support throughout the thesis process, always taking time to offer encouragement. Further, this thesis would not have been possible without my fellow colleagues and educators in Kentucky's public schools. The work you are doing is changing lives, one student at a time. Finally, a big thank you to Third Street Stuff and Coffee in Lexington, Kentucky, where many a page were written, and many cups of caffeine were consumed in the creation of this thesis.

TABLE OF CONTENTS

ACKNOWLEDGMENTS iii

LIST OF TABLES vii

LIST OF FIGURES viii

CHAPTER 1.INTRODUCTION 1

1.1 Statement of the Problem 1

1.2 Purpose of Study 2

1.3 Significance of Study 3

1.3.1 Kentucky Accountability Rating System 4

1.3.1.1 Comprehensive Support and Improvement 5

1.3.1.2 Targeted Support and Improvement 6

1.3.1.3 Other 6

1.4 Research Questions 7

1.5 Hypotheses 7

1.6 Biases and Assumptions 8

1.7 Theoretical Framework 8

1.7.1 Rurality Framework 9

1.7.2 Critical Race Theory 10

CHAPTER 2.REVIEW OF THE LITERATURE 14

2.1 Definition of “Achievement Gap” 14

2.2 Causes of the Achievement Gap 16

2.2.1 Standardized Testing Bias 16

2.3 Existence of the Achievement Gap 18

2.3.1 By Gender 18

2.3.2 By Ethnicity 19

2.3.3 Among Special Education Students 20

2.3.4 By Socioeconomic Status 21

2.4 Perceptions of the Achievement Gap 22

2.4.1 Among Parents 23

2.4.2 Among Teachers 24

2.5 Rural, Urban, and Suburban School Districts 25

CHAPTER 3.METHODOLOGY 28
3.1 Research Design 28
3.2 Procedures.....28
3.2.1 KPREP Data from the 2017-2018 School Year 28
3.2.2 Online Parent and Teachers Surveys 29
3.2.3 Parent and Teacher Follow-up Interviews.....30
3.3 Data Analysis.....30
CHAPTER 4. RESULTS.....33
4.1 KPREP Assessment Data Analysis by Locale.....33
4.1.1 CSI 33
4.1.2 TSI 34
4.1.2.1 TSI Category Analysis.....34
4.1.2.2 Ethnicity – Rural vs. Micropolitan vs. Metropolitan.....35
4.1.2.3 Disability.....37
4.1.2.4 Multiple Categories 38
4.2 Surveys 39
4.2.1 Parents.....39
4.2.1.1 Definition of Achievement Gap – Parental Perceptions.....39
4.2.1.2 Existence of an Achievement Gap – Parental Perceptions.....41
4.2.1.3 Communication of Achievement Gap – Parental Perceptions 42
4.2.1.4 Definition of Achievement Gap – Teacher Perceptions.....43
4.2.1.5 Existence of Achievement Gap – Teacher Perceptions.....43
4.2.1.6 Causes of the Achievement Gap – Teacher Perceptions 44
4.2.1.7 Closing of the Achievement Gap – Teacher Perceptions 45
4.3 Semi-Structured Interviews 47
4.3.1 Parents.....47
4.3.1.1 Interview Responses 48
4.3.1.2 Themes.....48
4.3.2 Teachers.....51
4.3.2.1 Interview Responses 52
4.3.2.2 Themes.....53
CHAPTER 5. CONCLUSIONS AND RECOMMENDATIONS.....64
5.1 Conclusions.....64
5.1.1 Research Questions and Hypotheses Revisited 64
5.1.1.1 Analysis of Hypotheses 65
5.2 Discussion.....66
5.2.1 Stakeholder Perceptions and Communication About the Achievement Gap 66
5.2.2 Validity of Achievement Gap Measurement 67

5.3 Recommendations 69
5.4 Final Remarks 70
5.5 Limitations 70
5.5.1 Survey Limitations 71
APPENDICES 74
APPENDIX 1. PARENT ONLINE SURVEY QUESTIONARRE 75
APPENDIX 2. TEACHER QUESTIONNAIRE 76
APPENDIX 3. PARENTS SEMI STRUCTRED INTERVIEW QUESTIONS 77
APPENDIX 4. TEACHER SEMI STRUCTURED INTERVIEW QUESTIONS 78
BIBLIOGRAPHY 79
VITA 90

LIST OF TABLES

Table 1 Number of Kentucky Counties by Census Classification..... 13
Table 2 Online Survey Questionnaire Six-Point Scale and Ratings..... 32
Table 3 Number of School Districts with TSI Ratings..... 57
Table 4 Number of Schools by Subgroup Identified as Underperforming..... 57
Table 5 Demographics of Newburg Middle and Breckinridge County High School..... 57
Table 6 Definition of Achievement Gap Codes..... 57
Table 7 Closing Gap Codes 58
Table 8 Reasons (Causes) for the Achievement Gap Codes..... 58

LIST OF FIGURES

Figure 1 Kentucky Counties by Population Classification 13
Figure 2 Online Survey Questionnaire Sample Questions 32
Figure 3 Online Survey Participants 58
Figure 4 Achievement Gap Definition Codes Frequency – Parent Responses..... 59
Figure 5 Achievement Gap Definition Codes Frequency – Teacher Responses 59
Figure 6 Frequency of Closing Gap Codes 60
Figure 7 Parent Survey Question Responses 61
Figure 8 Teacher Survey Responses 62
Figure 9 Reasons (Causes) for the Achievement Gap Codes Frequency 63

CHAPTER 1. INTRODUCTION

"Quality education for everyone, of every background, remains one of the most urgent civil rights issues of our time." – George W. Bush

1.1 Statement of the Problem

Throughout the history of American education, there have been numerous efforts at ensuring that all students achieve. The No Child Left Behind Act (2001) was specifically created to help with "improving the academic achievement of the disadvantaged" (No Child Left Behind [NCLB]). Yet, achievement gaps continue to be present in the majority of school districts across the United States. Decades after the passing of Brown v. Board of Education in 1954, Ladson-Billings (2009) determined that African American students continue to lag significantly behind their peers in every subject area. Even with countless studies the achievement gap continues to be a source of political and educational debate that has implications in the classroom. With the passing of the Elementary and Secondary Education Act (ESEA) of 1965, this achievement gap focus has been on student performance as measured by state standardized tests, specifically in math and reading (p. 24). Hence, student achievement is come to be known as performance on state assessments specifically.

When considering the location of a school, Bouck (2004) found that student achievement is affected by the school's geographic location. Yet again, this concept is hotly debated, with mixed research results. Jonathan Kozol's book *Savage Inequalities* gives a dire glimpse into urban schools that are failing. However, there are many who equate rural school systems with failure (Williams, 2005; Graham and Provost, 2012). Nevertheless, there are studies that have determined that location does not play a part in a

student's academic achievement (Weir, Archer, & Millar, 2009). When examining causes of the achievement gap, results were the same. Different studies reveal differing factors that impact student success in schools. However, Bol and Berry (2005) noticed that though there is ample research on causes of the achievement gap, they do not seek to understand how teachers perceive the achievement gap (p. 35).

1.2 Purpose of Study

The purpose of this study was to determine, using the Kentucky Performance Rating for Educational Progress (KPREP) Assessment, if there is an achievement gap among subgroups of students in Kentucky's public schools across rural and urban communities. Specifically, this study seeks to answer three research questions: (1) To what extent does an achievement gap exist among different subgroups of students in Kentucky's K-12 public schools? (2) How do the perceptions of parents and teachers interact with decision-making? (3) How do the ideas of parents and teachers regarding closing the achievement gap compare?

Taking this into consideration, as mentioned, this study aims to determine if there is a connection between a school's location in Kentucky and the absence or presence of an achievement gap. This study examines assessment data from three distinct categories population categories: metropolitan (urban), micropolitan (suburban), and rural. For the purpose of this study, these categories are defined by the same measures used by the United States Census Bureau. Metropolitan, generally known as "urban", areas are defined as areas with a population of 50,000 or greater. Micropolitan, or "suburban" areas are classified as such if they range in population from 10,000 to 50,000 people. Rural

areas are those not classified as either micro- or metropolitan and have a total population of less than 10,000.

Although half of Kentucky's counties are rural, according to the 2010 census, these counties only account for 23.3 percent of the total population (US Census Bureau, 2010). According to the Kentucky Department of Education (2019), though Kentucky has a total of 120 counties, the state has a total of 173 school districts when including independent districts. In this study, independent school districts were classified by population along with the county they reside in. (KDE, pg. 1). Table 1 shows the number of Kentucky counties by classification.

In the 2017-2018 school year (the school year assessment data analyzed for this study) there were 1,272 schools spread among these county and independent school districts. Note that at the time of this study, some of these Kentucky schools have since closed. Figure 1 shows each Kentucky county sorted by its classification as micropolitan, metropolitan, or rural. These classifications were used to sort schools classified under Kentucky's accountability system.

1.3 Significance of Study

This study is significant in three ways. First, this study adds to the research surrounding the existence of the achievement gap, specifically in Kentucky's public schools. Studies have been done regarding Kentucky's state accountability data (Buttrey, 2014; Kiggins, 2015; McCoy, 2014); however, these studies did not focus on perceptions of stakeholders and were completed prior to the new assessment system implemented in the 2017-2018 school year. With a new accountability system in Kentucky, districts need

to be aware of any achievement gaps that, in turn, effect the rating of their schools. This new rating system, with new terminology, also means that parents are learning a new system as to how their child and school rank within the state. Additionally, this study provides a much needed look at various stakeholder perspectives on the causes of the achievement gap, with an emphasis on how these perspectives may compare or differ. Current studies have been done that consider a certain group of stakeholders and their perceptions on what contributes to the achievement gaps of their school population; however, these studies focus on one stakeholder group alone: parents (Griffin & Galassi, 2012; Renth, 2014;), teachers (Cimpian, Lubienski, & Ganley, 2014; Pridemore, 2008; Uhlenberg & Brown, 2002), administration (Bol & Berry, 2005; Royle, 2013), and even students (McCracken & Barcinas, 1991; Rainey, 2004; Sampson, 2006; Strayhorn, 2009). However, these studies all focus on a single group rather than looking to determine common themes among stakeholders. Finally, data collected and themes from this study can be generalized and applied to other districts across the state and the United States as a whole to expand further research.

1.3.1 Kentucky Accountability Rating System

Currently, students in Kentucky's public schools take the Kentucky Performance Rating for Educational Progress (KPREP) Assessment. Beginning with the 2018-2019 school year, the Kentucky Department of Education, taking into consideration a school's performance on these assessments, assigns of three classifications to each school in a school district: Other, Targeted Support and Improvement (TSI), or Comprehensive Support and Improvement (CSI).

These three classifications take into consideration certain indicators of school performance. At the elementary and middle school level these include three categories: proficiency in reading and math, growth in reading and math, as well as English Language Learner's progress toward learning English, and separate academic indicator, which calculates a score of student performance in three tested areas – on demand writing, social studies, and science (Kentucky Department of Education, 2019). Contrastingly, high schools scores are calculated based on graduation rate and transition readiness, either into the career field or further academics.

1.3.1.1 Comprehensive Support and Improvement

Schools that are identified as CSI "are in the bottom 5 percent of schools at their level (elementary, middle, or high) in the state or had a graduation rate below 80 percent" (Kentucky Department of Education, 2018, p. 1). Because the CSI classification is dependent upon a school being in the bottom 5% of the state, Kentucky Education Commissioner Wayne Lewis clarified that "Regardless of what the accountability system looks like, we'll have the same number of CSI schools in Kentucky" (Marsee, 2019, p. 1). This means that schools can exit CSI status, if meeting qualifications in the aforementioned indicators; however, there will exist approximately the same number with this designated classification any given accountability year.

In the 2018-2019 school year, out of Kentucky's 1,272 public schools - elementary, middle, and high, there were 51 schools classified as Comprehensive Support and Improvement. Out of these 51 schools, 33 were elementary schools, 12 were middle schools, and only 6 were high schools.

1.3.1.2 Targeted Support and Improvement

According to the Kentucky Department of Education, schools that are classified as TSI are identified "as a result of having at least one student group performing as poorly as schools in the bottom 5 percent" (2018, p. 1). These student groups include those defined by the "Every Student Succeeds Act" as "(a) economically disadvantaged students; (b) students from major racial and ethnic groups; (c) children with disabilities; and (d) English learners" (Every Student Succeeds Act, 2015, p. 129). This means that other groups of students within the school can have high level of achievement, but a gap exists among a certain student population.

Approximately 39%, or 481 out of 1,272 public schools were classified as Targeted Support and Improvement for the 2018-2019 school year. In order to move out of this classification, schools will need to work to eliminate the achievement gap between these subgroups and the overall school population.

1.3.1.3 Other

Under the new accountability system, those schools who receive neither a "Comprehensive Support and Improvement" nor "Targeted Support and Improvement" are categorized simply as "Other". Thus, excluding those with CSI and TSI ratings, Kentucky's remaining 740 public schools are classified as "Other" for the 2018-2019 school year.

1.4 Research Questions

Aligned with the three goals of this study, this study focuses on three research questions:

1. To what extent does an achievement gap exist among different subgroups of students in Kentucky's K-12 public schools?

2. How do the perceptions of parents and teachers interact with the decision-making?

3. How do the ideas of parents and teachers in regard to closing the achievement gap compare?

1.5 Hypotheses

Since this study has three distinct research questions, the principal investigator is operating off of three hypotheses, each with reference to one of the separate research questions. Each hypothesis is listed below. These hypotheses will be revisited in the results and conclusions section.

H1. There are differences among different subgroups of students in Kentucky's K-12 public schools, specifically among students of different ethnicities.

H2. The perceptions of parents and teachers interact with decision-making in multiple ways.

H3. Stakeholders differ in regard to how they feel the achievement gap can be closed.

1.6 Biases and Assumptions

The principal investigator is a current elementary school teacher teaching at a CSI school in a metropolitan area in Kentucky. The past four years she has taught in the same school building in the same 4th grade classroom. Her student population are mostly African American students with several students enrolled or qualifying for special education services. She herself was from a low socioeconomic background in a rural area of Kentucky. The idea of an achievement gap impacts her daily teaching and she is invested in closing achievement gaps within her school and classroom. After the 2018-2019 school year she is leaving her current school to work at a TSI school in the same school district, a decision made as a direct result of changes implemented because of the school's CSI status. These experiences have shaped any biases and perceptions she has toward the achievement gap.

A few assumptions were made involving this study.

1. All participants would answer both the survey questions and the semi-structured interview questions honestly and openly to the best of their ability.

2. Teachers participating are from differing demographics, backgrounds, and current teaching locations – both grade level and geographical classification.

3. The study will provide next steps to help solve the achievement gap in Kentucky's public schools.

1.7 Theoretical Framework

This study operates under two key theoretical frameworks related to the achievement gap: the rurality framework and critical race theory.

1.7.1 Rurality Framework

Roscigno and Crowley (2001) established the rurality framework to describe the effect of investments in education by families and the schools, which are impacted by funding and resources. Districts with more resources are better able to provide for their students than districts with more limited budgets. In short, more resources mean more teaching and learning for students and their families. Though there may be some variance across counties, this framework is especially applicable when considering varying levels of funding for different school districts across the state of Kentucky, especially when comparing rural and urban districts. Though there are exceptions to the generalization – rural areas with economically profitable horse farms for instance, rural areas tend to lag behind their urban counterparts in terms of wealth. For instance, in 2004 the median household income of urban workers was $42,148; whereas, the average median income of rural workers was significantly less at $29,847 (Davis, 2009). One can infer that funding from property taxes would generally follow this pattern. Of the top ten counties with the highest property taxes earmarked for schools, only two were in rural school districts; the remaining eight were all metropolitan areas (WKYT, 2018).

Further, in Kentucky, rural school districts typically have lower populations, meaning that in the case of funding based on enrollment, schools in rural districts would have less available funds to spend per student. This coincides with the issue of varying socioeconomic subgroups in public schools. Just like economically wealthy school districts are able to provide more and better educational programs and experiences for their students, more affluent families are able to provide more and better educational and cultural experiences for their children. Further, the opposite is true. School districts that

do not receive as much funding cannot be expected to provide as many resources and services for their students. It can be inferred that these schools would have lower achievement scores and wider gaps, especially among students of different socioeconomic status (measured by qualification for Free and Reduced Lunch).

Two characteristics make the rurality framework especially apropos when studying the achievement gap. First, socioeconomic status is used to create a specific subgroup. Second, it has been addressed that "the relationship between SES, race, and ethnicity is intimately intertwined" (American Psychological Association, 2019) and research has shown that teacher perceptions of students of low socioeconomic status generally tend to be that they will low performing academically (Pridemore, 2008, p. 82).

1.7.2 Critical Race Theory

When studying the achievement gap, it is impossible to ignore the concept of race and ethnicity; this is especially true considering that certain categories of students designated in United States legislation are specifically defined by ethnicity. Zorn (2018) states it best when saying:

> Educators may think they sound enlightened in saying, 'I don't see race; I treat all students the same,' but according to [critical race theory], avoiding race means systematically underserving students of color (p. 204).

The term "critical race theory" (CRT) was originally used in the 1970's by Derick Bell, a civil rights lawyer and professor, when describing the impact of Western racial history and the conflict of interest in civil rights litigation (Delgado & Stefancic, 1998). Critical race theory became tied to education when scholars like Richard Delgado found

that white male students studying civil rights rarely cited African American authors in their research (Delgado & Stefancic, 1998, p. 467).

Tying to the rurality framework, critical race theory also addresses the issue of school funding, adding to the debate by addressing the issue that more affluent communities even tend to resent paying for school systems that have larger populations of poor, non-white students (Ladson-Billings & Tate, 1995, p. 53).

Critical race theory plays a large role in examining the achievement gap among students of color. Allen (2016) found that students from marginalized groups "based on race, sexuality, social and economic factors" have a more negative classroom experience than their white peers; these groups are represented in higher amounts in special education programs and identified less for gifted and talented programs, as well as having higher rates of dropping out and lower academic achievement.

Critical race theory is particularly relevant when examining teacher perceptions of the achievement gap. According to the United States Department of Education (2016), teachers are predominantly white, accounting for 80% of the field in 2016. It is this fact that CRT mentions has an impact on instructional practices and perceptions regarding students and their ability to succeed, specifically when the pressure was on raising test scores (Sleeter, 2017, p. 156). Ladson-Billings (1998) mentions the frustration that black teachers have being left out of the process of talking about how to teach students of color (p. 14). Sleeter (2017) found teachers reported learning about culturally responsive pedagogy in their teacher preparation programs; however, they tended to focus on a deficit model of their students of color, attributing student achievement to factors related to the student and their families instead of pedagogy (p. 157).

In terms of this study, according to the Kentucky Department of Education (2019), in the 2016-2017 school year, 96% of teachers were white even though white students only accounted for 77.4% of the enrollment. For this fact, implicit bias, stereotypes and attitudes that are not intentional may impact teacher's perceptions of the achievement gap.

Table 1 Number of Kentucky Counties by Census Classification

Classification	Number of Counties
Metropolitan	35
Micropolitan	26
Rural	59

Micropolitan counties		Metropolitan counties		Rural counties			
Anderson	*Menifee*	**Boone**	**Jefferson**	*Adair*	*Garrard*	*Marion*	*Todd*
Ballard	*Metcalfe*	**Bourbon**	**Jessamine**	*Allen*	*Grayson*	*Marshall*	*Union*
Barren	*Montgomery*	**Boyd**	**Kenton**	*Breathitt*	*Green*	*Martin*	*Washington*
Bath	*Muhlenberg*	**Bracken**	**Larue**	*Breckinridge*	*Harlan*	*McCreary*	*Wayne*
Bell	*Pulaski*	**Bullitt**	**McLean**	*Butler*	*Harrison*	*Mercer*	*Wolfe*
Boyle	*Rockcastle*	**Campbell**	**Meade**	*Caldwell*	*Hart*	*Monroe*	
Calloway	*Taylor*	**Christian**	**Nelson**	*Carlisle*	*Hickman*	*Morgan*	
Franklin	*Whitley*	**Clark**	**Oldham**	*Carroll*	*Jackson*	*Nicholas*	
Fulton		**Daviess**	**Pendleton**	*Carter*	*Johnson*	*Ohio*	
Graves		**Edmonson**	**Scott**	*Casey*	*Knott*	*Owen*	
Hopkins		**Fayette**	**Shelby**	*Clay*	*Knox*	*Owsley*	
Laurel		**Gallatin**	**Spencer**	*Clinton*	*Lawrence*	*Perry*	
Lewis		**Grant**	**Trigg**	*Crittenden*	*Lee*	*Pike*	
Lincoln		**Greenup**	**Trimble**	*Cumberland*	*Leslie*	*Powell*	
Livingston		**Hancock**	**Warren**	*Elliott*	*Letcher*	*Robertson*	
Madison		**Hardin**	**Webster**	*Estill*	*Logan*	*Rowan*	
Mason		**Henderson**	**Woodford**	*Fleming*	*Lyon*	*Russell*	
McCracken		**Henry**		*Floyd*	*Magoffin*	*Simpson*	

Figure 1 Kentucky Counties by Population Classification

CHAPTER 2. REVIEW OF THE LITERATURE

2.1 Definition of "Achievement Gap"

According to Ladson-Billings (2006), a frontrunner on Achievement Gap research, when you Google the term "Achievement Gap" you receive an astounding 11 million citations (p. 3). There are multiple definitions that explain what the achievement gap is as well as how it is measured. For this study, I adopt the National Education Association's definition of the achievement gap. According to the NEA (2017), gap students are those who fall into one or more distinct categories: racial or ethnic minorities, English language learners, special education students, male or female, or come from low-income homes. Molina-Solis (2011) defines the achievement gap as a "consistent difference in scores on student achievement tests between certain groups of children and children in other groups". Thus, the achievement gap is then the trends in performance among students of these distinct categories, most usually measured by national or state standardized assessments.

Often, studies that deal with the achievement gap mention the causes of the achievement gap which include disparity in resources in schools in different areas and racial inequity. This is accompanied with its own slew of terms. For example, the Great Schools Partnership's Glossary of Education Reform refers to the achievement gap as "outputs—the unequal or inequitable distribution of educational results and benefits", while they consider another term, "opportunity gap" to refer to the "inputs—the unequal or inequitable distribution of resources and opportunities" (2014).

It should be noted that although different categories are included (gender, ethnicity, language proficiency, etc.), most of the research literature prominently focuses

on racial and ethnic lines. Further, these same minority students seem to be mostly of lower socioeconomic status, a concept that indicates that ethnicity and socioeconomic status are entangled. It can be concluded that most studies regarding the achievement gap do so by examining students who fall into more than one of these categories more so than one category by itself. Finally, it was difficult to find literature that examined the achievement gap comparing male students versus female students. In this study, the term "achievement gap" will refer to the divide that existed in achievement between any categories of student when compared with another, for the sake of examining trends.

However, some researchers insist that the very terms associated with the achievement gap discourse help only to perpetuate the divide. Carey (2014) insists that these terms "serve only to fuel the flames that contribute to further drawing attention to the gap as understood" and that there needs to be a shift away from these labels. Milner (2013) goes further to say that the tendency to label students in the gap "can force us into studying and conceptualizing students of color from a deficit perspective". Carpenter, Ramirez, & Severn (2006) mention the importance of not categorizing the achievement gap in terms of one group, for instance, comparing white students with a lump category of "other races" (p. 114). Instead, their study found that within a subgroup classified by ethnicity there was a "stair-step" of achievement in which different subgroups outperformed other subgroups which outperformed other subgroups and so on. They insist that a singular definition of the achievement gap only misses an opportunity to influence the real issues between and within groups (Carpenter et al., 2006, p. 123). This debate on achievement gap discourse will also be considered and analyzed.

2.2 Causes of the Achievement Gap

To understand why it is that certain groups of students perform at lower levels than their peers, several of the research studies examined the causes of the achievement gap. This research has shown that this is a complex issue that depends on multiple factors. The issue of racial inequity, school district inequity, and institutional divides are all seen as factors that perpetuate the achievement gap. Some studies focus on racial divides, claiming that "the achievement gap is a reminder that race, and not class alone, is still a strong predictor of student performance on standardized exams" (Delgado et al., 2013). Others focus on the opportunity gap that exists when students do not have equal access to human capital and other resources (Gordon, 2004). King (2009) also made the case for the need for human capital in Massachusetts' schools. Some even say that the societal barriers that exist to create achievement gaps in the first place indicate that we should focus not on the gap, but the "education debt" that exists (Landson-Billings, 2006, p. 3).

2.2.1 Standardized Testing Bias

Finally, it cannot be dismissed that one of the causes of a perceived achievement gap is the measure of the achievement gap itself. Studies have been done that revealed class bias (Croizet & Dutrévis, 2004; Freedle, 2003; Klein & Jimerson, 2005;), gender bias (Dorner & Hutton, 2002; Keiser, H., Sackett, P., Kuncel, N., & Brothen, T., 2016; Saygin, 2019) and language and cultural bias (Banks, 2006; Newkirk-Turner & Johnson, 2018; Martiniello, 2008) in standardized assessments that speak to the issue of validity of test scores.

Despite having higher grades in high school and college than their male counterparts, the SAT continues to predict that female students will not be as successful (Froese-Germain, 2001, p. 115). Steele and Aronson (1995) discussed the impact of stereotype threat on black student's achievement on standardized assessments. Stereotype threat is essentially "test performance anxiety stimulated by the test taker's awareness that African Americans tend not to perform well on traditional tests" (Ford & Helmes, 2012, p. 187). This perception can lead to lower performance as test takers basically fulfill what they believe is expected of them. Further, Martiniello (2008) explored the difficulty that English Language Learners had answering mathematics questions that contained several high frequency words that were not familiar with students; He found that non-ELL students had double the change of answering these questions correctly compared to their ELL peers. Turner and Johnson (2018) argue that this type of language bias in assessment raises the question of whether low performance by "culturally and linguistically diverse students" is reflective of their lack of knowledge or test bias (p. 190).

Further, Qualls (1998) points out that traditional standardized paper and pencil assessments are limiting in what they actually assess, aimed at a particular set of learners; instead she argues that these assessments must be grounded in the same culturally relevant teaching practices that are designed to help students of color succeed in instruction (p. 297). Froese-Germain (2001) also argues the point that:

> the content of test questions "ignore the cultural experiences, perspectives, and knowledge of children from racial and ethnic minorities, low income families, and inner city and rural children (p. 116).

In short, it is not just the instruction that we provided students with, but the measures we use to assess any gaps must be taken into consideration.

Lastly, one study of a high school with significant achievement gaps actually determined that the school had “sustained gap-closing progress amongst all the school's population groups” but was not considered a success because the gap closure did not fit the criteria that required schools to close achievement gaps within their subgroups for three consecutive years (Blanford, 2001, p. 114). If this criteria and more “successful” schools were included, this may lead to a better understanding of factors that can work toward closing the achievement gap and that can be applied at a larger scale to eventually lead to sustainable growth.

2.3 Existence of the Achievement Gap

2.3.1 By Gender

Recent literature surrounding the achievement gap between male and female students was difficult to find. Most studies focused on results of schooling and gender, like the wage gap, or career fields typically entered into by sex. The term “gender gap” has been used as the name for the divide in achievement between male and female students. Different studies draw different conclusions about the existence of a gap by gender, particularly in mathematics. One Early Childhood Longitudinal Study-Kindergarten study determined that, though, in kindergarten achievement gaps in mathematics were statistically small in favor of male students, this gap widened and “grew to nearly 0.2 standard deviations by Grade 2” (Cimpian, et al., 2016, p. 7).

Whereas, some studies found little to no evidence that a gender gap exists (Hyde, Lindberg, Linn, Ellis, & Williams, 2008; OECD, 2006; Penner, 2008).

2.3.2 By Ethnicity

Graham and Provost (2012) used data gathered from the Early Childhood Longitudinal Study to predict the average achievement for students of different racial and ethnic backgrounds. They found that "the average African-American student is predicted to score substantially lower on mathematics assessments at all points in time than the average white student (p. 2). Fan & Chen (1999) found similar results using an assessment known as ANCOVA. These results showed that African American and Hispanic high school students in 8th, 10th, and 12th grades scored lower than Asian and Caucasian groups, regardless of location in a nation-wide study (p. 20). Further complicating the matter, Jackson's (2016) revealed that there is a "statistically significant difference in African American third grade student's FCAT 2.0 mathematics…. based upon local", whether urban or rural (p. 80).

Studies have attempted to explain this gap between students of different ethnicities. The lack of representation by teachers of color in schools that are predominately populated by minorities can have an impact on achievement (Uhlenberg & Brown, 2002, p. 501). According to their study, it was found that black teachers who experienced high poverty and urban backgrounds themselves had a positive impact on student achievement. The reverse was also found to be true. Bias from non-minority teachers, whether intentional or not, impacts the success of students of color. This fact mirrors the concept in the debate surrounding "testing bias" in standardized tests in relation to minority students (Uhlenberg & Brown, 2002, p. 504). Further, teacher

perceptions of what causes the achievement gap are influenced by the minority populations of their respective schools. For example, Bol and Berry (2005) determined that schools with predominantly white schools were less likely to consider language issues as factors in the gap when compared to schools with high populations of Hispanic/Latino students (p. 41).

2.3.3 Among Special Education Students

Throughout history, students with disabilities have had their own sets of legislation and hurdles in the classroom setting. Prior to 1965 and the passing of the *Elementary and Secondary Education Act* (ESEA) students with special needs were not even allowed to attend the same schools as their peers; however, it was not until the *Education for All Handicapped Children Act* of 1975 (EAHCA) that students were legally protected to a public education similar to their peers (Murphy, 2018, p. 1). A few decades later, the No Child Left Behind Act once again came into play. With its passing in 2002, special education students were added into the same system of standardized testing as their non-special education peers. Though the intent was for special education students to receive a grade appropriate education, the result was a widening of the achievement gap and an impact on a school's overall standardized test scores (Wiley, Mathis, & Garcia, 2005, p. 3).

Schulte and Stevens (2015) found that students who continually qualify for special education were the farthest group behind their peers and grew the least amount over time in terms of achievement, the direct opposite of closing the achievement gap (p. 383). Akos, Rose, and Orthner (2015) reached the same conclusion when studying middle school students in North Carolina; special education students grew the least from

fifth to sixth grade and continued to lag behind their peers (p. 181). In terms of this lack of progress, according to Benner, Kinder, Beaudoin, Stein, and Hirchman (2005) students with disabilities make little to no progress in reading, especially those above second grade (p. 77). One study of a district in Minnesota actually found an "inverse relationship…between students' average score in mathematics and [the school's] special needs population" (Bhowmick, 2014, p. 60).

2.3.4 By Socioeconomic Status

Renth's study (2014) found that higher income students outperformed their lower income peers in four different academic areas, along with having higher levels of discipline referrals and absences. African American students who experience generational poverty were more likely to experience an achievement gap when compared to white peers (Simpson, 2006, p. 53). Williams (2005) determined that students' scores in mathematics were less consistent when looking at location – rural or urban, but strongly predicted by SES in multiple countries studied, with the exception of Finland (p. 10). According to Uhlenberg & Brown (2002), socioeconomic status may factor into achievement not so much at the early level, but as students age since parental wealth determines the opportunities that impact achievement (p. 497). Lack of access to these resources including reading materials and technology at home could indicate a lack of access to as much learning as their more affluent peers.

One study found that teacher "seemed to view socioeconomic status and a culture opposed to achievement as connected" (Bol & Berry, 2005, p. 38). Teachers responded to a survey in ways that indicated they felt that families of poorer students may not value education or make it a priority. Interestingly enough, in the same study, low teacher

expectations were identified as a common theme when teachers were asked about possible causes of the achievement gap.

McCracken and Barcinas (1991) found that urban parents tended to have higher levels of education and were more likely to expect their children to attend higher levels of education after graduation of high school (p. 43). However, Cheng & Starks (2002) found that parents of Asian, Hispanic, and African American students had higher educational ambitions for their children than white parents. However, these aspirations were connected to socioeconomic status, with students living in poverty having less parental involvement and encouragement than their peers (Rainey, 2004, p. 30).

Although Lee (2016) found that socioeconomic status, usually dictated by level of parental education, impacts the achievement gap, regardless of curriculum type, poorer, urban schools are not the only ones who experience an achievement gap. In fact, Grossman and Ancess (2004) describe the action research projects regarding mathematics instruction that have been completed in affluent school districts that aim to bridge the gap between students of differing socioeconomic statuses.

2.4 Perceptions of the Achievement Gap

Numerous studies have been done to examine the perceptions of different stakeholders in terms of the achievement gap. Several studies focused on teacher perceptions of causes of the achievement gap (Pridemore, 2008; Bol & Berry, 2005). Some focused on teachers' perceptions toward a specific subgroup of students like the gender gap in mathematics (Cimpian, Lubienski, & Ganley, 2014; Cimpian, Lubienski, Timmer, Makowski & Miller, 2016) or the gap between certain racial groups (Uhlenberg

& Brown, 2002). Fewer focused on the parent's perceptions (Renth, 2014) or perceptions of administrators (Royle, 2013). Studies have been completed to determine students' perceptions of the expectations their teachers have for them (Rainey, 2004; Sampson, 2006) or their own aspirations after high school (Strayhorn, 2009). A few studies compared rural and urban students to determine if there were achievement gaps among locations (Fan & Chen, 1999; Graham Jackson, 2016).

2.4.1 Among Parents

Current literature was difficult to find that centered on parental perspectives of the achievement gap; instead, research tended to focus on the importance of parental engagement on decreasing achievement gaps (Blandin, 2016; Hammersla-Quick, 2016; Wolvek, 2012). It is interesting to note this stark contrast – the importance of including families in the achievement gap narrative and yet the limited studies inviting parents to share their perspectives on what they feel causes the achievement gap and what can be done to close it.

Renth (2014) interviewed parents of low socioeconomic status to determine their perceptions on what contributes to the achievement gap. This study found that though parents all agreed that they should be involved in their child's education, the shared perception among parents of these students was that most parents did not know how to help. However, when asked why a gap existed between students of wealthier families tended to perform better on standardized tests than students from poorer families, "overall, parents did not indicate that they believe the school or school district directly contributes to the achievement gap in general" (Renth, 2014, p. 47). Instead, parents perceived lack of resources as an impact on achievement, even including a school's

attempts to form relationships with families including emails, family events, and technology since families from low socioeconomic status may not be able to access these for different reasons (Renth, p. 48, 2014).

2.4.2 Among Teachers

One study indicates that teachers tend to rate boys higher in mathematical ability than their female peers which may help to influence the gender gaps in math during elementary school (Cimpian, Lubienski, Timmer, Makowski, & Miller, 2016, p. 2). Although the study determined that teachers perceive that girls consistently behave better than boys, when behavior was seen as equal between male and female students, male students were typically rated by the teacher as having a higher mathematical ability. It was only when teachers perceived the girls working harder than the boys that they were rated higher in mathematical ability. This indicated to researchers that teachers may be equating mathematical ability with behavior, stemming from a gender bias that affects female students in mathematics especially (Cimpian et al., 2016, p. 14).

When interviewing teachers in Nashville, Pridemore (2008) found that “95% of teachers viewed the socioeconomic status of students as the leading indicator of academic performance” (p. 82). These “economically disadvantaged” students were seen as having lower motivation and drive (Pridemore, 2008, p. 83). In their responses, teachers indicated several of the factors related to socioeconomic status that are already hypothesized to impact student achievement like adequate nutrition, school supplies, and preparation for school. Often, socioeconomic status was linked to race, a notion that will be examined further.

In regard to ethnic subgroups, studies also report that African American students experience lower expectations from their teachers in mathematics (Berry, 2004, p. 100). Uhlenberg and Brown (2002) described the impact of teacher's perceptions in regard to black students. Though their study included only a small statistical sample of 26 black and 25 white teachers, black teachers indicated that factors like racism (intentional or not), teachers with low expectations of black students, and not meeting the instructional needs of black students are more of an impact on the achievement gap than white teachers (p. 513). Rainey (2004) also concluded that teachers tended to have lower expectations for black students, particularly black males (p. 31).

Further, Pridemore determined through teacher surveys that teachers felt that race was the second leading cause of the achievement gap, behind English proficiency (p. 80). In her study, 82% of teachers surveyed felt that race and culture impacted students' academic performance. This indicates that there are divides among teachers themselves as to what causes the achievement gap and what can be done to close it.

2.5 Rural, Urban, and Suburban School Districts

There is a notion that rural school systems are associated with disadvantage. There are studies that indicate that there is not an overall rural gap in achievement; however, other studies and publications prove that this notion still exists among several researchers and stakeholders in education (Graham and Provost, 2012; Washington, 2004; Williams, 2005). Contrary to this held view, Fan and Chen (1999) studied high school students across rural, urban, and suburban areas in a national study and found that rural students performed in comparison or even better than their urban peers across four content areas: reading, math, social studies, and science. (p.

24). Further, in a cross-national study, Williams (2005) found that in 11 of 24 countries with statistical significance differences, “mathematics achievement gaps were more pronounced between rural and urban communities” and that urban communities actually scored lower than their rural counterparts (p. 5). In fact, according to Williams’ study, the “U.S. was characterized by a substantial and persistent urban achievement gap” (2005, p. 16). Williams, Davis, Saunders, and Williams (2002) found that urbanicity impacted African American high school students in characteristics such as grade point average, intent to graduate, and the number of disciplinary actions they received.

To complicate things, a study by the Carsey Institute reported that the opposite was true – though urban and rural students score lower than their suburban peers, it is rural students who score significantly lower than their urban counterparts in mathematics, grades K-8 (Graham & Provost, 2012, p 2.). Graham and Provost (2012) continue to conclude that this differs among geographic region in the United States and suggest that this may also play a part in student achievement. Considering these conflicting research findings and the rurality framework, it seems that resources play a large part in the achievement gap.

Roscigno and Crowley’s (2001) rurality framework indicates that a school’s student academic achievement is “directly affected by school and family investments in education”. (Jackson, 2016, p. 10). Since public schools depend on property taxes for funding, it can be hypothesized that those areas with higher property values will receive more funding that will trickle down to resources for students and families (Landson-Billings, 1998, p. 20). However, the addition of Title one funding seeks to eliminate the

disparity between schools with differing amounts of capital. The Every Student Succeeds Act, or ESSA, (2015) specifically mentions closing achievement gaps as one of its aims by “the distributing and targeting resources sufficiently to make a difference to local educational agencies and schools where needs are greatest” (p. 129).

Copyright © Heather Renee Brown Chapman 2019

CHAPTER 3. METHODOLOGY

This chapter will elaborate on the design of the study. The following subsections include: (a) Research Design, (b) Procedures, and (c) Data Analysis.

3.1 Research Design

This study consists of three distinct pieces aimed at accomplishing its goals: KPREP data analysis, stakeholder surveys, and stakeholder interviews. First, since the accountability system of Kentucky's students is tied to achievement on the KPREP assessment, KPREP data from the most current year, 2017-2018, is aggregated according to the current rating system. Second, stakeholders of student achievement including parents of enrolled students as well as teachers working in in the K-12 public school system were asked to complete a Likert-style online questionnaire with questions related to the achievement gap. Finally, a few representatives from these same stakeholders completed a follow-up interview with open-ended questions further exploring perceptions of the achievement gap. The three data sources used in this study are elaborated on more in this section.

3.2 Procedures

3.2.1 KPREP Data from the 2017-2018 School Year

Data from the 2017-2018 KPREP assessment, published by the Kentucky Department of Education was analyzed. First, school districts were sorted by location: metropolitan, micropolitan, or rural. Secondly, numbers of schools with different ratings, particularly CSI and TSI, were counted and sorted by the subgroup(s) that effected their

overall rating. These sorted results are presented in order to report district outcomes to establish a context of reported gaps in Kentucky.

3.2.2 Online Parent and Teachers Surveys

An online Qualtrics survey link was sent out through the principal investigator's personal social media. Friends were encouraged to share the survey to reach as many respondents as possible. The survey invited three specific groups of stakeholders in Kentucky's K-12 public schools to submit their responses: parents of students and teachers. These stakeholders were asked their degree of agreeability with statements designed to determine common perceptions of the achievement gap, thoughts surrounding certain subgroups, and ideas about the causes of the achievement gap. Appendix A lists a complete copy of parent survey questions and Appendix B lists questions included in the teacher survey; however, a couple of sample items can be found in Figure 2. Table 2 shows the degree of agreeability six-point scale ratings.

Similar surveys were given to parents and teachers; however, since the audience changes slightly depending on who is answering the questions, a few statements were worded differently for an audience of parents than an audience of teachers. Parents were given fourteen statements and three open-ended questions with an opportunity to add any additional comments. Teachers were given sixteen statements with two open-ended statements and the same opportunity to add any additional comments. Both qualitative and quantitative data was collected from the surveys. See Appendix A for a copy of parent survey questions and Appendix B for a copy of teacher and administrator survey questions.

3.2.3 Parent and Teacher Follow-up Interviews

This study hoped to interview five representatives in each of category: parents and teachers. Concluding the completion of the online survey, willing participants were given the opportunity to provide contact information for a follow-up semi-structured interview. Participants were randomly selected for participation in a follow-up interview. The intention was to include parents of students and teachers in rural, micropolitan, and metropolitan areas and spanning across multiple grade levels: elementary, middle, and high school. Interviews were scheduled around the availability and comfort of those willing to participate. Interviews were recorded and transcribed for later reference. Data was coded in order to determine any themes that emerged. Further, patterns and trends in these conversations were analyzed to determine if there were shared perceptions among these stakeholder groups. See Appendix C for a copy of the follow-up interview questions given to parents and Appendix D for a copy of the follow-up interview questions given to teachers.

3.3 Data Analysis

The principal investigator uses two main strategies for data analysis: open coding and ex post facto design. Cohen, Manion, & Morrison (2011) describe ex post facto research as a study where independent variables are studied in retrospect to determine any causality. With the nature of the KPREP data, ex post facto research design was the most appropriate strategy. KPREP data from the 2017-2018 school year is analyzed using this method. KPREP ratings are examined in relation to their location and the subgroup(s) that garnered such a rating. With this, patterns by location classification are inferred.

In regard to the interviews, the study employed use of open coding to identify themes within teacher and parent responses. Strauss and Corbin (1990) used the term "coding" to refer to how qualitative data is analyzed to find emerging themes (p.7). They further explain that in order to develop a comprehensive picture of the data, one must use three different types of coding: (a) open coding, (b) axial coding, and (c) selective coding. According to Pridemore, open coding is "the process of identifying and revealing concepts, characteristics, properties, and frequencies in the data" (2008, p. 73). Cresswell (2005) describes a three-step process in which data is analyzed and interpreted (p. 247). First, a first read through is done to get a general sense of participant's responses. This is where open coding is used. Axial coding is used in step two, where data is pieced together in new ways when themes begin to emerge (Strauss & Corbin, 2008). Finally, one can begin to develop a narrative using selective coding (Cresswell, 2005, p. 2008). After transcribing recorded interviews, transcriptions were coded using this process to identify emerging themes. Note that this coding procedure was used for both the interviews and the open-ended questions on the online survey.

Copyright © Heather Renee Brown Chapman 2019

Table 2 Online Survey Questionnaire Six-Point Scale and Ratings

Degree of Agreeability Survey Scale
1 - Strongly Disagree
2 - Disagree
3 - No Opinion
4 - Agree Just a Little
5 - Agree
6 - Strongly Agree

		1	2	3	4	5	6
1.	I can define the term “achievement gap”.						
2.	There is an achievement gap in mathematics among African American and White students in my child’s school district.						
3.	There is an achievement gap in mathematics among Special Education and general education students in my child’s school district.						

Figure 2 Online Survey Questionnaire Sample Questions

CHAPTER 4. RESULTS

First, it was necessary to establish the existence of an achievement gap within school districts in Kentucky's public schools. Therefore, released KPREP assessment data was analyzed first.

4.1 KPREP Assessment Data Analysis by Locale

4.1.1 CSI

In the 2017-2018 school year, twenty school districts within the state of Kentucky had schools that were classified as "CSI" status. Again, according to Kentucky's new rating system, a CSI rating means that students in the school as a whole scored in the bottom 5% of the state or, if a high school, had a graduation rating of less than 80%. Most of these school districts only had one or two schools with such as rating, with the exception of Fayette and Jefferson counties with seven and twenty-one schools listed as CSI respectfully. Out of the 51 schools identified as CSI, only two (4%) of them are located in rural districts. Both Sebastian Middle School in Breathitt County and R. E. Stevenson Elementary School in Russellville Independent (Logan County) were identified as CSI status because their students scored within the bottom 5% of students on the KPREP assessments. Five schools in this category (10%) were from metropolitan areas. A majority forty-four school districts (86%) were from metropolitan areas.

Looking further, most of these schools were at the elementary level and rated as such because they scored within the bottom 5% of the state. Only one metropolitan school, Silver Grove High School in Campbell County, was categorized because of graduation rate; although it can be noted that three high schools, all in Jefferson County,

were labeled CSI because they fell into both the bottom 5% and graduation rate categories.

4.1.2 TSI

In regard to TSI status, the data follows the same pattern, with more schools in metropolitan areas receiving a TSI rating compared to their rural counterparts. A TSI school received such a rating as a result of one subgroup (or more) scoring significantly lower than their peers. Table 3 lists the number of school districts with at least one school receiving a TSI rating, compared the number of districts in that population category.

Every district in the metropolitan and micropolitan categories had at least one school classified as TSI. When considering that 481 of Kentucky's schools (33% of Kentucky's overall schools) received a TSI rating, it can be concluded that several of these districts had more than one school listed as TSI. This point will be examined further. The only category that did not have every district with at least one TSI school was the rural category. As listed above, only 44 of 59 counties had a TSI rated school.

4.1.2.1 TSI Category Analysis

As mentioned, schools receive a TSI rating with "one or more student groups performing as poorly as all students in any lowest performing 5% of Title I or non-Title I schools" (KDE, 2018, p. 3). These categories include ethnic groups: African American, Asian, Hispanic, Native Hawaiian or Pacific Islander, White, or Two or More Races; Disability, ELL, and Free and Reduced Lunch. Several schools received a TSI rating for more than one group. Table 4 shows the number of schools that received a TSI rating for each category, as well as how often that group appeared.

Schools were overwhelmingly identified as TSI because of the performance of their special education students. This category was the single subgroup factoring into a total of 238 schools' TSI rating. When counting schools with multiple subgroups listed, this increases almost another hundred instances, for a total of 330 schools. With this amount, the next highest instance of a subgroup hardly compares. When considering race and ethnicity, the subgroup that appeared the most was African American students, with 30 instances as a single factoring subgroup and 74 when including all instances. This data also indicates that more schools with achievement gaps typically have gaps among multiple subgroups and not just a single group of students, something that needs to be considered in the discourse of an achievement "gap". Instead, achievement "gaps" may be the more appropriate term.

4.1.2.2 Ethnicity – Rural vs. Micropolitan vs. Metropolitan

Only four rural schools were categorized as TSI because of a single ethnic category. Russellville Junior/Senior Middle School was TSI based on their African American population. Caverna Elementary School was TSI based on the performance of their white population. Finally, Garrard Middle School and Russellville Junior/Senior High School were TSI because of their Hispanic population. When including schools with multiple subgroups as a TSI factor, this number only rises to seven schools out of a total of 83 schools having an underperforming ethnic subgroup when compared to their other peers. This may be because there tends to be a lower minority population in rural areas in Kentucky according to the 2010 US Census Bureau.

For example, the population of Adair County, one rural county in Kentucky, is 94.6% white (Proximity One, 2019). Caverna Independent mirrors this statistic exactly,

with Russelville Independent being only slightly more diverse at 78% white. Further, the fact that Garrard County received a TSI rating because of their Hispanic population is at first glance surprising since only 2.4% of their overall population is Hispanic. However, this could be due to the fact that, given lower numbers of Hispanic students, this population has a higher outsize effect on the subgroup overall. Deeper analysis into the specific student scores of the school would be necessary to determine how much of an achievement gap actually exists among this population.

Contrastingly, a total of thirty-five schools in metropolitan areas and nine micropolitan areas were TSI because of a single ethnic subgroup. When considering ethnicity subgroups in schools where there were multiple subgroups, ethnic groups were present in 75 different instances overall, with 57 instances occurring in metropolitan districts and 18 instances for micropolitan areas. This furthers the prediction that counties with higher minority populations will be those districts with minority subgroups classified as underperforming in relation to their peers. Wiley, et al. (2005) stated:

> Schools with greater diversity, meaning they have more student subgroups, will be identified at a faster rate than schools with more homogenous populations simply because there are increased opportunities to fail. The effect of these provisions is that a school with a highly diverse population of ethnic groups, children in poverty, non-English speakers, and special education students may have more than 30 opportunities to fail in a given year. In contrast, a school with limited poverty and no sizable minority population has far fewer opportunities to fail and is less likely to be identified (p. 12).

When comparing two schools from two districts with differing demographics this seems to be the case.

Jefferson County for instance is the largest school district in Kentucky, enrolling 99,813 students in the 2016-2017 school year (U.S. Department of Education, National Center for Educational Statistics, 2019). We can compare two of its schools, randomly selected because of their demographics and overall ratings, to determine how true this fact is. One of its middle schools, Newburg Middle, was rated TSI according to performance by five subgroups: African American, Asian, English Language Learners, students who qualified for Free/Reduced-Priced Meals, and Disability. Looking at the school's demographics, Newburg has a higher percentage of minority students than schools in a rural district. Breckinridge County High School, for instance, is located in a rural area and enrolls only 2,800 students in the 2016-2017 school year (U.S. Department of Education, National Center for Educational Statistics, 2019). It was rated TSI according to two subgroups: African American and Disability. Breckinridge County High School is 91.7% white students; whereas Newburg Middle is only 25.5% white (Kentucky Department of Education, 2018). One could infer that Breckinridge County High School would be less likely to have an achievement gap among its Asian students since the total population is approximately 0.7%, or 1 total student; one student's scores would not be considered a valid measure of an entire subgroup. Further demographics of these two schools are provided in Table 5.

4.1.2.3 Disability

Schools in every population category: rural, metropolitan, and metropolitan received a TSI rating because of the performance of their special education students. Out

of all the subgroups (ethnic, socioeconomic status, etc.) disability was the category that appeared the most as evidence that a school required a TSI rating. This was overwhelming true regardless of location, indicating that there is a significant achievement gap in Kentucky's public schools between students with disabilities and those without.

When aggregating by this subgroup, 61 schools in the rural areas were TSI based on their disability group alone, with a total of 71 schools including those having multiple subgroups with disability as at least one subgroup. Metropolitan areas had a total of 135 schools scoring TSI because of their special education population, adding another 77 for schools with multiple subgroups. This means that an impressive 212 schools of 275 total (77%) of metropolitan schools were TSI because of their special education population. Though the micropolitan areas had lower numbers than this, they too had a significant number of schools with TSI ratings due to this subgroup. Alone, thirty-eight schools were TSI and combined with other subgroups, there were a total of forty-six out of 123 micropolitan schools (37%) that were TSI with disability as a listed subgroup.

4.1.2.4 Multiple Categories

Several schools had TSI ratings due to multiple subgroups. Most of these schools only included two subgroups; however, there were schools with more than one even as many as five. subgroups. For instance, in Fayette County seven schools had more than three subgroups listed, with four of those seven schools rated TSI because of five subgroups: African American, Hispanic, English Language Learners, Free/Reduced-Price Meals, and Disability. The rural school districts only had seven schools with multiple categories and the micropolitan areas almost matched with eight schools. These were

mainly disability and a race category, either Hispanic or African American. This contrasts starkly with the metropolitan areas with 82 different schools with multiple subgroups. This indicates that location of school does have an impact on student achievement, particularly in regard to subgroups. Again, this may be because those metropolitan areas have a higher percentage of these students than their rural and micropolitan counterparts.

4.2 Surveys

A total of 70 respondents participated in the online survey; this includes participants who completed the survey and those with only partial responses. For the sake of this study, only respondents that completed the entirety of the survey will be included. Of the total respondents, 48 were teachers and 19 were parents. Survey results will be given broken down by category. Figure 3 shows the breakdown of the number of participants.

4.2.1 Parents

A total of nineteen parents responded to the survey; however, only eight completed every question item. Only two parents indicated the rating that their school received in regard to KPREP for the 2017-2018 school year. Both of these ratings indicated were “other”.

4.2.1.1 Definition of Achievement Gap – Parental Perceptions

No parent respondents indicated that they could not define the achievement gap. Though one parent indicated a “neutral” response, all other participants at least felt they agreed with the statement. When asked to define the achievement gap in the open-ended questions, all respondents included some verbiage to indicate that an achievement gap is

a disparity among different populations of students. Only one parent mentioned specific subgroups but included only “students of color or special needs”. It is worth noting that these are the two specific subgroups mentioned in the survey.

Additionally, in item number 15, parents were given an open-ended question asking them to define the achievement gap; the same is true of teachers in item number 17. Together, responses for definitions of the achievement gap were coded using five separate indicator codes. An initial reading of all responses, both parent and teacher were reviewed. During follow up readings, whenever a specific characteristic was mentioned, it was coded. There emerged five specific characteristics in responses that appeared multiple times across both parent and teacher definitions. Parent responses will be analyzed in this section. These codes are listed in Table 6.

It can be inferred that parents were hesitant to define the achievement gap. Several participants simply listed “N/A” or some variation in the response box for this question; whereas 8 parents filled this box in with an attempted definition. This may be for multiple reasons – one possibility being that they did not know the definition. However, this is up to interpretation, a possibility discussed further in the conclusions section. Nevertheless, this open-ended response is very important to note since it impacts responses given for the likert items in the survey. If parents do not have a true understanding of what the achievement gap even is, they cannot give a valid assessment of its prevalence or what contributes to it.

Of those that gave a response, parent definitions of the achievement gap did not differ greatly. In fact, most definitions mentioned some version of “disparity in academic achievement between groups of students”. Six of the eight parents mentioned the term

“disparity” or “difference” (D2) in their definitions. The same six explained that this difference was in “academic achievement” or “educational performance” (D4). The group was divided in terms of including specific student groups. The code D5 – General Term “Group(s) of Students” means that a participant used some variation of the phrase “groups of students” but did not list a specific subgroup(s), which was given its own code, D1. In reference to this, four parents used the general phrase (D1); whereas only two parents named specific subgroups. Those named included, students of differing “race or socioeconomic standing” and “students of color or special needs”. No parents included the word “assessment” (D3) in their definitions. Figure 4 shows the frequency of each code in parent responses.

4.2.1.2 Existence of an Achievement Gap – Parental Perceptions

In terms of subgroups, parent perceptions mirrored what the KPREP data shows. Only one parent indicated that they disagreed that there was a gap among special education students. Three respondents actually indicated that they “agreed very strongly”. Contrastingly, when asked about the presence of a gap among African American students and their peers, most respondents either chose to remain neutral or disagreed. Further, only one parent disagreed with the statement that their child received the same education as other students of different races. This was also true when participants were asked about African American and special education students by specific locations. More parents perceived that special education students performed worse in both rural and urban areas than African American students. Analysis of the KPREP data showed that the gap between African American students is not as present as the one among special education

students. Finally, when questioned about socioeconomic status, of those agreeing wealthier students perform better than their peers in mathematics (four parents total), all parents indicated that they “agree very strongly”.

4.2.1.3 Communication of Achievement Gap – Parental Perceptions

In regard to communication with schools and parents, results were mixed. Half the parents said agreed that communication was effective, while half disagreed. This indicates that there are mixed perceptions about the communication between parents and schools, a characteristic that will be explored further in the parent semi-structured interview section. Figure 7 shows responses of parents for each item on the online survey.

4.2.1.4 Teachers

A total of 48 teachers responded to the online survey, with a total of 23 teachers completing the entirety of the survey questions. It is important to note that demographics were not recorded so survey questions cannot be disaggregated by socioeconomic status, race or ethnicity, or geographic region – an issue discussed further in the limitations and recommendations sections.

All of the teachers agreed that they could define the achievement gap. In fact, half of the teachers indicated that they “agreed very strongly” to item number one, “I can define the achievement gap”.

4.2.1.5 Definition of Achievement Gap – Teacher Perceptions

Item number 20 was an open-ended response where teachers were asked to define the achievement gap. Again, responses were coded using the same five codes used for parent responses included in Table 6.

When compared to the parent responses, teachers seemed to have a more solid grasp of what the achievement gap actually is. The frequency of codes increased when teachers defined the term. Again, the two highest codes that appeared in teacher responses were the same as those for parents, the term “difference” or “disparity (D2) and an indication that this difference is in “academic achievement” or “academic performance” (D4). Both of these codes were present thirteen times out of 24 separate definitions given. Mirroring parents, teachers mentioned specific subgroups (D1) as much as the general term “groups of students” (D5). Both of these codes appeared eleven times. Of the specific subgroups mentioned, socioeconomic status was mentioned the greatest number of times at ten instances; race was the next highest at eight times. Gender was mentioned only four times. Surprisingly, special educations students were not specifically named at all. Further, only three teachers specifically included assessment(s) (D3) as a measure in their definition of achievement gap. Figure 5 shows the frequency of each code in teacher responses.

4.2.1.6 Existence of Achievement Gap – Teacher Perceptions

In terms of the perception of the existence of an achievement gap, results were mixed. Eleven teachers felt that all students get the same education regardless of race, gender, or socioeconomic status. However, these same teachers answered other item

questions a little differently, indicating that they feel there are other causes to the achievement gap other than the education students are receiving. Only one teacher disagreed that with item number two, “In my district, there is an achievement gap among white and African American students in mathematics”. This indicates that teachers perceive that there is an achievement gap among racial lines. However, in responses to item number six, only one teacher felt that academic achievement is related to race. Further, when asked about low-performing students, teachers were divided. Half (11) agreed that their low performing students were black or Hispanic; whereas half (11) disagreed with this statement.

In terms of other subgroups, it is interesting to note that every single teacher agreed that there is a gap among special education students and their peers. Seven teachers agreed “very strongly” with this statement while five teachers did “agree just a little” Again, this fact is reflected in the 2017-2018 KPREP data analyzed. When questioned about economic status, six teachers felt that socioeconomic status affected achievement.

4.2.1.7 Causes of the Achievement Gap – Teacher Perceptions

As far as causes of the achievement gap, only one teacher felt that parent involvement impacted the achievement gap. Teachers were divided about location, rural or urban. Nine teachers felt the achievement gap was more of an issue in urban areas; while eight felt this to be true for rural areas. As indicated in their responses for race, teachers did not feel that race impacted student achievement.

4.2.1.8 Closing of the Achievement Gap – Teacher Perceptions

Priorities for closing the achievement gap were mixed. Half of the teachers agreed that closing the achievement gap was a priority in their district; whereas half disagreed with this statement. However, only three teachers indicated that they felt that closing the achievement gap was not important.

Teachers had several different ideas about what can be done to close the achievement gap. More teachers felt their districts lacked adequate supports and resources for African American students (11) than had them (8). The same was true of resources for special education students, though by a smaller margin. Even though more teachers perceived that there was a gap among special education students than African American students, eleven teachers felt there were not adequate resources for special education students that would help close any achievement gaps while However, more teachers felt that their districts were dedicated to closing the achievement gap in mathematics (12) than were not (10).

Item Number 18 was also an open-ended question where teachers were asked about their perceptions about what they think has been the most effective at closing the achievement gap. Analyzing the responses, several responses were present multiple times. To organize these different responses, ten codes were used to categorize types of responses. These codes are listed in Table 7.

The frequency for each Closing the Gap code is graphed in Figure 6. These indicate the total number of times that a certain code was mentioned specifically in an open-ended comment. The code that occurred most frequently was Differentiated

Instruction or Small Group Instruction (C5). Seven teachers specifically included statements like “differentiation and meeting students on their level” and “small group teaching based on student needs”.

This category was very similar to the second most prevalent idea about what is effective at closing the gap - Instruction (C8). This category includes any response that referred to “quality instruction”, rigorous instruction, or “explicit instruction”. One teacher that mentioned instruction suggested that teachers must being using data analysis and afterword, use that formative and summative data to provide “rigorous teaching of the standards with an intentional focus on area/students that need help closing the gap”.

When including both Differentiated Instruction or Small Group Instruction (C5) and Instruction (C8), it is clear that teachers overwhelming believe that instruction is the most effective in improving academic achievement and helping to close the gap. The only other comparable code was RTI - Response to Intervention (C2). Again, this code relates to the type of instruction that students are receiving. Other codes were not as prevalent. Only one teacher mentioned student engagement (C1) and making sure students actually attend school so they do not miss instruction (C2). Other statements including lower class sizes and student-to-teacher ratios (C4) and correcting teacher bias or “apathy” of the teacher himself/herself (C6). Interestingly enough, only two teachers indicated that parental involvement (C7) was effective in closing the achievement gap. This will be discussed more in the Conclusions section. Figure 8 shows teacher responses for all items in the online survey.

4.3 Semi-Structured Interviews

Three themes were examined in these interviews to determine if there were any commonalities: definitions of the achievement gap, communication between schools and parents, and theories on how to close the achievement gaps that exist. Participants are given a pseudonym to protect their identities. Any identifying information like names and school districts were redacted from the interview transcript. Therefore, for confidentiality, no identifying information, including school districts or counties, will be given.

4.3.1 Parents

Five parents of students of multiple grade levels ranging from K-9th grade were included in follow-up interviews. The following pseudonyms were assigned to the parents that participated in the study: Penelope, Sarah, Katelyn, Beth, and Ashley.

Penelope – Penelope's daughter attends a high school in a metropolitan area that has a rating of TSI because of their special education learners and ELL students. Having recently moved from another county, Penelope's daughter has only attended the school for the 2018-2019 school year.

Sarah – Sarah's daughter is a first-grade student at a TSI school in a metropolitan area. The TSI rating is due to the achievement of their special education students. She has attended the same school since Kindergarten. Sarah is also a teacher but teaches kindergarten at a CSI school in the same metropolitan county.

Katelyn –Katelyn is both a parent and a teacher. Her daughter is in kindergarten at a CSI school in a metropolitan area rated in the bottom 5%. She attends the same school in which Katelyn is a special education teacher.

Beth –Beth is a stay-at home mom with two children that both attend school at a school rated "other" in a rural county. Her son is in kindergarten and her daughter is in fifth grade. Her children have attended the same school their entire academic career. Their school district had two schools rated TSI and none rated CSI.

Ashley - Ashley has two children in the fourth grade this current school year. Both her biological daughter and her adopted daughter attend at TSI school in a metropolitan area. The school received a TSI rating because of the gap in performance between their special education students and the rest of the student population.

4.3.1.1 Interview Responses

Transcriptions of interviews were categorized, looking once again for the Closing Gap codes (C1-C10) and the Definition of the Achievement Gap codes (D1-D5) to see if these were present in responses to interview questions as well. In regard to defining the achievement gap, all parents used some version of the term "difference" or "discrepancy" (D2), but none mentioned any specific subgroup (D1) in their initial definition, giving instead the phrase "groups of students" (D5). In further discussion, one parent did mention migrant children and refugee families who were "not as proficient in the English language" compared to groups who were "mostly Caucasian".

4.3.1.2 Themes

The following three themes emerged from interviews with parents.

Theme 1 – Schools do not effectively communication with parents about the achievement gap.

All five parents mentioned a lack of communication from the schools their student(s) attends and the parents. Further, the fact that only two of five parents knew the school's current rating and whether or not an achievement gap exists indicates that the schools do not do a good job in communicating this to parents. It can be inferred that schools with a lower rating, CSI, in particular may be forced to communicate more with parents about their school's standing. However, this is not conclusive since the only parent with a child attending a CSI status school, Katelyn, was also a teacher at the same school.

Theme 2 – Achievement and the achievement gap is based on grades.

Parents tended to view achievement as academic success, specifically grades. Only Sarah mentioned that achievement is not just in academics and can instead be "academic, social, [and] emotional". However, when questioned to define the achievement gap, Sarah defined the achievement gap as performance academically only. As for the existence on achievement gap, two parents, Penelope and Beth did not know if there was an achievement gap among different subgroups of students in their child/children's school or what rating the school had received for the 2017-2018 school year. In fact, when asked about how the school communicated achievement gaps, Penelope responded simply, "They don't". The other three parents agreed that an achievement gap did exist within their school. It is interesting to note that neither Beth nor Penelope's children attend a CSI school. Further, though all five parents agreed that

teachers understood the achievement gap, all five disagreed that parents had the same understanding.

Theme 3 – Parents have limited ideas for solving the achievement gap.

Parents had limited ideas as how to close the achievement gap. Only one code, instruction (C5), appeared in the transcripts. One parent, Penelope, mentioned that the idea of an achievement gap meant that certain groups like African American students or special education students were not getting access to "rigorous instruction" impacted their learning. Another parent, Sarah, mentioned that direct instruction, rather than project-based or exploratory learning was actually helping to widen the gap instead of close it. She also suggested that it was inequities in resources and funding that added to the disparity. She reported that her daughter's school was able to take four field trips over the course of the year and had two paraprofessionals in each kindergarten classroom; whereas, the school in which she works could only afford one field trip a year. She explained that "providing equitable opportunities" even among schools in the district would help.

Predictably, the two parents that were also teachers, Katelyn and Sarah, had the most ideas about how to solve the achievement gap. However, neither of their responses to these interview questions included any of the Closing Gap Codes (C1-C10) that appeared in the parent survey responses. Instead, Sarah mentioned project-based learning and focuses less on direct instruction; whereas Katelyn incorporating more of the arts into the school day. Beth, Penelope, and Ashley all mentioned some form of after school tutoring or enrichment to help boost the grades of those students who were struggling.

4.3.2 Teachers

Five teachers completed a semi-structured interview. The following pseudonyms were assigned to each participant: Faith, Julie, Mary, Anna, and Helen. These teachers have between five and fourteen years of experience. They all teach at the elementary level. Though these five teachers are all at different schools and among three different school districts, they all teach within a school district in areas categorized as "metropolitan".

Faith –Faith is in her thirteenth year of teaching. For this school year she is co-teaching with another teacher in a fourth-grade classroom. Previously, she has taught every grade level, along with a few years in intervention. She is currently teaching at a CSI school in a metropolitan area, rated as such because their scores fall within the bottom 5%. She mentioned that she was notified that she is being involuntarily transferred to another school within the same district in the upcoming school year because of test low scores. Midyear, her class was actually split up among the two other fourth grade teachers and she became a co-teacher in each of the rooms.

Julie - Julie is a special education teacher at a CSI school in a metropolitan area. She works with fourth and fifth grade students, co-teaching in classrooms and pulling students for resource time. Though she is new to her current building, this is her 12th year of teaching, and her second year in her current district.

Mary - Mary is a first-grade teacher at a metropolitan TSI school. This is her 11th year of teaching, all at the same school. She is transferring to another school within the

district after this year due to the stress of behavior and pressure to raise test scores immediately.

Anna - Annie is at a metropolitan school that earned the classification of “other”. This is here sixth year of teaching, her first teaching K-5 in the school’s STEM lab. Previously, she taught fourth grade and spent one year as a curriculum coach at another school before returning to the one in which she currently teaches. In the upcoming year, she plans to continue teaching at the school she is in currently.

Helen - Helen is a kindergarten teacher with twelve years of experience, all in the same school she is in currently which has a CSI label. She has had experience in all grade levels K-5 except for third. This year she spent a month in third grade before being moved to kindergarten because of low numbers. She has accepted a job teaching first grade in another school in the same county, citing stress from the CSI label and all that accompanies it in her decision to leave her current school building.

4.3.2.1 Interview Responses

Using the same coding system mentioned throughout this study, several codes repeated in the responses given by teachers. Again, teachers used the terms “disparity” and “difference” (D2) when defining the term achievement gap. All but one teacher, Mary, included specific subgroups (D1) in their definitions. Mary was also the only teacher that disagreed that there was an achievement gap among students of different races, although, Julie did mention that the achievement gap may be clearer cut if the school populations demographic was different. She mentioned that her school had a high population of black students and that it was “harder to make a comparison” of

achievement between races because of the low number of other races present. Mary was also the only teacher that specified that closing the achievement gap was a higher priority in reading than in math.

Further, all teachers insisted that the pressure related to standardized testing and closing the achievement gap created its own set of issues. However, they did have ideas on what can be done to close the achievement gap. Several Close Gap Codes appeared once again in the teacher interviews. As mentioned, increasing parent support (C7) was mentioned by several teachers. Mary specifically mentioned smaller class sizes (C4) would be beneficial. Faith was the only teacher that mentioned making sure that students' basic needs were being met, most importantly, adequate rest and nutrition. Helen and Julie both mentioned the need for more preschools to help prepare students for kindergarten, an issue that Mary describes by saying that 80% of her school's incoming kindergartens are not ready for kindergarten according to the Brigance screener.

4.3.2.2 Themes

The four following themes emerged from interviews with teachers.

Theme 1: Teachers define the achievement gap in terms of performance on standardized testing.

Assessment (D3), specifically standardized testing was mentioned by every teacher when defining the achievement gap. This differs greatly to the online surveys where only three teachers mentioned it in their open-ended responses. Four teachers stated that achievement was some type of measurable skill that progresses over time. One remarked that it was success outside of just school. However, when asked about the

achievement gap, it was clear that these teachers associate it with standardized testing. Since Kentucky's public schools' ratings are directly tied to student achievement on the KPREP standardized test, this fact is not surprising.

Theme 2: Teachers feel they adequately communicate with parents about the achievement gap, but it could be improved upon.

When asked how the achievement gap is communicated with parents, all of the teachers mentioned print information sent home (e.g. report cards, flyers, etc.) and parent teacher conferences. All schools had some type of system to communicate student performance with parents. However, one teacher, Faith noted that sometimes things sent home do not get read or parents do not attend conferences. Mary mentioned that there is a misconception that "parents don't care"; however, she argued that this is not the case. She explained that although teachers at her school hold parent teacher conferences, parents "don't really understand what is expected of their child". She does her best to communicate this with parents but feels that "the communication is not as strong as it probably should be.

The other teachers felt that parental involvement was necessary. In fact, parental involvement (C7) was listed as necessary by four teachers to help close the gap. Faith, who pointed out the issue that some parents may not be able to access a school's website or the print information that is sent home because of a lack of education or English speaking on the parent's part, need some other form of communication system. She suggested a podcast as an example but noted the extra "work and a little bit more procedural hoops one must jump through before it can be attained".

Theme 3: Teachers feel that shifting strategic priorities actually contribute to widening the achievement gap.

All of the teachers felt that closing the achievement gap was a high priority in their schools. However, three specifically mentioned that lack of consistency in programs was an issue that their school districts created that helped to keep the achievement gap wide. Because of her school's CSI status, Helen explained that her school was adopting new curriculum. Mary also reflected on similar circumstances:

> there is this constant pressure to close the gap…the impact is that there is a top down effect, where, every year, we're told to do something different – a different program, a different strategy, a different plan, and then we do all of those things but it's not consistent…and without consistency you can't really see if the program is working.

Faith had similar things to say of her school and its CSI status, where both an external audit team and an internal district team were offering suggestions, mandates, and "non-negotiables" that needed to be implemented to help close the achievement gap. She explained that though she felt that teachers understood the idea of an achievement gap, she believes:

> they are limited in regard to what they are able to do…if it's not something that cleared by the 'what works' committee…that particular program or strategy may not be welcome.

Theme 4: Teachers feel that outside factors and readiness for school has the largest impact on student achievement.

Teachers had clear ideas on what they perceived to be the cause of some of the gaps that existed within their schools. Because of this, a separate set of codes (R1-R6) was developed to categorize the Reasons (Causes) for the Achievement Gap. These codes are listed in Table 8.

All five teachers mentioned experiences that students experienced outside of school (R3). This aligns with the online survey responses that suggested that the achievement gap stems from other factors than the education students are receiving. Helen mentioned cultural activities like whether students were able to visit museums and theaters or if parents had books at home. Aligning with this was vocabulary. Three teachers, Faith, Mary, and Julie all mentioned the impact of vocabulary deficits on children that have not been read to or talked to. Faith explains that these deficits affect students who come in and "may not have the same expressive or receptive vocabulary" as their peers. Less mentioned was behavior (R5) and the idea of "learned helplessness" (R5) that Julie exclaims impacts some of her special education students who:

> think there is a gap…and think they are not supposed to perform a certain way so they just don't try at times…They have the idea of, 'I'm not supposed to be good at this so I'm not going to try to be good at this'…Its kind of like making an excuse for themselves.

Two other factors declared by two teachers are similar. Both Transiency (R4) and Lack of Parental/Community Support (R6) were mentioned as causes that were outside of the control of the school. As such, the generalization is that the causes of the achievement gap are outside of the realm of the school itself. Figure 9 shows the frequency each of these Reasons for the Gap Codes appears.

Table 3 Number of School Districts with TSI Ratings

Location	Number of School Districts with a TSI school rating	Total Number of Counties (not including independent districts)
Metropolitan	50	35
Micropolitan	27	26
Rural	44	59

Table 4 Number of Schools by Subgroup Identified as Underperforming

Subgroup	**Schools (single category**	**Schools (2+ categories)**
Asian	0	6
African American	30	74
Hispanic	7	27
White	6	9
2+ Races	0	6
Disability	238	330
ELL	8	51
Free/Reduced Lunch	23	54

Table 5 Demographics of Newburg Middle and Breckinridge County High School

Demographic	**Newburg Middle**	**Breckinridge County High School**
White	25.6%	53.3%
Black	51.4%	46.7%
Hispanic	13.4%	91.7%
Asian	5.5%	2.3%
Two or More Races	3.8%	2.3%
Free/Reduced Lunch	67.6%	0.7%

Table 6 Definition of Achievement Gap Codes

Definition of Achievement Gap Codes (D)
D1 – Specific Subgroup(s) Named
D2 – Difference/Disparity
D3 – Assessment
D4 – Academic Achievement/Academic Performance
D5 – General Term “Group(s) of Students”

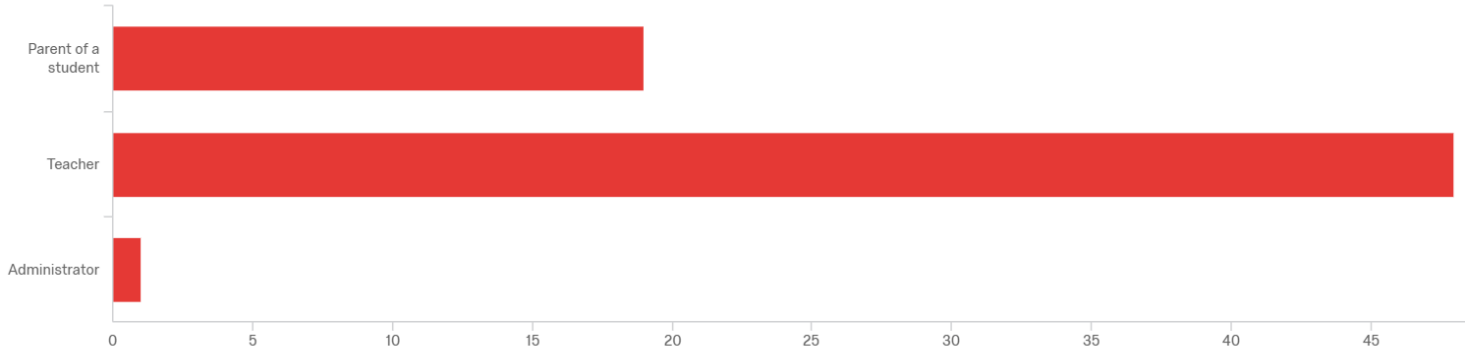
Table 7 Closing Gap Codes

Closing Gap Code (C)
C1 – Student Engagement
C2 – RTI (Response to Intervention)
C3 – Attendance
C4 – Teacher to Student Ratio/Class Sizes
C6 – Teacher Bias
C7 – Parental Involvement
C8 – Quality Rigorous Instruction
C9 – Relationships Between Parents/Students/Teachers
C10 – Culturally Responsive Teaching/Resources

Table 8 Reasons (Causes) for the Achievement Gap Codes

Reasons (Causes) for the Achievement Gap Codes (R)
R1 – Learned Helplessness
R2 – Vocabulary/Educational Deficits
R3 – Enrichment/Experiences Outside of School
R4 – Transiency
R5 – Behavior
R6 – Lack of Parental/Community Support

Figure 3 Online Survey Participants



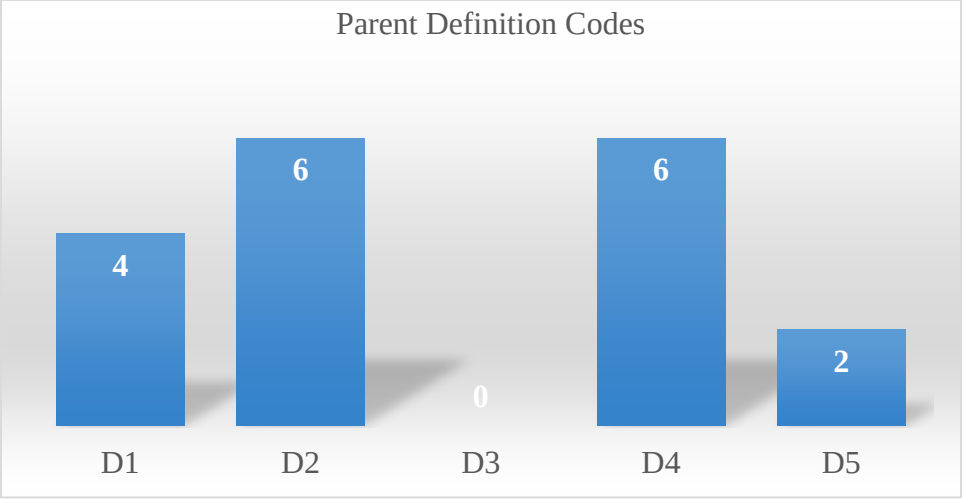


Figure 4 Achievement Gap Definition Codes Frequency – Parent Responses

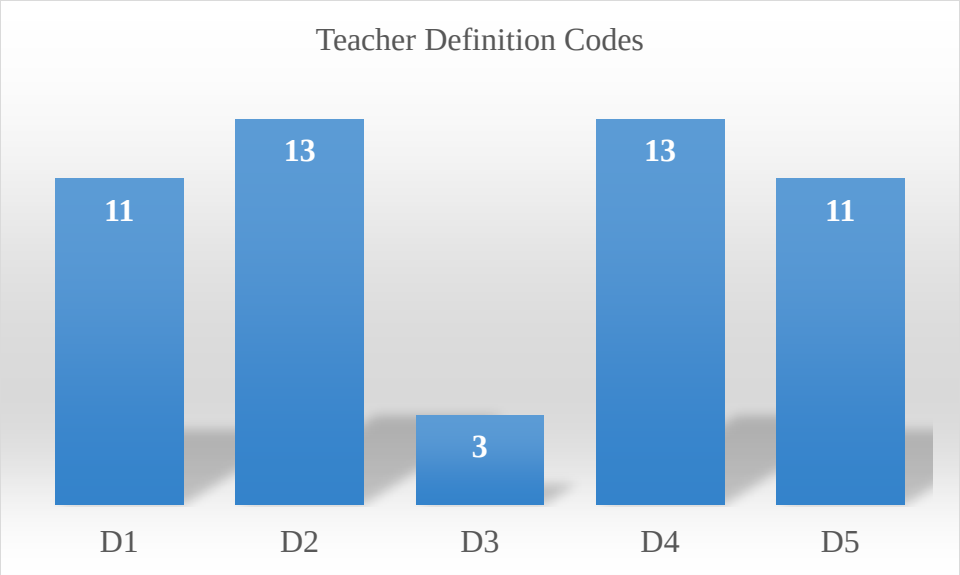


Figure 5 Achievement Gap Definition Codes Frequency – Teacher Responses

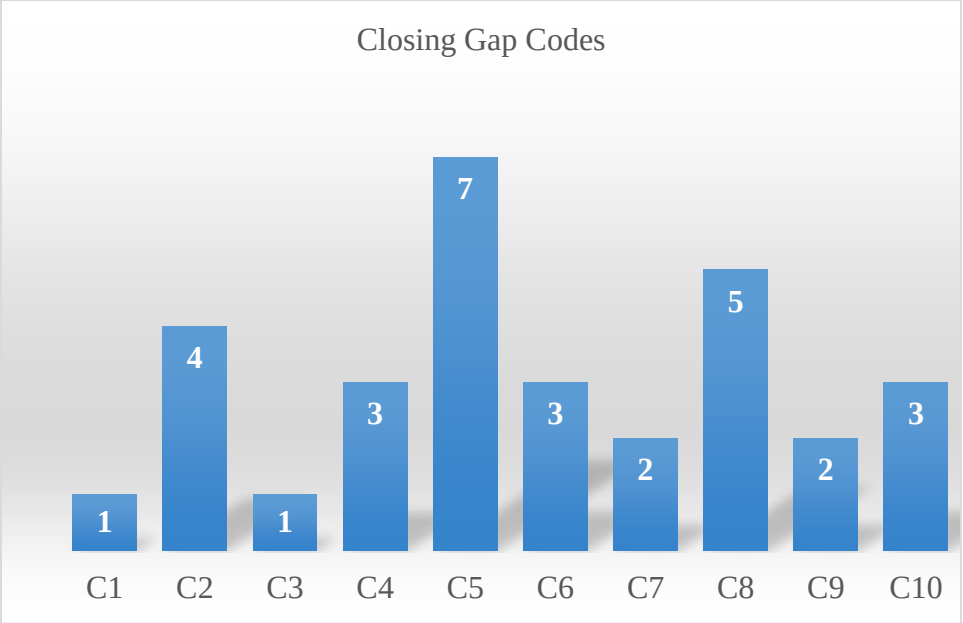


Figure 6 Frequency of Closing Gap Codes

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I can define the word "achievement gap".	4.00	6.00	5.63	0.70	0.48	8
2	There is an achievement gap in mathematics among African American and White students in my child's school district.	1.00	6.00	4.38	1.87	3.48	8
3	There is an achievement gap in mathematics among Special Education and general education students in my child's school district.	2.00	7.00	5.75	1.56	2.44	8
4	My child receives the same mathematics education as other students in the school, regardless of race.	2.00	7.00	6.00	1.58	2.50	8
5	Teachers at my child's school care about the learning of all students, regardless of race.	5.00	7.00	6.50	0.71	0.50	8
6	Students of certain races tend to do better than other students at my school in mathematics.	1.00	6.00	3.63	1.93	3.73	8
7	Wealthier students tend to perform better in schools than students from lower income families in mathematics.	1.00	7.00	4.63	2.45	5.98	8
8	Teachers at my child's school district are trying to make sure all students learn the same in mathematics, regardless of differences.	6.00	7.00	6.38	0.48	0.23	8
9	My school district keeps parents informed about student achievement in mathematics.	2.00	7.00	4.38	2.00	3.98	8
10	African American students perform poorly compared to their peers more often in urban settings.	1.00	5.00	3.00	1.41	2.00	8
11	African American students perform poorly compared to their peers more often in rural settings.	1.00	6.00	3.63	1.80	3.23	8
12	My child receives a good mathematics education.	2.00	7.00	5.50	1.41	2.00	8
13	Special Education students perform poorly compared to their peers more often in urban settings.	1.00	7.00	4.38	1.93	3.73	8
14	Special Education students perform poorly compared to their peers more often in rural settings.	1.00	7.00	4.25	1.85	3.44	8

Figure 7 Parent Survey Question Responses

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I can define the term “achievement gap”.	5.00	7.00	6.48	0.56	0.31	33
2	In my district, there is an achievement gap among white and African American students in mathematics.	3.00	7.00	5.73	1.11	1.23	33
3	All students get the same education, regardless of race, gender, or socioeconomic status.	1.00	7.00	4.45	2.18	4.73	33
4	Closing the achievement gap is a priority in our school district.	2.00	7.00	5.33	1.59	2.53	33
5	As a educational policy, closing the achievement gap is important.	2.00	7.00	5.91	1.29	1.66	33
6	Academic achievement in mathematics is directly related to a student’s race.	1.00	5.00	2.36	1.20	1.44	33
7	Academic achievement in mathematics is directly related to a student’s socioeconomic status.	1.00	6.00	3.33	1.82	3.31	33
8	My school district provides sufficient programs and services to eliminate the achievement gap among African American students in mathematics.	1.00	7.00	3.94	1.54	2.36	33
9	My school district is dedicated to closing the achievement gap in mathematics.	2.00	7.00	4.73	1.69	2.87	33
10	My teacher preparation program and experience has given me the skills to be an effective educator, regardless of race or socioeconomic background.	1.00	7.00	5.27	1.78	3.17	33
12	The achievement gap is more of an issue in rural school districts.	1.00	7.00	3.33	1.95	3.80	33
13	Most of my low-performing students are Black or Hispanic.	1.00	7.00	3.42	2.03	4.12	33
14	Level of parental involvement affects a student’s academic achievement.	1.00	7.00	6.31	1.13	1.28	32
15	In my district, there is an achievement gap among special education and general education students in mathematics.	4.00	7.00	6.15	0.82	0.67	33
16	My school district provides sufficient programs and services to eliminate the achievement gap among special education students in mathematics.	2.00	7.00	4.09	1.48	2.20	33

Figure 8 Teacher Survey Responses

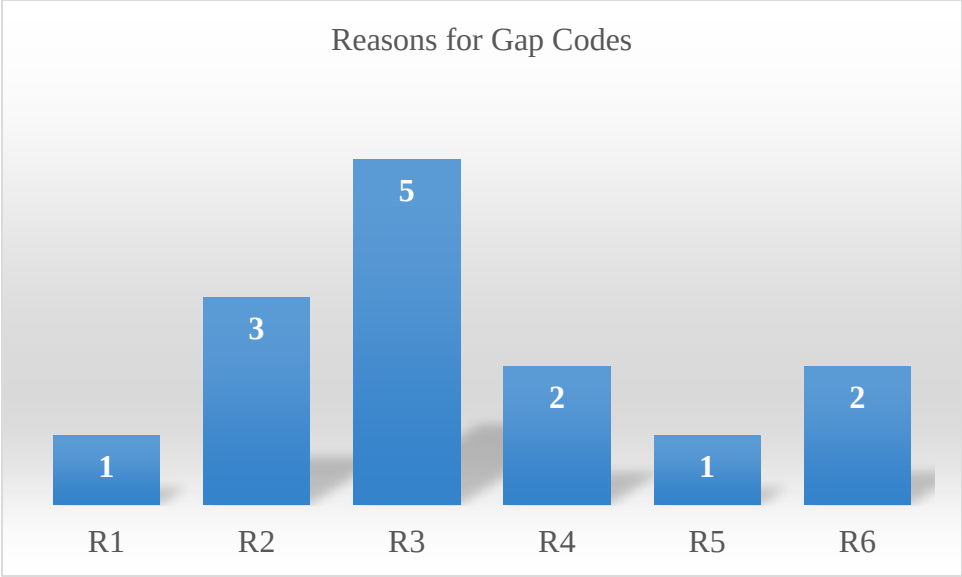


Figure 9 Reasons (Causes) for the Achievement Gap Codes Frequency

CHAPTER 5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 Research Questions and Hypotheses Revisited

This study aimed to answer three research questions, aligned with its three goals:

1. To what extent does an achievement gap exist among different subgroups of students in Kentucky's K-12 public schools?

2. How do the perceptions of parents and teachers interact with decision-making?

3. How do the ideas of parents and teachers in regard to closing the achievement gap compare?

Aligned with these three research questions were three hypotheses:

H1. There are differences among different subgroups of students in Kentucky's K-12 public schools, specifically among students of different ethnicities.

H2. The perceptions of parents and teachers impact decision-making in multiple ways.

H3. Stakeholders differ in regard to how they feel the achievement gap can be closed.

5.1.1.1 Analysis of Hypotheses

Hypothesis 1 failed to be rejected. Based on analysis of the 2017-2018 KPREP data, it can be concluded that achievement gaps do exist within subgroups of Kentucky's schools. Though the gap is more prevalent among special education students and their peers, race was the next largest category where gaps were found. However, it cannot be concluded as to how large this gap is quantitatively as specific numerical scores of individual students and schools and districts was not included in this study. Therefore, the principal investigator is inferring that gaps indicated are statistically significant. More research will need to be done to determine the degree of these gaps and their progression throughout elementary, middle, and high school.

Hypothesis 2 also fails to be rejected per this study. Teachers interviewed had clear visions of how the idea of an achievement gap (item number six) impacts students, especially those who are African American or special education, including learned helplessness, ever changing curriculum, and immense pressure on both students and teachers. Since districts are making changes based on school ratings, it can be inferred that the impact on students themselves is great and varies across the state according to a school's rating.

Hypothesis 3 conclusively failed to be rejected. It was apparent over the course of analysis of both the online survey and the semi-structured interview that there were conflicting views on how to solve the achievement gap. Though several ideas were coded and appeared multiple times across interviews and there was still a

wide variety of ideas given. Not only did teachers and parents have different ideas, but so did parents and other parents and teachers and other teachers. This indicates a wider issue with the achievement gap – stakeholders themselves perceive it differently and thus, have varying viewpoints on what needs to happen to close any existing gaps.

5.2 Discussion

5.2.1 Stakeholder Perceptions and Communication About the Achievement Gap

This study aimed to compare the perceptions of stakeholders regarding the achievement gap, research that needed to be added to the current literature. Research of stakeholder groups separate was supported. For instance, teachers in this study identified external factors that contributed to the achievement gap like Pridemore suggested (2008). One of the themes that came about also agreed with Renth's (2014) study that suggested parents wanted to help with achievement but had limited ideas on what could be done to close gaps.

It found common themes among teachers and parents, one of those coinciding with the research surrounding parental engagement and the achievement gap (Blandin, 2016). Like the research, without prompting, teachers tended to focus on the importance of parental engagement instead of varying methods they used to communicate achievement. However, both parents and teachers agreed that communication about the achievement gap was not as strong as it could have been. Faith's comments in particular about some parents not being able to access written communication about their student or school's performance mirrors issues that were brought up in Renth's (2014) study where

parents stated that the school's current mode of communication, like newsletters or parent nights, were ineffective or even embarrassing to attend. This speaks to the notion that not only is there inherent linguistic and cultural bias in the achievement gap measure but in how it is presented as well.

Studies like Griffin's (2010) found lack of communication between parents and teachers as an issue that actually impacted the achievement of students in middle school. The parents surveyed in Griffin's study desired updates but reported that they were not told of any problems with how their student was doing until they perceived it as too late to address, after a report card went home, for example (p. 93). However, it is difficult to conclude without further study if this ineffective communication helped to contribute to widening the gap.

5.2.2 Validity of Achievement Gap Measurement

The majority of schools identified as TSI were identified due to multiple subgroups, not just a single population of students, particularly when looking at those categorized by ethnicity. However, when looking at the demographics of the schools themselves, one student may account for a school's entire ethnic subgroup population. This supports Wiley, et al.'s (2005) claim that more diverse urban areas with larger populations of minorities (in that there are at more minority groups represented in the population) may be identified as having an achievement gap(s) at a larger percentage than more rural counties with less minorities.

Because of these facts, it can be inferred that there needs to be deeper studies into the measure of the achievement gap itself, looking at individual student's or subgroup's

scores. Without delving into the raw data and demographics of students themselves it is difficult to determine how deep the gap actually is among students. For instance, students with disabilities were the most common subgroup to be identified as scoring as their peers. This supports the claim of Schulte and Stevens (2015) that special education students are further behind their peers. However, in the reported data by KDE for KPREP, racial and ethnic demographics are not given for this population. Therefore, it is impossible to assess whether this supports the research of researchers like Allen (2016) who concluded that special education students are overwhelming African American who have been overidentified. It would also be interesting to determine if Kentucky KPREP scores among different ethnic groups mirrored Carpenter, et al.'s (2006) "stair-step" in performance.

Further, this study, brings to question the validity one measure of achievement, given only in certain grade levels at a school, that may not be a valid assessment of achievement gaps, especially when considering that the measure may include unintentional cultural and linguistic biases (Banks, 2006; Newkirk-Turner & Johnson, 2018; Martiniello, 2008). This is specifically true when the measure itself means that approximately the same number of schools will be classified as "CSI" each year, given that to qualify one must be in the "bottom 5%" of schools in Kentucky. With this reasoning, for one school to climb out of CSI status, another will have to receive the label. This directly corresponds to Blanford's (2001) study that points out the error in not recognizing the importance of any closure of the gap, whether or not it meets an arbitrary criterion.

5.3 Recommendations

This study aimed to accomplish three goals: (a) define the achievement gap, (b) examine its causes and analyze its presence in a few Kentucky school districts, and (c) identify the major themes of the research surrounding school curriculum and decision making and its impact on decreasing the achievement gap. The results of this study were mixed. Limitations may have impacted the research and conclusions drawn are generalizations that are difficult to apply to the whole state of Kentucky.

Based on current research and the results of this study, recommendations for further research include:

1. Keep online surveys confidential but collect demographic information on participants as well as grade level taught, name of school, and school district.

2. Shorten online survey or provide incentive for more incentive for participants to complete every question.

3. Continue study longitudinally to determine patterns and trends in KPREP data.

4. Expand number of semi-structured interviews to include more teacher and parent participants.

5. Expand the study to ensure participation from school administrators.

6. Replicate the study at the district level to determine if perceptions very across schools in the districts, especially those with different ratings.

5.4 Final Remarks

This study aimed to analyze the different perspectives of stakeholders in one state's assessment system. Though it did not result in any conclusive answers, it did reveal that even within a small area, held perspectives can vary greatly. The achievement gap is a large-scale problem that will continue to be hotly debated in terms of causes and what can be done to close it. School districts need to be aware of what their teachers perceive, understand, and misunderstand about the achievement gap. Parents need to be involved in the process and communication efforts need to be changed and expanded in order to better include all. Though further research needs to be conducted, this study provides a glimpse at how large and varying the issue of closing the achievement gap is.

5.5 Limitations

There were limitations with both the online survey and the semi-structured interview that may impact the validity of data. Due to the nature of the research design, two limitations apply to both the surveys and the interviews:

1. Participants may have personal biases that may impact their answers to questions and must be considered when analyzing the results of the study.

2. Conclusions from study results are generalizations that may not apply to all Kentucky public schools.

3. Only parents and teachers from the state of Kentucky in public schools K-12 were included.

5.5.1 Survey Limitations

This study aimed to have 100 participants complete the online survey. However, only 70 respondents participating, with less completing the entire survey. Since the survey was sent out on the principal investigator's personal Facebook page, which is set to private, this limits the audience that it was able to reach. The principal investigator, a teacher herself, is Facebook friends with a large percentage of elementary teachers. This may have impacted who completed the survey, the large percentage being teachers. Compounding with this, the principal investigator noticed that a few of those sharing the link posted that respondents had to be "parents and teachers of a child in a K-12 public school". This slightly incorrect verbiage implied to some that in order to respond to the survey one had to be both a parent of a student *and* a teacher in a K-12 school. When noticed, this was corrected, but this may have impacted those who took the survey.

Further, though the grade level taught was not part of the information that was collected, since the principal investigator is friends with a large portion of elementary teachers, it can be inferred that the majority of the teachers completing the survey were at the elementary level. This does not offer as wide range an audience as desired. In future studies, the link to the survey would be sent out on a more public forum to reach more parents of students and a mixture of teachers from all levels. Finally, since a large number of participants began the survey but did not complete all of the questions, the survey will be altered in future studies. Length may have factored in a participant's willingness to complete. Thus, the survey could be shortened or more incentive to answer all questions could be given.

Semi-Structured Interview Limitations

Of the teachers interviewed, all five were at the elementary level, therefore there was not a mixture of grade levels included. Additionally, all interviews conducted were of teachers and parents in metropolitan areas. Both of these limitations were a result of the confidentiality of the survey and the randomness of the selection. In further studies, more participants will be interviewed in order to get a more diverse range of teachers and parents throughout the state of Kentucky. One way to ensure this is to collect information about location (micropolitan, metropolitan, or rural) in the online survey and make sure interviewees from all areas are included.

Of the semi-structured interview questions, one question in particular was awkwardly worded and several participants, both parents and teachers, needed clarification on what the question was asking. In future studies this question would be reworded for clarity to ensure that any clarification from the principal investigator does not affect a participant's response. Question six was worded:

> What impact does the idea of an achievement gap have on student achievement of African American or special education students?

The intent of this question was to determine if participants thought that the general notion of an achievement gap, whether one exists or not, had an impact on student achievement. For instance, one teacher explained that her school has multiple signs throughout the school building that say, "Close the gap". In her interview she explained:

> It's embedded into our meetings that we make decisions that help all students learn. Its embedded in what we send home to parents and it definitely drives

instruction and instructional decisions such as professional development and academic programs.

She continues to elaborate on the numerous systemic changes that are being done this school year stemming from how pressing closing the gap has become because of the school's CSI status. These changes include possible adding additional instructional hours and instructional days, more planning in Professional Learning Communities (PLCs), and adoption of new curriculum. She mentions that the school considers both data from KPREP and the Measure of Academic Progress (MAP) assessment which students in her county take three times a year. She explains that decision makers in the district use this data to "highlight the fact that there definitely is an achievement gap among students in our building and in other buildings". The principal investigator hypothesized that the pressure to close the gap influences student achievement; however, the question may have led some participant's responses.

Copyright © Heather Renee Brown Chapman 2019

APPENDICES

APPENDIX 1. PARENT ONLINE SURVEY QUESTIONARRE

Instructions: Using the scale below, please indicate how much you AGREE or DISAGREE with each of the following statements.

1 = Disagree Very Strongly, 2 = Disagree, 3 = Disagree Just a Little, 4 = Agree Just a Little, 5 = Agree, 6 = Agree Very Strongly

		1	2	3	4	5	6
1.	I can define the term "achievement gap".						
2.	There is an achievement gap in mathematics among African American and White students in my child's school district.						
3.	There is an achievement gap in mathematics among Special Education and general education students in my child's school district.						
4.	My child receives the same mathematics education as other students in the school, regardless of race.						
5.	Teachers at my child's school care about the learning of all students, regardless of race.						
6.	Students of certain races tend to do better than other students at my school in mathematics.						
7.	Wealthier students tend to perform better in schools than students from lower income families in mathematics.						
8.	Teachers at my child's school district are trying to make sure all students learn the same in mathematics, regardless of differences.						
9.	My school district keeps parents informed about student achievement in mathematics.						
10.	African American students perform poorly compared to their peers more often in urban settings.						
11.	African American students perform poorly compared to their peers more often in rural settings.						
12.	My child receives a good mathematics education.						
13.	Special Education students perform poorly compared to their peers more often in urban settings.						
14.	Special Education students perform poorly compared to their peers more often in rural settings.						

15. Define the "achievement gap":

16. According to the new ratings by the Kentucky Department of Education, what is your school/your child's school's rating for the 2016-2017 school year? (CSI, TSI, Other, I don't Know)

17. Are you aware of any achievement gaps in your school/your child's school?

Additional Comments:

APPENDIX 2. TEACHER QUESTIONNAIRE

Instructions: Using the scale below, please indicate how much you AGREE or DISAGREE with each of the following statements.

1 =Strongly Disagree, 2 = Disagree, 3 = No Opinion, 4 = Agree Just a Little,
5 = Agree, 6 = Strongly Agree

		1	2	3	4	5	6
1.	I can define the term “achievement gap”.						
2.	In my district, there is an achievement gap among white and African American students in mathematics.						
3.	All students get the same education, regardless of race, gender, or socioeconomic status.						
4.	Closing the achievement gap is a priority in our school district.						
5.	As an educational policy, closing the achievement gap is important.						
6.	Academic achievement in mathematics is directly related to a student’s race.						
7.	Academic achievement in mathematics is directly related to a student’s socioeconomic status.						
8.	My school district provides sufficient programs and services to eliminate the achievement gap among African American students in mathematics.						
9.	My school district is dedicated to closing the achievement gap in mathematics.						
10.	My teacher preparation program and experience has given me the skills to be an effective educator, regardless of race or socioeconomic background.						
11.	The achievement gap is more of an issue in urban school districts.						
12.	The achievement gap is more of an issue in rural school districts.						
13.	Most of my low-performing students are Black or Hispanic.						
14.	Level of parental involvement affects a student’s academic achievement.						
15.	In my district, there is an achievement gap among special education and general education students in mathematics.						
16.	My school district provides sufficient programs and services to eliminate the achievement gap among special education students in mathematics.						

17. Define the term “achievement gap”.

18. What do you think has been the most effective to improve academic achievement of all students and close the achievement gap?

Additional Comments:

APPENDIX 3. PARENTS SEMI STRUCTRED INTERVIEW QUESTIONS

1. How do you define achievement?
2. How do you define the achievement gap?
3. Is there an achievement gap between students of different races at your school?
4. How would you describe the priority of closing the achievement gap at your school?
5. What do you think is the cause of this achievement gap?
6. What impact does the idea of an achievement gap have on student achievement of African American or special education students?
7. Would you say that teachers understand the idea of an achievement gap?
8. Would you say that other parents understand the idea of an achievement gap?
9. What makes you think parents don't/do have such an understanding?
10. How does your school communicate with parents about the achievement gap?
11. How can the school close the achievement gap?
12. Do you have any additional comments that you would like to add?

APPENDIX 4. TEACHER SEMI STRUCTURED INTERVIEW QUESTIONS

1. How do you define achievement?
2. How do you define the achievement gap?
3. Is there an achievement gap between students of different races at your school?
4. How would you describe the priority of closing the achievement gap at your school?
5. What do you think is the cause of this achievement gap?
6. What impact does the idea of an achievement gap have on student achievement of African American or special education students?
7. Would you say that teachers understand the idea of an achievement gap?
8. Would you say that parents understand the idea of an achievement gap?
9. What makes you think parents don't/do have such an understanding?
10. How do you communicate with parents about the achievement gap?
11. How can we close the achievement gap?
12. Do you have any additional comments that you would like to add?

BIBLIOGRAPHY

Akos, P., Rose, R., & Orthner, D. (2015). Sociodemographic Moderators of Middle School Transition Effects on Academic Achievement. *The Journal of Early Adolescence*, *35*(2), 170-198.

Allen, M. (2016). The Relevance of Critical Race Theory: Impact on Students of Color. Urban Education Research and Policy Annuals, 5(1).

Alvermann, D. E. (2005). Literary on the edge: How close are we to closing the literacy achievement gap? Voices from the Middle, 13(1), 8-14.

American Psychological Association. (2019). *Ethnic and Racial Minorities & Socioeconomic Status*(Publication). Retrieved from https://www.apa.org/pi/ses/resources/publications/minorities

Banks, K. 2006. A comprehensive framework for evaluating hypotheses about cultural bias in educational testing. *Applied Measurement in Education*, (19) 115–132.

Barcinas, J., & McCracken, J. David. (1989). Comparison of Attributes of Rural and Urban Secondary Schools and Twelfth-grade Students in Ohio, ProQuest Dissertations and Theses.

Benner, G. J., Kinder, D., Beaudoin, K.M., Stein, M., & Hirchman, K. (2005). The effects of the corrective reading decoding program on the basic reading skills and social adjustment of students with high-incidence disabilities. Journal of Direct Instruction, 5(1), 67-80.

Berry, III, R. Q. (2004). The Equity Principle through the voices of African American males. Mathematics Teaching in the Middle School 10(2), 100-103.

Bhowmick, N., & Guldbrandsen, F. (2015). *Investigating the Achievement Gap in Mathematics: An Analysis of Fifth Grade School Data. 76*(01), Dissertation Abstracts International, A: The Humanities and Social Sciences, 76(01).

Blandin, A. (2016). *Parental Involvement, Socio-economic Status and Students' Perceptions of the Classroom Learning Environment as Predictors of 8th Grade Students' Academic Achievement: A Structural Equation Model.*, ProQuest Dissertations and Theses.

Blanford, D. (2011). *Mind The Gap: Critical Race Theory And The Achievement Gaps Of An "Exemplary" High School,* ProQuest Dissertations and Theses.

Bogner, & Wiseman. (1997). Environmental Perception of Rural and Urban Pupils. Journal of Environmental Psychology, 17(2), 111-122.

Bol, L., & Berry, R. (2005). Secondary Mathematics Teachers' Perceptions of the Achievement Gap. The High School Journal, 88(4), 32-45.

Bouck, E. "How Size and Setting Impact Education in Rural Schools." *Rural Educator* 25.3 (2004): 38-42. Web.

Bulris, M. (2010). A meta-analysis of research on the mediated effects of principal leadership on student achievement: Examining the effect size of school culture on student achievement as an indicator of teacher effectiveness. (Doctoral

dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3389429)

Carpenter, D., Ramirez, A., & Severn, L. (2006). "Gap" or "Gaps": Challenging the Singular Definition of the Achievement Gap. Education and Urban Society, 39(1), 113-127.

Cimpian, J., Lubienski, S., Timmer, J., Makowski, M., & Miller, E. (2016). Have Gender Gaps in Math Closed? Achievement, Teacher Perceptions, and Learning Behaviors Across Two ECLS-K Cohorts. AERA Open,2(4), AERA Open, 2016, 2(4).

Croizet, J., & Dutrévis, M. (2004). Socioeconomic Status and Intelligence: Why Test Scores Do Not Equal Merit. *Journal of Poverty*, *8*(3), 91-107.

Davis, A. (2009). *Kentucky's Urban/Rural Landscape: What is driving the differences in wealth across Kentucky?*(pp. 25-34, Publication). Kentucky Annual Economic Report. Retrieved from: https://cedik.ca.uky.edu/files/kyruralurbanwealthdifferences.pdf

Delgado, R. & Stefancic, J. (1998). Critical Race Theory: Past, Present, and Future, *Current Legal Problems*, 51(01), 467–491, https://doi.org/10.1093/clp/51.1.467

Dorner, C. & Hutton, I. (2002). Mathematics Placement Tests and Gender Bias. *College and University*, *77*(3), 27-31.

Dotson, L. *Middle Grade Academic Achievement and Socioeconomic Status on North Carolina State Report Cards, 2012 - 2013.* 76.06 (2015): Dissertation Abstracts International, A: The Humanities and Social Sciences, Vol.76(06). Web.

ESSA (2015). Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177 (2015- 2016).

Fan, X., & Chen, M J. (1999). Academic achievement of rural school students: A multi-year comparison with their peers in suburban and urban schools. Journal of Research in Rural Education, 15, 31-46.

Ford, D., & Helmes, J. (2012). Overview and Introduction: Testing and Assessing African Americans: "Unbiased" Tests are Still Unfair. *The Journal of Negro Education, 81*(3), 186-189.

Graham, S. E., & Provost, L. E. (2012). Mathematics achievement gaps between suburban students and their rural and urban peers increase over time. Durham, NH: Carsey Institute.

Griffin, D. & Galassi, J. (2010). Parent Perceptions of Barriers to Academic Success in a Rural Middle School. Professional School Counseling, 14(1), 87-100.

Hammersla-Quick, M. (2016). *Perceptions of Effective Parent Engagement in Rural Title I Schools,* ProQuest Dissertations and Theses.

Hendrickson, M. (2011). Middle School Students' Perceptions of the Gender and Ethnic Gap in Achievement, ProQuest Dissertations and Theses.

Hyde, J., Lindberg, S., Linn M., Amy B. Ellis, A., & Williams C. 2008. "Gender Similarities Characterize Math Performance." Science, 321(5888): 494.

Jackson, S., Hope, W., Henderson, L., Singleton, G., & White, D. (2016). A Study of Mathematics and Reading Achievement Gaps among Third Grade Urban, Rural, and Suburban Students in the Florida Panhandle, ProQuest Dissertations and Theses.

Keiser, H., Sackett, P., Kuncel, N., & Brothen, T. (2016). Why Women Perform Better in College Than Admission Scores Would Predict: Exploring the Roles of Conscientiousness and Course-Taking Patterns. *Journal of Applied Psychology,101*(4), 569-581.

Kentucky Department of Education. (2018, September 26). *Achievement Remains Flat, Gaps Persist in Kentucky Schools* [Press release]. Retrieved from https://education.ky.gov/comm/news/Documents/R18-146 2017-18 Accountability Results_final.pdf

Kentucky Department of Education. (2019). *Students/Teachers Learning Environment* [Excel]. Frankfort: Kentucky Department of Education.

Kentucky Department of Education. (2019, March 4). *Kentucky Education Facts.* Retrieved from https://education.ky.gov/comm/edfacts/Pages/default.aspx

Klein, J., & Jimerson, S. (2005). Examining Ethnic, Gender, Language, and Socioeconomic Bias in Oral Reading Fluency Scores among Caucasian and Hispanic Students. *School Psychology Quarterly: The Official Journal of the Division of School Psychology, American Psychological Association., 20*(1), 23.

Ladson-Billings, G. (1998). Just what is critical race theory and what's it doing in a nice field like education? *International Journal of Qualitative Studies in Education,11*(1), 7-24.

Ladson-Billings, G. (2006). From the Achievement Gap to the Education Debt: Understanding Achievement in U.S. Schools. *Educational Researcher, 35*(7), 3 2. https://doi.org/10.3102/0013189X035007003

Ladson-Billings, G. (2009). The dreamkeepers: Successful teachers of African American Children (2nd ed.). San Francisco, CA: Jossey Bass

Ladson-Billings, G & Tate, W. (1995). Toward a critical race theory of education. *Teachers College Record*, 97, 47–68.

Lee, J., & McIntire, W. G. (2000). Interstate variation in the mathematics achievement of rural and nonrural students. Journal of Research in Rural Education, 16, 168-181.

Marsee, M. (2019, January 30). Commissioner clarifies how CSI, TSI schools identified at council meeting. *Kentucky Teacher*.

Martiniello, M. (2008). Language and the performance of English language learners in math word problems. Harvard Educational Review, 78(2), 333–368

McCracken, J. D., & Barcinas, J. D. T. (1991). High school and student characteristics in rural and urban areas of Ohio. In: School and Community Influences on Occupational and Educational Plans of Rural Youth. ERIC Document Reproduction Service No. ED 338-456.

Murphy, J. (2018). *Co-Teaching Inclusion Model: Perceptions of General and Special Education Attitudes and Student Achievement*, ProQuest Dissertations and Theses.

Newkirk-Turner, B., & Johnson, V. (2018). Curriculum-Based Language Assessment with Culturally and Linguistically Diverse Students in the Context of Mathematics. *Language, Speech, and Hearing Services in Schools, 49*(2), 189-196.

No Child Left Behind Act of 2001, P.L. 107-110, 20 U.S.C. § 6319 (2002).

Organization for Economic Co-operation and Development (OECD). 2006. PISA 2006: Science Competencies for Tomorrow's World. Paris: OECD.

Penner, Andrew M. 2008. "Gender Differences in Extreme Mathematical Achievement: An International Perspective on Biological and Social Factors." American Journal of Sociology, 114(Suppl.): S138-S170.

Pridemore, W., & Purslow, V. (2008). The Academic Achievement Gap: An Examination of Teacher Perceptions of Disparate Student Performance, ProQuest Dissertations and Theses.

Proximity One. (2019). *Kentucky School District Demographics Profiles.* Retrieved from http://proximityone.com/ky_sdc.htm

Qualls, A. (1998). Culturally Responsive Assessment: Development Strategies and Validity Issues. *Journal of Negro Education, 67*(3), 296-301.

Rainey, P., Jones, L., & Penny, R. (2010). School Identification and Student Perceptions of Parent and Teacher Expectations: A Closer Look at the Achievement Gap between Black Males and Females, ProQuest Dissertations and Theses.

Renth, B. (2014). Academic Performance Gaps and Family Income in a Rural Elementary School: Perceptions of Low-Income Parents, ProQuest Dissertations and Theses.

Robinson-Cimpian, J., Lubienski, S., Ganley, C., Copur-Gencturk, Y., & Eccles, Jacquelynne S. (2014). Teachers' Perceptions of Students' Mathematics Proficiency May Exacerbate Early Gender Gaps in Achievement. Developmental Psychology, 50(4), 1262-1281.

Robinson-Cimpian, J. P., Lubienski, S., Ganley, C., & Copur-Gencturk, Y. (2014). Teachers' Perceptions of Students' Mathematics Proficiency May Exacerbate Early Gender Gaps in Achievement. Developmental Psychology, 50(4), 1262-1281.

Royle, J., Brown, C., Hammack, B., & Holt, C. (2013). Administrator Perceptions of the Achievement Gap between African American Students and Other Subpopulations, ProQuest Dissertations and Theses.

Sampson, R. (2006). Mathematics Achievement Gap: Suburban Students' Perceptions of Teaching and Learning, ProQuest Dissertations and Theses.

Sasser, T., Whitaker, C., & Shaw, M. (2018). *A Qualitative Study Examining Staff and Parent Perceptions of Closing the Achievement Gap for Intermediate Elementary Students in Poverty,* ProQuest Dissertations and Theses.

Saygin, P. (2019). Gender bias in standardized tests: Evidence from a centralized college admissions system. *Empirical Economics*, 1-29.

Schulte, A., & Stevens, J. (2015). Once, Sometimes, or Always in Special Education: Mathematics Growth and Achievement Gaps. *Exceptional Children, 81*(3), 370-387.

Sleeter, C. E. (2017). Critical Race Theory and the Whiteness of Teacher Education. *Urban Education, 52*(2), 155-169.

Steele, C. M., & Aronson, J. (1995). The intellectual performance of African Americans. Journal of Personality and Social Psychology, 69, 797-811.

Strauss, A. and Corbin, J. (1990) Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. Newbury Park, CA: Sage.

Strauss, A., & Corbin, J. (2008). Basics of qualitative research: Grounded theory procedures and techniques. (3rd ed.). Newbury Park, CA: Sage.

Strayhorn, T. (2009). Different Folks, Different Hopes: The Educational Aspirations of Black Males in Urban, Suburban, and Rural High Schools. Urban Education, 44(6), 710-731.

Uhlenberg, J., & Brown, K. (2002). Racial Gap in Teachers' Perceptions of the Achievement Gap. Education and Urban Society, 34(4), 493-530.

U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency (School District) Universe Survey", 2016-17, v.1a.

Washington Kids Count. (2003). Washington's rural schools at a disadvantage (Press release). Retrieved February 4th, 2019 from http://hspc.org/wkc/annual/state_WA_children/SWC2003PressRelease.pdf

Weir, S., Archer, P., & Millar, D. (2009). Analysis of English reading and mathematics achievements in schools in the rural dimension of the School Support Programme. Report to the Department of Education and Science. Dublin: Educational Research Centre

Weir, S., Errity, D., & McAvinue, L. (2015). FACTORS ASSOCIATED WITH EDUCATIONAL DISADVANTAGE IN RURAL AND URBAN AREAS. *The Irish Journal of Education / Iris Eireannach an Oideachais, 40*, 94-110. Retrieved from http://www.jstor.org.ezproxy.uky.edu/stable/24582832

Wiley, E. W., Mathis, W. J., & Garcia, D. R. (2005). The impact of the adequate yearly progress requirement of the federal "No Child Left Behind" Act on schools in the Great Lakes Region. Arizona State University Educational Policy Research Unit.

Williams, G., & Washington, Ernest D. (2002). *Perceptions of Black Male Students and Their Parents about the Academic Achievement Gap between Black and White Students at the Elementary School Level*, ProQuest Dissertations and Theses.

Williams, J. H. (2005). Cross-National Variations in Rural Mathematics Achievement: A Descriptive Overview. Journal of Research in Rural Education, 20(5), 1-18.

Uhlenberg, J., & Brown, K. (2002). Racial Gap in Teachers' Perceptions of the Achievement Gap. *Education and Urban Society, 34*(4), 493-530.

Watson, C. (2013). *Using Factors of Socioeconomic Status, Family Support, and Academic Preparation to Explain the Black-White Gap in Mathematics Achievement and Participation, 73*(10), Dissertation Abstracts International, A: The Humanities and Social Sciences, 73(10).

Zorn, J. (2018). Critical race theory in education: Where farce meets tragedy: AQ AQ. *Academic Questions, 31*(2), 203-211.

VITA

Heather Renee Brown Chapman

PLACE OF BIRTH

Corbin, KY

EDUCATION

B.A., Elementary Education, Berea College, Berea, KY, 2011

PROFESSIONAL POSITIONS

August 2013-June 2014	Sandersville Elementary	4th grade teacher
August 2014-June 2019	William Wells Brown Elementary	4th grade teacher
June 2019-present	Lansdowne Elementary	4th grade teacher