2019

Making a Case for using Effective Reading Programs: A Program Evaluation of Wilson Fundations

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MAKING A CASE FOR USING EFFECTIVE READING PROGRAMS: A PROGRAM EVALUATION OF WILSON FUNDATIONS

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

By

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March 2019

MAKING A CASE FOR USING EFFECTIVE READING PROGRAMS: A PROGRAM EVALUATION OF WILSON FUNDATIONS

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Dedication

I would be remiss to not acknowledge the life changes that happened throughout the three years I was in this program. I came into this doctoral program a newly-married teacher with no children. In only three years, I became a father of three and I am now a school principal. During the final calendar year of this program alone, we moved from Washington, D.C. to Michigan, I became a school principal, we purchased our first home, we had twin babies (Ella and Carter), and now, I am becoming Dr. Chalfant. There are several people who need to be acknowledged for their time spent on ensuring my success throughout this journey and to whom I dedicate these successes to.

To my mom, the one who kept us from living in the streets and for teaching me the meaning of hard work and dedication. You were the breadwinner in our family and taught me from an early age the benefits of working hard while always keeping a smile on your face. You will forever be the hardest working person I will have ever known and because of that, you are only one year away from having all three of your children graduate from college. Thanks for showing us the way.

To my dad, the one who showed me how to dream as high as I could, to be solution-oriented, and to be hard-nosed and relaxed during times of stress. I miss your laugh and our daily conversations. Thank you for showing me what to not do and always being so adamant about it—I will spend the rest of my life trying to live up to your high expectations.

To my brother, the most confident person I will have ever known. Even from a young age, and being 6.5 years younger than me, you showed me what it was like to absolutely embody confidence in yourself and allow that to radiate into everything you

do. I have always looked up to you, even though you are younger. It took me plenty of time to find my way and with that, I know you will, too.

To my sister, the youngest of the group. The one who was only in kindergarten when I was graduating from high school. This is dedicated to you. For the past 15 years, I tried leading the way for you and Michael both educationally and professionally. I hope that I have shown you how much fun life can be; albeit, you are usually the one laughing. Thanks for your extra pushes for me to get this thing done—now, I will let you shine next year at your graduation from Virginia Tech.

To my better half, Rachel, we did it! This is as much yours as it is mine. Thanks for letting me convince you that this program was what we needed while being six-months pregnant. I dedicate this to you and our family, my one true love. I transformed into the man I am today because of you and I would have never been able to do this without your love, your support, and your scrumptious dinners.

To my best friend, Andrew--Pancho, my 11th grade roommate. I have always looked up to you and your hard-working focus, even as middle-schoolers. Who would have thought we would become closer than we were at 16 years-old? Here's to 22 years of friendship.

To Scott, my mentor, my buddy, my father-figure. "Where you at?" You were the one who encouraged me to do this program before my kids were born, so I never had to miss out on the great things in their lives. I think of you often and you will live forever in the hearts of our family and now, within our daughter Ella, whose middle name is yours. You meant the world to me and it hurts to even think about you being gone. I am

the man I am today because of you and I will be a better man tomorrow because of you, too.

In all, this is dedicated to my father, who taught me to dream big and have high expectations. To my mother, who taught me what relentless hard work means. To my brother, who taught me the value of being confident in myself. To my sister, who taught me the benefits of laughing, even at the wrong moment. To my wife, who taught me the meaning of joy, integrity, and an absolute fierce love. To my son, Landon, who taught me that with laughter, comes love and joy. And to everyone else, this is dedicated to you. We made it!

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Acknowledgements

While this was dedicated to several special people in my life, I also need to acknowledge several other people who have made a profound impact in my life, helping to make this journey successful.

To Chris Cebrzynski, the only principal I will have ever worked for. You were exactly the male role model I needed during the five years we worked together. I single-handedly owe all of my current successes to the fruitful opportunities you provided for me when no one else would. No matter whether you saw my true value as someone with potential or as someone who was willing to do a lot of the work you didn't have to do, I will be forever indebted to you for your true dedication to my success from the very get-go. And now that I am a school leader, I also want to apologize for all of those long-winded emails I sent you during our time together. I'm not really sure how you ever found the time to read those, let alone respond or meet and discuss with me later on. Either way, I hope you understand the professional impact you have made on me and similar to my own father, I learned a great lesson from you, as you would say, "Do as I say, not as I do."

To Richie Smith, the absolute coolest superintendent on the block. Not only did you show me how to lead charismatically, you are hands-down one of the best people I have ever met. I aspire to be like you each and every day—and if I become half the leader you are, I know I will be successful. I will never be able to think about care and relationships without thinking of you and to also "know my audience" during presentations.

To David Gesualdi, quite possibly one of the smartest people I've ever been able to call my friend. Our monthly conversations driving to and from the College of William and Mary will always resonate with me and I yearn to have discussions like ours sometime soon. Thoughts of our time together will now live through our daughters, both named Ella.

To Erin Kershner, who truly showed me the meaning of being a hands-on leader while also being a warm-demander. While this whole thing wasn't a race, you did win, so I will at least acknowledge that. Not only your work ethic, but your sense of humor and tenacity are admirable and I truly hope to take the things I have learned from you and put them in motion ASAP.

To Dr. Chris Gareis, my dissertation chair, who pushed me to find my way and make this dissertation my own. I admire your intellect, as well as your ability to be so funny, both as a professor and as a mentor.

And to Dr. Peggie Constantino, to whom none of this would have been possible without allowing me to submit my application late. This program was a game-changer for me and I owe so many break-throughs to the knowledge that I built up while going through this program. It functioned much more than a principal-prep program and I am a better person for having been through it.

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Abstract

Students who struggle to read at an early age are likely to continue struggling for not only the rest of their schooling, but the rest of their lives. Schools need to begin adopting research-based reading programs and measuring their effectiveness formatively throughout the school year. Research suggests that effective reading programs need to include phonics, phonemic awareness, fluency, vocabulary and comprehension. During the 2018-2019 school year, Wilson Fundations was implemented in K-2 at Summit Academy, a high-poverty Pre-K-8th grade school in Flat Rock, MI. The purpose was to uncover the potential effects of using Wilson Fundations as a reading program, while focusing on fidelity of implementation and the change in student achievement while the Wilson Fundations program was in place. To do so, I examined the teachers' fidelity of implementation, student performance on Wilson Fundations unit tests, and I also used statistical analyses to compare the growth of student achievement on NWEA MAP from Fall 2018 and Winter 2019 to Fall 2017 to Winter 2018. Previous research assessed the impact of Wilson Fundations on special populations, such as special education and students needing tiered reading intervention, but failed to measure the effectiveness of Wilson Fundations on student achievement across entire grade levels as a Tier 1 reading program. The results in this study suggest that student achievement in reading across all grade levels in K-2 experienced a significant positive change while the Wilson Fundations program was being implemented ($p < 0.05$). Based on the observations and RIT growth percentages on the NWEA MAP, the classrooms with the highest fidelity of implementation percentage also demonstrated the highest growth for their students.

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CHAPTER 1

INTRODUCTION

Background

America has a literacy crisis that manifests itself in preschool and endures through adulthood. The National Assessment of Adult Literacy estimated that 93 million adults are incapable of productively contributing to society because they lack the basic reading skills to do so (National Center for Education Statistics [NCES], 2003). Not only that, half of American adults are estimated to be reading below an 8th grade level (Kirsch, Jungeblut, Jenkins, & Kolstad, 2002). To gain a better sense of why so many American adults struggle with reading, one must look into the literacy proficiency levels in American schools. By doing so, it is evident that this problem may be worse than originally thought: According to the NCES, in May 2017, the most recent National Assessment of Educational Progress scores indicate appallingly low proficiency levels for American students (McFarland et al., 2017). More specifically, only 37% of 12th graders, 34% of 8th graders, and 36% of 4th graders were deemed at or above proficient on the National Assessment of Educational Progress assessment (McFarland et al., 2017).

A relationship has emerged between students who struggle with reading and its implications on society. When students spend "less time reading, [their] reading comprehension skills erode, and these declines have serious civic, social, cultural, and economic implications," such as a decrease in voting, exercise, and cultural responsiveness (Office of Research and Analysis, 2007, p. 7). This is a sharp divergence

from more active and advanced readers, who, in turn, "accrue [more] personal, professional, and social advantages" (Office of Research and Analysis, 2007, p. 16). As noted in the following quotation, Cunningham and Stanovich (1998) examined the effects of reading on a person's life, underscoring the magnitude of the long-term effects of reading:

> Reading has cognitive consequences that extend beyond its immediate task of lifting meaning from a particular passage. These consequences are reciprocal and exponential in nature. Accumulated over time—spiral either upward or downward—they carry profound implications for the development of a wide range of cognitive capabilities. (p. 1)

Businesses and the economy are significantly impacted by the prevalence of poor reading skills of American citizens, as well. Annual costs for large corporate employers and state employers are $3.1 billion and $221 million, respectively (The National Commission on Writing, as cited in Office of Research and Analysis, 2007).

There is an underlying theme to the literacy problem in America: Students who have literacy problems in early elementary school are likely to continue having these problems throughout the rest of their schooling and even worse, for the rest of their lives (Dawson, 2016; Menzies, Mahdavi, & Lewis, 2008). Through this scenario, a question arises: How can the American education system successfully meet the needs of students who are struggling in reading as early as kindergarten? Elementary schools, in particular, need to seek out and implement with fidelity effective, research-based reading programs in order to combat issues related to poor reading for early elementary school students.

Effective reading programs include such components as phonics, phonemic awareness, fluency, vocabulary, and comprehension. Wilson Fundations is an example of a reading program for K-3 students that incorporates these fundamental reading areas and is designed for whole group instruction, as well as individual intervention. Barbara and Ed Wilson developed the Wilson Fundations program in 2002, and it is widely distributed throughout the United States and distributed from their reading organization called Wilson Language Training Corporation. According to the company's claims, this scripted reading program offers:

> all students in K-3 classrooms with a systematic program in the foundational skills for reading and spelling, emphasizing phonemic awareness, phonics-word study, high frequency word study, fluency, vocabulary, handwriting, and spelling. (Wilson Language Training Corporation, 2014, p. 2)

Summit Academy, a kindergarten through 8th grade (K-8) school in Flat Rock, MI, had English Language Arts (ELA) proficiency percentages that are well-below the state average and was is in desperate need of a phonics program that provided support for students in whole-group and small-group intervention. For that reason, Wilson Fundations was purchased for the 2018-2019 school year for Grades K-2. Wilson Language Training Corporation indicated that 3rd grade students need to have prior experience with the program in order to be successful with it in 3rd grade, so the program was only purchased for K-2, leaving the potential for purchasing the 3rd grade program for the 2019-2020 school year. There is limited independent research available for Wilson Fundations on research databases, such as *Education Research* and implementing this new reading program warrants the need to understand how reading achievement

changes during the implementation of the Wilson Fundations program, especially at Summit Academy. To do so, an objectives-based program evaluation was conducted to measure its effectiveness in moving students toward achieving its intended outcomes. This study serves as a program evaluation of the implementation of Wilson Fundations at Summit Academy, potentially leading toward a possible solution to this literacy crisis.

Program Description

Wilson Fundations is a reading program designed to help K-3 students acquire the foundational reading skills necessary to become a successful reader. In each of these grades, Wilson Fundations consists of daily, thirty-minute lessons delivered to the entire class. Within each lesson, there are several activities that students participate in, all aiming to build on previously-learned skills, while also teaching students new skills they can practice (Wilson Language Training Corporation, 2014). Wilson Fundations "was designed for use in [these] situations: (a) preventatively, in Grades K-3, for whole group instruction; (b) as an intervention for the targeted lowest 30th percentile of student readers; or, (c) for students with language-based learning disabilities, as intensive instruction" (Florida Center for Reading Research, 2004, p. 1).

The Wilson Fundations program aims to explicitly impact students in K-3 through daily, whole-group instruction and small-group intervention. An argument could be made that Wilson Fundations has the potential to affect a much wider range, as these students move into higher grades and become more prepared for reading and writing. Within each daily lesson, there are "specific guidelines provided to address the needs of advanced students, English Language Learners (ELL), and struggling students who may need differentiated support" (Wilson Language Training Corporation, 2014, p. 3). Not

only does Wilson Fundations attempt to provide effective Tier 1 instruction, there also is a built-in Tier 2 intervention sub-program called *Double Dose*. Double Dose intends to reduce the number of students receiving Tier 2 intervention through additional 30-minute lessons, 3-5 times per week. These lessons focus on students' trouble spots as evidenced through daily anecdotal notes, alongside unit tests. In all, Wilson Fundations attempts to meet the needs of all students in kindergarten through third grade through effective whole-group instruction and targeted small-group intervention.

Context. Summit Academy is a Title I, tuition-free public academy in Flat Rock, Michigan. It was established in 1996 and chartered by Central Michigan University. There were 250 students who attended Summit Academy during its inaugural school year in the fall of 1996. What distinguished Summit Academy from other schools was its use of technology: It became the first school in the state of Michigan to become 1:1 with technology, allowing all students to use and take home a school laptop. Since then, Summit Academy has turned into a small school district consisting of 4 schools and serving over 2,500 students:

- Summit Academy, which is K-8th grade,
- Summit Academy North, which is K-5th grade,
- Summit Academy North Middle, which is 6th-8th grade, and
- Summit Academy North High School, which is 9th-12th grade.

During the 2017-2018 school year, there were 345 students from 39 different school districts enrolled at Summit Academy (Table 1). Because students come from so many different locations, buses are provided for students at various meeting points throughout southeast Michigan. During the 2018-2019 school year, 31% of teachers were in their

first three years of teaching and 62% of teachers had been employed at the school for less than three years.

Table 1

School Demographics of Summit Academy in Flat Rock, Michigan

Student Subgroup	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Total Students	446	455	403	342	345
Males	227	238	205	179	178
Females	219	217	198	163	167
White	319	323	276	222	210
African American	74	82	75	70	86
Hispanic/Latino	31	30	31	28	26
Two or more races	13	10	11	13	13
Asian	7	8	8	7	8
American Indian	1	1	1	2	2
Economically Disadvantaged	249	269	246	175	220
Not Economically Disadvantaged	197	186	157	167	125
Students with Disabilities	77	86	76	65	56
Students without Disabilities	369	369	327	277	289
English Learners	20	16	19	12	11
Not English Learners	426	439	384	330	334

Note. Adapted from *School count snapshot*, by MI School Data, 2018b, retrieved from https://www. mischooldata.org/DistrictSchoolProfiles2/StudentInformation/StudentCounts/StudentCount.aspx.

I am the researcher in this study, as well as the school principal of Summit Academy, where I started in April 2018. With that said, I was able to allocate the school's budget to purchase Wilson Fundations for K-2 because of historically low proficiency levels of student achievement in ELA (Table 2). Level 3 (3rd grade) was not purchased because students the program designers recommend that students have

experience with Wilson Fundations in Level 2 (2nd grade) beforehand; therefore, it was only purchased for K-2. I had 4 years of experience in D.C. Public Schools using and analyzing the results from Wilson Fundations and thought that the program might prove to be beneficial for the students at Summit Academy. Summit Academy's student proficiency levels in ELA, as determined by the Michigan State Test of Educational Progress (M-STEP), had decreased in every grade level, including a staggering decrease of 20% or more in 4 out of the 6 tested grade levels between 2014-2015 and 2017-2018. To put these proficiency percentages into perspective, the statewide M-STEP averages in Michigan during the 2017-2018 school year ranged from 41.4% to 46.5%, so Summit Academy's proficiency levels were below the state average in every grade level. In 2016, the state of Michigan passed the *3rd Grade Reading Law*, which requires students who are reading on a 2nd grade level or below (termed reading deficiency) at the end of 3rd grade to be retained. The 3rd Grade Reading Law goes into effect for the 2019-2020 school year, so the urgency to increase reading proficiency was vital (Michigan Education Association, 2017).

Table 2

Summit Academy Student Proficiency Percentages in ELA on M-STEP

Grade	2014-2015	2015-2016	2016-2017	2017-2018
3rd	26.1	20.8	20.9	25.7
4th	32.6	25.0	11.1	19.4
5th	41.3	44.2	30.8	13.5
6th	37.0	20.6	21.9	15.4
7th	43.1	47.6	16.7	14.8
8th	58.1	41.5	44.7	33.3

Note. M-STEP is Michigan's state assessment used for school accountability purposes. Adapted from *Grades 3-8 assessments: Proficiency snapshot*, by MI School Data, 2018a, retrieved from https://www.mischooldata.org/DistrictSchoolProfiles2/AssessmentResults/AssessmentGradesProficiency.aspx; ELA = English Language Arts; M-STEP = Michigan State Test of Educational Progress.

Description of the program. To gain a better understanding of how student achievement at Summit Academy could positively change while implementing Wilson Fundations, it is important to analyze its *theory of action* as depicted in a logic model (Figure 1). A logic model is "a model that displays the sequence of actions in a program, describes what the program is and will do, and describes how investments will be linked to results" (Mertens & Wilson, 2012, p. 560). The purpose of a logic model is to bring to life the program's theory of action, which "describes how the activities, resources, and contextual factors work together to achieve the intended outcomes" (Mertens & Wilson, 2012, p. 244). This logic model consists of five major phases, which are separated into columns and designed to represent the logical flow within the theory of action of the Wilson Fundations program: (a) Inputs, (b) Processes, (c) Initial outcomes, (d) Intermediate outcomes, and (e) Ultimate outcomes (Figure 1). In the first column, the inputs represent the resources that are needed to make the processes take place within Wilson Fundations program. In this case, the processes represent the implementation of

the teaching strategies that are included in the Wilson Fundations program and these processes are in the second column. Outcomes are stretched between the third and fifth columns, in order to represent relative time of impact in a linear sequence; therefore, the initial outcomes come first and are followed by intermediate outcomes and ultimate outcomes. Stakeholders within each major phase are represented inside boxes and arrows are used to indicate how items are interrelated.

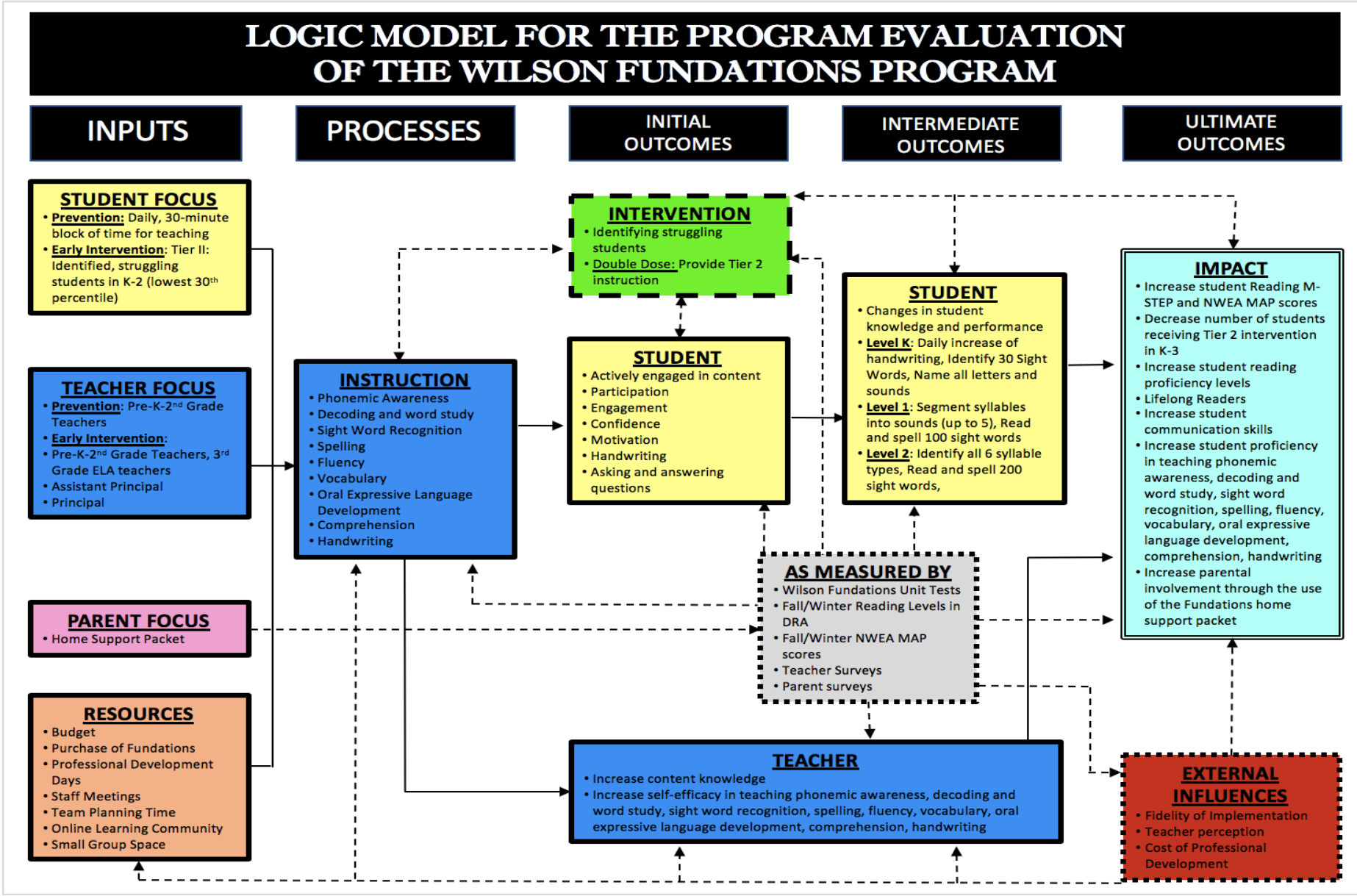

Figure 1. The theory of action of the Wilson Fundations program as depicted in a logic model

Program elements depicted in the model. Given the overall structure of the logic model, there are elements present in many of the categories listed above. The logic model is arranged in such a way that one can follow the arrows to better understand the relationship among the various components, as well as how the progression from inputs to outcomes evolves throughout the logic model. To get a better sense of how the different parts of the logic model are interrelated, further explanation of these key components is needed.

Inputs. Wilson Fundations has four key inputs: (a) students, (b) teachers, (c) parents, and (d) resources. As mentioned before, Wilson Fundations consists of daily, thirty-minute lessons in Grades K-3, alongside Tier 2 intervention three to five days per week. All students participate in the daily, whole group lessons, while the students who score in the lowest 30th percentile also receive Double Dose lessons in Tier 2. In the logic model, these are grouped together in a box because they are focused on students and throughout this logic model, student-focused items are labeled in yellow boxes.

Teacher-focused items are represented in dark blue boxes. The theory of action indicates that ELA teachers in Grades K-2 are needed for Wilson Fundations for both whole group instruction and Tier 2 intervention. Paraprofessionals can also be used to provide Tier 2 intervention to students. The assistant principal is needed to help teachers analyze their classroom data during the initial outcomes phase and help teachers make more informed decisions based on those data.

Parents have the opportunity to play an integral role in the undertaking of Wilson Fundations, as well. There is a home support packet that is reproduced for parents, encouraging them to support classroom instruction for students while they are at home.

While parents are not held accountable for taking part in these activities at home, it should be noted that the home support packet includes activities, such as handwriting, games, and spelling. The parent-focused item is represented in a pink box.

Resources are indicated using an orange box and include many of the fundamental items needed to successfully implement the Wilson Fundations program. Many of these resources involve monetary expenses, such as the school's budget, purchase of the Wilson Fundations program, and professional development. Typically, individual schools use their budget to purchase the curriculum, while the school district provides professional development opportunities and funding of a Wilson Fundations trainer who provides coaching to teachers 4 times per year. Small group space is a resource needed to provide Tier 2 intervention to struggling students, as well.

Processes. In this logic model, the processes are the major areas of instruction needed to improve student achievement in reading. These processes are based on the research discussed earlier in this paper: phonics, phonemic awareness, fluency, vocabulary, and comprehension (Dawson, 2016). These instructional areas are presented in a scripted, daily lesson plan format for teachers in Grades K-3. The theory of action is that by delivering these lessons to students, many positive outcomes will occur.

Outcomes. The theory of action for the Wilson Fundations program suggests that there are three phases of outcomes: (a) initial, (b) intermediate, and (c) ultimate. When analyzing these outcomes, one must understand that each consecutive set of outcomes is a result from the application of the previous outcome (McLaughlin & Jordan, 1999, p. 66). For example, an initial outcome of student engagement should cause a change in student performance (intermediate outcome) and, in turn, cause an increase in student proficiency

(ultimate outcome). The solid arrows symbolize this relationship between the outcomes, as well. It is important to distinguish between the outcomes and how they relate to the overall effectiveness of the program.

Initial outcomes. Initial outcomes refer to the immediate results that can be attributed to the implementation of the Wilson Fundations program. Handwriting is a critical process element in the K-1 programs and an improvement is expected immediately. Asking and answering questions takes place in each lesson; therefore, an improvement is expected right away. Student characteristic development is another initial outcome. Here, students are expected to be more engaged in lessons, actively participate, develop a higher sense of confidence, and be more motivated to read. Each of these is expected to increase immediately and continue throughout the program. Initial outcomes for teachers are not explicitly mentioned in the Wilson Fundations program; however, it can be inferred that teachers will increase their content knowledge and as a result, increase their self-efficacy in teaching the key areas of the program. This increase in self-efficacy is expected to continue to take place during the intermediate and ultimate outcomes, which is why the teacher box is extended across multiple phases in the logic model.

Intermediate outcomes. Intermediate outcomes refer to those outcomes that take place after the completion of one year of instruction. These outcomes are explicitly listed in the Wilson Fundations program and described using this terminology: "By the end of kindergarten, students will be able to" (Wilson Language Training Corporation, 2014, p. 3). In the logic model, intermediate outcomes for students are described as changes in

student knowledge and performance and several examples for each grade level are listed within that box.

Ultimate outcomes. Ultimate outcomes refer to the goals that happen after years of implementing the Wilson Fundations program. These are listed as impacts inside a teal-colored box. Through the use of interventions during each phase of outcomes, a decrease in the number of Tier 2 students in K-3 is expected. Wilson Fundations is expected to increase M-STEP test scores, students' communication skills, and proficiency in each area that is taught. The ultimate outcomes could be used in the development of the school's vision, as well. While some schools do focus on increasing test scores, which would be part of their vision for the school, other schools may focus on increasing parental involvement. Summit Academy focuses on acceleration of learning for all students, and, based on this logic model, Wilson Fundations is designed to accelerate student learning at all levels within K-3.

Intervention, external influences, and measurement. There are three dotted boxes used within this logic model that need to be considered during the outcome phases of the Wilson Fundations program: (a) intervention, (b) external influences, and (c) measurement. Each of these play a role in the overall execution of the program, which is why a discussion about each component is needed.

Intervention. Intervention, which is the dotted green box, refers to identification of students needing Tier 2 intervention and is used during each of the outcome phases. Although it appears to be under the initial outcomes phase in the logic model, the arrows indicate that it impacts all three outcome phases.

External influences. External influences refer to those factors that are likely to impact the overall effectiveness of the Wilson Fundations program and is represented in a dotted red box. "A critical feature of the [logic model] is the identification and description of key contextual factors external to the program and not under its control that could influence its success either positively or negatively" (McLaughlin & Jordan, 1999, p. 66). Said differently, external influences need to be identified in order to determine how those might impact the program.

Measurement. Measurement includes the tools that can be used to measure the processes and outcomes of the program and is symbolized in the logic model in a dotted gray box. Each of these are fundamental to the success of the program and need to be considered during each of the outcome phases: (a) initial, (b) intermediate, and (c) ultimate. The processes can be measured using the teacher survey about their fidelity of implementation. The outcomes can be measured using M-STEP test scores, Wilson Fundations unit test scores, Northwest Evaluation Association Measurement of Academic Progress (NWEA MAP), and the Developmental Reading Assessment, 2nd Edition PLUS (DRA2) assessments. Fidelity and teacher perception of the program can be measured through the use of teacher questionnaires.

Relationships of elements. Arrows are used within this logic model to represent the linear movement from one major phase to another. Solid arrows imply a direct, linear relationship among the elements within the logic model and the progression from one major phase to another, while dotted arrows refer to those relationships that can possibly occur between elements. For example, external influences such as teacher perception of

the Wilson Fundations program may positively or negatively impact their self-efficacy, but are not explicitly mentioned in the Wilson Fundations program.

Reciprocal relationship. There are also double-sided dotted arrows, which represent how components of the logic model may have a reciprocal relationship. Intervention is a clear example, as teachers use intervention to identify students during each outcome phase who are not achieving those intended outcomes. This relationship is represented using a double-sided arrow because of how teachers use it, but also how the intervention is expected to lead to those intended outcomes.

Overview of the Evaluation Approach

An objectives-based evaluation was used to determine the degree to which students are achieving the objectives set out by the Wilson Fundations program in K-2 at Summit Academy. The purpose of this evaluation was to uncover the changes in reading achievement during the implementation of Wilson Fundations, while focusing on fidelity of implementation. The evaluation questions connect directly to the focus and purpose of this evaluation and a much deeper look into each of these will follow.

Program evaluation model. An objectives-based evaluation, also known as the Tylerian evaluation, "involves judging the worth of a program on the basis of the extent to which its stated objectives have been achieved" (Owen, 2007, p. 48). While this approach was initially created by Ralph Tyler to determine whether or not educational outcomes were achieved in classrooms, the objectives-based approach offers a simple, yet practical way to evaluate the effectiveness of the Wilson Fundations program. Stufflebeam and Shinkfield (1985) explain the eight steps of the objectives-based evaluation:

1. To establish goals or objectives,
2. To place objectives in broad classifications,
3. To define objectives in behavioral terms,
4. To establish situation and conditions in which attainment of objectives can be demonstrated,
5. To explain the purpose of the strategy to relevant personnel in the selected situations,
6. To choose or develop appropriate measurement techniques,
7. To collect performance data (in the case of educational programs these would be of student performance), and
8. To compare data with behavioral objectives. (p. 71)

It makes sense an objectives-based program evaluation was used because the major focus of this evaluation is on the intended outcomes. In addition, I was interested in the determining the effectiveness of Wilson Fundations in its purest form, as implemented with fidelity. Focusing on the program this way is a clear delimitation of the program evaluation and will be discussed later on. When examining the steps for conducting an objectives-based program evaluation, described by Stufflebeam and Shinkfield (1985), it is important to also understand that the first six steps are actually completed by the developers of Wilson Fundations. For instance, there are specific, behaviorally-categorized objectives listed for each grade level, and, for each unit that is taught in Wilson Fundations, there is an assessment provided to help determine whether students achieved those objectives.

Purpose of the evaluation. The purpose of this program evaluation was to determine whether Summit Academy K-2 students achieved its prescribed educational objectives during the implementation of Wilson Fundations and to gain a better understanding of how student reading outcomes changed, as measured by the NWEA MAP and DRA2. This evaluation highlighted the changes in student achievement in reading during the implementation of Wilson Fundations in K-2 from the Fall 2018 assessment to the Winter 2019 assessment. Not only that, it identified the degree to which students met the objectives laid out in the program during the implementation of the program. Students at Summit Academy have a history of low performance on standardized tests and with the passing of the 3rd grade reading law, there was a need to evaluate the worth of this program within the context of Summit Academy from the fall to the winter. This program evaluation sought to reveal whether Wilson Fundations was a successful program within the context of this school. There are multiple stakeholders with an interest in this program evaluation: (a) the aforementioned stakeholders, (b) outside school administrators seeking to find an effective phonics program for their school setting, and (c) reading specialists, instructional coaches, and district curriculum directors who are seeking programs to adopt to meet the needs of the students within their own schools.

Focus of the evaluation. The focus was to understand how K-2 student achievement in reading changed during the implementation of Wilson Fundations at Summit Academy between Fall 2018 and Winter 2019 and this program evaluation was primarily focused on a specific set of intended outcomes of the program itself. This entire study was geared to learn more about whether Wilson Fundations helped students

to learn to read. The first step was to focus on the degree to which students achieved the objectives as set out by Wilson Fundations. Focusing on the results of the unit tests provided an insight into whether or not students met programmatic goals. Shifting to a more summative focus while still looking at the outcomes, student achievement was analyzed across multiple assessments, identifying whether student growth is statistically significant. Differences in student achievement were analyzed using extant data from NWEA MAP. While there were several clear limitations with comparing student achievement across school years, including a different cohort of students and different teachers, it provided meaningful evidence toward understanding how student achievement was changing while receiving instruction from Wilson Fundations. For example, comparing a cohort of kindergarteners' performance in kindergarten to their performance in 1st grade while receiving Wilson Fundations instruction could be meaningful in identifying a potential upward trend in student achievement, but the attrition of the student population, as described before, plays an impact in this and could also limit the worth of these data.

No matter whether students were meeting the goals or not, it was important also to focus on how teachers implemented the program. Teachers provided an indication of the fidelity of implementation through which they provided instruction. This shifted the focus to the process and input within the program's theory of action. To gain a better understanding of teacher perceptions of their own fidelity of implementation, a self-assessment of the degree to which teachers taught the program the way it was designed to be taught was utilized. Understanding teachers' implementation of the program should enhance future decision-making by focusing on formative judgments about the program

while working to improve the delivery of the program. The evaluation questions give a more in-depth look at the overall focus of this program evaluation, as well.

Evaluation questions. While there are several avenues through which program evaluation questions can be developed, the central focus was on the achievement of intended outcomes. With this in mind, the evaluation questions for this program evaluation focused on the initial, immediate, and ultimate outcomes. When looking at the logic model, however, not all the outcomes were evaluated (Figure 1). Here, it was decided to focus on the prescribed objectives provided by Wilson Fundations and develop evaluation questions aimed at helping stakeholders gain a better understanding of its effectiveness. In order to determine its effectiveness at Summit Academy, it was critical to focus on student achievement across multiple assessments. Multiple assessments help triangulate the results of the study, while also ensuring that increases in student achievement, or lack thereof, were found across each assessment. With that said, this study addressed the following guiding research questions:

1. To what degree is the Wilson Fundations program implemented with fidelity as specified in the guidelines for program design and implementation?
2. To what extent are students in Grades K-2 achieving the intended Wilson Fundations program outcomes at 80% or higher and how do these outcomes differ from grade level to grade level?
3. How does K-2 student achievement in reading change while the Wilson Fundations program is being implemented?

4. While implementing Wilson Fundations, is there a significant change in student NWEA MAP reading outcomes in Grades K-2, compared to the 2017-2018 school year?

Definitions of Terms

The following terms and related definitions are centrally important to the purpose and design of this program evaluation:

- *Behavioral objectives* are student outcomes "that have been defined in terms of the kind of behavior involved and the content with which the behavior deals" (Tyler, 1949, p. 63). Wilson Fundations creates its own behavioral objectives and these objectives are available within the teaching manual.
- *Intact groups* are groups of people who already belong to a certain group. For this program evaluation, an intact group represents the students in K-2 classrooms, already in classrooms receiving Wilson Fundations instruction.
- *Phonics instruction* is a teaching strategy that aims to teach students the letters of the alphabet and the sounds that each letter makes. In turn, students are able to decode words by separating the sounds of each letter. Sounds include consonants, short and long vowels, digraphs, and blends. Students must be explicitly taught phonics using direct instruction because it establishes a strong foundation for phonemic awareness.
- *Program Evaluation* is a "profession that uses formal methodologies to provide useful empirical evidence about public entities in decision-making contexts that are inherently political and involve multiple often-conflicting stakeholders, where

resources are seldom sufficient, and where time-pressures are salient" (Trochim, 1998, p. 248).

CHAPTER 2

REVIEW OF RELATED LITERATURE

Researchers have suggested that there are five pillars of reading instruction: (a) phonics, (b) phonemic awareness, (c) fluency, (d) vocabulary, and (e) comprehension (Dawson, 2016; National Reading Panel, 2000). Naturally, an effective reading program will incorporate each of these components in a sequential, but also integrated, manner. Snow, Burns, and Griffin (1998) described the importance of integrating these five components as a means of developing successful readers:

> Adequate progress in learning to read English beyond the initial level depends on having established a working understanding of how sounds are represented alphabetically, sufficient practice in reading to achieve fluency with different kinds of texts written for different purposed, instruction focused on concept and vocabulary growth, and control over procedures for monitoring comprehension and repairing misunderstandings. (p. 223)

There is inconsistent evidence among researchers regarding how text exposure increases students' reading ability (Cunningham & Stanovich, 1998; Nagy, Herman, & Anderson, 1985), as there are researchers who concluded that exposure to text is not enough (Beck, McKeown, & McCaslin, 1983; Hattie, 2009). While these five components cannot be individually identified as being solely responsible for developing proficient readers, a case can be made for specific teaching strategies that help develop each of them. Further investigation into each of these components is needed to determine how to effectively

teach students how to become skilled readers. The purpose of this review of literature is to examine these five instructional components to determine their effectiveness in overall reading instruction, while providing a background of the Wilson Fundations program to offer a better sense of understanding and highlighting how these instructional components are incorporated into the program.

Phonemic Awareness

A fundamental component of reading instruction is phonemic awareness, which is one's ability to break up spoken words into individual sounds. Several studies have indicated letter recognition and phonemic awareness to be the two most critical pieces of reading instruction for students learning how to read within their first two years of schooling (National Reading Panel, 2000). In fact, these two parts are correlated with early prediction of reading success, as well (National Reading Panel, 2000). In general, the English language has 41 phonemes through which syllables and words are created. Phonemic awareness is an integral part of learning to read because English writing is focused on the alphabet and, when equipped with phonemic awareness, readers are able to attack new words by separating sounds within words to assist with pronunciation. The difficulty involved in this process highlights the importance of developing phonemic awareness skills very early on in reading acquisition.

Phonemic awareness has been found to have large effect sizes on reading achievement, which underscores the importance of phonemic awareness within reading instruction. For instance, based on the results from a meta-analysis of 52 studies, the National Reading Panel (2000) found that phonemic awareness has an overall effect size of 0.86 and, in turn, it has an effect size of 0.52 on reading outcomes and 0.59 on spelling

(p. 2-3). With this in mind, high correlations have been found between phonemic awareness instruction and students learning to read (Liberman, Shankweiler, Fischer, & Carter, 1974; Share, Jorm, Maclean, & Matthews, 1984), with Bradley and Bryant (1983) claiming to have found a causal relationship between the two. With that said, "phonological awareness measures administered in kindergarten or earlier are superior to I.Q. tests as predictors of future reading achievement" (Stanovich, 1993, p. iii). It is evident that "phonemic [awareness] instruction is effective in teaching children to attend to and manipulate speech sounds in words" and helps students learn how to read (National Reading Panel, 2000, p. 2-5). Without a strong command of phonemic awareness, students are unable to acquire vocabulary, read fluently, independently comprehend text, and decode unknown words.

On another note, Hattie (2009) summarized the benefits of phonemic awareness instruction on students from all socioeconomic statuses: "The effects of phonemic awareness were as great with low as with middle and high socioeconomic status students" (p. 134). Learning how to effectively break words into their corresponding sounds also enhances reading comprehension for students, which emphasizes the interrelated nature of reading instruction. However, teaching phonemic awareness alone cannot assure reading success, which further highlights the importance of utilizing multiple components of reading instruction simultaneously (National Reading Panel, 2000). In all, Snow et al. (1998) underscore this assertion:

> Adequate progress in learning to read English beyond the initial level depends on having established a working understanding of how sounds are represented alphabetically, sufficient practice in reading to achieve fluency with different

> kinds of texts written for different purposed, instruction focused on concept and vocabulary growth, and control over procedures for monitoring comprehension and repairing misunderstandings. (p. 223)

Phonics

Phonics instruction is a teaching strategy that aims to teach students the letters of the alphabet and the sounds that each letter makes. In turn, students are able to decode words by separating the sounds of each letter. Sounds include consonants, short and long vowels, digraphs, and blends. Students must be explicitly taught phonics because it establishes a strong foundation for phonemic awareness; however, phonics instruction should not be confused with phonemic awareness instruction, as phonemic awareness instruction "entails teaching students how to use grapheme-phoneme correspondences to decode or spell words" (National Reading Panel, 2000, p. 2-5).

Typically, teachers use a systematic phonics program that teaches these skills in a sequential format, across multiple grade levels. Additionally, Hattie (2009) asserts that phonics instruction has an effect size of 0.60 and direct instruction has an effect size of 0.59. With this in mind, the Wilson Fundations program combines these strategies together: Teachers use direct instruction to deliver phonics instruction to students. However, Ryder, Burton, and Silberg (2006) compared phonics instruction using both direct instruction and non-direct instruction and found that "although all students improved their decoding ability, direct instruction students exhibited no advantage over more traditional approaches" (p. 189). On the other hand, Rupley, Blair, and Nichols (2009) highlighted the fact that while direct instruction can be effective in phonics instruction, "this approach is not successful with all types of [instructional] objectives

and can be misused" by teachers in the classroom (p. 136). Likewise, teachers need to be able to use more than direct instruction when teaching phonics and need to also understand that increasing the repertoire of teaching strategies also increases the likelihood that students will be successful. In all, "good readers are good decoders [and] direct instruction [of phonics] guides students to develop flexible, problem-solving attitudes toward identifying words using the available cue systems—whole word recognition, phonics, structural analysis, and context" (Duffy, as cited by Rupley et al., 2009).

Fluency

Fluency is the "ability to decode a word with relative ease with no hesitation [and] is [typically] developed through an abundance of teacher-directed explicit practice in reading text" (Samuels, as cited in Rupley et al., 2009). Fluent readers have the ability to use speed, while simultaneously focusing their attention on punctuation to guide their sense-making of a text. In fact, students are deemed fluent through the acquisition of accuracy and speed skills (Schreiber, 1980, p. 178). A meta-analysis of more than 70 studies from PsycINFO and ERIC found that fluency instruction has an effect size of 0.41 on reading attainment and 0.35 on reading comprehension (National Reading Panel, 2000). With this in mind, there is a "preponderance of empirical and clinical evidence [that] supports the relationship of fluent oral reading and good overall reading ability" (Allington, 1983, p. 560). This underscores the importance of becoming a fluent reader.

There are three themes that emerged from the research, in terms of the best way for students to become fluent readers: (a) increasing the number of books read, (b) independent reading, and (c) repeated readings. Cunningham and Stanovich (1998)

pointed out that a student's fluency is positively impacted by the sheer number of books he or she reads (p. 5). In addition, schools have consistently tried developing programs or times within their master schedules to plan for independent reading time, as there was an inclination that students' fluency could increase with very little direction (National Reading Panel, 2000, p. 3-1). These programs include: (a) Accelerated Reader (AR), (b) Drop Everything and Read (DEAR), and (c) Sustained Silent Reading (SSR). On the other hand, "fluency is [also] developed through an abundance of teacher-directed explicit practice in reading text" (Samuels, as cited in Rupley et al., 2009, p. 132). Repeated readings of the same text is another strategy used to enhance students' overall fluency (Schreiber, 1980, p. 177). This involves teachers modeling reading fluently and students independently, or with a partner, practice rereading the text, using intonation and speed. While the National Reading Panel (2000) found a 0.41 effect size for explicit fluency instruction, including repeated readings, "these studies failed to find a positive relationship between encouraging [silent and independent] reading and either the amount of reading and reading achievement" (p. 3-3). In all, fluency matters because when students who struggle with automaticity of words and decoding, it leads to a reduction in the cognitive capacity available for students to achieve reading comprehension. Said differently, "if the word recognition task is difficult, all available cognitive resources may be consumed by the decoding task, leaving little or nothing for use in interpretation" (National Reading Panel, 2000, p. 3-8).

Vocabulary

Vocabulary instruction has an effect size of 0.97 on reading comprehension and direct instruction has long been documented as the effective method of instruction for

vocabulary acquisition (Stahl & Fairbanks, 1986, p. 72). Beck et al. (1983) declared that there are competing methods for vocabulary instruction:

> Traditional vocabulary instruction is based on the assumption that word meaning is best taught through the presentation of a word in context rather than through definition-based instruction; [however] it is not true that every context is an appropriate or effective instructional means for vocabulary development. (p. 177)

With that said, vocabulary acquisition occurs differently for students than in some of the other areas of reading instruction, as "the bulk of vocabulary growth during a child's lifetime occurs indirectly through language exposure rather than through direct teaching" (Cunningham & Stanovich, 1998, p. 2). In fact, students' vocabulary systems expand immensely without direct instruction from teachers (Nagy et al., 1985, p. 234). Vocabulary development increases at a much greater frequency by increasing the quantity of texts, not through oral language. The sheer number of unique words present in texts outnumber those in oral language. Moreover, "what is immediately apparent is how lexically impoverished most speech is, as compared to written language" (Cunningham & Stanovich, 1998, p. 2). Not surprisingly then, "children's books have 50 percent more rare words in them than does adult prime-time television and the conversation of college graduates" (Cunningham & Stanovich, 1998, p. 3).

The context of the learning environment seems to matter the most for struggling readers, as Beck et al. (1983) argued: "Children most in need of vocabulary development, less-skilled readers who are unlikely to add to their vocabulary from outside sources, will receive little benefit from such indirect opportunities" (pp. 180-181). In fact, "contexts occurring in text selections do not reliably assist readers in discovering the meanings of

unknown words" (Beck et al., 1983, p. 180). Successful vocabulary programs offer students "repeated and varied encounters with the instructed words" (Beck et al., 1983, p. 181). Vocabulary instruction is also a necessary tool for overall reading improvement and has a strong correlation to reading comprehension (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983). While there is evidence of a strong correlation between vocabulary and reading comprehension, studies have yet to find a causal relationship between the two because, as McKeown et al. (1983) stated that there is "a difference [that] exists between acquiring knowledge of a word's meaning and knowing the word well enough to aid comprehension of a text" (p. 4).

Comprehension

Reading comprehension is the ultimate goal of reading instruction and has an effect size of 0.85 (National Reading Panel, 2000). The National Reading Panel (2000) conducted a meta-analysis of 203 comprehension studies and found that there are seven instructional strategies that improve reading comprehension: (a) comprehension monitoring, (b) cooperative learning, (c) graphic and semantic organizers including story maps, (d) question answering, (e) question generation, (f) summarization , and (g) multiple strategy instruction (p. 4-42). With that said, reading comprehension has undergone an expansion of skills that need to be considered during instruction:

> The concept of reading comprehension has been expanded to include background knowledge, text structure, flexible use of knowledge, reader habits, fluency, automatic word recognition, automatic word knowledge, and the orchestration of skills that support one another in a variety of ways. (Rupley et al., 2009, p. 133)

Beck et al. (1982) acknowledged how reading comprehension is impacted by the other components of reading instruction: "Reading comprehension requires accuracy (knowing word meanings), fluency (speed of lexical access), and richness (semantic network connections)" (p. 508).

Wilson Language Training Corporation

Wilson Language Training Corporation is a reading organization founded in the 1980s by Barbara and Ed Wilson, which at the time, focused their research and programming on meeting the needs of individuals diagnosed with dyslexia. While neither of the founders were officially trained as educators, Barbara Wilson was a clinician for over 30 years, dedicated to teaching adults with dyslexia how to read and Ed Wilson spent time on the Executive Board of the International Dyslexia Association and has spent over 30 years dedicated to enhancing the lives of children (Wilson Language Training Corporation, 2018). Eventually, they developed the Wilson Reading System, which offers certification for educators to provide Wilson Reading System instruction to students with dyslexia. Since then, Wilson Language Training Corporation developed other programs, including Wilson Fundations and Words Their Way, all of which provide educators with the framework to receive embedded professional development and expand their pedagogical skills within reading and writing.

Background of Wilson Fundations

Wilson Fundations is a reading program developed with the aforementioned components of reading instruction in mind, and it is important to analyze the empirical studies that have been conducted to evaluate the program, alongside how the program was chosen for Summit Academy. In short, Wilson Fundations consists of daily, 30-

minute lessons delivered to the entire class. Within each lesson, there are several activities in which students participate, all aiming to build on previously learned skills, while also teaching students new skills they can practice. It is important to note that there are three ways in which Wilson Fundations should be used: "(a) preventatively, in grades K-3, for whole group instruction; (b) as an intervention for the targeted lowest 30th percentile of student readers; or, (c) for students with language based learning disabilities, as intensive instruction" (Florida Center for Reading Research, 2004, p. 1).

Response to Intervention. "Children who are identified as poor readers in first grade are more than likely to remain poor readers in fourth grade"; therefore, there is a crucial need to develop an intensive school-wide intervention plan for students who struggle in reading (Menzies et al., 2008, p. 67). Wilson Fundations provides "scientifically-based instruction in Tier 1, as well as an early intervention program for students at risk for reading difficulties" in Tier 2 (Wilson Language Training Corporation, 2014, p. 2). Wilson Fundations consists of whole group instruction, while also providing a Tier 2 intervention program that it calls *Double Dose*. Double Dose is an intensive, progress monitoring program, aimed at bringing students from Tier 2 back to Tier 1 through targeted, small-group instruction, based on daily formative assessments and end of unit assessments. These targeted lessons are taught 3-5 times per week, in addition to the everyday lessons. As a scripted program, teachers are supposed to stick to the program as much as possible, while identifying struggling students and providing Double Dose to them as necessary. Within each daily lesson, there are "specific guidelines provided to address the needs of advanced students, English Language

Learners (ELL), and struggling students who may need differentiated support" (Wilson Language Training Corporation, 2014, p. 3).

Presence of the five pillars within Wilson Fundations. The five pillars of reading instruction are embedded within the daily Wilson Fundations activities (Table 4). The Wilson Fundations lessons typically follow a *gradual release model* of teaching, which was first coined by Pearson and Gallagher (1983) and examined further by Fisher and Frey (2013). This method of instruction is sometimes summed up and referred to as the *I do, we do, you do* approach and it consists of three distinct steps: (a) the teacher modeling a skill, (b) the teacher and students modeling the skill together, and then (c) the students working on the skill independently or in small groups. While each activity is outlined in the daily lesson plans for Wilson Fundations, each program comes with *Activity Cue Cards* that provide specific teacher language for teachers to follow to help with teaching the program with fidelity. With that said, it is important to discuss how the daily activities across the grade level programs within Wilson Fundations align to the five pillars of reading instruction, including an analysis of how the research is replicated throughout the daily lessons and activities.

Table 3

Alignment of Wilson Fundations and the Five Pillars of Reading Instruction

Phonemic Awareness	Phonics	Fluency	Vocabulary	Comprehension
• Echo/Find Letters & Words • Make It Fun • Word Play • Word Talk	• Sky Writing and Echo/ Letter Formation • Drill Sounds • Echo/Find Letters & Words • Word of the Day • Word Play • Word Talk • Dictation	• Fluency Kits • Word Play • Trick Words-Reading • Dictation/ Sentences • Storytime	• Echo/Find Words • Word of the Day • Word Play • Word Talk • Trick Words • Storytime	• Storytime

Phonemic awareness and phonics. Phonemic awareness is one's ability to hear sounds in spoken words, while phonics focuses on one's ability to decipher sounds in print. These two strategies comprise the core of Wilson Fundations activities and are the foundation for becoming a successful reader. *Echo/Find Letters & Words* involves students using a magnetic board and magnetic letter tiles. The teacher will say the sound of a letter or will announce a word and students will use their fingers to "tap out" the sounds within the word. Then, students will proceed to find the letter that makes the sound or the letters that make of the sounds of the word the teacher announced. This activity focuses on students' abilities to hear the sounds within the words (or letters) and accurate construction of the word by using the correct letter tiles. This activity is used across each grade level program of Wilson Fundations.

Make It Fun activities typically help assess students' abilities to hear sounds within words and are not as repetitive and structured as the other components of the program. Usually occurring once per week, Make It Fun activities provide students with opportunities to practice their newly-learned skills through games. For example, a teacher will have a bag full of items whose names start with the letters that have been presented to the class. The teacher will put his or her hand inside the bag and then present students with a prompt to think about: "I am holding an object that is used to write with and it start with the sound /p/. Think about what I might be holding and the letter that it starts with." These performance-based activities help deepen learning by encouraging students to transfer their learning to other aspects of their daily lives.

Drill Sounds is an activity that starts the beginning of most lessons from Level K to Level 2 and typically involves the teacher saying the letter, the keyword, and the sound the letter or groups of letters make and then, the students echo or repeat this aloud. For example, the teacher will say, "a, apple, /a/" and the students will echo what the teacher says. This strategy helps students identify letters with their sounds and when they forget the sounds, they are likely to remember the keyword associated with the sound which will help to recall the sound of the letter. Digraphs are introduced the same say in Level 1. For example, teachers will say, "t-h, thumb, /th/" and students will echo this.

Sky Writing and Echo/Letter is an activity aimed at improving student handwriting while also accurately identifying and writing a letter in response to its sound. At Level K, teachers will focus on accurately using the writing grid, which consists of four lines: (a) sky line, (b) plane line, (c) grass line, and (d) worm line. These lines help students understand how letters are formed. Letter sounds are also are used in

conjunction with the handwriting piece in each level of Wilson Fundations. Teachers will say the sound of a letter and student will echo that sound. For example, teachers will say, "/t/. What letter says /t/?" Students will then say, "T, top, /t/" and begin writing the letter on their dry erase boards. Similar to the Echo/Letter activity, *Dictation* is an activity that involves students using dry erase boards to write the letters, words, and sentences that are spoken by the teacher. Students will hear a letter, word, or sentence, for example, and will tap out the sounds they hear and write them down.

Fluency, vocabulary, and comprehension. A major understanding of fluency is the fact that students need to be able to listen to fluent readers, which highlights the importance of the *Storytime* activity, which involves the teacher reading a story fluently to students while modeling comprehension strategies and thinking aloud. The teacher uses *Mama Echo*, an owl that helps to act out the story as the teacher reads.

Trick words are the words that cannot be "tapped out" by using letter sounds and in most other reading programs, these words are referred to as sight words. These words are called trick words because Wilson Fundations acknowledges how tough these words can be to read. They cannot be decoded using traditional strategies and students need to be able to recognize and read these words immediately. In Wilson Fundations, these words are presented, analyzed, and used within sentences, both written and spoke, to give students multiple exposures to them through reading and writing. There are 27 trick words presented in kindergarten (Level K), 93 trick words presented in 1st grade (Level 1), and 84 trick words presented in 2nd grade (Level 2). These words are presented throughout the units that span across the entire school year. Learning these trick words

will enhance students' fluency and vocabulary. When students are able to accurately read words without pausing to try and decode, they read faster and more fluently.

Eventually, student will also learn how to "scoop" groups of words while reading to increase their fluency during *Word Play* and Dictation. Word Play involves tapping out sounds within both real and non-sense words and listening to the sounds being spoken. This helps students isolate sounds and focus on tapping and blending them together, no matter whether the word is real or non-sense. Examples of non-sense words include mip, taj, yig, and kug.

The words used for Echo/Find Words and *Word of the Day* are also used to enhance students' vocabulary because many times, the decodable words being used have multiple meanings. For example, the word "rich" can be used to describe the amount of money or wealth a person has, but it can also describe an abundance of something, such as natural resources. Word of the Day is not presented until Level 1 and there are 57 words presented in Level 1 and 61 words presented in Level 2. *Word Talk* is an activity in the Level 1 program aimed at increasing students' vocabulary, including a review of the previous Words of the Day from each unit. Also included in Levels 1 and 2 is a personal resource dictionary that captures the words used in Word Play, Word of the Day, Dictation, and Word Talk, which further increases the number of exposures for students to practice reading these words.

As mentioned before, Storytime focuses on teaching comprehension strategies to students to increase their understanding of a story. Within these stories, words are also identified and presented to students to enhance their understanding of the meanings of these words. Other than during Storytime, comprehension strategies are not part of the

Wilson Fundations program, further highlighting the fact that Wilson Fundations should not be used in isolation when teaching literacy.

Case studies. The search for research on the Wilson Fundations program was challenging, mainly due to the limited number of studies available on the *Education Research* database. Even simply searching for Wilson Fundations in quotes relayed very few studies. On the Wilson Fundations website, general research is cited that supports the use of daily phonics instruction in the classroom, but not specific empirical research that supports Wilson Fundations itself. Most of the studies were found in dissertations, rather than articles in peer-reviewed journals. In all, there were two dissertations that measure the effectiveness of Wilson Fundations in various settings such as intervention, alongside a study that attributes the reading growth in a school to the use of Wilson Fundations.

***Wilson Fundations Double Dose*.** Goss and Brown-Chidsey (2012) conducted a study to measure the differences in effect of Reading Mastery and the Double Dose intervention from Wilson Fundations. Twelve Caucasian first-grade students from two different classrooms in a suburban, public elementary school were selected as participants in this study. Each student received Wilson Fundations instruction as their Tier 1 reading program. Goss and Brown-Chidsey (2012) compared "the reading scores of students who had the same Tier 1 instruction but different Tier 2 instruction, [as] the relative effects of the two interventions could be observed" (p. 67). The researchers used the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment to measure reading progress through the two Tier 2 interventions for two months: Reading Mastery and Wilson Fundations Double Dose. Students were progress-monitored weekly using

the Non-sense Word Fluency and Oral Reading Fluency benchmarks within DIBELS. A paraprofessional was trained through the Wilson Language Training Corporation and provided the Double Dose intervention to the students in the group. All students receiving Tier 2 intervention made progress; however, 4 out of the 6 students receiving Reading Mastery intervention exceeded their winter benchmarks while none of the students receiving Wilson Fundations Double Dose met their goals for Non-sense Word Fluency and Oral Reading Fluency. Overall, Reading Mastery "yielded faster success for at-risk students' reading outcomes when used at Tier 2" than Wilson Fundations did (Goss & Brown-Chidsey, 2012, p. 71).

Students' reading ability. Gibson (2016) designed a dissertation study to conclude whether the Wilson Fundations program "would increase the students' overall reading ability," as shown on the DRA2, Early Star offered by Renaissance Learning, Stanford Achievement Test-10, and Missouri Assessment Program assessments (pp. 45-46). The researcher argued that the assessments used within this study produce data "that could better inform other schools and district that are trying to determine if Wilson Fundations is the right intervention for their reading programs" (Gibson, 2016, p. 46). She used a mixed-methods approach, which included surveying teachers' perceptions of the effectiveness of Wilson Fundations, and student achievement across assessments. In all, the sample size consisted of 65 students in Grades K-3. Gibson (2016) found no statistical significance across the groups studied; however, students' reading ability did increase while using Wilson Fundations and teachers agreed that there was a need for the Wilson Fundations program to be used at their school (p. 2).

Students with special needs. Sessa (2003) designed a thesis study to determine the effectiveness of the Wilson Fundations program in second grade for students with mild to severe special needs. She found that "100% of the second-grade sample increased their spelling and phonemic awareness skills" (Sessa, 2003, p. ii). Sessa's (2003) sample size included four students in a special education program in New Jersey. Between September and March of that school year, these "students received consistent, scaffolded instruction as they have made progress through Level 1 of the Fundations program" (Sessa, 2003, p. 21). Notable increases in this 6-month study included areas such as phonological awareness and spelling. It is worth mentioning that these students were receiving Wilson Fundations instruction at Level 1, which means first grade, while they were in second grade. There was no indication of a goal for students to make growth toward their grade-level goals, though.

School-based evidence. One way that Wilson Fundations explains support for its program is through the evidence of its success in schools. Montanari (2013) explained that by using Wilson Fundations in an elementary school in Triton, Massachusetts, student achievement in reading increased. After learning that only 50% of students in kindergarten and first grade were reading at grade level, Montanari (2013) devised a plan to provide these struggling readers with a reading program that would address their needs: Wilson Fundations. As a leadership team, the Title I director, reading specialist, data coaches, and principal provided teachers with training and support to ensure Wilson Fundations would be implemented with fidelity. Coaching and peer observations were used to provide teachers with opportunities to master the teaching of Wilson Fundations and its activities and routines.

Students in K-3 participated in Wilson Fundations lessons as part of their 30-minute *word study* block during the school day. When creating the master schedule, the principal developed a 45-minute time block, called *What I Need (WIN) Time*. This time ensured students in need of Tier 2 or Tier 3 instruction would receive Double Dose. Using DIBELS as the data source, Montanari (2013) reported how Wilson Fundations helped increase student achievement in reading in Grades K-3:

> The DIBELS (core) data showed that at the beginning of kindergarten 50% of students were at or above benchmark. The year ended with 82% of the students meeting benchmark. There was even more growth in first grade as the grade began with only 39% at/above benchmark and ended with 83%. Second grade showed adequate results with 70% meeting benchmark at the end of the year. The first full year implementation of Level 3 yielded 84% of students meeting benchmark. (para. 16)

Montanari (2013) warned, "According to Implementation Science research, complex programs take approximately 2-4 academic years to achieve full implementation. Therefore, early evaluations should themselves be evaluated with caution" (para. 8).

Critique of case studies. While the researchers from the case studies made claims about the effectiveness of the Wilson Fundations program, the statistical significance of these gains is unknown. Only Goss and Brown-Chidney's (2012) study used a control group and, even then, the researcher merely compared student progress on DIBELS against the Reading Mastery program. Overall, the findings from these studies are not generalizable to another population of students and are limited to the small sample size from their own contexts. The major component missing from these studies is an insight

into the effectiveness of Wilson Fundations for a whole classroom of students, primarily as a Tier 1 program. The implications from these small-scale studies highlight the necessity to evaluate Wilson Fundations as a Tier 1 program within a school, in order to determine its effectiveness on student achievement in reading.

Summary

Effective reading programs need to include comprehension, fluency, vocabulary, phonemic awareness, and phonics instruction because each instructional component has a high effect size on overall reading achievement. Not only that, when taught simultaneously, these components are serve as the foundation for an effective reading program. Wilson Fundations incorporates each of the major components of reading instruction within its units and it was purchased at Summit Academy to help improve student achievement in reading. With that said, it was imperative to learn how student achievement changed in reading for students in K-2 at the Tier 1 level, while implementing Wilson Fundations, something none of the aforementioned studies set out to do. The limited research available on the effectiveness of Wilson Fundations also heightened the urgency of this study.

CHAPTER 3

METHODS

An objectives-based program evaluation was be used to evaluate the effectiveness of the Wilson Fundations program in increasing student achievement in reading in K-2 from the fall to the winter semester. Five data sources were used to collect and analyze the results from this study and they include a teacher survey, classroom observations, the unit tests from Wilson Fundations, and the results from two types of assessments: (a) a growth measure and (b) a diagnostic. These data helped to answer the four research questions for this study:

1. To what degree is the Wilson Fundations program implemented with fidelity as specified in the guidelines for program design and implementation?
2. To what extent are students in Grades K-2 achieving the intended Wilson Fundations program outcomes at 80% or higher and how do these outcomes differ from grade level to grade level?
3. How does K-2 student achievement in reading change while the Wilson Fundations program is being implemented?
4. While implementing Wilson Fundations, is there a significant change in student NWEA MAP reading outcomes in Grades K-2, compared to the 2017-2018 school year?

Participants

All students in K-2 within the designated school were involved in this study because Wilson Fundations was used in every K-2 classroom. This objectives-based program evaluation utilized a single-group design because there is no control group and no official selection process for the participants in this study (Mertens & Wilson, 2012, p. 325). Single-group designs "involve having a pretest and a posttest to be able to demonstrate changes [in student outcomes] following exposure to" the Wilson Fundations program (Mertens & Wilson, 2012, p. 325). In addition, all of the students were part of an intact group already receiving Wilson Fundations instruction. This is significant to note because "when a sample is an intact group, it is difficult for the evaluator to know whether the sample is representative of any larger group" (Mertens & Wilson, 2012, p. 467). With this in mind, pertinent information about the students was collected in order to limit the threat to validity of this study because of their inclusion within the intact group. Selection bias was a potential threat to the validity of the study, as well (Mertens & Wilson, 2012, p. 324). Further, Marsden and Torgerson (2012) declared that "maturation, history, test effects, and regression effects cannot be controlled for using a single group design" (p. 584).

There were 98 students in five classes in kindergarten through 2nd grade who received Wilson Fundations instruction at Summit Academy during the 2018-2019 school year. There were two kindergarten teachers, one 1st grade teacher, and two 2nd grade teachers. In all, 98 students and five staff members participated in this program evaluation (Table 4). More than 76% of students in these classes received free and reduced-price lunch.

Table 4

2018-2019 K-2 Student Demographics of Summit Academy in Flat Rock, Michigan

Student Subgroup	K Class A	K Class B	1st Grade	2nd Grade Class A	2nd Grade Class B
Total Students	16	14	24	22	22
Males	7	8	11	14	13
Females	9	8	13	8	9
White	12	8	13	14	12
African American	4	7	10	3	6
Hispanic/Latino	0	0	0	3	2
Two or more races	0	0	0	0	0
Asian	0	0	1	0	1
American Indian	0	1	1	0	1
Economically Disadvantaged	12	9	20	18	17
Not Economically Disadvantaged	4	5	4	4	5
Students with Disabilities	0	0	0	1	2
Students without Disabilities	16	16	25	21	20
English Learners	0	0	1	1	1
Not English Learners	16	14	23	21	21

Data Sources

The objectives-based model used both a quantitative and qualitative approach to the collection and analysis of data. Quantitative data used in this program evaluation include: a teacher survey, Wilson Fundations Unit Tests, Developmental Reading Assessment, 2nd Edition PLUS (DRA2), and Northwest Evaluation Association Measurement of Academic Progress (NWEA MAP). Qualitative data that were collected and used as a means of gathering evidence to better extend and understand the fidelity of implementation of Wilson Fundations in these classrooms include a survey and debrief with each teacher and two observations using the *Implementation Checklist* provided by

the program. These sources of data were used to answer the program evaluation questions.

Teacher survey and debrief. A teacher survey was used to determine fidelity of implementation of the Wilson Fundations program. This survey was administered using *Qualtrics* and was piloted at my previous school in Washington, D.C., with the teachers who agreed to take it. These teachers provided information about various issues they had with the survey, including a misunderstanding of a question. This survey utilized a percentage scale that enabled teachers to rate their degree of fidelity through which they implemented Wilson Fundations in their classroom. Here, the same question was repeated for each topic that was taught in each grade level. For example, teachers were able to indicate that they taught the "Storytime" activity with 0-100% fidelity during the school year (Appendix A). There are several activities used within the teacher-led lessons that vary from K-2 and this survey aims to determine if teachers were implementing Wilson Fundations with fidelity, so there were three separate surveys: (a) one for the teacher in kindergarten (Appendix A), (b) one for the two teachers in 1st grade (Appendix B), and (c) one for two teachers in 2nd grade (Appendix C). Open-ended questions were used in the teacher survey to learn more about the teachers' perceptions of the program, including possible reasons why the program was not taught with fidelity (in cases in which a respondent indicated such) and whether the teachers felt the program was effective in teaching their students how to read. The teacher surveys provided information about the fidelity through which Wilson Fundations was implemented and when compared with the assessment results from each classroom, an indication of the program's impact on reading achievement was examined. As needed,

teachers were able to debrief on their survey responses as a means to explain any unclear responses, as well as to extend their explanations. This helped to better capture their understanding of the implementation of the program and its effects on student achievement in reading.

Classroom observations. Wilson Fundations provides administrators with an Implementation Checklist, sometimes referred to as the *Fidelity Checklist*, for each grade level, to help them identify specific needs to support the implementation of the Wilson Fundations program (Wilson Language Training Corporation, 2008). Wilson Fundations did not specifically publish any research supporting these checklists; however, these checklists follow the procedures for each activity as laid out in the activity manual, so they provide administrators with a clear measure of the differences between how to program is supposed to be taught and how it is actually being taught.

Wilson Fundations unit tests. Wilson Fundations supplies an end-of-unit, criterion-referenced assessment for each unit taught to students in K-3, designed to measure student acquisition of skills taught throughout each unit. While the publisher does not provide information as to whether these assessments are valid and reliable, the assessments were created based on the content taught within each unit, which means that a case could be made that the necessary requirements for construct validity are met. To this point, the tasks from the unit tests match the activities that students take part in throughout the units. These unit tests provided data to inform initial outcomes in identifying struggling students in need of intervention or Wilson Fundations Double Dose instruction.

NWEA MAP. NWEA MAP is an adaptive, computerized growth-focused assessment tool that was developed by the NWEA and is given to students at Summit Academy three times per school year: once in the fall, once in the winter, and once in the spring. Upon completing the assessment, each student is given a *Rasche Unit Score* (RIT Score) and a *Projected Growth Goal*. The RIT Score enables stakeholders to see where students' scores are compared to national norms, including percentiles and the Projected Growth Goal is the projected RIT Score in the winter and spring, which is determined by the average growth demonstrated by students with the same RIT score in the same grade level. Thus, when students take the NWEA MAP in the fall, they also are given their growth goals for the winter and spring assessments. When aligned with the RIT scale, a RIT score can help stakeholders better understand and compare student performance across long periods of time because the "RIT scale extends equally across all grades" (NWEA, 2018b, p. 1). In 2007 and then again in 2015, NWEA conducted a norming study, which analyzed student growth at certain grade levels, creating a mean and median for all grade levels at the 50th percentile. This enables schools which choose to use the NWEA MAP to be able to better interpret student performance, as well as student growth. While the actual studies were not included, NWEA (2018a) describes how it continues to ensure that NWEA MAP assessments maintain reliability and validity:

> To ensure test reliability, validity, and fairness across all populations tested, the NWEA Research team regularly conducts a variety of studies and analyses such as: pool depth analysis, test validation, comparability studies, and Differential Item Functioning (DIF) Monitoring item quality to ensure that

functioning remains constant across subgroups of students when ability is controlled. (p. 1)

The results from NWEA MAP were used to indicate reading proficiencies for each student and student growth from fall to winter was measured.

DRA2. The DRA2 is an assessment given one-on-one, which tasks students with independently reading passages or smaller books and demonstrating comprehension. In general, there are independent reading book levels that range from A and 1 through 80, which correspond to certain grade levels and students are assessed by reading one non-fiction and fiction book at each level. The books become harder as students advance through these levels, as well. A 2nd Edition was developed to align with the Common Core State Standards (CCSS) and to also assess a much wider array of students: kindergarten through 8th grade. The goals of DRA2 are to: (a) identify students' independent reading level and (b) evaluate their mastery of reading engagement, oral reading fluency, and reading comprehension (Pearson Education, 2011).

The validity and reliability of DRA2 have been examined in many ways and through several studies conducted by the publisher of the assessment (Pearson Education, 2011). The four processes that were used to measure the reliability of DRA2 for each of the independent reading levels (A-80) were: (a) internal consistency, (b) parallel equivalency reliability, (c) test-retest reliability, and (d) inter-rater reliability. Each of these indicators suggested high-moderate to high reliabilities, including rest-retest reliabilities that ranged from 0.93-0.99 (Pearson Education, 2011). Overall, these reliability analyses established triangulation and indicated that "DRA2 is a reliable measure in that it produces stable, consistent results over time" (Pearson Education,

2011, p. 46). The three processes that were used to measure the validity of DRA2 were: (a) content-related validity, (b) criterion-related validity, and (c) construct validity. Based on these methods, the DRA2 "measures those constructs it was designed to measure—oral fluency and reading comprehension" (Pearson Education, 2011, p. 69). The results from DRA2 were used to indicate reading proficiencies for each student and student growth from fall to winter was measured.

Data Collection

There were five teachers who participated in this program evaluation, including two kindergarten teachers, one 1st grade teacher, and two 2nd grade teachers. The data collection process at Summit Academy was transparent, which meant that teachers shared all of their assessment data with colleagues and administrators through Google Drive; therefore, access to student performance on Wilson Fundations unit tests was readily available. Wilson Fundations provided a Microsoft Excel sheet that was used and housed on Google Drive to capture student achievement data from the Wilson Fundations unit tests. The results from NWEA MAP and DRA2 were stored on the companies' websites; therefore, the collection of these data were retrieved digitally once the students finished taking their assessments. Extant student data (e.g., prior scores on these assessments) were also retrieved from these websites, as well, allowing a comparison of student achievement across school years to be conducted. The teacher survey was given to staff and they were able to debrief on their responses from the survey to provide further explanations and to ensure their responses are understood correctly. Each teacher was also observed teaching the program twice using the Implementation Checklist from the

Wilson Fundations website. Teachers' participation in this study, including their responses on the survey, had no bearing on their evaluations at our school.

Data Analysis

Using five sources of data helped to create a triangulation of sources and, in effect, create a much deeper understanding of results. While each data source was analyzed separately and differently, their results were used jointly to make assertions about each of the selected evaluation questions. There were various ways the data were analyzed to help answer the program evaluation questions, but it is important to understand how each data source was analyzed and how each question was answered (Table 5).

Table 5

Evaluation Questions, Data Sources, and Analysis Methods

Evaluation Question	Data Sources	Analysis Methods
1. To what degree is the Wilson Fundations program implemented with fidelity as specified in the guidelines for program design and implementation?	Teacher Survey (Ordinal and Interval Data) Observations	Descriptive Statistics Qualitative analysis of responses from teacher surveys
2. To what extent are students in Grades K-2 achieving the intended Wilson Fundations program outcomes at 80% or higher and how do these outcomes differ from grade level to grade level?	Fundations Unit Tests (Interval Data)	Descriptive Statistics
3. How does K-2 student achievement in reading change while the Wilson Fundations program is being implemented?	NWEA MAP DRA2 (Interval Data)	Descriptive Statistics
4. While implementing Wilson Fundations, is there a significant change in student NWEA MAP reading outcomes in Grades K-2, compared to the 2017-2018 school year?	NWEA MAP (Interval Data)	Inferential Statistics (*t*-test)

Note. These are the evaluation questions that were examined during the program evaluation of Wilson Fundations. NWEA MAP = Northwest Evaluation Association Measurement of Academic Progress; DRA2 = Developmental Reading Assessment, 2nd Edition PLUS.

Teacher survey. The teacher survey was analyzed to determine whether teachers are implementing Wilson Fundations with fidelity. The mean of the responses for each activity was calculated to give insights into teacher self-reporting of their fidelity of implementation of the program. The results from the teacher survey was compared to the classroom results from NWEA MAP and DRA2 to gain a better understanding of how

student achievement was potentially related to the fidelity of implementation of Wilson Fundations. Open-ended questions were used to gain a further understanding of teachers' perspectives of teaching Wilson Fundations and how they felt it impacted student achievement in reading. With that said, these responses were coded using open coding to better understand themes that emerged across the responses (Corbin & Strauss, 2007). Many trends were identified based on the responses from the teachers responding to the survey. For instance, as teachers indicated just how Wilson Fundations might be making an impact in reading or whether they found limitations using the program, open coding was used to first identify labels to summarize meaningful themes that emerged from the teachers' responses. In all, these steps in coding helped to identify relationships and themes across the respondents' survey responses.

Classroom observations. Each teacher was observed twice using the Implementation Checklist provided by Wilson Fundations. These checklists focus on the procedures of each activity and provide feedback to the teachers on their delivery of instruction, as compared to how it ought to be taught. In general, these checklists provide administrators with a tool to oversee the implementation of the program from a more holistic point of view and will enable teachers to receive for specific feedback, including next steps, such as reviewing activity guidelines and videos using the Wilson Fundations online support tool. Each activity has its own checklist with boxes to indicate *Evident* and *Not Evident* during the observations. Then, the total number of boxes checked are divided by the total number of boxes to indicate a mean percentage.

Wilson Fundations unit tests. The end-of-unit tests created by Wilson Fundations were used to determine the degree to which students met the prescribed

objectives, which is the ultimate goal for the objectives-based evaluation. They were analyzed to determine areas in which students did not demonstrate mastery, as well. The program suggests that teachers need to reteach if 80% of the students do not show mastery within an objective or unit. Wilson Fundations provides unit test trackers that help teachers keep their classroom data organized, providing multiple ways to analyze student data: (a) individual student averages, (b) overall classroom averages, and (c) averages per objective taught. Each of these three methods were used when analyzing student achievement on the unit tests. Descriptive statistics were used to determine percentage of students scoring 80% or above on each objective, as well as the entire unit test. These data were organized and sorted by classroom teacher, in an attempt to also compare classroom percentages and achievement with the results of the teacher survey, as well. For example, if Classroom A shows the highest level of achievement and the teacher self-reports a high fidelity of implementation of the Wilson Fundations program, further inquiry could be made to investigate whether the program actually causes the growth.

NWEA MAP and DRA2. The results from the growth between the fall and winter administrations of the DRA2 and NWEA MAP in the 2018-2019 school year were compared across classrooms, grade levels, and against the fall to winter growth from the 2017-2018 school year, which indicated whether there was a statistical significance between these two growth periods. This provided valuable data to be used when discussing the results of the program within the first semester of school. Calculations included *t*-test and effect size. Grade levels were compared to see if there was a significant difference in student achievement and growth. Extant data were available for

NWEA MAP, which meant that a comparison of student growth to previous years was possible. At Summit Academy, there was a classroom placement process where creating balanced classrooms was the ultimate goal, based on many factors such as academic achievement in reading and mathematics, behavior, and demographics such as gender and race. So, various rates of growth, as measured by NWEA MAP and DRA 2, helped to indicate varying levels of implementation fidelity across classrooms.

Evaluation question 1. The teacher survey provided insight into whether teachers were implementing the Wilson Fundations program with fidelity, as well as provided an insight into teachers' understanding of the effectiveness of the program, including their thoughts as to how they could be better supported during the implementation of the program. A score of 80% or higher established a belief that teachers were implementing the program with a high regard to fidelity. A debrief of the survey provided teachers with the opportunity to explain any uncertainty or to elaborate their survey responses. Their anecdotal responses to the surveys and debrief, along with the classroom observation, provided insights into whether the program was being implemented with fidelity.

Evaluation question 2. Wilson Fundations provides a benchmark of 80% or higher for students to demonstrate mastery on its unit tests; therefore, it was important to use this guideline when analyzing the results from classroom unit tests. There were a few ways the scores from the unit tests were analyzed. First, at the end of each unit test, each student received an overall percentage toward the benchmark. This was compared across K-2 to indicate the percentage of students with an average of 80% or more on the unit tests. In addition, the unit test trackers highlighted the student achievement percentages

for the objectives taught during each unit. This helped to create an understanding as to whether there are certain objectives that are not mastered. The teacher survey provided an indication of whether teachers were implementing the program with fidelity and this self-assessment was compared with classroom percentages to see if there were any patterns that emerge. Here, it was important to notice whether the teachers with the highest fidelity of implementation self-assessment scores also had the highest unit test scores. These results were displayed in a table, outlining the scores from each unit in each classroom, including overall class average, and teacher self-assessment score.

Evaluation question 3. While student progress was tracked throughout the first semester of school, a growth measure (NWEA MAP) and a diagnostic (DRA2) were used to gain a better understanding of student achievement at the end of the semester. While the results from only one semester of implementation of the Wilson Fundations provided a very preliminary assessment of its worth, students and teachers alike were held accountable for ensuring semester-based growth goals are met, especially on the NWEA MAP. As the school principal, it was important to analyze and when taking into consideration the importance of the new 3rd Grade Reading Law, it was vital to know whether student achievement in reading had a positive change during the implementation of Wilson Fundations. There are a few ways student achievement was analyzed with NWEA MAP and DRA2. NWEA MAP provided its own analysis of student achievement in the winter, including the percentage of students who met their projected RIT goal, as well as an average class growth percentage. DRA2 provided a way to indicate reading proficiencies for students, classes, and grade levels. This was helpful when comparing the proficiency levels for the fall and winter assessments. Extant data

were available for NWEA MAP, which meant student proficiency and growth in the fall and winter was compared, and when put into a table, this helped to see if there is a difference in student achievement while students were receiving instruction with Wilson Fundations. A *t*-test was administered to compare the growth during the 2017-2018 school year to the 2018-2019 school year. These tests helped determine levels of significance within these data and more importantly, whether or not these data were statistically significant. Grade levels were compared to see if there was a significant difference in student achievement and growth. Also, using the average growth on the NWEA MAP provided a way to analyze overall student achievement in reading because an average of 100% or above would indicate that student achievement in reading was increasing higher than the expected grade level expectations during the implementation of the Wilson Fundations program.

Evaluation question 4. Creating a table that displayed reading achievement scores for each classroom, as measured by the Wilson Fundations unit tests, NWEA MAP, and DRA2, and then, comparing these scores to the teacher self-assessment uncovered the impact of Wilson Fundations on student achievement. If students were meeting their goals and teachers were indicating that they were implementing the program with fidelity, the success could be cautiously attributed to the implementation of the program. In conjunction to answering evaluation question three, a *t*-test was used to determine any statistically significant change in student achievement from fall to winter, using a comparison of the results from the NWEA MAP and DRA2 from 2017-2018 and 2018-2019.

Delimitations, Limitations, and Assumptions

Delimitations. A key delimitation of this program evaluation is its strict focus on outcomes. At this time, the focus was on the worth of Wilson Fundations and determining whether or not it meets its objectives; however, there is value in analyzing the data to find out its effects on various student populations. This delimitation highlights the importance of feasibility of this program evaluation itself. It would take a great deal of time to gain access to the demographics of each student, including his or her socioeconomic status and race. I acknowledge my preference to use more accessible data in determining the effectiveness of the Wilson Fundations program in meeting its goals. A teacher survey was used to determine whether Wilson Fundations was being implemented with fidelity, rather than classroom observations. It was imperative to keep my distance from the implementation of the program evaluation to reduce bias. If a researcher were more interested in how to improve the Wilson Fundations program, for example, he or she would focus on the process of teaching Wilson Fundations and the fidelity through which teachers are operating during the implementation of the program.

Limitations. When thinking about the results of this program evaluation, there were clear limitations because of the lack of a control group during the same school year. In fact, Marsden and Torgerson (2012) explain, "the pre- post-test design consistently overestimates effectiveness by an average of 61% compared with studies with a control group; [therefore], control (or comparison groups) are important for avoiding unwarranted interpretation of data from pre-post measurements" (p. 587). Another limitation of this program evaluation was the fact that Wilson Fundations was a new program at Summit Academy and teachers will not be given professional development

sessions, nor coaching, from Wilson Language Training Corporation, due to the cost of those services. However, I provided coaching to the K-2 teachers implementing Wilson Fundations, based on my experience with the program, during the first 6 weeks of implementation, which included observations, modeling, and debriefs.

Another limitation was my role as practitioner-researcher. As the school principal and researcher, while also being involved in the undertaking of providing professional development to teachers for the Wilson Fundations program, a certain level of bias and influence on the teachers within this study was likely to take place due to the reality that I am personally involved in this study. My role as school principal could have also influenced the survey results from teachers, as they may have feared they needed to denote a high level of implementation fidelity on the survey because they could be held accountable for not doing so on their yearly evaluations. To help mitigate this potential fear, I was transparent in acknowledging that their participation in the survey had no role in their teaching evaluations. To help mitigate bias, member checking was used to involve the teachers participating in this study to review the coding from their teaching surveys and the data from their classrooms, including the Wilson Fundations unit tests, NWEA MAP, and DRA2. These member checks helped to reduce the bias within the study by enhancing the accuracy of the data and in turn, making the process of data collection, data analysis, and communication of results more transparent (Birt, Scott, Cavers, Campbell, & Walter, 2016).

Two important inputs of the Wilson Fundations program that were not assessed in this study, and thus, limitations, were Wilson Fundations Double Dose and parental involvement. As a review, the program recommends providing Double Dose to students

who score below the 80% threshold for mastery of program objectives 3-5 times per week for 30 minutes each session. Parental involvement is an input within the Wilson Fundations program because the At-Home Support Packet provided by the program can be utilized by parents and students at home as a means for extra practice and support. The fidelity of implementation of both of these inputs within the program were not assessed and thus, were limitations in this study.

The most notable limitation of this study was the timeframe through which Wilson Fundations was evaluated. Focusing on the implementation of fidelity and outcomes in only a semester's time may not provide the generalizations needed to make broader claims about the effectiveness of the program; however, my role as school principal necessitated an evaluation of the program on a more formative basis throughout the school year. School leaders need to make programmatic decisions about reading curricula much sooner than holistic evaluations take.

Assumptions. An underlying assumption of this study was that students need to be explicitly taught how to read in order to become successful at reading. In that, a scripted reading program designed to be taught with fidelity was necessary to make this happen. Another assumption was that if a reading program incorporates phonics, phonemic awareness, fluency, vocabulary, and comprehension, then it serves as an effective instrument in teaching students how to read. Here, an assumption is also made that the program is being implemented with fidelity by teachers in the classroom.

There was an assumption that the stakeholders, including teachers and parents, at Summit Academy were interested in learning whether or not Wilson Fundations was an effective reading program for its student population. This assumption highlighted the

future plans of communicating the findings of the program evaluation. There was also an assumption that schools will continue using the Wilson Fundations program. A teacher survey was used to gain a better sense of the degree to which the program was being implemented with fidelity; therefore, when it came to administering the survey to teachers, there was also an assumption that teachers would answer truthfully.

Ethical Considerations

Confidentiality of teachers' survey responses and student data throughout this entire study were at the forefront of ensuring participants' rights are protected. To do this, the objectives of the study and the data collection and analysis methods were shared with teachers before, during, and after the study. The program evaluation of the Wilson Fundations program was submitted to the Institutional Review Board (IRB) at The College of William and Mary, in order to receive approval to move forward, but to also ensure participants were protected. The Program Evaluation Standards were also used to ensure stakeholders' rights were protected. A deeper look into these standards will provide a better understanding of how I plan to adhere to an ethical program evaluation.

Program Evaluation Standards. The Program Evaluation Standards were developed by the Joint Committee on Standards for Educational Evaluation (JCSEE) to ensure that quality and effective program evaluations are conducted. These standards are structured into five different groups "to help clarify the standards and make them manageable": (a) evaluation utility, (b) feasibility, (c) propriety, (d) accuracy, and (e) accountability (Yarbrough, Shulha, Hopson, & Caruthers, 2011, p. xxiii). Each of these standards was taken into consideration in the development of this program evaluation plan.

Feasibility. To improve the quality and efficiency of the evaluation and overall feasibility, it is important to focus on "the logistical and administrative requirements" (Yarbrough et al., 2011, p. 72). Summit Academy ensures data are transparent and available to all staff members, including previous years, which increased the number of sources used.

Accuracy. Highlighting the core of an ethical evaluation, accuracy needs to be ensured, including "the truthfulness of evaluation representations, propositions, and findings, especially those that support judgments about the quality of programs or program components" (Yarbrough et al., 2011, p. 158). There are many ways in which the researcher adheres to the Accuracy standards. For example, when describing the context of the school, the demographic information used was provided by the school and the state of Michigan. In order to be transparent, all of the findings will be communicated to the stakeholders. The teacher survey was also being piloted at another school to increase reliability.

Utility and Propriety. Utility refers to the degree to which "stakeholders find evaluation processes and products valuable in meeting their needs" (Yarbrough et al., 2011, p. 6). Utility standards are focused on ensuring the evaluators understands how to include stakeholders within the "processes, descriptions, findings, judgments, and recommendations in ways that best serve their needs" (Yarbrough et al., 2011, p. 8). Propriety standards seek to ensure the evaluation is "proper, fair, legal, right, acceptable, and just" and that the researcher conducts the evaluation in a professional manner that is both respectable and equitable (Yarbrough et al., 2011, pp. 106-109). The introduction of Wilson Fundations as the new reading program prompted discussions in which teachers

expressed their desires to know if Wilson Fundations was going to be effective in meeting the needs of their students, particularly those from low socio-economic backgrounds. These discussions were the foundation for the development of the evaluation questions and were taken into consideration when planning for the communication of the results. This also enabled a much more inclusive orientation to the evaluation process. Being transparent with teachers throughout this process, including the sharing of data collection and analysis methods also helped to ensure Utility and Propriety standards were met.

Evaluation accountability. The evaluation accountability standards "support the development of evaluation capacity, continuous evaluation improvement, and judgments about evaluation quality once the evaluation is completed" (Yarbrough et al., 2011, p. 226). This helps to enhance future evaluations of the program, but it also enhances stakeholders' ability to participate and conduct evaluations (Yarbrough et al., 2011, p. 226). Pertinent decisions made throughout the program evaluation were noted and communicated with the results. After the evaluation is completed, a Program Evaluation Standards checklist will be paired against the program evaluation to function as an internal meta-evaluation. With that said, I plan to submit the findings to a program evaluation journal, such as *Educational Assessment, Evaluation, and Accountability*. This submission will function as an external meta-evaluation.

CHAPTER 4

FINDINGS

The purpose of this program evaluation was to determine, during the first semester of the 2018-2019 school year and in the midst of its first year of implementation, the degree to which the program was implemented with fidelity, the extent to which K-2 students were achieving the intended Wilson Fundations program outcomes, the change in K-2 student achievement in reading during the implementation of Wilson Fundations, and whether or not Wilson Fundations had a statistically significant effect on students' NWEA MAP reading outcomes, compared to the 2017-2018 school year. As such, this chapter is focused on the findings from the study and organized by the proposed evaluation questions:

1. To what degree is the Wilson Fundations program implemented with fidelity as specified in the guidelines for program design and implementation?
2. To what extent are students in Grades K-2 achieving the intended Wilson Fundations program outcomes at 80% or higher and how do these outcomes differ from grade level to grade level?
3. How does K-2 student achievement in reading change while the Wilson Fundations program is being implemented?
4. While implementing Wilson Fundations, is there a significant change in student NWEA MAP reading outcomes in Grades K-2, compared to the 2017-2018 school year?

The five classes used in this study were renamed to indicate their grade level, and without using teachers' names: (a) K Class A, (b) K Class B, (c) 1st Grade, (d) 2nd Class A, and (e) 2nd Class B. The findings within each classroom and grade level are organized in tables within each evaluation question and described the main points of the findings.

Evaluation question #1. To what degree is the Wilson Fundations program implemented with fidelity as specified in the guidelines for program design and implementation?

This section focuses on teachers' self-assessment of their fidelity of implementation within each activity and whether there are any barriers to implementing the program with fidelity, including any limitations noted. Each teacher responded to a survey in which open-ended questions were asked about Wilson Fundations, including a scale from 0-100 that teachers used to indicate the degree to which they taught each activity with fidelity. Open-ended survey questions prompted teachers to discuss potential limitations of the program, such as whether there was anything holding them back from implementing the program with fidelity. Open coding was used to code and identify themes across teachers' responses. There were themes that emerged from each survey question, both across and within grade levels, and will be discussed in the following sections.

Self-assessment. Within each program, different activities are taught each day, so it was important to understand how teachers responded to teaching new activities on different days. Teachers completed a survey, part of which included a self-assessment of their teaching of each activity within the Wilson Fundations program. Here, teachers used a scale of 0-100 to indicate the percentages through which each activity was taught

as outlined within the daily lesson plans. Teachers' self-assessments were organized in a table to compare the results across classrooms and grade levels (Table 6, Table 7, and Table 8).

Table 6

Kindergarten Fidelity of Implementation Survey Responses

Activity	Self-Assessed Percentage Taught		
	Total K	Class A	Class B
Dictation/Composition Book	41%	81%	0%
Dictation/Dry Erase	93%	100%	85%
Drill Sounds	100%	100%	100%
Echo/Find Letters	100%	100%	100%
Echo/Find Words	25%	50%	0%
Introduce New Concepts	46%	91%	0%
Letter-Keyword-Sound	50%	0%	100%
Make It Fun	43%	0%	85%
Student Notebook	50%	0%	100%
Storytime	85%	90%	80%
Teach Trick Words	0%	0%	0%
Trick Words Practice	0%	0%	0%
Word Play	0%	0%	0%
Alphabetical Order	0%	0%	0%
Echo/Letter Formation	76%	51%	100%
Sky Write/Letter Formation	93%	85%	100%
Vowel Extension	93%	85%	100%
Total *Mean*	52%	49%	56%

Note. The percentages listed under Total K are rounded to the nearest whole number.

Table 7

1st Grade Fidelity of Implementation Survey Responses

Activity	Self-Assessed Percentage Taught
Dictation/Composition Book	96%
Dictation/Sounds	98%
Dictation/Words	98%
Dictation/Trick Words	98%
Dictation/Sentences	98%
Dictation/Dry Erase	99%
Drill Sounds	100%
Echo/Find Letters	95%
Echo/Find Words	95%
Introduce New Concepts	100%
Letter-Keyword-Sound	100%
Make It Fun	98%
Student Notebook	97%
Storytime	100%
Teach Trick Words Reading	99%
Teach Trick Words Spelling	99%
Word of the Day	99%
Word Talk	90%
Word Play	100%
Alphabetical Order	100%
Echo/Letter Formation	100%
Sky Write/Letter Formation	100%
Vowel Extension	100%
Total *Mean*	98%

Note. The percentages listed are rounded to the nearest whole number.

Table 8

2nd Grade Fidelity of Implementation Survey Responses

Activity	Self-Assessed Percentage Taught		
	Total 2nd	Class A	Class B
Dictation/Composition	20%	0%	40%
Dictation/Sounds	99%	100%	98%
Dictation/Words	84%	97%	71%
Dictation/Trick Words	100%	100%	100%
Dictation/Sentences	65%	29%	100%
Dictation/Dry Erase	85%	75%	95%
Drill Sounds	95%	100%	90%
Echo/Find Letters	43%	75%	11%
Echo/Find Words	15%	20%	10%
Introduce New Concepts	72%	50%	94%
Trick Words	50%	0%	100%
Word of the Day	15%	10%	20%
Make It Fun	50%	0%	100%
Storytime	42%	0%	83%
Echo/Letter Formation	60%	71%	48%
Sky Write/Letter Formation	86%	73%	99%
Total *Mean*	61%	50%	72%

Note. The percentages listed under Total 2nd are rounded to the nearest whole number.

While there are data available to analyze the fidelity of implementation for each activity within each grade level, the goal of this study was to better understand the degree to which the Wilson Fundations program was being implemented with fidelity as specified in the guidelines for program design and implementation. With that said, 1st grade was the only classroom in which the teacher self-assessed that the program was implemented with fidelity over 80% fidelity (M = 98%). Overall, the averages of Kindergarten (M = 52%) and 2nd grade (M = 61%) were both below 80%, including K Class A (M = 49%), K Class B (M = 56%), 2nd Class A (M = 50%), and 2nd Class B (M = 72%).

Survey themes in kindergarten and 1st grade. There were several themes that emerged in kindergarten and 1st grade that were different than 2nd grade; therefore, the themes will be discussed separately. In addition to the teachers' self-assessment for percentages of each activity taught, teachers were asked to explain if there was anything within the program that might be holding them back from implementing it with fidelity. Codes and themes that emerged from kindergarten and 1st grade, along with their responses, are described in Table 9. Kindergarten Teacher A and the 1st grade teacher described the amount of time needed to teach each lesson exceeded the amount of time prescribed by the publisher (30 minutes):

- "Students know we go to our Fundations area at 8:30 a.m. There may be a day that we don't get to everything because we are out of time. We spend about 30-45 minutes daily. Fundations does take a little bit more time in our daily schedule than programs I have used in the past."
- "Some days it takes more time, so I have cut it short, but I believe as I use it more, I will be better able to fit it in the timeframe."

Another code that emerged from teachers' response to whether there were any barriers, was daily lesson plans. Teachers discussed the use of the lesson plan provided by the program, and specifically, how easy they were to follow:

- "I'm finding the well-portrayed lessons are very easy to follow for the teachers."
- "I use Fundations every day, incorporating the Daily Plan that is given. It is basically laid out what to say, word-by-word."

Table 9

K-1 Teachers Responses About Implementing Wilson Fundations With Fidelity

Survey Question	Codes	Themes
Is there anything holding you back from implementing the program with fidelity (i.e., as it is laid out in the daily lesson plans)? Please explain.	Time	The amount of time needed to teach each lesson exceeded the amount of time indicated by the publisher
	Lesson Plan	Teachers used the lesson plan provided and was easy to understand

Survey themes in 2nd grade. 2nd grade teachers communicated difficulties they were experiencing regarding student engagement, the need for professional development, and feeling like the program did not meet the needs of their students (Table 10):

- "I think that this program would have been beneficial to our students if it was implemented from when they started in kindergarten. To start it fresh this year in second grade was difficult for the students, especially since they haven't been trained on parts of Fundations that are in the K-1 boxes. Also, I do have some students in 2nd grade that I think get bored of this. These students are my higher level students, who have a higher reading level and grade level appropriate handwriting. I think some effective training for teachers would allow us to comfortably implement it in our room with confidence and ease. I feel that the book isn't very easy to understand."
- "When I was doing a 30-minute whole group lesson, many of my students were not paying attention. I found that it did not fit the needs of all of my students. By starting in 2nd grade with a new program, it was extremely hard

for them to understand parts of the lessons. If they would have started in kindergarten or even 1st grade, I think it would have been easier for my students to follow along. During the assessment times, my students would sit at their seats and just cry because it was hard and they could not follow along with what we were doing."

In turn, the 2nd grade teachers stopped using Wilson Fundations to teach the entire class during the 30-minute allotted time block after 6 weeks of implementation and began using it in small groups with a select group of students:

- "I do Fundations in a small guided reading group with my struggling students and it seems to be working more effectively than doing it whole group."
- "Instead of doing a whole group lesson for 30 minutes a day, I used the parts of Fundations into my guided reading groups."

Table 10

2nd Grade Teacher Responses About Implementing Wilson Fundations With Fidelity

Survey Question	Codes	Themes
Is there anything holding you back from implementing the program with fidelity (i.e., as it is laid out in the daily lesson plans)? Please explain.	Student Engagement	Students are bored during lessons, frustrated during unit tests
	Training	Teachers need more professional development to adequately teach the program

Note. The survey results from 2nd grade were coded separately to acknowledge the different themes that emerged from their responses.

Observations. Each classroom teacher was observed teaching Wilson Fundations twice using the Implementation Checklist provided by the program for administrators: once during the third week of implementation and once, again, during the sixth week of

implementation (Wilson Language Training Corporation, 2008). The timeframe used for these observations was not chosen with specific intent; rather, these two times were most available across all schedules. The Implementation Checklist provides a simple two-level rating scale to indicate whether something was *Evident* or *Not Evident* during the observation. Here, there are checklists available for each activity taught within the program, so administrators are able to assess whether teachers are implementing each activity within the program with fidelity. At the end of an observation, the mean of the Evident ratings were calculated and given a percentage to signify the degree to which Wilson Fundations was implemented with fidelity during each observation (Table 11). Both 2nd grade classes were observed and scored using the rubric before they changed their delivery methods (i.e., small groups with struggling students), so these data are cautiously taken into consideration during analysis. First grade (*M* = 100%) and K Class A (*M* = 87.5%) had the two highest means during the observations and were the only two classrooms with scores above 80%.

Table 11

Fidelity of Implementation in K-2 as Observed Using the Implementation Checklist

Observations	Grade				
	K Class A	K Class B	1st	2nd Class A	2nd Class B
First	85%	20%	100%	55%	40%
Second	90%	30%	100%	70%	60%
M	87.5%	25%	100%	63%	50%
M Self-Assessment	49%	55.9%	98.2%	50%	72.4%

When comparing the mean observation percentages with the overall mean from the self-assessment, there were a few trends noticed. For 3 out of the 5 classes, there was

at least a difference of 22 percentage points between the mean of the self-assessment and the mean of the observations. Three out of the 5 classes also had self-assessment means lower than the observed means, which means either these teachers under-estimated their fidelity of implementation or these observations occurred on days in which fidelity was higher than normal. Overall, Wilson Fundations was implemented with low fidelity during the first semester of the 2018-2019 school year.

Evaluation question #2. To what extent are students in Grades K-2 achieving the intended Wilson Fundations program outcomes at 80% or higher and how to these outcomes differ from grade level to grade level?

At the end of each unit of Wilson Fundations, students are assessed with a unit test. In kindergarten, these tests are administered one-on-one with students and can be described as performance-based because the teacher asks a question and in turn, the student must, for example, select the correct letter or verbally identify a letter or sound. In 1st and 2nd grade, however, students have notebooks designed for taking the end of unit tests and teachers administer these by reading a question aloud and students respond by writing in their notebook. Wilson Fundations provides the metric of 80% proficiency as a means to adequately demonstrate mastery of the objectives and concepts taught in each unit. In the data analysis of unit test scores, students are assessed on their ability to score 80% and above on the unit test as a whole, but also on every objective taught. Wilson Fundations recommends that the classroom goal should be for at least 80% of students to demonstrate at least 80% mastery of each objective and overall unit proficiency. This allows teachers to better plan for re-teaching and small group instruction, based on students' needs. In all of the units assessed in K-2 during the first

semester of the 2018-2019 school year, only one time did a class reach the goal of 80% of students scoring 80% or higher (Table 12, Table 13, and Table 14). This means that out of the 16 total unit tests administered, 15 had scores of less than 80%. It should be noted that the kindergarten classrooms only have results from one unit test because this first unit is 12 weeks long, so the unit test encompasses a great deal of teaching. Overall, the program outcomes were achieved by students at very low rates.

Table 12

Kindergarten Wilson Fundations Unit Test Scores 2018-2019

Unit and Objectives	Total K (n = 35)	K Class A (n = 16)	K Class B (n = 14)
Unit 1	66%	84%	44%
Names of Lower Case Letters	77%	84%	69%
Sounds of Letters	74%	84%	63%
Sound to Letter Correspondence	63%	84%	38%
Forms Lower Case Letters	40%	63%	19%

Note. The numbers listed are the percentages of students scoring at 80% or higher on the Wilson Fundations Unit Tests and are rounded to the nearest whole number.

Table 13

1st Grade Wilson Fundations Unit Test Scores 2018-2019

Unit and Objectives	1st Grade (n = 24)
Unit 1	71%
Forms Lower Case Letters	54%
Sounds of Letters	88%
Unit 2	63%
Writing Sounds of Letters & Digraphs	88%
Writing Phonetic Words	54%
Writing Phonetic Sentence	67%
Writing Trick Word Sentence	83%
Unit 3	67%
Writing Sounds of Letters & Digraphs	83%
Writing Phonetic Words	71%
Marking Phonetic Words	71%
Writing Phonetic Sentence	54%
Writing Trick Word Sentence	71%
Unit 4	50%
Writing Sounds of Letters & Digraphs	88%
Writing Phonetic Words	54%
Marking Phonetic Words	33%
Writing Phonetic Sentence	33%
Writing Trick Word Sentence	71%

Note. The numbers listed are the percentages of students scoring at 80% or higher on the Wilson Fundations Unit Tests and are rounded to the nearest whole number.

Table 14

2nd Grade Wilson Fundations Unit Test Scores 2018-2019

Unit and Objectives	Total 2nd (n = 44)	Class A (n = 22)	Class B (n = 22)
Unit 1	45%	22%	67%
Writing Sounds of Digraphs & Blends	62%	61%	62%
Writing Phonetic Words	49%	30%	67%
Marking Phonetic Words	45%	35%	52%
Writing Trick Words	47%	23%	71%
Writing Phonetic Word Sentence	40%	17%	62%
Writing Trick Word Sentence	36%	9%	62%
Unit 2	45%	39%	50%
Writing Glued/Welded Sounds	82%	78%	86%
Writing Phonetic Words	31%	30%	32%
Marking Phonetic Words	31%	30%	32%
Writing Trick Words	45%	35%	55%
Writing Phonetic Word Sentence	69%	61%	77%
Writing Trick Word Sentence	65%	61%	68%
Unit 3	38%	26%	50%
Writing Closed Syllable Exceptions	58%	57%	59%
Writing Phonetic Words	45%	30%	59%
Marking Phonetic Words	45%	35%	55%
Writing Trick Words	38%	39%	36%
Writing Phonetic Word Sentence	61%	48%	73%
Writing Trick Word Sentence	45%	35%	55%
Unit 4	33%	30%	36%
Writing Sounds of Vowel Teams	94%	87%	100%
Writing Phonetic Words	33%	30%	36%
Marking Phonetic Words	29%	22%	36%
Writing Trick Words	20%	13%	27%
Writing Phonetic Word Sentence	65%	57%	73%
Writing Trick Word Sentence	45%	39%	68%
Unit 5	36%	26%	45%
Writing Sounds of Vowel Teams	82%	87%	77%
Writing Phonetic Words	25%	17%	32%
Marking Phonetic Words	34%	26%	41%
Writing Trick Words	31%	30%	32%
Writing Phonetic Word Sentence	63%	52%	73%
Writing Trick Word Sentence	58%	43%	73%

Note. The numbers listed are the percentages of students scoring at 80% or higher on the Wilson Fundations Unit Tests and are rounded to the nearest whole number.

Evaluation question 3. How does K-2 student achievement in reading change while the Wilson Fundations program is being implemented?

To understand how student achievement in reading changed during the implementation of Wilson Fundations in K-2, both NWEA MAP reading and DRA2 results were analyzed and several trends emerged from each assessment. It is important to understand that these two assessments have different purposes at our school: NWEA MAP is a norm-referenced, adaptive, computerized assessment focused on reading growth, while the DRA2 functions more as a diagnostic, teacher-administered assessment provided to measure student achievement against grade level proficiency expectations. Before the study was conducted, there was an assumption that extant data would be accessible for NWEA MAP and DRA2 from the 2017-2018 and 2018-2019 school years; however, DRA2 data from the 2017-2018 school year was not available on the publisher's website due to incomplete entry methods during the assessment windows, so DRA2 results were not compared between the two school years. When these data are entered during the assessment window, they become part of the analysis provided by the publisher; therefore, these data were not included in this study because they were entered after the assessment window closed. This emphasizes the importance for schools to maintain an independent and historical, school-wide data collection process to have adequate records to compare student achievement across school years, as well as the need to complete data entry tasks in a timely fashion. Instead of comparing DRA2 scores between the two school years, the scores from Fall 2018 were compared to Winter 2019

to uncover any noticeable growth trends, as well as to compare student achievement to grade level proficiency expectations, as determined by the publisher.

NWEA MAP. To gain a better understanding of the change in student achievement on the reading NWEA MAP, results from Fall 2017 to Winter 2018 were compared to the results from Fall 2018 to Winter 2019. As a result of taking the NWEA MAP, students are given a Rasche Unit Score (RIT score), which is norm-referenced, so it can be compared to national norms. When students take the NWEA MAP in the Fall, students are given their RIT score, as well as a RIT growth goal in the Winter, which is the expectation of growth in half of a school year (i.e., a half year's worth of growth). If students meet their RIT growth goal exactly, then their growth percentage is 100%. If they score lower than their growth goal, their percentage will be lower and even negative if their RIT score is less than it was in the Fall, indicating they regressed. On the other hand, if a student's growth goal is 7 points and they grow 14 points, this is considered 200% growth. Three key areas to focus on to better understand RIT growth include RIT score at the beginning of the year, RIT growth percentages, and meeting or exceeding RIT growth goals.

Comparing fall and winter RIT scores. By organizing these data into tables, trends and results become apparent (Table 15, Table 16, and Table 17). When comparing the mean fall RIT scores between 2017 and 2018, 4 out of the 5 classes in Fall 2018 had lower RIT scores to start than in Fall 2017, which means the overall mean of student achievement in reading was lower to start the 2018-2019 school year. While all of the classes had positive mean RIT growth percentages, these four classes' mean RIT scores were still lower in Winter 2019 than they were in Winter 2018. With that said, 50% of

kindergarten students, 62.5% of 1st grade students, and 31.82% of 2nd grade students met or exceeded their RIT growth goal from Fall 2018 to Winter 2019. Each of these percentages was higher than the 2017-2018 school year.

Table 15

Comparison of Kindergarten NWEA MAP from Fall to Winter, 2017-2018 to 2018-2019

Measurement	2017-2018 (n = 35)	2018-2019		
		Total K (n = 30)	Class A (n = 16)	Class B (n = 14)
M RIT Fall	138.37	133.07	132.81	133.36
M RIT Winter	148.71	140.33	144.31	135.79
M RIT Growth	10.34	7.27	11.50	2.43
RIT SD	12.94	12.36	13.87	8.46
M Growth	103.56%	60.98%	95.23%	21.84%
Students Meeting or Exceeding RIT Growth Goal	48.57%	36.67%	50%	21.42%

Note. RIT = Rasche Unit Score

Table 16

Comparison of 1st Grade NWEA MAP from Fall to Winter, 2017-2018 to 2018-2019

Measurement	2017-2018 (n = 45)	2018-2019 (n = 24)
M RIT Fall	154.6	147.71
M RIT Winter	165.15	164.04
M RIT Growth	10.55	16.33
RIT *SD*	11.48	13.98
M Growth	92.36%	135.16%
Students Meeting or Exceeding RIT Growth Goal	53.33%	62.50%

Note. RIT = Rasche Unit Score

Table 17

Comparison of 2nd Grade NWEA MAP from Fall to Winter, 2017-2018 to 2018-2019

Measurement	2017-2018 (n = 36)	2018-2019		
		Total 2nd (n = 44)	Class A (n = 22)	Class B (n = 22)
M RIT Fall	170.19	168.79	166.36	171.23
M RIT Winter	175.86	175.27	173.54	177.00
M RIT Growth	5.67	7.27	7.18	5.77
RIT *SD*	8.30	12.36	7.79	6.84
M Growth	54.61%	63.88%	71.68%	56.08%
Students Meeting or Exceeding RIT Growth Goal	16.67%	31.82%	31.82%	31.82%

Note. RIT = Rasche Unit Score

Originally, the purpose behind this study was to focus on the changes in student achievement in reading while the Wilson Fundations program was in place, as compared to the changes from the 2017-2018 school year. As these data were analyzed, it became important to not only compare the changes in student achievement in reading against the previous school year, but to also analyze the change in student achievement in reading from Fall 2018 to Winter 2019. To better understand how significant of a change there was in student achievement in reading from Fall 2018 to Winter 2019, a *t*-test was administered (Table 18). There was a positive change in student achievement in reading across all grade levels ($p < .05$). However, when analyzed at the classroom level, the positive changes in student achievement in reading was only statistically significant in each of the kindergarten and 1st grade classes ($p < .05$), not in each of the 2nd grade classes.

Table 18

Comparison of NWEA MAP from Fall 2018 to Winter 2019

Grade	Measurement					
	Fall 2018 RIT	Fall 2018 SD	Winter 2019 RIT	Winter 2019 SD	*p*	Cohen's *d*
Kindergarten	133.07	9.22	140.33	13.72	.01	0.632
Class A	132.81	9.06	144.31	13.81	.009	1.017
Class B	133.36	9.73	135.79	12.57	.019	0.225
1st	147.71	16.03	164.04	13.44	<.001	1.128
2nd	168.80	14.45	175.27	15.57	.046	0.436
Class A	166.36	14.50	173.55	16.61	.14	.472
Class B	171.23	14.32	177.00	14.02	.18	.417

Note. NWEA MAP = Northwest Evaluation Association Measurement of Academic Progress; RIT = Rasche Unit Score.

Leading education researchers use effect sizes (Cohen's *d*) when describing potential impacts of instructional strategies or programs to help school leaders compare the various impacts from school, teachers, and a student's home. Hattie (2009) uses a hinge-point of $d = 0.40$ to designate the "zone of desired effects, as these are the influences that have the greatest impact on student achievement outcomes" (p. 19). Effect sizes were calculated for each classroom to compare the changes in student achievement in reading on the NWEA MAP during the implementation of Wilson Fundations from Fall 2018 to Winter 2019. The effect sizes in each grade level were greater than the 0.40 hinge-point (kindergarten $d = 0.632$, 1st grade $d = 1.017$, and 2nd grade $d = .436$). When examined even further, only 1 out of the 5 classrooms experienced an effect size less than 0.40, which was K Class B ($d = 0.225$). Overall, from Fall 2018 to Winter 2019, there was a significant positive change in student achievement in reading during the implementation of the Wilson Fundations program.

RIT growth percentages. On the NWEA MAP, all K-2 classes had a positive overall mean RIT growth percentage during the implementation of the Wilson Fundations program (Table 15, Table 16, and Table 17). To better understand just how positive the growth was, the mean RIT growth percentages from Fall 2017 to Winter 2018 were compared to the mean RIT growth percentages from Fall 2018 to Winter 2019. All of the 1st and 2nd grade classes had higher mean RIT growth percentages from Fall 2018 to Winter 2019 (M = 135.16% for 1st grade , M = 71.68% for 2nd Class A, and M = 56.08% for 2nd Class B) than in the previous year (M = 92.36% for 1st grade and M = 54.61% for 2nd grade). 1st grade's mean RIT growth percentage was more than 43 percentage points higher from Fall 2018 to Winter 2019 (M = 135.16%) than it was in the previous school year (M = 92.36%). Both kindergarten classes had lower RIT growth percentages. In fact, the mean RIT growth percentage from Fall 2018 to Winter 2019 in kindergarten was nearly 43 percentage points lower (M = 60.98%) than in Fall 2017 to Winter 2018 (M = 103.56%).

Meeting or exceeding RIT growth goals. Another way to assess the differences between the growth from Fall 2017 to Winter 2018 and Fall 2018 to Winter 2019 was to compare the percentages of students who met or exceeded their RIT growth goals. Not only did 3 out of the 5 classrooms have higher mean RIT growth percentages from Fall 2018 to Winter 2019 than in the previous school year, 4 out of the 5 classes also had higher percentages of students who met or exceeded their RIT growth goals. In 2nd grade, nearly twice as many students (31.82%) met or exceeded their RIT growth goals from Fall 2018 to Winter 2019 than in the previous school year (16.67%). In 1st grade, 62.5% of students met or exceeded their RIT growth goals, as compared to only 53.33%

the year before. Only one kindergarten class (Class A) had a higher percentage of students who met or exceeded their RIT growth goal (50%) than the percentage from Fall 2017 to Winter 2018 (48.57%). Only 21.42% of students from K Class B met or exceeded their RIT growth goals.

DRA2. K-2 students' reading levels were assessed using the DRA2 in Fall 2018 and Winter 2019 for 1st and 2nd grade and only in Winter 2019 for kindergarten, which is standard practice. Initially, these scores were going to be compared to the 2017-2018 school year, but these data were not available for analysis. Instead, an analysis of students' growth and proficiency was conducted only from Fall 2018 to Winter 2019 to better understand whether DRA2 would, similar to NWEA MAP, uncover positive results on students' reading achievement.

Kindergarten. In kindergarten, students are not assessed using DRA2 until the Winter assessment period, so for this grade level, there were no growth data available. At the Winter assessment time for DRA2, kindergarteners are expected to be reading independently at Level 1. The mean DRA2 reading level in both kindergarten classes was above this expectation for the Winter assessment period (K Class A, $M = 1.62$ and K Class B, $M = 1.14$; Table 19). It is important to note, however, that in K Class B, only 1 out of 14 students read independently at Level 1 or above and this student's independent level was 16, which heavily increased the overall mean independent reading level for that classroom. With that said, K Class B students met grade level expectations in reading (81.25%) at a much higher rate than K Class B students (7.14%).

Table 19

Comparison of Kindergarten DRA2 from Fall 2018 to Winter 2019

Measurement	Total K (n = 30)	K Class A (n = 16)	K Class B (n = 14)
M DRA2 Winter 2019	1.4	1.62	1.14
DRA2 Winter Proficiency Expectation	1	1	1
Students Meeting or Exceeding Grade Level Expectations in Winter 2019	46.67%	81.25%	7.14%

Note. DRA2 = Developmental Reading Assessment, 2nd Edition PLUS.

1st grade. In 1st grade, students were assessed with DRA2 both in Fall 2018 and Winter 2019 (Table 20). While there was not a specific expectation for total number of levels to increase from Fall to Winter in 1st grade, the proficiency expectation is that students will be reading at Level 3 in the Fall and Level 8 in the Winter. With that in mind, in Fall 2018, the mean 1st grade reading level was higher (M = 3.56) than the proficiency expectation of 3; however, the mean 1st grade reading level was lower (M = 5.61) in Winter 2019 than the proficiency expectation of 8. In addition, 50% of students met or exceeded the proficiency expectation in Fall 2018, but only 25% of students met or exceeded the proficiency expectation in Winter 2019.

Table 20

Comparison of 1st Grade DRA2 from Fall 2018 to Winter 2019

Measurement	1st Grade (n = 24)
M DRA2 Fall 2018	3.56
DRA2 Fall Proficiency Expectation	3
M DRA2 Winter 2019	5.61
DRA2 Winter Proficiency Expectation	8
M DRA2 Growth	2.04
DRA2 Growth *SD*	1.72
Students Meeting or Exceeding Grade Level Expectations Fall 2018	50%
Students Meeting or Exceeding Grade Level Expectations Winter 2019	25%

Note. DRA2 = Developmental Reading Assessment, 2nd Edition PLUS.

2nd grade. 2nd grade students were also assessed in Fall 2018 and then, again, in Winter 2019 (see Table 21). Both classes had higher mean DRA2 scores (2nd Class A, M = 16.68 and M = 19.22 and 2nd Class B, M = 16.5 and M = 21.45) than the proficiency expectation in Fall 2018 (16) and Winter 2019 (20). 2nd Class B had a higher mean DRA2 growth (M = 4.95, SD = 3.81) than 2nd Class A (M = 3.88, SD = 2.78). More than half of 2nd grade students met or exceeded the proficiency expectation in Fall 2018 and Winter 2019, as well. Overall, K-2 student achievement in reading had a positive change during the implementation of Wilson Fundations.

Table 21

Comparison of 2nd Grade DRA2 from Fall 2018 to Winter 2019

Measurement	Total 2nd (n = 44)	Class A (n = 22)	Class B (n = 22)
M DRA2 Fall 2018	16.27	16.68	16.50
DRA2 Fall Proficiency Expectation	16	16	16
M DRA2 Winter 2019	20.34	19.22	21.45
DRA2 Winter Proficiency Expectation	20	20	20
M DRA2 Growth	4.48	3.88	4.95
DRA2 Growth *SD*	3.89	2.78	3.81
Students Meeting or Exceeding Grade Level Expectations Fall 2018	54.54%	50%	59.09%
Students Meeting or Exceeding Grade Level Expectations Winter 2019	56.81%	54.54%	59.09%

Note. DRA2 = Developmental Reading Assessment, 2nd Edition PLUS.

Evaluation question 4. While implementing Wilson Fundations, is there a significant change in student NWEA MAP reading outcomes in Grades K-2, compared to the 2017-2018 school year?

Now that there is an understanding of how student achievement in reading changed from the 2017-2018 to 2018-2019 school year, it is important to understand whether these changes were statistically significant on NWEA MAP. To do so, a *t*-test was conducted for each class and overall grade level, as a means to compare the mean RIT growth of each student on the NWEA MAP from the 2017-2018 school year to the 2018-2019 school year. While all of the classrooms experienced a significant positive change in student achievement in reading from Fall 2018 to Winter 2019 ($p < 0.5$), including higher mean RIT growth percentages in all of the 1st and 2nd grade classes, none of these positive changes were statistically significant when compared to the 2017-2018 school year (Table 22). However, the reading growth in K Class B was

significantly lower (M = 21.84%, $p < .05$) than the reading growth from Fall 2017 to Winter 2018 (M = 103.56%) (See Table 21), and the growth from K Class B was significantly lower (M = 21.84%, $p \leq .05$) than K Class A (M = 95.23%).

Table 22

Comparison of NWEA MAP from Fall to Winter 2017-2018 to 2018-2019

Grade	Cohen's *d*	*p*
Kindergarten	-0.374	.14
Class A	-0.070	.82
Class B	-0.742	.026
1st	0.414	.11
2nd	0.123	.59
Class A	0.217	.40
Class B	0.020	.94

Note. *t*-tests were conducted for each class to compare against the previous year. NWEA MAP = Northwest Evaluation Association Measurement of Academic Progress.

Effect sizes were calculated for each classroom to compare the effects of Wilson Fundations on student achievement on the NWEA MAP reading against the growth from Fall 2017 to Winter 2018. First grade was the only class with an effect size above d = 0.40 (d = 0.414). Both kindergarten classes had lower mean RIT growth percentages than the previous year, which is why they have negative effect sizes. Overall, during the implementation of the Wilson Fundations program, student NWEA MAP reading outcomes were not significantly different in 4 out of the 5 classes in K-2, but in K Class B, students grew significantly less than the year before.

Additional Finding

After analyzing the data for each evaluation question, I began to look for trends across those data and it appeared that the higher the percentage for fidelity of

implementation identified from the two classroom observations, the higher their students' mean RIT growth scores were (Table 22). A scatterplot also summarizes the comparison between the level of fidelity and student achievement (Figure 2). This suggests that the more the program was implemented with fidelity, the more that students grew in reading.

Table 22

Comparison of Fidelity of Implementation and RIT Growth Percentages in K-2

Category	Grade				
	K Class A	K Class B	1st	2nd Class A	2nd Class B
Fidelity of Implementation					
M Self-Assessment	49%	55.9%	98.2%	50%	72.4%
M Observations	87.5%	25%	100%	63%	50%
Student Growth Percentage					
M Growth	95.23%	21.84%	135.16%	71.68%	56.06%

Note. RIT = Rasche Unit Score

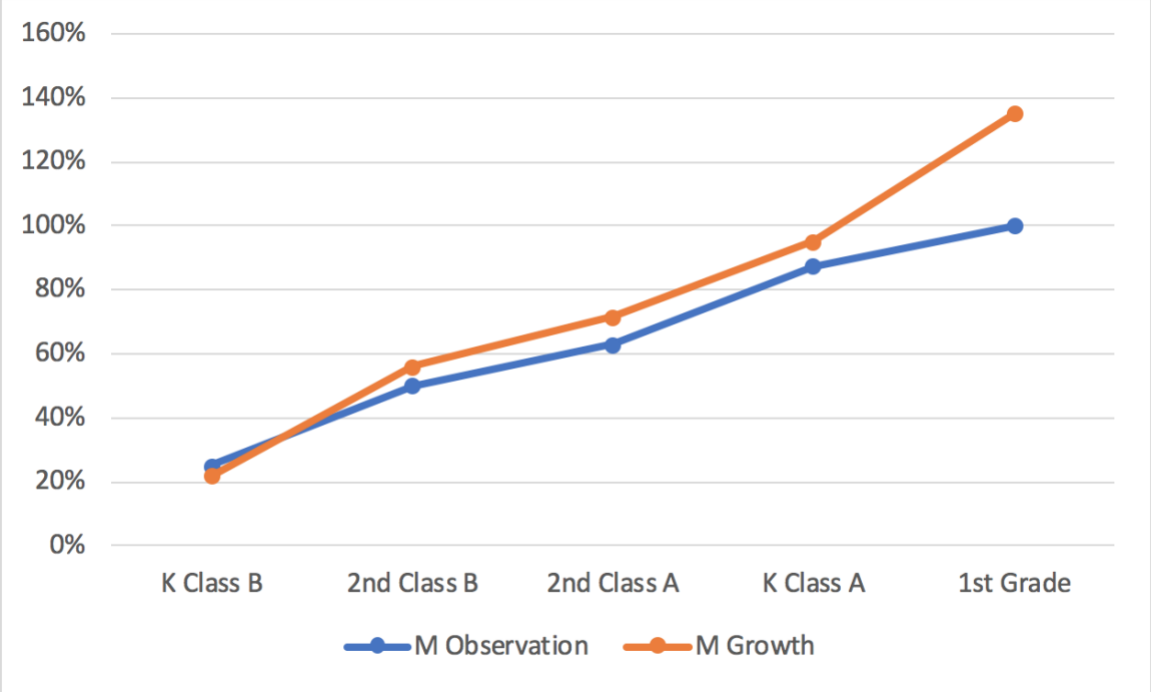

Figure 2. Comparison between fidelity of implementation and student growth percentages on NWEA MAP.

CHAPTER 5

RECOMMENDATIONS

There is a literacy crisis in America that schools need to combat through the use of effective reading programs that provide a systematic approach to reading instruction. This includes instruction in areas such as: phonics, phonemic awareness, fluency, vocabulary, and comprehension. Students who struggle in reading at an early age are at an increased risk to drop of school (Suh & Suh, 2007). Although the high school graduation rate has reached an all-time high at 83%, there are still more than 4,000 students who drop out of school every day (McFarland et al., 2017, p. xxix; National Education Association, 2017, p. 5). Students' low levels of engagement "has very serious consequences including increased risk for school dropout " (Caraway, Tucker, Reinke, & Hall, 2003, p. 417). Low reading proficiencies are likely to cause these low levels of engagement; thus, it makes sense that early intervention in reading has been documented as a successful strategy in reducing the high school dropout rate (McFarland et al., 2017; National Education Association, 2017; Suh & Suh, 2007). Barrington and Hendricks (1989) indicated that there are "connections between measures of academic performance in early elementary school and dropout behaviors before high school graduation" (p. 298). These researchers highlight the importance of early elementary education and ultimately, the importance of finding an effective reading program.

The purpose of this study was to examine the implementation of Wilson Fundations at Summit Academy by measuring the fidelity of implementation, as well as the change in K-2 student reading achievement, both on NWEA MAP and DRA2. To triangulate the results for implementation fidelity, teachers responded to a survey, provided a debrief on their survey as needed, and were observed twice using the Implementation Checklist. To identify themes across survey responses, results of the open-ended survey responses were coded using open coding. Wilson Fundations unit tests were used to indicate the extent to which students mastered programmatic objectives at 80% or higher. NWEA MAP was used to measure the differences in growth from Fall 2017 to Winter 2018 and Fall 2018 to Winter 2019. This assessment was also used to determine whether the differences in student achievement were significant. DRA2 helped to suggest the percentages of students who met or exceeded proficiency expectations, but extant data were not available to compare across school years. This section provides a discussion of the findings from the study, several implications for policy, practice, and leadership, several recommendations for further research, and a concluding summary.

Discussion of Findings

There are several findings from this study that compel further discussion. First, the fidelity of implementation of the Wilson Fundations program was examined through the use of a teacher survey and debrief, along with two classroom observations using the Implementation Checklist provided by the publisher. Only one teacher (1st grade) self-assessed a score of 80% or higher. The results from the two observations in the classroom indicated that only the 1st grade teacher and K Teacher A were implementing

the program with fidelity over 80%. The differences noticed in the fidelity of implementation across the classrooms highlighted the fact that the program was not teacher-proof, meaning the levels of fidelity differed from class to class. Even if the percentages from these surveys and observations were high across each classroom, it would only indicate whether the Tier 1 program delivery was followed with fidelity. To fully implement the program with fidelity would also mean utilizing the Wilson Fundations Double Dose feature, which aims at identifying students who score below 80% on the unit tests and providing small group instruction, based on the weekly activities. This feature of the program was not used during the timeframe within this evaluation. Overall, fidelity of implementation was low across most classes.

The open-ended questions on the survey provided a much deeper understanding of the teachers' experience with teaching the program, including several barriers to implementation in 2nd grade. It was apparent that the 2nd grade teachers' decisions to change their delivery method of the program were made without careful consideration of student performance on the unit tests (Table 13). Simply put, if these teachers were using the results from their Wilson Fundations unit tests to inform their instruction, they would have a better understanding that their students' scores were well-below the 80% threshold (M = 49.6%) and should have continued receiving instruction by reteaching the objectives with student achievement percentages below 80% mastery.

Considering the fact that students only demonstrated mastery above 80% on 1 out of the 16 total unit tests, it is clear that students did not meet the objectives as laid out by the program. This finding is supported by the DRA2 scores as well, as only 46.6% of kindergarteners, 26% of 1st graders, and 56.8% of 2nd graders met or exceeded the

Winter 2019 proficiency expectations. It would be instinctual to identify poor fidelity of implementation as a potential cause for students not achieving the programmatic objectives on the unit tests, but the 1st grade class, which was observed implementing the program with 100% fidelity, only had 71%, 63%, 67%, and 50% of students score 80% or above on the unit tests (Table 13). However, in K Class A, whose fidelity of implementation was observed at 87.5%, 84% of students scored at least 80% on their unit test. So, it is difficult to identify a relationship between fidelity of implementation and student achievement as measured by the Wilson Fundations unit tests.

The changes in student achievement in reading, from Fall 2018 to Winter 2019 were statistically significant ($p < 0.05$), but when comparing these changes to the 2017-2018 school year, these changes were not statistically significant. All of the classrooms demonstrated also positive growth in reading for students, as evidenced by positive changes in their mean RIT growth percentages. From a practitioner's standpoint, it appears that three out of five classes had mean RIT growth percentages higher than the year before and four out of five classes had higher percentages of students who met or exceeded their RIT growth goals; however, it is important to understand that none of these changes were statistically significant. The lack of statistical significance means that these changes are considered to have happened by chance. With more time implementing the program, the positive trends may in the future meet the criteria for statistical significance. When comparing the percentage of fidelity noticed during the classroom observations with each class' RIT growth percentages, student growth appeared higher in the classes with greater fidelity. The goal was to implement the program with as much fidelity as possible, in order to effectively judge the program's worth.

Implications for Leadership

By finding an effective reading program, leaders are able to focus on the collective strengthening of the school community by building "community capacity and group empowerment," as demonstrated through community servanthood (Bordas, 2012, p. 122). Creating a more literate American society is likely to increase the participation in young leadership. In fact, "preparing the young generation to assume leadership is the only way inclusion and equity will be finally achieved" (Bordas, 2012, p. 132). America's reading problem requires leadership, not management, because there are no clear-cut answers to solving this issue (Fullan, 2001, p. 2).

A program evaluation of this magnitude can impact a school in several ways. First, as the school leader, I am communicating to teachers a desire to be using programs that actually work for our students, in that it is critical to uncover whether Wilson Fundations increases student achievement to an acceptable level and that students are learning the intended outcomes. This should, in turn, initiate a paradigm shift in the school culture such that "people are getting better at what they do because learning to be more effective is built in to the values and routines of the" school (Fullan, 2014, p. 32). Involving stakeholders, especially teachers, in the communication of results from this program evaluation should also positively impact the teachers' human capital, or quality as instructors, and in turn, build the social capital, or quality of the relationships, of the entire school through collaboration (Fullan, 2014). After all, "social capital increases an individual's knowledge because it gives him or her access to other people's human capital" (Fullan, 2014, p. 78). To positively impact reading achievement within our school, in conjunction with the communication of the results from this program

evaluation, building social capital needs to be a focus. The act of knowledge-sharing through collaboration is key for improving the school culture and overall coherence within the school (Fullan, 2001; Fullan & Quinn, 2016). This type of knowledge-sharing highlights how, when the human and social capital within the school are developed, nurtured, and increased, the decisional capital, or ability to make informed-decisions, is then built upon this foundation (Fullan, 2001, 2014; Fullan & Quinn, 2016).

There is a plan to communicate the results of this evaluation to key stakeholders, hoping to foster this culture of growth by focusing on the results of the study in the context of the school. Creating an understanding about the effects of this program on student achievement will, in turn, help "build a common language and knowledge base" about the areas within the program that might be lacking and how to potentially fill in these missing gaps such that students can become more successful in reading (Fullan & Quinn, 2016, p. 88). In all, this shift in thinking (i.e., willingness to let new evidence change our views) could have profound impacts on our school culture ("Personality testing," 2013, p. 78). The transparency involved in communicating results and modeling a change in viewpoints will also help strengthen trust within the school (Fullan & Quinn, 2016).

Implications for Policy and Practice

While undertaking a program evaluation of a reading program is just one way to approach the reading problem in America, it is a strong step in the right direction. In preparation to tackle this wicked problem, it is important to understand what the findings from this study help to suggest for policy and planning (Table 21). These implications

were formed both as a result of my role as researcher-practitioner and lived experiences as the school leader, but also as a result of this study.

Table 23

Research Findings and Recommendations

Finding	Related Recommendations
Only 2 out of the 5 classes implemented the program with high fidelity and several barriers were identified	When purchasing the program, school leaders should also purchase the coaching and professional development that Wilson Fundations provides
While all classes experienced a positive impact on reading achievement, the results were only significant in one class: Students in K Class B grew significantly less on the NWEA MAP in Fall 2018 to Winter 2019 than the cohort of students from Fall 2017 to Winter 2018.	Make observations early and often and provide feedback to teachers using the Implementation Checklist and allows teachers to peer observe
	Utilize Wilson Fundations in kindergarten and 1st grade before purchasing Level 2 (2nd grade)
Out of the 16 total unit tests given, only once did a class have 80% of students achieve the program outcomes at 80% or higher.	Meet in grade level teams to discuss student progress throughout each unit and schedule Wilson Fundations Double Dose groups for reteach and retaking unit tests
K-2 student achievement in reading improved significantly from Fall 2018 to Winter 2019 ($p < 0.05$), but the improvement was not statistically significant when compared to the 2017-2018 school year.	Continue implementing the program and focus on fidelity of implementation while measuring it across all assessments
The two classrooms with the highest mean RIT growth percentages on NWEA MAP also had the highest ratings for fidelity of implementation during observations.	

Note. NWEA MAP = Northwest Evaluation Association Measurement of Academic Progress; RIT = Rasche Unit Score

Specific recommendation 1. Before spending more money on the extra coaching and professional development that can be provided by the Wilson Fundations program, school leaders need to examine the current resources available with the original purchase of the program to ensure that these resources are being used to the best advantage possible: (a) the teacher's guide and (b) the Wilson Academy online platform. The unpacking can happen through professional development and a *Professional Learning Community* (PLC). Low levels of implementation fidelity and identification of specific barriers highlight the need for more professional development to fully implement the program with fidelity. Hattie (2009) found professional development to have an effect size of 0.51 and Dewitt (2017) explained that professional development "is beneficial when it is ongoing and focuses on student learning" (p. 7). DuFour, DuFour, Eaker, Many, and Mattos (2016) define a PLC as "an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve" (p. 11). This implementation could have been improved by using professional development to not only ensure the program was being taught with fidelity at the Tier 1 level, but to also extrapolate the resources that already come with the program, such as the Wilson Academy website subscription that has sample lesson videos for every activity taught within the program and resources for Wilson Fundations Double Dose. So, it is recommended that on-going professional development within a PLC be provided around these resources with the teachers implementing the program and then measuring any changes in fidelity of implementation and student achievement on the Wilson Fundations unit tests, NWEA MAP, and DRA2.

The next potential step would be to also purchase the coaching and professional development features that are available as extras to the program. There are grade-level specific professional development sessions that allow grade levels to be clustered together and are taught how to implement their own grade level's curriculum. The issue for our school, in the Fall of 2018, was that it was not very cost-effective to host sessions at our school because there were very few teachers at each grade level, which meant there would be less than two teachers at each professional development session. Typical sessions have more than 100 participants. If the entire school district were to adopt Wilson Fundations, however, it would become more cost-effective because the cost would be spread across the schools. The coaching feature would allow schools to work with a coach who observes and provides feedback to teachers, both individually and as a group, several times per school year. Here, the coach would help to identify the current level of fidelity of implementation of the program and next steps to increasing the fidelity.

Specific recommendation 2. To continue focusing on implementing the program with fidelity, this study emphasizes the importance of using the Implementation Checklist as not only a means to compare fidelity with reading growth, but also to provide teachers with feedback on their practice. These Implementation Checklists could be used as a self-guide for teachers in analyzing their own practice. Because the Wilson Fundations coach is only available to observe a few times per school year, the teachers implementing Wilson Fundations could also plan to peer observe each other using the Implementation Checklist, so that feedback comes from their peers instead of the school principal, which

would serve as an observation without evaluation. Richardson (2000) suggests that peer observations can be beneficial because they:

> (a) allow teachers to glean from a wide variety of sources, (b) foster a sense of career-long learning, (c) demonstrate to students that learning is an essential part of what they do, and (d) promote a forum to talk about good teaching. (pp. 14-17)

During the early implementation of Wilson Fundations, peer observations could provide a foundational piece to the professional development aspect of the program, including a boost in school culture and morale through the professional learning that takes place during peer observations (Grimm, Kaufman, & Doty, 2014).

Specific recommendation 3. Based on survey results and Wilson Fundations unit tests, it is recommended that students receive Wilson Fundations instruction in 1st grade before 2nd grade. Oliva and Gordon (2013) define vertical articulation

> as the meshing of the curriculum of the various levels of the educational ladder to provide for smooth transition on the part of the learners. [Said differently], it is the planned sequencing of units of content across grade levels—that is, from one grade level to the next to ensure that the next grade level takes up where the previous grade level left off. (p. 340)

Teachers in 2nd grade explained that their students struggled because they started a new program in 2nd grade and they highlighted how important it was to receive instruction in kindergarten and 1st grade beforehand. The reason Level 3 was not purchased for 3rd grade was because the publisher suggested that students would not be able to access Level 3 material without first receiving Level 2. Vertical articulation of Wilson Fundations is fundamentally necessary to not only ensure students achieve the objectives

laid out by the program, but to also make sure there is continuity between grade levels. Based on this program evaluation, the same might be said for Level 2: It is recommended that students receive Wilson Fundations instruction in at least 1st grade before moving to 2nd grade, as a means to vertically articulating the curriculum and provide students with a smooth transition from level to level in Wilson Fundations.

Specific recommendation 4. One of the goals for using a specific reading program is for students to be able to demonstrate mastery of the program outcomes, as measured on unit tests. In this study, unit test scores were well below the mastery level of 80% and most of the program outcomes were not achieved. While using funds to purchase the Wilson Fundations coach is recommended to train teachers in implementing the program with fidelity, it is recommended that school leaders train teachers in how to successfully use data from unit tests to drive their Wilson Fundations instruction (Barnes & Fives, 2018). Not only should teachers be focusing on identifying students who scored less than 80% and providing Wilson Fundations Double Dose to them, when classes have less than 80% of students demonstrating 80% mastery, the program recommends reteaching the unit to all students before moving on (Wilson Language Training Corporation, 2014). Both of these features were missing from this program implementation at Summit Academy and are clear next steps to focus on.

Summary of recommendations. One of the very first impacts a school can have on student achievement is providing a "guaranteed and viable curriculum" (Marzano, 2003, p. 10). The above recommendations serve as an attempt to supply schools and teachers with just that. In summary, it is recommended to continue implementing the Wilson Fundations program at Summit Academy because of the mixed results from this

study: the fidelity of implementation was low and the changes in student achievement in reading were statistically significant from Fall 2018 to Winter 2019, but not statistically significant when compared to the 2017-2018 school year. The focus should be on implementing the program with fidelity and to continue measuring the changes in student achievement in reading to see if they are statistically significant. These recommendations include: (a) using professional development and a professional learning community, (b) using the Implementation Checklist during classroom observations and allow teachers to observe each other with the checklists, (c) implement Wilson Fundations in kindergarten or at least 1st grade before implementing it in 2nd grade, and (d) focus on data analysis from unit tests to drive instruction during reteaching, including the identification of students receiving Wilson Fundations Double Dose.

Recommendations for Future Research

A natural transition for further research would be to focus on the change in student achievement in reading during the implementation of Wilson Fundations for a cohort of students across several years. Assessing the worth of Wilson Fundations would be even more meaningful if it were assessed this way. A limitation of this study is the fact that different cohorts of students with different teachers are being compared. Also, it is likely that student achievement in reading will change differently at each level during the implementation of the Wilson Fundations program, so studying the changes in student achievement across several years could provide insight into the changes within both student proficiency (e.g., percent of students on or above grade level expectations) and growth (e.g., percentage of students who increase at least 100%) in reading. Documenting the changes that occur each year could help these experiences serve as a

case study for other schools to use when considering adoption of the program. An analysis of this magnitude would also take into consideration the use of Wilson Fundations Double Dose as a means to providing intervention for students who do not demonstrate mastery on the unit tests.

Through the surveys with teachers, it became apparent that self-belief, or even self-efficacy, might play a role in teachers' abilities to independently carry out the implementation of a new program with fidelity. Bandura (1997) defines self-efficacy as "a belief about what one can do under different sets of conditions with whatever skills one possesses" (p. 37). With two out of five teachers highlighting the need for more training to better teach the program, understanding a teacher's sense of self-efficacy may help school leaders recognize how much assistance a teacher might need during the implementation of a new program. It is important for school leaders to improve teacher self-efficacy by focusing on strategies that teachers are in control of, such as using the Implementation Checklist to highlight ways in which programmatic activities can be changed (Cervone, 2000). Also, further research on specific activities within the program that might be the most difficult to implement with fidelity, as indicated by the teacher survey and as measured by the Implementation Checklists, could prove to be beneficial. These types of research may lead to higher rates of implementation fidelity.

To expand on the findings from this program evaluation, further research could be conducted to examine the impact of Wilson Fundations on the five pillars of reading instruction, found by the National Reading Panel (2000) to be: (a) phonics, (b) phonemic awareness, (c) fluency, (d) vocabulary, and (e) comprehension. A study focused on one or more of these areas would provide insight as to how a school needs to supplement their

reading instruction, especially because Wilson Fundations acknowledges that the program should be used as part of a balanced reading curriculum, not in place of it. In order to have a balanced approach to literacy, a study like this could potentially recommend the specific areas that need to be supplemented.

Summary

Montanari (2013) warned, "according to Implementation Science research, complex programs take approximately two to four academic years to achieve full implementation. Therefore, early evaluations should themselves be evaluated with caution" (para. 8). While full implementation of a new program takes quite a few years to reach, school leaders cannot wait that long to measure the impact of their programs. Students and families alike are counting on educators to make the best decisions for them each and every day. School leaders need to be able to make programmatic decisions formatively throughout every school year, based on data and feedback from teachers and students. This program evaluation underscores this need and serves as a model to the beginning implementation of a new reading program, in hopes of finding out what works for increasing student achievement in reading.

School leaders measure their school's progress in relative terms, typically comparing their results to prior years' achievement. Progress in student achievement can be positively impacted by high expectations from the school leader, as well. In this case, the results from this program evaluation indicate a positive change student achievement in reading, as compared to the previous school year, but these changes were not statistically significant. The results from this study do not show an implementation dip, which is a decrease in student achievement and teacher confidence, something that is

expected during the beginning stages of implementing a new program (Fullan, 2001). Previous research only assessed the impact of Wilson Fundations on special populations, such as special education and students needing intervention, but failed to measure the effectiveness of Wilson Fundations on student achievement across entire grade levels as a Tier 1 reading program. Based on the observations and RIT growth percentages on the NWEA MAP, the classrooms with the highest fidelity of implementation percentage demonstrated the highest growth for their students, but it was not statistically significant.

School leaders need to also keep in mind that there are certain school-wide, student proficiency levels they need to aim for—simply doing better than the year before is not enough. It is important to understand that when students are under-achieving in reading, a result of 100% growth simply maintains their deficiency in reading. Even with better reading results from the year before and a significant change in reading from Fall 2018 to Winter 2019, 4 out of the 5 classrooms had a mean RIT growth percentage of less than 100% in Winter 2019. Leaders of low-performing schools need to have the expectations of at least 150% growth for their students if this gap is ever going to close and in order to assess student progress early and often, programs need to be proactively evaluated more frequently. This study emphasizes the importance of understanding current levels of student achievement because the proficiency level of the students in this study in Fall 2018 were even lower than Fall 2017. The need for higher achievement is more important than ever and schools need to find, implement, and evaluate effective reading programs as a first step in addressing the reading crisis.

APPENDIX A

RESEARCH PARTICIPATION INFORMED CONSENT FORM

Title: Making a Case for Using Effective Reading Programs: A Program Evaluation of Wilson Fundations
Principal Investigators: Charles Chalfant (and Chris Gareis, Research Advisor)

This is to certify that I, _____, have been given the following information with respect to my participation in this study:

1. **Purpose of the research**: The purpose of this research is to determine, during the first semester of school, the extent to which students are achieving the intended Wilson Fundations program outcomes, the impact of Wilson Fundations on K-2 student achievement in reading, the degree to which the program is implemented with fidelity, and whether or not Wilson Fundations has a statistically significant effect on student reading outcomes, compared to the 2017-2018 school year.
2. **Procedure to be followed**: As a participant in this study, I will participate in a teacher survey and teacher debrief.
3. **Discomfort and risks**: There are no known risks associated with this study. My participation in this study will not have an impact on the relationship with the researcher nor my teaching evaluation.
4. **Potential benefits**. There are no known benefits of participating in the study. However, my participation in this research will contribute to the development of our understanding about the effectiveness of Wilson Fundations in increasing our K-2 students' reading achievement.
5. **Statement of confidentiality**: I understand that the researcher has been trained in the research of human subjects and my data will be confidential. My identity will never be disclosed nor will it be associated with the findings. My data will be coded, but never linked directly to my name and will be safeguarded to ensure confidentiality.
6. **Voluntary participation**: My participation in this study is voluntary. I am free to withdraw at any time without penalty or loss of benefits. I may choose to skip any question or activity.
7. **Incentive for participation**. I will not be compensated for my participation in this research study.
8. I am aware that I must be at least 18 years of age to participate in this project.
9. I may obtain a copy of the research results by contacting Charles Chalfant at 757-235-1781, cgchalfant@email.wm.edu or Dr. Chris Gareis at 757-221-2319, cgare@wm.edu.
10. **Termination of participation**: Participation may be terminated by the experimenter if it is deemed that I am unable to perform the tasks presented.
11. Questions or concerns regarding participation in this research should be directed to: Dr. Chris Gareis at 757-221-2319, cgare@wm.edu.
12. I am aware that I may report dissatisfactions with any aspect of this study to Dr. Jennifer Stevens, the Chair of the Protection of Human Subjects Committee, by telephone (757-221-3862) or email (jastev@wm.edu) or Dr. Tom Ward, EDIRC Chair by telephone at (757-221-2358) or email (tjward@wm.edu).

I agree to participate in this study and have read all the information provided on this form. My signature below confirms that my participation in this project is voluntary and that I have received a copy of this consent form.

_____

Signature Date

_____

Witness Signature Date

APPENDIX B

WILSON FUNDATIONS LEVEL K TEACHER SURVEY

Purpose of the Survey: The purpose of this survey is for the researcher to gain a better understanding of your perception of the Wilson Fundations program. Thank you for your participation in this study and in this survey. Just a reminder: Your responses to these questions will be kept confidential and will have absolutely no impact on your evaluation.

Please type your responses in the text box below each question:

1. Does Wilson Fundations seem to be making a difference in student learning in reading? Please explain.
2. Do you find any limitations in the program (e.g. is it lacking anything instructionally)? If yes, please explain.
3. Is there anything holding you back from implementing the program with fidelity (i.e. as it is laid out in the daily lesson plans)? Please explain.
4. Wilson Fundations requires you to use fidelity when implementing the strategies included in the program. Listed below are all of the activities that take place throughout the school year, although not every day. For each time that these activities came up in the daily lesson plan, how often did you actually implement each of these activities?

	Activity	Best Estimate for Percentage Implemented						
I.	Dictation/Composition Book	100	90	80	70	60	50	<40
II.	Dictation/Dry Erase	100	90	80	70	60	50	<40
III.	Drill Sounds	100	90	80	70	60	50	<40
IV.	Echo/Find Letters	100	90	80	70	60	50	<40
V.	Echo/Find Words	100	90	80	70	60	50	<40
VI.	Introduce New Concepts	100	90	80	70	60	50	<40
VII.	Letter-Keyword-Sound	100	90	80	70	60	50	<40
VIII.	Make It Fun	100	90	80	70	60	50	<40
IX.	Student Notebook	100	90	80	70	60	50	<40
X.	Storytime	100	90	80	70	60	50	<40
XI.	Teach Trick Words	100	90	80	70	60	50	<40
XII.	Trick Words Practice	100	90	80	70	60	50	<40
XIII.	Word Play	100	90	80	70	60	50	<40
XIV.	Alphabetical Order	100	90	80	70	60	50	<40
XV.	Echo/Letter Formation	100	90	80	70	60	50	<40
XVI.	Sky Write/Letter Formation	100	90	80	70	60	50	<40
XVII.	Vowel Extension	100	90	80	70	60	50	<40

APPENDIX C

WILSON FUNDATIONS LEVEL 1 TEACHER SURVEY

Purpose of the Survey: The purpose of this survey is for the researcher to gain a better understanding of your perception of the Wilson Fundations program. Thank you for your participation in this study and in this survey. Just a reminder: Your responses to these questions will be kept confidential and will have absolutely no impact on your evaluation.

Please type your responses in the text box below each question:

1. Does Wilson Fundations seem to be making a difference in student learning in reading? Please explain.
2. Do you find any limitations in the program (e.g. is it lacking anything instructionally)? If yes, please explain.
3. Is there anything holding you back from implementing the program with fidelity (i.e. as it is laid out in the daily lesson plans)? Please explain.
4. Wilson Fundations requires you to use fidelity when implementing the strategies included in the program. Listed below are all of the activities that take place throughout the school year, although not every day. For each time that these activities came up in the daily lesson plan, how often did you actually implement each of these activities?

	Activity	Best Estimate for Percentage Implemented						
I.	Dictation/Composition Book	100	90	80	70	60	50	<40
II.	Dictation/Sounds	100	90	80	70	60	50	<40
III.	Dictation/Words	100	90	80	70	60	50	<40
IV.	Dictation/Trick Words	100	90	80	70	60	50	<40
V.	Dictation/Sentences	100	90	80	70	60	50	<40
VI.	Dictation/Dry Erase	100	90	80	70	60	50	<40
VII.	Drill Sounds	100	90	80	70	60	50	<40
VIII.	Echo/Find Letters	100	90	80	70	60	50	<40
IX.	Echo/Find Words	100	90	80	70	60	50	<40
X.	Introduce New Concepts	100	90	80	70	60	50	<40
XI.	Letter-Keyword-Sound	100	90	80	70	60	50	<40
XII.	Make It Fun	100	90	80	70	60	50	<40
XIII.	Student Notebook	100	90	80	70	60	50	<40
XIV.	Storytime	100	90	80	70	60	50	<40
XV.	Teach Trick Words Reading	100	90	80	70	60	50	<40
XVI.	Teach Trick Words Spelling	100	90	80	70	60	50	<40
XVII.	Word of the Day	100	90	80	70	60	50	<40
XVIII.	Word Talk	100	90	80	70	60	50	<40
XIX.	Word Play	100	90	80	70	60	50	<40
XX.	Alphabetical Order	100	90	80	70	60	50	<40
XXI.	Echo/Letter Formation	100	90	80	70	60	50	<40
XXII.	Sky Write/Letter Formation	100	90	80	70	60	50	<40
XXIII.	Vowel Extension	100	90	80	70	60	50	<40

APPENDIX D

WILSON FUNDATIONS LEVEL 2 TEACHER SURVEY

Purpose of the Survey: The purpose of this survey is for the researcher to gain a better understanding of your perception of the Wilson Fundations program. Thank you for your participation in this study and in this survey. Just a reminder: Your responses to these questions will be kept confidential and will have absolutely no impact on your evaluation.

Please type your responses in the text box below each question:

1. Does Wilson Fundations seem to be making a difference in student learning in reading? Please explain.
2. Do you find any limitations in the program (e.g. is it lacking anything instructionally)? If yes, please explain.
3. Is there anything holding you back from implementing the program with fidelity (i.e. as it is laid out in the daily lesson plans)? Please explain.
4. Wilson Fundations requires you to use fidelity when implementing the strategies included in the program. Listed below are all of the activities that take place throughout the school year, although not every day. For each time that these activities came up in the daily lesson plan, how often did you actually implement each of these activities?

	Activity	Best Estimate for Percentage Implemented						
I.	Dictation/Composition Book	100	90	80	70	60	50	<40
II.	Dictation/Sounds	100	90	80	70	60	50	<40
III.	Dictation/Words	100	90	80	70	60	50	<40
IV.	Dictation/Trick Words	100	90	80	70	60	50	<40
V.	Dictation/Sentences	100	90	80	70	60	50	<40
VI.	Dictation/Dry Erase	100	90	80	70	60	50	<40
VII.	Drill Sounds	100	90	80	70	60	50	<40
VIII.	Echo/Find Letters	100	90	80	70	60	50	<40
IX.	Echo/Find Words	100	90	80	70	60	50	<40
X.	Introduce New Concepts	100	90	80	70	60	50	<40
XI.	Trick Words	100	90	80	70	60	50	<40
XII.	Word of the Day	100	90	80	70	60	50	<40
XIII.	Make It Fun	100	90	80	70	60	50	<40
XIV.	Storytime	100	90	80	70	60	50	<40
XV.	Echo/Letter Formation	100	90	80	70	60	50	<40
XVI.	Sky Write/Letter Formation	100	90	80	70	60	50	<40

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