A Quantitative Study on the Relationship Between Kindergarten Enrollment Age and

Kindergarten Students on Reading Improvement Monitoring Plans.

by

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ABSTRACT

As a result of the Third Grade Reading Guarantee signed into law in 2012, each year all Ohio public school kindergarten students are required to take reading diagnostic assessments by September 30 (ORC 3313.608). The assessments identify kindergarten students as not needing early literacy intervention (*on track*) or needing early literacy intervention (*not on track*) for the school year. In a study conducted by Francia Huang and Marcia Invernizzi, entitled The Association of Kindergarten Entry Age with Early Literacy Outcome, the youngest students scored lower than their oldest peers at the beginning of kindergarten on various early literacy measures. Four research questions for this study focused on the perception of stakeholders regarding the entry age for kindergarten students:

1. Does the proportion of kindergarten students on RIMPs (Reading Intervention Monitoring Plans) and children not on RIMPs (including and excluding Canton City schools) differ as a function of student age?

2. Do ethnicity, gender, and socioeconomic status distinguish students with RIMP status from non-RIMP students (including and excluding Canton City schools)?

3. Is there an association of the diagnostic test given and resultant RIMP status?

4. Does the selected student variable (Age in months) distinguish students with RIMP status from non-RIMP status?

Finally, this study indicated that the probability for early entry students to be on RIMPs does exist in school districts with the kindergarten entry cutoff date of September 30.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

As a result of the Third Grade Reading Guarantee signed into law in 2012, each year all Ohio public school kindergarten students are required to take reading diagnostic assessments by September 30 (ORC 3313.608). The assessments identify kindergarten students as not needing early literacy intervention (*on track*) or needing early literacy intervention (*not on track*) for the school year. As any other grade level, the ages of the kindergarten students vary because the kindergarten entry ages vary throughout the state of Ohio. The age of 6 years (if retained) may be the oldest, the age of 5 years may be the average, but the age of 4 years will be the youngest according to current school law. Ohio public school district boards are permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, and 6 years of age to be admitted to first grade (ORC 3321.01). Even though students must be at least 5 years old to attend kindergarten, the kindergarten entry age cutoff date varies throughout the United States. Throughout all the states, Ohio is one of 11 where the latest kindergarten entry age cutoff date is later than September 1st (National Center for Educational Statistics, 2014). Therefore, when schools begin before September 1st, students attending kindergarten may not have turned 5 years old.

Therefore, kindergarten assessment data results will have the results of 4- and 5-year-olds in districts with a kindergarten cutoff date after August 1st. In Stark County, of the 17 school districts, nine use the September 30th for their kindergarten entry date (Kindergarten Entrance Date Cutoff, 2014). Do kindergarten data reflect that school districts with the September 30th cutoff date have more students on reading intervention

plans than those districts with the August 1st cutoff date? Since all Ohio schools are

mandated to evaluate kindergarteners, does the entry age make a difference as in terms of

kindergarteners not meeting benchmark on the fall diagnostics?

In Ohio, the mandates of No Child Left Behind have caused increased rigor for

kindergarten standards with funding tied to state test results. With that being said,

parents have voluntarily held out their kindergarten-eligible children to avoid the

assessments until their children are older (Datar, 2006; Graue & DiPerna, 2000; Marshall,

2003; Shepard & Smith, 1988). Currently, there is no high level Ohio legislature

discussion on kindergarten entry age. The decision has been left to the individual

districts to choose either the first day of August or the 30th day of September as the date

by which a child must be 5 years of age to be admitted to kindergarten. After reviewing

the research, entry age for kindergarten may still be a topic up for review for some Ohio

school districts.

Kindergarten Reading Readiness

Diagnostic assessments were developed to monitor students' progress to meet

reading standards as prescribed by the Ohio Department of Education. The mandates of

No Child Left Behind have caused increased rigor for kindergarten standards and early

intervention at the kindergarten level is a priority (Torgesen, 2002). However, how

young is too young for kindergarten students and their school districts to be held

accountable for assessments on their early literacy skills? Early literacy skills include

children's developing concepts of print, comprehension of age-appropriate text,

phonological awareness, and letter recognition (Ohio's Early Learning & Development

Standards: Birth to Kindergarten Entry, n.d.). Are districts with the later kindergarten

entry cutoff date observing more students lacking early literacy skills? For schools opening in early to mid-August, is there an increased risk for 4-year-olds, as compared to 5-year-olds to not have the early literacy skills resulting in them being placed on Reading Intervention Monitoring Plans (RIMPs) as mandated by the state?

Results from recent research using kindergarten multilevel models demonstrate that the youngest students have consistently lower scores than the oldest students (Huang & Invernizzi, 2009). Since school district boards are permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, age may play a factor on the number of kindergarten students that are *off track.*

Conceptual Underpinnings of This Study

Socialization through the life course may be problematic for younger kindergarten students. The expectations in kindergarten are learned behaviors over a period of time. Repetition and role playing increase the likelihood for the expectations to be established. Expectations included, but not limited to, are sharing, working, and playing with others. Consequences for children not meeting expectations may result in time out away from other children, loss of activity privileges, and negative reports communicated home which may result into more consequences at home. Frustration levels may create temper tantrums at school and at home. Children with fewer life experiences, as compared to older classmates, may create traumatic experiences and other negative actions. As a result, behavior problems may occur and impact psychological well-being for the future (Sociology through life, n.d.). Erik Erikson's psychosocial development theory may address the burden placed on early entry kindergarten students. The need to feel confident

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and secure among students may be hindered in an unsuccessful academic environment. Psychologist Erik Erikson's third stage of psychosocial development, birth-12 years, is the initiative vs. guilt stage. The stage occurs for children among the ages of three through six. It is centered on children having independence of activities. As independence activities are replaced with teacher lead structured activities, such as in kindergarten, older students may adapt easier (Erikson, Paul, Heider, & Gardner, 1959).

Parents are holding their kindergarten-age children another year before enrolling them so they will be top in their classes and able to meet the demands of kindergarten curriculum (Graue & DiPerna, (2000). Achievement in early grades may improve if the average age of kindergartners is raised (Stipek, 2002). Entering kindergarten a year older significantly boosts test scores at kindergarten entry (Datar, 2006). When 4-year-olds, 5-year-olds, and 6-year-olds are taking the same assessment to determine the necessity for Reading Improvement Monitoring Plan (RIMP), the scale tilts to the younger students' academic performance to be lower than that of the much older (Oshima & Domaleski, 2006). Elder and Lubotsky (2006) provided evidence that older kindergarteners perform better than younger kindergarteners on reading and math achievement tests. Students starting kindergarten at a younger age progress relatedly slower than older aged students (Allhusen et al., 2007). In a more recent study conducted by Francia Huang and Marcia Invernizzi, entitled *The Association of Kindergarten Entry Age with Early Literacy Outcome,* the youngest students scored lower than their oldest peers at the beginning of kindergarten on various early literacy measures. The longitudinal study viewed 405 students (202 boys, 203 girls) who were in high-poverty and low-performing public schools in the Commonwealth of Virginia. Age was measured for student success with

alphabet recognition, letter-sound knowledge, and spelling through the Stanford Reading First assessment. The chi-squared tests of homogeneity indicated that the oldest and youngest groups of students were not significantly different based on gender, economic status, ethnicity/ethnicity, and disability status. However, results of the kindergarten multilevel models showed that the youngest students have consistently lower scores than the oldest students (Huang & Invernizzi, 2009). Later research suggested kindergarteners who entered kindergarten or first grade at an early age were more likely to display adjustment problems and task-avoidant behavior, compared to older students (Hirvonen, Torppa, Nurmi, Eklund, & Ahonen, 2016). Later entry for kindergarten promotes positive social behavior (Datar & Gottfried, 2015)

Studies suggest that children who entered at a later chronological age scored consistently higher on cognitive and non-cognitive skill sets than their younger classmates (Lubotsky & Kaestner, 2016). More recently, researchers found that kindergarten curriculum is moving from less structure to more structure with increased challenging literacy expectations (Bassok, Latham, & Rorem, 2016).

A statistically significant difference in achievement was found in national testing. States with earlier cutoff dates score higher (Bedard & Dhuey, 2012). International studies conclude the entry age does make a difference in academic performance. Schools add stress to children by hurrying them for standardized testing with the emphasis on gifted testing to compete with the Japanese. In kindergarten, two out of every 10 kindergarten-aged children are not promoted because they lack the necessary academic skills needed for first grade, and social skills are not taught due to an increasing amount of academic skills (Elkind, 1988). An Amsterdam report revealed disadvantaged Dutch

students' test scores increased as the age increased monthly (Leuven, Lindahl,

Oosterbeek, & Webbink, 2004). New evidence on the effect of time in school on early

achievement research done in Germany found a strong and substantial positive effect on

educational outcomes for pupils entering first grade at an older age. (Weber & Puhani,

2006). There is a correlation between age and creativity of primary students as found in a

study conducted by Jordan University. The imagination score differences were

significant on the Thinking Creatively in Action and Movement test (TCAM) with results

favoring 5-year-olds over 4-year olds (Alsrour & Al-Ali, 2014).

The results of the September 30 reading diagnostic test determine whether a child

is considered *on track* or *not on track* in reading. Students *not on track* are required to be

placed on RIMPs. In my own Northwest Local School District, I viewed the kindergarten

RIMP data from the past three years. The proportion of 4-year-olds *not on track* was

greater than the 5-year-olds *not on track*. As pertaining to kindergarten reading

readiness, the data suggest that entry age makes a difference.

Primary Research Questions

The four research questions for this study focus on the perception of stakeholders

regarding the entry age for kindergarten students:

1. Does the proportion of kindergarten students on RIMPs (Reading Intervention

   Monitoring Plans) and children not on RIMPs (including and excluding

   Canton City schools) differ as a function of student age?

2. Do ethnicity, gender, and socioeconomic status distinguish students with

   RIMP status from non-RIMP students (including and excluding Canton City

   schools)?

3. Is there an association of the diagnostic test given and resultant RIMP status?

4. Does the selected student variable (Age in months) distinguish students with RIMP status from non-RIMP status?

The general hypothesis is age at entrance into kindergarten is predictive of school success. To be more specific, the research hypothesis is the proportion of students with RIMPs entering kindergarten at age 4 under the September 30th date will be larger than the proportion of RIMPs for children age 5 under the August 1st date. It is hypothesized that there is a relationship between RIMP status and age with a slightly lesser relationship between RIMP status and other variables such as student Gender (male and female), Ethnicity (white and nonwhite), and Social Economic Status (SES; eligible for free and reduced lunch or not eligible). Finally, it is hypothesized a minimal relationship exists between RIMP status and the diagnostic assessment.

Methods

This quantitative study analyzed the results of more than 8,000 kindergarten students from academic years 2013-2014, 2014-2015, and 2015-2016 to determine if age, more than the gender, ethnicity, SES, and the diagnostic test is the primary indicator for kindergarten students on RIMPs. This study used causal-comparative research because it explored possible causal factors of RIMPS. The primary hypothesis was that age is the largest contributing factor for student placement on RIMPS. However, it is possible that the covariates of gender, SES, and diagnostic test are contributing factors. These other factors make up the secondary hypotheses of this study.

A causal-comparative research study was employed in this quantitative study as a cohort of participants that share a common exposure factor (entry age in kindergarten) to

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determine if it is influencing the outcome. Causal-comparative research seeks to identify associations among variables. It is common to begin with a noted difference (on RIMPs or not on RIMPs) between two groups and look for causes for, or consequences of, the difference (Fraenkel & Wallen, 2006). The longitudinal study looked over events that have already occurred in the last three years. Logistic regression was used to determine whether there is a significant association between the two ages across gender, ethnicity, SES, school district, and assessment. Logistic regression is the analytical technique for use when the outcome variable is dichotomous. The effectiveness of the logistic model was shown to be supported by (a) significance tests of the model against the null model, (b) the significance test of each predictor, (c) descriptive and inferential goodness-of-fit indices, (d) and predicted probabilities (Chao-Ying, Peng, Lee, & Ingersoll, 2002). The null hypothesis supports there is no relationship between the age of kindergarten students on RIMPs.

Significance of the Study

The results of the study served to illuminate the possible effect of policy decisions that implicate cost, psychological impact on students and parents, and state of Ohio's assessment of the school. Policies that result in fewer kindergarten students requiring reading improvement and monitoring plans (RIMPS) are favorable for several reasons:

a) The cost factor – School districts have the unfunded mandate to provide interventions for students *not on track*. The cost can be prohibitive. After-school tutoring (4½ hours a week for 18 weeks) and summer school tutoring (12 hours a week for six weeks) is required to be taught by Ohio licensed teachers. At Northwest, teachers receive a flat pay of $22/ hour. Class sizes

are limited to four per class. The budget for kindergarten interventions can be in the thousands of dollars. The cost per teacher is $3,366.

b) The image factor – Kindergarten students starting out behind other students often view themselves as not successful and can cause undue stress on them and their parents.

c) Ohio's New Local Report Card factor – K-3 Literacy Improvement measures how well schools and districts are helping young students who are reading below grade level.

A school or district with fewer than 5% of their kindergartners reading below grade level will not receive a letter grade on the district's Ohio Report Card. The minimum range of a "C" grade will be the statewide average value for this measure. If 4-year-olds are probable for RIMPs, then schools with higher numbers of 4-year-olds may be at greater risk of not attaining a minimum "C" grade.

Limitations and Delimitations

In causal comparative design, sampling is not random in the *ex post facto* design, making it difficult to suggest that the findings are representative of the larger population (all Ohio public school districts with the September 30th kindergarten entry age). This study was further limited by lack of controls for related factors. As the literature review suggests, these factors might include students with and without preschool experience, red-shirted students, students with learning disabilities, and students repeating kindergarten.

For the purpose of this study, the following assumptions were made concerning all kindergarten students:

- The students tried to do well when taking the assessments

- The students answered questions without assistance

- The assessments were given specific to manufacturer's instructions

- Proper supervision was given during the assessments

Summary

Children entering kindergarten often develop anxieties as the first day of school approaches. Life experiences create self-coping skills necessary for successful transitions. Students are expected to assimilate into full days that encompass more structure and less free time. Simply, it only seems natural that younger students would have a more difficult time. It would seem obvious that they would also possess less mature literacy awareness than older students. This study used previously disposed data to determine if the obvious is true or only an assumption. In determining the kindergarten entrance date, my research provided data for school districts to determine which kindergarten entrance date, the first day of August or the 30th day of September is the better predictor of kindergarteners on RIMP Plans. The results of the study serve a purpose in terms of policy decisions that affect cost, psychological impact on students and parents, and state of Ohio's assessment of the school on the Ohio District Report Card.

Every fall throughout the country, thousands of children under the age of five enter kindergarten. There is dialogue, including debate, on how early is too early to attend public school kindergarten. Some research favors older students may perform academically better than their counterparts; however, most states have kindergarten entry dates after August 1. As in Ohio, most school districts have chosen September 30th as

the kindergarten cutoff entry. For Local Education Agencies (LEA) to study an entry

date that permits kindergarten students to begin school at four years old, empirical

evidence may be needed for the LEA's to consider four years of age as being too young

to begin school. The analysis of research is pertinent to all districts in Ohio because all

kindergarten students must take an Ohio Department of Education approved diagnostic

test in the fall. Also within the three-year period of this study, nine school districts used

several different assessments making it difficult for the LEA's to compare and contrast

their scores with neighboring districts. Therefore, the purpose of this study was for

LEA's to reexamine their current policy on their decision to use the kindergarten entry

ages August 1 or September 30 due to the results of the diagnostic tests to determine the

money, time, and personnel that would be needed to remediate kindergarten students not

at grade level.

CHAPTER II

HOW DID ALL OHIO PUBLIC SCHOOL DISTRICTS GET TO THE

THIRD GRADE GUARANTEE?

This chapter reviews the literature in which this study was situated. Thus, it

includes sections surveying previous writings pertaining to governmental reports on the

condition of education in the United States, comprehensive reform through federal

legislation, and local ownership through statewide legislation. The focus is redirected

from post-secondary and secondary improvement to kindergarten, early literacy skills,

and third grade student development. They are taken up in successive sections that

comprise this chapter.

Governmental Reports

One of the largest impacts on education with a call for comprehensive reform

didn't come from legislation, but from a 48-page government report. In April 1983, the

U.S. Department of Education released the report, *A Nation at Risk*. It was best

summarized that the educational foundations of our society were being eroded by a rising

tide of mediocrity that threatens our very future as a nation and a people (U.S.

Department of Education, 1983). The commission exhorted, "The twin goals of equity

and high-quality schooling have profound and practical meaning for our economy and

society" (U.S. Department of Education, 1983, p. 14). They also warned, "If only to keep

and improve on the slim competitive edge we still retain in world markets, we must

dedicate ourselves to the reform of our educational system for the benefit of all—old and

young alike, affluent and poor, majority and minority" (U.S. Department of Education,

1983, p. 10). The findings and data presented in the report were organized around four major topics: content, expectations, time, and teaching. The commission's report used statistics to describe the public school system as in urgent need of improvement. In a general overview, the commission found low expectations for student performance and conduct. The commission proposed that all schools, kindergarten through postsecondary, approve more rigorous and measurable academic standards (U.S. Department of Education, 1983).

In the late 1800s the scrutiny on the efficacy of education moved from the local level to the nationwide level as information was collected on pupils, staff, and finances of educational institutions. The yearly created article on the standing and growth of schooling in the United States was conducted by The U.S. Department of Education's National Center for Education Statistics (NCES) called the *The Condition of Education.* In the 2000 edition, the report emphasized that just less half of 1982 post high school students enrolled into more than two corrective reading courses and more than two thirds entered corrective math courses in college. The report also established it was more advantageous for older children entering kindergarten children than for students six years and under (Zill & West, 2000).

In *The Condition of Education 2010,* the report cited 2009 statistics from The National Assessment for Educational Progress (NAEP). It provided evidence that 2009 fourth grade reading results were equivalent to the 2007 results but greater than the 1992 to 2005 fourth grade reading results. The report cited evidence of limited change in *Basic, Proficient*, and *Advanced* fourth grade reading results 2007 to 2009 (Aud & Hannes, 2010). *The Condition of Education* 2015 reported that in the fall of 2010, about

26% of first-time kindergarteners were rated by their teachers as demonstrating positive approaches to learning behaviors "*very often*;" 47% were rated as demonstrating these behaviors "*often*;" 25% were rated as demonstrating them "*sometimes*;" and 1% were rated as "*never*" demonstrating them. Fall kindergarten Approaches to Learning scores were positively associated with reading, mathematics, and science scores in kindergarten and first grade (Kena et al., 2015).

Comprehensive Reform Through Federal Legislation

Supported by research that suggests that third grade reading scores predict success or failure as evidenced that third graders with below third grade reading scores are more likely not to graduate from high school (Lloyd, 1978), the No Child Left Behind (NCLB) Act of 2001 included pieces of legislation that targeted third grade reading scores. Through NCLB, the Reading First Program (Title I, Part B, Subpart 1) was established. Reading First (RF) was created through the Department of Education to assist and support students lacking proficient reading skills. Based upon a systematic constructed study that below level reading skills will affect students before their senior year, their main objective is for third graders to have proficient or higher reading skills before entering fourth grade (NCLB, 2001).

To increase the skills set for teaching reading Reading First program's highest goal was to provide remediation training for kindergarten through third grade reading teachers. The professional development would provide the use of research-based instruction and materials to increase the reading skills and achievement of children in kindergarten through third grade. The RF program targeted the fundamentals of effective primary grade reading instruction as prescribed in NCLB: 1) phonemic awareness; 2)

phonics; 3) vocabulary development; 4) reading fluency, including oral reading skills; and 5) reading comprehension strategies. The RF program expects reading teachers to frequently assess their students to monitor progress and to identify and address students' reading problems before the end of third grade. Grant eligibility required an application process by each State Education Agency (SEAs). Eligible local education agencies (LEAs) apply to SEAs for sub-grants (*Reading First*, 2010). Only LEAs that serve either 15% or more children from families with incomes below the poverty line or 6,500 children from such families are eligible to apply for Reading First funds. Additionally, LEA eligibility is based on the highest number or percentages of students in kindergarten through third grade who are reading below grade level, based on the most current data available (Reading first impact study, 2008). Ohio received the grant on January 17, 2003. All 50 states and jurisdictions, except Puerto Rico, were awarded Reading First grants (U.S. Department of Education, 2013). NCLB legislation directed the U.S. Department of Education to work with and hire independent education agencies to monitor and review its progress (Section 1205).

A two year, 2004 and 2006, appraisal of the program provided qualitative information from Reading First and non-Reading First Title I schools' staff associated with students learning how to read. In 2008, the U.S. Department of Education released an independent study entitled *Reading First Implementation Evaluation: Final Report*. There were three major findings. First, RF schools provided more time for reading instruction and had professional development and support staff such as reading coaches available to assist teachers with the implementation of reading programs using reading materials aligned with scientifically-based reading research. RF schools were using

assessments to drive instruction. Second, non-RF Title I schools implemented Reading

First elements such as assisting struggling readers, providing staff with professional

development for reading instruction on phonemic awareness, phonics, vocabulary,

fluency, and comprehension. Also, they exhibited knowledge on the use of materials and

strategies aligned with scientifically-based reading research. Finally, the third and fourth

grade assessment scores favored the RF schools as compared to the non-RF Title I

schools (U.S. Department of Education, 2013**).**

Current states of mandate measure, report, and monitor the reading scores of third

graders by poverty status and ethnicity, ethnicity with disabilities, and English language

learners to the states' department of education. The mandate was a product of the No

Child Left Behind (NCLB) Act of 2001and President Bush's commitment to ensuring

that every child can read by the end of third grade. Targeting kindergarteners, first, and

second graders to assure every child can read by the end of third grade was the

fundamental element of the bill's passage (No Child Left Behind Act, 2001).

State Legislation

As demonstrated in Table 1, since 1987 the Ohio State Legislature has passed 12

House Bills and three Senate Bills on student assessments. The progression of specific

grade level tests began with 9th grade and 12th grade in high school levels. In August

2003, Ohio House Bill 3 brought into conformity with federal NCLB legislation

achievement tests in reading and mathematics in grades 3-8 and Ohio Graduation Tests in

reading, mathematics, writing, science, and social studies in grade 10 (Ohio statewide

assessment program rules book, 2014).

Table 1

Statutory/Regulatory History of Statewide Testing

		Statutory/Regulatory History of Statewide Testing
HB 231	Jul-87	Initial legislation requiring ninth-grade tests beginning in 1990, 12th-grade tests starting in 1994.
HB 55	Mar-92	One diploma; science added to ninth-grade tests; fourth-grade and sixth-grade tests added.
HB 152	Jul-93	Eighth-grade option; chartered nonpublic schools required beginning in 1999.
HB 552	May-94	Two-year science delay for the ninth-grade tests.
HB 715	May-94	Citizenship exemption on the ninth-grade test for non-U.S. citizens.
SB 55	Aug-97	Phases out ninth-grade tests and phases in new graduation tests, increases graduation units from 18 to 21; adds the fourth-grade reading guarantee.
Ohio Supreme Court decision	Apr-98	Previous year's tests available as public records upon request.
HB 770	May-98	Field-tested items become available as public records when used operationally.
HB 282	Aug-99	Temporary exemption for English-limited students.
HB 94	Jun-01	Decreases minimum graduation units from 21 to 20.
SB 1	Sep-01	Delays ninth-grade tests phase-out for two years; phases out proficiency tests and phases in achievement tests and diagnostic assessments aligned with academic content standards and model curriculum.
HB 95	Jun-03	Requires Academic Watch and Academic Emergency districts to administer to ninth-graders the OGT practice tests that are aligned with academic content standards and model curriculum.
HB 3	Aug-03	Brings Ohio law into conformity with federal NCLB legislation including achievement tests in reading and mathematics in grades 3-8 and Ohio Graduation Tests in reading, mathematics, writing, science and social studies in grade 10.

Table 1

Statutory/Regulatory History of Statewide Testing (continued)

SB 2	Mar-04	Directs that the General Assembly's ongoing efforts to improve the quality of teaching in Ohio including provisions recommended by the Governor's Commission on Teaching Success; changes date for summer grade 3 reading achievement tests; expands use of OGT practice tests; changes phase-in date of grade 8 social studies achievement test; changes requirements for administrating diagnostic assessments, including the kindergarten readiness assessment.
HB 106	Jun-04	Exempts limited English proficient (LEP) students who have been enrolled in U.S. schools for less than one year from certain testing and accountability requirements, i.e., the exemption from taking state reading and writing assessments.
HB 493	May-05	Provides for the substitution of passing OGT scores for certain eligible students who originally were required to pass the Ohio Ninth-Grade Proficiency Tests by amending ORC 3313.614 to expressly allow that substitution.
HB 66	Jul-05	Changes the date for the grades 3-8 achievement tests from March to May in 2006-2007; eliminates state development and distribution of additional grades 3-8 diagnostic assessments; changes the public record provisions governing the release of test items; institutes a new voucher program (EdChoice) for chartered nonpublic schools in 2006-2007 with mandatory achievement testing in grades 3-8 (OGT is already required); strengthens assessment and accountability provisions for e-school students and e-schools; requires Additional reading and mathematics academic progress assessments in certain community schools in 2006-2007.
HB 276	Mar-07	Eliminates summer Third Grade reading test; allows students who otherwise must pass ninth-grade proficiency tests for graduation but who did not fulfill the curriculum requirements for a diploma by Sept. 15, 2006, to meet the graduation testing requirements by passing any combination of proficiency tests and OGT in the five tested subjects; revises the time period for administering the KRA-L.
SB 31	Apr-07	Establishes the "Ohio Core" curriculum of 20 specified units of study as minimum graduation requirements beginning with the class of 2014; provides alternative requirements and excuses certain students in drop-out prevention/recovery programs; requires State Board to revise standards for honors diplomas and make them effective by June 30, 2007; changes many other requirements regarding high school and college and work readiness.

Note. From Ohio Statewide Assessment Program Rules Book, 2014.

Summary of Ohio's Fourth Grade Reading Performance Since 2002

Since the signing of No Child Left Behind in 2001 and its enactment in 2002, the credible data on the progress on Ohio's fourth grade reading achievement are identified by the National Assessment of Educational Progress (NAEP). The National Assessment of Educational Progress provides Trial State Assessments (TSA) on school districts' through a voluntary basis. The assessments are identical to national assessments. NAEP provides states the ability to observe over time their reading achievement progress (*State Snapshot Report*, 2009). Nationally, fourth grade reading data collected by NAEP and posted in The Nation's Report Card, identify Ohio as having higher reading achievement scores than a majority of states/jurisdictions in 2009. As compared with the average score to other states/jurisdictions, Ohio scored higher than 24 states/jurisdictions, not significantly different than 21 states/jurisdictions, and lower than only 6 states/jurisdictions.

As a state, Ohio reveals significant improvement over the 17-year time period (Figure 1) from 1992-2009. *Proficient* scores increased by five points and *Below Basic* scores decreased by eight points since 1992. However, the *Basic* scores remained relatively consistent throughout that same time period. Within subgroups, the 2009 data reflects percentages at or above the *Proficient* level higher for female, nonwhite, and not eligible for the National School Lunch Program than their counter parts. Ohio performed higher than the National (public) reading achievement scores conducted that same year (State snapshot report, 2009).

NAEP Ohio 4th Grade Reading Data
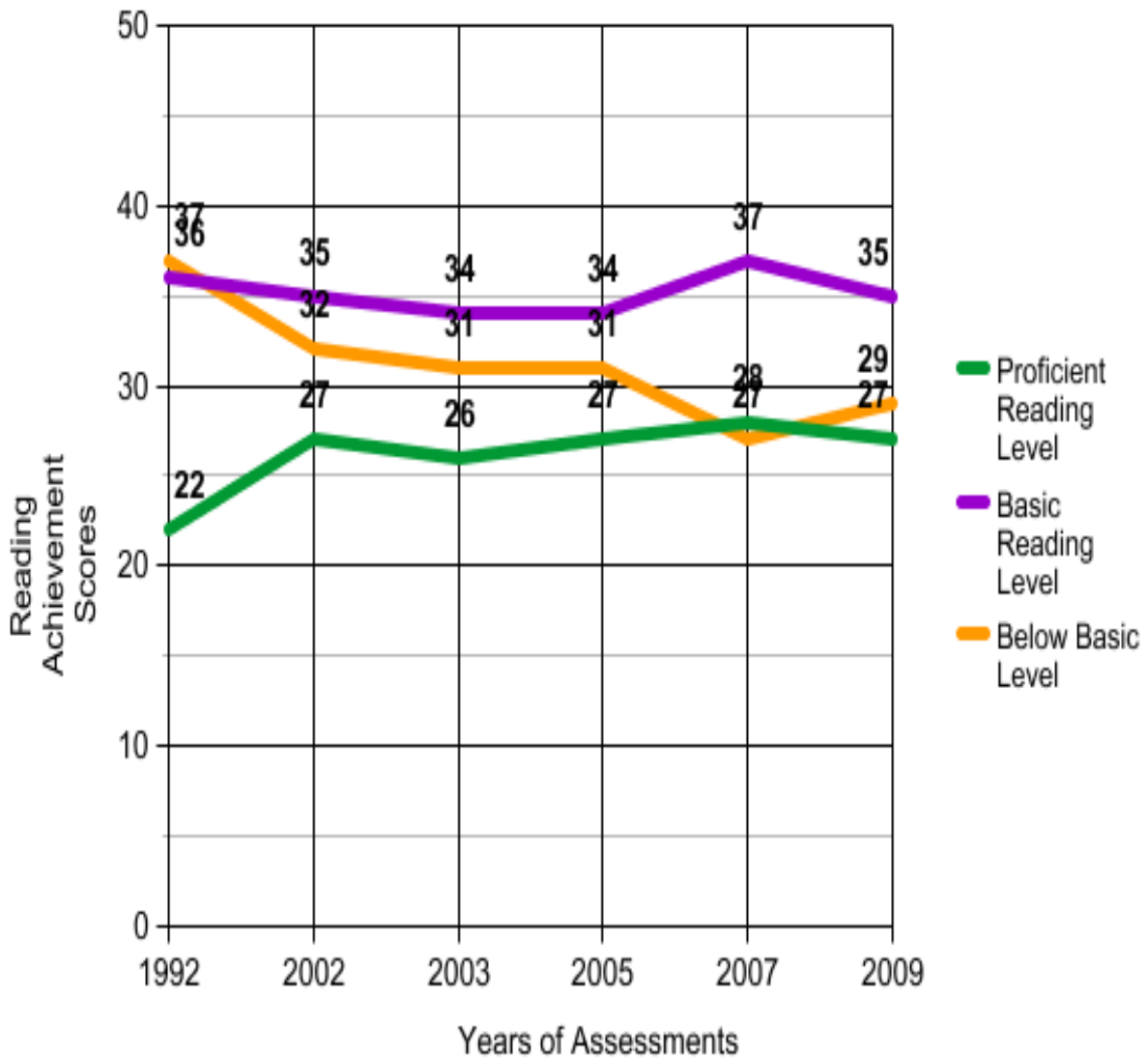
Note. † Not applicable. Results are not reportable for one or more student groups selected.
* Significantly different ($p < .05$) from state's results in 2009.

Figure 1. A 17-year time period of fourth grade NAEP scores in Ohio. From State

snapshot report, 2009.

Early Literacy Skills

In the fall of 2008, the Ohio Department of Education mandated all public schools to institute the Kindergarten Readiness Assessment-Literacy (KRA-L) to assess literacy skills and academic readiness. In the fall of 2014, the Kindergarten Readiness Assessment-Literacy (KRA-L) was replaced with the Kindergarten Readiness Assessment (KRA). The KRA-L only assessed language and literacy, while the new assessment assesses students in six areas: social foundations (including social emotional development and approaches toward learning), language and literacy, mathematics, science, social studies, physical well-being, and motor development. Also, the KRA-L involved a teacher prompting a student to respond to direct questions. The new measure includes both a teacher prompting a student to respond to direct questions and a teacher completing observations of students during classroom activities (Kindergarten Readiness Assessment, n.d.).

Children in kindergarten through third grade are being taught how to learn to read. The Ohio Language Arts Standards implemented in 2010 expects students entering fourth grade to be able to read to make logical inferences, support conclusions, determine central ideas, summarize supporting details, and analyze the how and why of a text. They must also be able to interpret words and phrases, analyze the structure of texts, and assess the point of view, and style of a text (Ohio's new learning standards, 2010). Post-third-grade students are expected to read to learn. Subjects such as science and social studies require predominantly reading, and the partial success of math word problems is based on reading ability. The success of the transition is dependent on the reading level at the end of third grade (Casey, 2010).

Donald Hernandez researched the essentials of third graders reading at grade level. The research completed by Donald Hernandez and published by the Annie E. Casey Foundation in 2011 entitled *"Double Jeopardy: How Third Grade Reading Skills and Poverty Influence High School Graduation"* made the declaration on the importance for third graders to be on grade level as imperative. The report examined a national database of nearly 3,975 students born between 1979 and 1989. The longitudinal study tracked students from their earliest entry to finishing high school by age 19. Family economic status, poverty levels based on family income in the neighborhoods where they lived, and their Peabody Individual Achievement Test (PIAT) Reading Recognition subtest scores were tracked and documented. The limitation for the study was that no data were collected on the number for actual drop outs. The study findings were students who do not read proficiently by third grade are four times more likely to drop out of school by age 19 than students who can read proficiently and about 16% of children who are not reading proficiently by the end of third grade do not graduate from high school on time – a rate four times greater than that for proficient readers. Fourth grade level curriculum requires fourth grade students to be able to read at the fourth grade reading level (Hernandez, 2011). Third graders reading below grade level are predicted to display relatively high aggressive behavior in third and fifth grades (Miles & Stipek, 2006). Students failing to read proficiently by the end of the third grade are more likely to have ongoing difficulties in school and failure to graduate (Feister, 2013).

Leaving third grade at a reading below grade level lends to the greater opportunity to be in special education classes and be suspended or expelled (Courtney, Roderick, Smithgall, Gladden, & Nagaoka, 2004). Leading researchers Joy Lesnick, Robert M.

Goerge, Cheryl Smithgall, and Julia Gwynne concluded that future educational success is primarily dependent on successful reading in third grade. They learned third grade performances can predict educational outcomes. They studied the long-term outcome of third grade reading level outside the effect on four educational outcomes, above and age, gender, and socio-economic status, home environment, institution climate, grade retention, and pre-high school reading ability. The four educational outcomes are junior high reading marks, freshman achievement (attendance, Grade Point Average, and course incompletions), high school completion, and college presence. By demonstrating and using the 2010 Longitudinal Analysis of 26,000 Chicago Public Schools (CPS) third-grade students and using the third grade national percentile rankings on the Iowa Tests of Basic Skills (ITBS), they located an association among the proficient and above readers with high school completion and college presence at advanced degrees greater than third grade students that were basic and below readers. (Lesnick et al., 2010).

What Is Ohio's Third Grade Guarantee?

In 2011, in the Ohio State Legislature, Ohio Revised Code 3313.608 Fourth Grade reading capability was passed into Ohio law. It is better known as Ohio's Third Grade Reading Guarantee. The heart of the law is "no school district shall promote to fourth grade any student who does not attain at least the equivalent level of achievement" (Ohio Revised Code 3313.608). The law requires pre-third grade diagnostic testing as early as kindergarten. Starting in the fall of 2012, the Local Education Agencies (LEA) must approve district guidelines and ways for yearly measuring the literacy abilities of each child in grades K-3 and must specify the assessments for the Third Grade Reading Guarantee to be administered by the end of September each year (Ohio Revised Code

3313.608). On June 25, 2012, Gov. John Kasich signed the Ohio's Third Grade Reading

Guarantee into law. The legislation mandates all Ohio public school districts to retain

students who cannot read at grade level before entering fourth grade.

As pertaining to the importance of this study, the Third Grade Guarantee has six

central focuses (for all 10 focuses see Appendix B) for students in kindergarten through

third grade and it is further explained in this literature review. Diagnostic testing is

designed to identify literacy areas of weakness. Districts are directed to use diagnostic

results to categorize students as *on track* or *not on track*. Students who are designated

with the status, *not on track*, are required to be offered intensive remediation services.

Reading Improvement and Monitoring Plans (RIMPs) will follow the students who are

not on track until *on track* diagnostic scores are achieved. School districts are mandated

to provide intensive remediation for students *not on track.* Students completing third

grade without reaching the *on track* status will be retained. Diagnostic data must be

annually reported to the department of education (Third grade reading guarantee, 2015).

Diagnostic Testing

Public schools are mandated by the Ohio Department of Education to evaluate all

children to determine if they are reading at grade level. All students in Ohio public

school kindergarten through grade 3 are required to take reading diagnostic assessments

by September 30 and kindergarten students in kindergarten by Nov. 1 to meet the

requirements of the Third Grade Reading Guarantee (Third Grade Reading Guarantee

Law (ORC 3313.608). Ohio's diagnostic assessments are aligned with Ohio's Learning

Standards and diagnostic assessments were designed to monitor students' progress

meeting the standards.

The Local Education Agencies (LEA) administers tests to determine literacy competence for the applicable grade level approved under section 3301.079 of the Revised Code, or a similar instrument permitted by the department of education, to classify schoolchildren.

Table 2

Third Grade Reading Guarantee: Reading Diagnostic Options

Grade level	Reading Diagnostic Options for the Sept. 30 Deadline
Kindergarten	Kindergarten Reading Assessment* Comparable tool from approved list
Grade 1	Ohio Department of Education Grade 1 Screening Measure Comparable tool from approved list
Grade 2	Ohio Department of Education Grade 2 Screening Measure Comparable tool from approved list
Grade 3	Ohio Department of Education Grade 3 Screening Measure Comparable tool from approved list

Note. * Districts may use the language and literacy portion of the Kindergarten Readiness Assessment instead of the kindergarten screening measure.

The Local Education Agencies (LEA) may choose an assessment from the permitted list irrespective of their schools' achievement scores. If the assessment presently being administered is not on the state-approved list, it cannot meet the standard necessary to be completed for the end of September assessment obligation. This does not limit the implementation of the assessment during the rest of the year to determine teaching and learning. Table 3 characterizes the names of state-approved, similar reading assessments. The department of education may yearly evaluate the list.

A brief description of each state approved diagnostic assessment used in this study is as follows: The aimsweb Reading Curriculum-Based Measurement (R-CBM) assessment is research-based and meets professional standards for reliability, validity, and sensitivity to improvement. It meets the standards for use in Reading First as determined by the Secretary of Education's Committee on Reading Assessment (Reading assessment resource for educators, 2014).

DIBELS (Dynamic Indicators of Basic Early Literacy Skills) Next® assesses basic early literacy skills, including those listed on the Common Core State Standards (CCSS) for English Language Arts (ELA). Initial research on DIBELS was conducted at the University of Oregon in the late 1980s. Since then, an ongoing series of studies on DIBELS has documented the reliability and validity of the measures as well as their sensitivity to student change (How DIBELS next aligns, 2013).

i-Ready covers more than 90% of assessible standards in Grades K–8. It is linked to National Measures recognized by Common Core: Lexiles measures, Quantile measures. It strongly correlated to Common Core assessments based on third-party research from the Educational Research Institute of America (ERIA) (Science behind i-Ready's adaptive diagnostic, n.d.).

The new Kindergarten Readiness Assessment (KRA) is based on Ohio's Early Learning and Development Standards adopted in October 2012, whereas the Kindergarten Readiness Assessment Literacy (KRA-L) was based on Ohio's previous standards for preschool. Both assessments measure skills in reading, speaking and listening, and language. The new Kindergarten Readiness Assessment also measures writing skills (Ohio Department of Education, 2016).

Measures of Academic Progress (MAP and MAP for Primary Grades) is aligned to Common Core State Standards and produces validated achievement and growth data, including a series of validity studies including concurrent and predictive validity, criterion-related validity, and construct validity (Northwest Evaluation Association, n.d.).

STAR assessments under the Renaissance Learning's research base—numbering over 400 studies— have met the review standards set by reputable organizations such as the National Center on Intensive Intervention, National Center on Response to Intervention, National Center on Student Progress Monitoring, National Dropout Prevention Center, Promising Practices Network, and What Works Clearinghouse. During the summer of 2015, STAR assessments were aligned to Ohio's State Standards (National Center on Response to Intervention, 2016).

Table 3

State-Approved, Comparable Reading Diagnostics

Vendor	Assessment	Form C
Amplify Wireless Generation	mCLASS: DIBELS Next	mCLASS: DIBELS Next
Cambium	DIBELS Next	DIBELS Next DIBELS Next Cost
Curriculum & Associates	iReady Diagnostic	iReady DX
Scantron	Performance Series Reading	Performance Series Reading
NWEA	MAP for Reading Assessments (K-3)	MAP for Reading Assessments (K-3)
Pearson Clinical Assessment	Woodcock Reading Mastery Tests	WRMT-III Form C
Pearson Clinical Assessment	AIMSWEB	AIMSWEB
Pearson School	Developmental Reading Assessment	Developmental Reading

(continued)

Table 3

State-Approved, Comparable Reading Diagnostics (continued)

Pearson School	Group Reading Assessment and Diagnostic Evaluation (GRADE)	Group Reading Assessment
Renaissance Learning	STAR Reading Enterprise	STAR Reading
Renaissance Learning	STAR Early Literacy Enterprise	STAR Early Literacy
Scholastic, Inc.	Scholastic Reading Inventory (SRI)	Scholastic Reading Inventory (SRI)

Note. From http://education.ohio.gov/Topics/Early-Learning/Third-Grade-Reading-Guarantee/Third-Grade-Reading-Guarantee-District-Resources

Diagnostic Results

If a child scores below the benchmark, the school will design a reading improvement plan (Ohio Revised Code 3313.608). The benchmark score is determined by the school district after consultation with the assessment's vendor (Third grade reading guarantee, 2015).

Reading Improvement Monitoring Plan (RIMP)

All students *not on track* are also required to be placed on reading improvement and monitoring plans (RIMP). Each pupil in grades K-3 acknowledged as *not on track* must have be on a (RIMP) within two months when a pupil is labeled *not on track.* In addition, if the decision is that these students need help with reading, schools may electively put students, even though *on track,* on RIMPs. Schools will enforce reading improvement plans and monitor students' reading progress.

A Reading Improvement Monitoring Plan (RIMP) is a plan to address each student's reading deficiencies. The plan includes performance, diagnostic, or other observation data used to identify and monitor progress in areas of academic need,

curriculum and instructional focus, the instructional strategies employed in response to instructional focus, and interventions. A plan must identify the student's specific reading deficiency with description of proposed supplemental instruction services that will target the student's identified reading deficiencies. Exhaustive corrective help must pinpoint the student's weakness. Corrective services necessitated by the assurance must contain exhaustive, clear, and orderly teaching. LEAs can use the following descriptions as direction when planning corrective teaching: "*Intensive*" teaching focuses only on reading and is thorough and demanding; "*Explicit*" teaching plainly and directly clarifies skills and makes no suppositions about the student's capability to make inferences; and "*Systematic*" teaching hits all the areas of reading weakness through a systematic plan, follows the student's progress, and recurrently reviews and implements literacy concepts..

Students on Individualized Education Programs (IEP) that have been identified to be on a RIMP and are needing exhaustive corrective help must have a systematic plan for corrective support that does not interfere with the goals and plan on the IEP. The LEA or school must document the course of how it will adjust corrective teaching and necessary strategies forthcoming (Third grade reading guarantee, 2015). A blank copy of a RIMP is accessible for viewing on the department of education's website under "Teacher Resources" (see Appendix A).

Intensive Remediation Programs

At the start of the school year (for the Sept. 30 deadline) any student identified as reading below grade level from the results of diagnostic testing, will formally be in need of corrective support and on a reading improvement and monitoring plan (RIMP) until

the student scores at grade level as indicated from the results of the next year's diagnostic test or achieving a proficient score on the grade 3 Ohio Achievement Assessment in reading. Included must be a process to monitor the implementation of the student's instructional services. Schools will work closely with parents to help design a remedy and for parents to be able to support the plan (ODE Third Grade Reading Guarantee, 2015). As prescribed in the RIMP, remediation instruction is the necessary intervention for students reading below grade level. Remediation services may range from small group instruction to summer school. However, all services must be research-based (Third grade reading guarantee, 2015).

Retention in the Third Grade

Each year the Ohio Department of Education predetermines a set score on the grade 3 OAA in reading to determine eligibility to be promoted to fourth grade. Students scoring below the set score will be retained in third grade. (see Appendix B).

However, students may be excluded from retention in third grade for several reasons. Students not assessed throughout the determined testing period must prove third grade reading capability on a substitute test for reading permitted by the ODE. Any students with substantial intellectual incapacities will not be retained for missing a passing score. Students on individualized education programs (IEP) with incapacities that create exceptional and substantial adjustments that are contrary to test taking procedures and exceed the permissible standards for statewide test accommodations will not be retained for missing a passing score. IEPs with language negating retention in third grade will exempt students from the Third Grade Guarantee directive.

Students with severe language barriers due to limited school exposure and students previously retained may also be excluded from the requirements expressed in the law(Third grade reading guarantee, 2015).

Data Reporting

The scores of the Sept. 30 assessment, determining if the child is on a RIMP or not, are to be reported to the department of education. Previously established procedures are necessary for districts to track and report data compliant to the Third Grade Guarantee. The Education Management Information System (EMIS) excerpts the information from each of the LEAs database into a central database used to house student data. Each student will be described on an RIMP or not on an RIMP. In addition to students' data will be the interventions put in place by the school district (Third grade reading guarantee, 2015).

Submitted data are not only used to hold districts to be compliant to the state law, but are also used in the Ohio School Report Cards. The K-3 Literacy and Prepared for Success is one component that is used to assign an A-F letter grade to each for each school district (Report card resources, 2016).

<div align="center">Ohio School Report Card</div>

Included on the yearly State Report Card is the K-3 Literacy grade. This grade answers the question, "Are more students learning to read in kindergarten through the third grade?" The grade is calculated by the number of students on RIMPS from year to year (K-3 literacy measure, 2014).). The K-3 Literacy Measure records data on students at the start of each school year if the pupil has progressed to not be on an RIMP from the

year before being on an RIMP. For instance, a pupil on an RIMP in kindergarten is expected to not be on an RIMP in first grade. A pupil on an RIMP in first grade is expected to not be on an RIMP in second grade. A pupil on an RIMP in second grade is expected to not be on an RIMP in third grade (K-3 literacy measure, 2014).

The Ohio K-3 Literacy aims to guarantee that every pupil passes the third grade assessment through monitoring each student's reading level from kindergarten through third grade. The LEA is responsible to provide exhaustive support for any student not at grade level. With this mandate, LEAs identify reading problems and create plans to remediate poor reading skills into proficient reading skills (K-3 literacy improvement measure, 2014).

The Ohio K-3 Literacy component measures how well schools and districts are helping young students who are reading below grade level (K-3 literacy improvement measure, 2014). The measure looks at which students are *not on track* on the kindergarten diagnostic and gives credit for those students who improve to *on track* following the first-grade diagnostic. Similarly, it measures improvement from first- to second-grade diagnostics, second- to third-grade diagnostics, and from the third-grade diagnostic to the third-grade achievement assessment. Additionally, the measure identifies students who were never on or removed from a Reading Improvement and Monitoring Plan but do not achieve proficiency by not passing the Ohio Achievement Assessments (OAA) .

All parents of students *not on track* will receive notification that unless the student achieves the determined level by passing the third grade Ohio test, the student will need to repeat third grade. Any student attaining a grade level reading score within

the same school year may have the RIMP modified accordingly. However, the RIMP

cannot be dismissed (Third grade reading guarantee, 2015).

In 2014, the K-3 Literacy Measure which first appeared on Ohio's Accountability

System (A-F Report Card) contains four features: State Indicators, Performance Index

score, Value Added, and AYP (Adequate Yearly Progress). Ohio's annual district and

school report cards are freely published for public viewing, once a year online and to the

media to display pupils' literacy progress, absences, and are doing by school and by

district on key subjects, attendance, and senior completion data. A letter grade is

assigned to reflect the number of students learning to read (*not on track* from year to year

(*on track* the following year) in their primary years.

The 2015 report card displays one letter mark for the schools and the school

district. This analysis calculates data from the start of school assessments and the third

grade Ohio Achievement Assessments (OAA) to determine the progress LEAs are

making to get students off RIMPs. As revealed in Figure 2, these data will use scores

through the primary years and the third grade test (Report card resources*, 2016)*.

Figure 2. Improvement on diagnostics. From C:\Users\MLaRi\Documents\lit review\K-3 Literacy Improvement Measure Ohio Department of Education.mht.

Personal Parent Communication

In addition to the Ohio School Report Card, for any student considered *not on track*, schools must communicate in script to the guardians notification that their son or daughter is in need of extra reading support. The communication must include the description of current services the student on will receive, the explanation of planned additional learning skills, and will be placed an RIMP, and that future diagnostic tests will be used to monitor progress to passage.

Factors as the Result of the Third Grade Guarantee

District Cost

Effective early intervention in the primary grades is necessary for below level readers to become successful readers (Juel, 1988; Vellutino & Scanlon, 2002). The

Ohio's Third Grade Reading Guarantee is an unfunded mandate to provide interventions for kindergarten, first, and second grade students scoring *not on track* on diagnostic assessments.

The financial burden brought about by mandated interventions will vary year to year depending on the number of students in RIMPs. Interventions including after school tutoring and summer school tutoring are required to be taught by Ohio licensed teachers. An example, the Northwest Local Schools located in Stark County, adhered to the law by creating times for remediation called the Reading Education and Development Program (R.E.A.D.). The total cost for the after school Reading Education and Development Program for the 2014-15 school year was $26,512.50 and $18,480.22 for the summer school program (Personal communication, August 15, 2015). Simply stated, the higher the number of students on RIMPs, the more costly the interventions.

With that being said, an earlier kindergarten entry cutoff date can increase a district's standing in positive achievement on proficiency assessments (Vecchiotti, 2001).

Are districts with a kindergarten entry cutoff date of September 30th servicing more students on RIMPs than districts with a kindergarten entry cutoff date of August 1st? If there is an increased risk of RIMPs for 4-year-olds, then schools with the September 30th kindergarten entry age cutoff may have more kindergarten students on RIMPs. For all Ohio public school districts, the entry age of first time kindergarteners ranges from four to six years with the goal of students' reading scores being at or above grade level by third grade. Therefore, early intervention at the kindergarten level is a priority (Torgesen, 2002).

Factors of Influence on Kindergarten Students

Studies of the Third Grade Guarantee provide parents of children in kindergarten the awareness that performance up through third grade will be reflected on assessments as in terms of retention or promotion to fourth grade. In a qualitative interview-based study of 29 females, 13 teachers and 16 parents, knitted throughout the meetings was a general feeling of nervousness about children's future kindergarten enrollment (Hatcher, Nuner, & Paulsel, 2010). With the "the threat of retention as much as retention itself will lead to higher performance" being a misnomer and causing more harm than good (Roderick & Nagaoka, 2005, p. 310), high stakes testing can become an image issue. Younger kindergarten students are more likely to be retained in kindergarten and the subsequent next two grades and are more likely to be diagnosed for ADD (Elder & Lubotsky, 2009).

Kindergarten Gender Factor

Research suggests that girls score higher than boys in reading achievement (Husain, & Millimet, 2009). International reading studies from Progress in International Reading Literacy Study (PIRLS) (Thompson & Provasnik, 2012), PISA (OECD, 2015), and Patterns of Change in U.S. Gender Achievement Gaps during Elementary and Middle School (Fahle, 2016) also support the findings of Husain and Millimet. Therefore, gender is a demonstrating influential factor. However, is entry age into kindergarten a larger factor when scoring better in reading achievement?

Kindergarten Ethnicity Factor

Research suggests that white students score better than nonwhite students in reading achievement. International reading studies from Progress in International

Reading Literacy Study (PIRLS) (Thompson & Provasnik, 2012) and School Composition and the Black-White Achievement Gap (Bohrnstedt, Kitmitto, Ogut, Sherman, & Chan (2015) support the findings; therefore, ethnicity is a demonstrating influential factor. However, is entry age into kindergarten a larger factor when scoring higher in reading achievement?

Kindergarten Socioeconomic Status (SES) Factor

Research suggests that students from low income families score lower than students not from low income families in reading achievement. International reading studies from Progress in International Reading Literacy Study (PIRLS) (Thompson & Provasnik, 2012) and Fast Facts (U.S. Department of Education, 2016) also support the findings. Therefore, socioeconomic status is a demonstrating influential factor. However, is entry age into kindergarten a larger factor when scoring higher in reading achievement?

Kindergarten Entry Age Factor

Since all Ohio schools are mandated to evaluate kindergarteners, does the entry age make a difference as in terms of kindergarteners not meeting benchmark on the fall diagnostics? Results of the kindergarten multilevel models show that the youngest students have consistently lower scores than the oldest students (Huang & Invernizzi, 2009). Later research suggests kindergarteners who entered kindergarten or first grade at an early age were more likely to display adjustment problems, task-avoidant behavior, compared to older students (Hirvonen et al., 2015). Later entry for kindergarten promotes positive social behavior (Datar & Gottfried, 2015). In a longitudinal study of 56 students at a parochial school in a predominantly low socioeconomic status, there was

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a significant correlation between school age entrance and reading readiness achievement of the kindergarten children in the sample (Parks, 1996). In a kindergarten report, it was determined that changing the deadline for kindergarten entry from December 31 to September 1 would support to decrease incidences of retention among the young kindergarten children (Warder, 1999).

In a cross-sectional study, older kindergarten entrants scored significantly higher academically than younger kindergarten entrants (Wiechiel, 1988). In a more recent study conducted by Francia Huang and Marcia Invernizzi, entitled *The Association of Kindergarten Entry Age with Early Literacy Outcome,* the older kindergarten children recorded higher than their youngest classmates at the start of kindergarten on numerous primary reading assessments. The longitudinal study viewed 405 students (202 boys, 203 girls) who were in high-poverty and low-performing public schools in the Commonwealth of Virginia. Age was measured for student success with alphabet recognition, letter-sound knowledge, and spelling through the Stanford Reading First assessment. The chi-square tests of homogeneity indicated that the oldest and youngest groups of students were not significantly different based on gender, economic status, ethnicity/ethnicity, and disability status. However, results of the kindergarten multilevel models show that the youngest students have consistently lower scores than the oldest students (Huang & Invernizzi, 2009). Oshima and Domaleski's (2006) study supports age as a larger predictor of reading and mathematics achievement than gender or ethnicity in the primary grades.

Entering kindergarten a year older significantly boosts test scores at kindergarten entry (Datar, 2006). Elder and Lubotsky (2006) provided evidence that older

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kindergarteners perform better than younger kindergarteners on reading and math achievement tests. When 4-year-olds, 5-year-olds, and 6-year-olds are taking the same assessment to determine the necessity for RIMP plans or not, the scale tilts to the younger students' academic performance to be lower than that of the much older (Oshima & Domaleski, 2006; Stipek, 2002).

A statistically noteworthy change in success was located, with the older children scoring meaningfully advanced on the Iowa Test of Basic Skills than younger children (Montz & Richardson, 1985). Annual grade level assessments, beginning in kindergarten, accelerate curriculum beyond grade level. Therefore, what was taught in first grade years ago is now being taught in kindergarten (Cosden et al., 1993). Schools add stress to children by hurrying them for standardized testing with the emphasis on gifted testing to compete with the Japanese. In kindergarten, 2 out of every 10 kindergarten-aged children are not promoted because they lack the necessary academic skills needed for first grade and social skills are not taught due to an increasing amount of academic skills (Elkind, 1988),

Parent Factor

Parents are holding their kindergarten-age children another year before enrolling them so they will be top in their classes and able to meet the demands of kindergarten curriculum (Graue & DiPerna, 2000). Notwithstanding data that younger students have a learning disadvantage in the early grades of school, data propose that parent or school approved redshirting is not an appropriate approach for increasing high school scores, successful senior years, or entering into higher learning courses (Lincove & Painter, 2006).

Ohio's Kindergarten Entry Age

There are differences in the ages of the kindergarten students being evaluated because the decision is left to local boards of education in determining the kindergarten entry date. Beginning with the 2001 school year, school district boards were permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, and 6 years of age to be admitted to first grade (ORC 3321.01). Therefore, kindergarten data will have the results of 4- and 5-year-olds in districts with a kindergarten cutoff date after September 1st. In Stark County, of the 17 school districts, 9 use the September 30th for their kindergarten entry date (State support team 9).

Will the kindergarten data show the school districts having the September 30th cutoff date have more students on reading intervention plans than those districts with the August 1st cutoff date? Each year the districts' diagnostic tests must be completed by September 30th and with the cutoff entry date for kindergarten at September 30th and the first day of school in mid-August, the age of students less than 5-years-old may range from 4 years 10.5 months to 4 years 11.9 months as compared to 5-year-olds may range from 5 years 1 month to 5 years 12 months.

The age of the kindergartener may need to be studied and researched further to determine if the September 30th entry date is increasing cost, undue stress, and lower grades on the State Report Card. There are uncontrolled variables including gender, intelligence quotient, socioeconomic status, and preschool experience that play a role in the success of any first-time kindergarteners on reading grade level assessments that need to be addressed as well (Huang & Invernizzi, 2012).

The Federal Equal Education Opportunities Act of 1974 provides that no state can use any uncontrolled variables to deny equal education opportunities to an individual based on ethnicity, gender, or national origin (Types of educational opportunities, n.d.). Any child registering to attend must be the age of 5 (or 4 for pre-kindergarten enrollment or having a birthday before September 30th) to be enrolled in any public or state-funded school system. However, age for kindergarten entrance (depending on cutoff dates) is the only variable that can be selected to even the playing field among other kindergarteners and other school districts (Zill & West, 2000).

Policies that result in fewer kindergarten students requiring RIMPs are favorable. The test results and the results of the study will serve a purpose in terms of policy decisions that affect cost for remediation, the psychological impact on students (on RIMPs) and parents, and the imprecise perception of kindergarten readiness from the state of Ohio's assessment of the school on the Ohio District Report Card.

National Kindergarten Entry Ages

As compared to other states, Ohio is only one of 11 states that kindergarten entry age is not at least September 1st (National Center for Educational Statistics, 2014). In California, Senate Bill No. 1381 was signed into law to move the kindergarten entry age from December 1st to September 1st. Sophia Kwong Kim, ED., who analyzed the Bill and cited the May 2008 Public Policy Institute of California (PPIC) review of 14 existing studies that concluded students who enter kindergarten at an older age do better on math and reading test scores, was behind its passage (Cannon & Lipscomb, 2008). Other states have used similar research that supports younger students achieve lower scores than their

older peers in kindergarten. Such research has precipitated changes in policy of the basis for kindergarten dates (Elder & Lubotsky, 2006).

Kindergarten Entry Age Repercussions

Every fall throughout the country, thousands of children under the age of five enter kindergarten. There is dialogue, including debate, on how early is too early to attend public school kindergarten. Kindergarten entry ages vary throughout the country. Some research favors older students perform academically better than their counterparts.

In Ohio public schools, all kindergarten students must take Ohio Department of Education approved diagnostic tests in the fall. Students scoring below designated benchmarks are placed on Reading Improvement Intervention Plans (RIMPs). The research and analysis of kindergarten students placed on RIMPs is pertinent to all districts for the following reasons:

The numbers of students on RIMPs determine the budget items such as money, time, and personnel that will be needed to remediate kindergarten students not at grade level. School districts use several different diagnostic tests. The cost in choosing a test may be a prohibitive factor; however, a comparison and contrast of students on RIMPs may assist in the decision process.

Socialization through the life course may be problematic for younger kindergarten students being placed on RIMPs as compared to older students, due to the extra support that will be provided outside the regular classroom.

Finally, the purpose of this study was for LEA's to reexamine their current policy on their decision to use the kindergarten entry ages August 1 or September 30. In Ohio, most school districts have chosen September 30th as the kindergarten cutoff entry. For

Local Education Agencies (LEA) to study an entry date that permits kindergarten students to begin school at four years old, empirical evidence may be needed for the LEAs to consider four years of age as being too young to begin school.

CHAPTER III

METHODOLOGY

Introduction

Starting in 2001, school districts were given the choice of adopting either the first

day of August or the 30th day of September as the date by which a child must be 5 years

of age to be admitted to kindergarten and 6 years of age to be admitted to first grade

(ORC 3321.01). There has been limited research on which kindergarten entry date is

more advantageous to kindergarten readiness. The purpose of this study was to

understand the relationship between students' age at enrollment into kindergarten and

their RIMP placement. The sample included kindergarten students from years 2013

through 2015 in nine Stark County School Districts. By utilizing variables identified by

the theoretical constructs of the reviewed literature and students in kindergarten placed on

RIMPs due to scores on State Diagnostics Assessments, differences between groups were

examined.

This chapter describes the research design, methods, and procedures used to better

understand the relationship between age and RIMP placement. Conceptual framework,

research design, and research hypothesis are included, as well as sampling procedures,

data collection, and instrumentation. This chapter is completed with data analysis and

limitations of this study.

Conceptual Framework

The conceptual framework steering this analysis is the comparison of the entry

age of students in kindergarten between those on RIMPs and those not on RIMPs. In a

cross-sectional study, older kindergarten entrants scored significantly higher academically than younger kindergarten students (Datar, 2006; Wiechiel, 1988) with significant findings on reading and mathematics achievement tests (Elder & Lubotsky, 2006). Research has shown that students entering kindergarten or first grade at an early age were more likely to display adjustment problems compared to older students, and the children who entered at a later chronological age scored consistently higher on achievement ratings than their younger classmates (Beatti, 1970) and that later entry promotes achievement (Crosser, 1991; Foote, 1991; Parks, 1996). Finally, contrary to most studies the analysis herein is also guided by research that suggests that the entry age of students in kindergarten has little to no effect on students' academic performance (Harahara, 1998) with other factors contributing to the differences in student achievement (Wiechiel, 1998). Wiechiel found that chronological age is a factor in learning but is not the sole criteria for determining the best age for entering school, finding statistically significant differences with students' gender and preschool experience contributing to achievement and classroom behavior (1998).

School districts in Stark County, Ohio were selected for this study. In Stark County, all 17 public school districts start the new school year between mid to late August. However, eight school districts do not permit kindergarten students to enroll as four-year-olds. The researcher chose to eliminate those districts and concentrate on the nine school districts in Stark County with the cutoff date of September 30th.

This quantitative study analyzed the results of more than 8,000 kindergarten students from academic years 2013-2014, 2014-2015, and 2015-2016 to determine if age, more than the gender, ethnicity, SES, and the diagnostic test, is the primary indicator for

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kindergarten students on RIMPs. This study used causal-comparative research because it

explored possible causal factors of RIMPs. The primary hypothesis was that age is the

largest contributing factor for student placement on RIMPS. However, it is possible that

the covariates of gender, SES, and diagnostic test are also contributing factors. These

covariates make up the secondary hypotheses of this study.

The conceptual framework is illustrated in Figure 3. The assumption is that 4-

year-old students are more likely to be placed on RIMPs. Data were collected on

students who turned five between August 2nd and September 30th. State approved

diagnostic tests are administered to kindergarteners before September 30th. Each test has

a cutoff score determined by the Ohio Department of Education. Students testing below

the cutoff score will be placed on RIMPs. Data were extracted from Data Analysis for

Student Learning (DASL) and analyzed to test the null hypothesis. Each district uses

Data Analysis for Student Learning (DASL) to deliver student data to the Ohio State

Department of Education. The Education Management Information System (EMIS)

extracts the data from each school district's files.

The analysis was an assessment of the effect of the independent variables of age

(4 years versus 5 years) on the dependent categorical variable (RIMPs) and the

categorical covariate variables are gender, ethnicity, SES, and diagnostic test.

Research Design

A causal-comparative research study was employed in this quantitative study as a

cohort of participants who share a common exposure factor (entry age in kindergarten) to

determine if it is influencing the outcome. Causal-comparative research seeks to identify

ASSUMPTION
A higher number of students under the age of five will qualify for RIMPs.

Null hypothesis: There is no relationship between RIMP status and age.

Sample includes approximately 8,000 kindergarteners from nine Stark County districts under the entry date of September 30th

Logistic regression with the use of chi square tests on the independent variables of age (4yrs. vs. 5 yrs.) and the dependent categorical variable (RIMPs) and on the categorical covariate variables are gender, ethnicity, SES, and diagnostic test

State Diagnostic Assessments administered by September 30th

2013-2015 Kindergarten Students on RIMPs and 2013-2015 kindergarten students not on RIMPs according to age, sex, ethnicity, SES, and state diagnostic tests

Students scoring below the cutoff score are placed on RIMPs

Data from Data Analysis for Student Learning (**DASL**) drawn on 2013-2015 kindergarten students on RIMPs and not on RIMPs

Figure 3. Conceptual framework.

associations among variables. It is common to begin with a noted difference (on RIMPs or not on RIMPs) between two groups and look for causes for, or consequences of, the difference (Fraenkel & Wallen, 2006). The longitudinal study looked over events that had already occurred in the last three years. A generalized flow chart of the study is as follows:
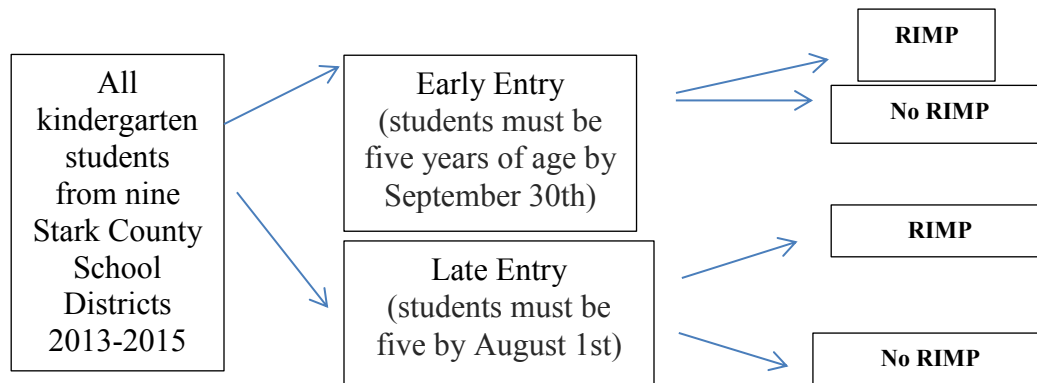
Figure 4. Flow chart for three-year study on early entry and late entry students.

Research Questions

Three research questions were addressed in this study.

1. Does the proportion of kindergarten students on RIMPs (Reading Intervention Monitoring Plans) and children not on RIMPs (including and excluding Canton City schools) differ as a function of student age?

2. Do ethnicity, gender, and socioeconomic status distinguish students with RIMP status from non-RIMP students (including and excluding Canton City schools)?

3. Is there an association of the diagnostic test given and resultant RIMP status?

4. Does the selected student variable (Age in months) distinguish students with RIMP status from non-RIMP status?

Instructional Factors

Part three of this contextual narrative investigated differences in teacher quality, testing standards, and curriculum. Considering first the teachers and the training, the teachers administering assessments in 2013 would not be the same staff administering the assessments in 2014 and 2015. However, all teachers are responsible to schedule and to create an environment conducive for test taking in the classroom or computer lab. Scheduling will include several days for preparation, administration, and make ups for student absences. All kindergarten teachers are trained in respect to the assessment as determined by the individual district. Training is necessary for administering the assessment with fidelity. Assessments are conducted with paper and pencil or on the computer. Teachers may give the assessments in small groups or one on one. The actual scoring of the assessment is done by the assessment manufacturer.

Considering the standards taught and curriculum, in this study reading and language arts curriculum vary throughout the nine districts. Each district is responsible to schedule time to adhere to and administer the Ohio's kindergarten content standards. Time devoted to the curriculum will vary depending on the transitional needs of each kindergarten class. Often students are not ready for the time of student engagement necessary as prescribed by the curriculum manufacturer. Therefore, modifications to curriculum delivery, as compared to the average school day later on in the year, are necessary. Structured time for curriculum instruction increases as the year moves on. Accommodations that were made to adjust to the length of day, such as more breaks, cause less curriculum and standards to be taught during the first month of school. With the average date for the start of school being August 20th, approximately only 20 days of

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student instruction is managed before the September 30th deadline (due date for diagnostic assessments to be completed).

For all nine districts in this study, the instructional factors are addressed differently yet within the guidelines that are not quantifiable as are the Reading Improvement Monitor Plans (RIMPs).

Research Hypothesis

Does the entry age make a difference as to whether or not kindergarten students reach the reading benchmark on the state diagnostic test? Research suggests children who entered kindergarten early were more likely to experience adjustment problems compared to older students, and children who entered later demonstrated higher achievement than their counterparts (Beatti, 1970; Crosser, 1991; Foote, 1991; Parks, 1996). In a longitudinal study of 56 kindergarten students of low socioeconomic status enrolled in a parochial school there was a significant correlation between school age entrance and reading readiness achievement (Parks, 1996). Further moving the cutoff date for kindergarten entrance from December 31 to September 1 helped lessen occurrences of failure among the youngest students (Warder, 1999). Given the current understanding of the research available, the following research hypotheses have been employed:

General Hypothesis: Age at entrance into kindergarten is predictive of school success.

Specific Research Hypothesis: The proportion of RIMPs (see Appendix A) entering kindergarten at age 4 under the September 30th date will be larger than

the proportion of RIMPs for children age 5 under the August 1st date.

Age: four and five years or older

Null Hypothesis 1: There is no relationship between RIMP status and age.

Alternate Hypothesis 1: There is a relationship between RIMP status and age.

Null Hypothesis 2: There is no relationship between RIMP status and Gender:

Male and Female; Ethnicity: White and Nonwhite; Social Economic Status (SES):

Eligible for free and reduced lunch or not eligible.

Alternate Hypothesis 2: There is a relationship between RIMP status and Gender:

Male and Female; Ethnicity: White and Nonwhite; Social Economic Status (SES):

Eligible for free and reduced lunch or not eligible.

Null Hypothesis 3: There is no relationship between RIMP status and the

diagnostic assessment.

Alternate Hypothesis 3: There is a relationship between RIMP status and the

diagnostic assessment.

Sampling Procedures

Population

Stark County was selected because of its diversity and demonstration of all

typographies. It contains cities, towns, farms, and suburban neighborhoods. There are

over 9,000 acres of parks, including close to 100 miles of walking/biking trails, and 30

miles of equestrian trails. It hosts historical and intellectual engagement opportunities

through the Pro Football Hall of Fame, the National First Ladies' Library, William

McKinley Presidential Library and Museum, Historic Canton Palace Theatre, Canton

Classic Car Museum, and MAPS Air Museum. Higher learning opportunities are

available through five colleges and universities within its borders: Kent State University-Stark Campus, Malone University, University of Mount Union, Stark State College, and Walsh University (Stark county by the numbers, 2017).

Table 4

Demography of Stark County

INCOME & COST OF LIVING	MAJOR INDUSTRIES
Median household income: $45,661	Education and health services: 19.2%
Median home value: $122,400	Manufacturing: 16.6%
Median rent: $666/month	Trade, transportation and utilities: 17.6%
Cost of living: 11.9% lower than the US average	Professional and business services: 8.6%
Unemployment rate: 4.7%	Leisure and hospitality: 10.9%
HOUSEHOLDS	WORKFORCE
Canton population: 72,297	Total workforce: 189,900
Stark County population: 375,736	Average commute: 21.1 minutes
EDUCATION	
High school graduate or higher: 89.1%	
Bachelor's degree: 14.1%	
Graduate or professional degree: 7%	

Note. Retrieved from https://www.cantonchamber.org/economics-scorecard

In total, approximately 8,000 kindergarten students from nine Stark County public schools make up the sample population. Each district uses Data Analysis for Student Learning (DASL) to deliver student data to the Ohio State Department of Education. Retrieved data included the following: age, gender, ethnicity, and SES. Each district provided the assessment used. For ethical purposes in maintaining confidentiality and anonymity, no names were included in received data from the school districts. Each line

item was labeled with the school district's initials and year (example NW 13, Tw14, and CCS15).

This study acknowledged large disparities among the Canton City school district and the other eight Stark County school districts sampled in this study in the following areas:

- Ethnic Distribution:

  The Canton City school district average nonwhite enrollment is 90%. The average nonwhite enrollment of the other eight districts is 53%.

- Socioeconomic Status:

  The Canton City school district average free and reduced lunch enrollment is 84%. The average free and reduced lunch enrollment of the other eight districts is 36%.

- Student Enrollment:

  The Canton City school district average enrollment is 11,000 students. The average enrollment of the other eight districts is 3,500 students.

Ethnic distribution, socioeconomic status, and school district are three covariate variables that were tested in determining the influence of kindergarten students in RIMPS. Therefore, it is understood the concluding findings may leverage disproportionally toward and with the Canton City school district.

Table 5

2014 Data From the Ohio Department of Education Website

Stark County school districts	Sq. miles	# of students	White students	Free & reduced	Expenditure per pupil
Canton City	17	11,000	47%	84%	$12,272
Fairless Local	65	1,700	97%	40%	$9,947
Jackson Local	36	6,000	90%	17%	$8,381
Massillon City	29	4,200	76%	65%	$10,033
Minerva Local	81	1,800	96%	48%	$8,847
Northwest Local	32	2,000	96%	28%	$9,659
North Canton	15	5,000	93%	21%	$10,180
Plain Local	29	6,000	75%	43%	$7,932
Tuslaw Local	45	1,300	97%	27%	$9,114

Note. From district profile, 2014.

Participants

Each student who met the following requirements of kindergarten students in the fall of 2013, 2014, and 2015 school year was included in the study:

1. Was assessed by an Ohio Department of Education approved Third Grade Guarantee Diagnostic Assessment in kindergarten during the fall of 2013, 2014, and 2015 school years

2. Was enrolled in any of the following nine Stark County *(Kindergarten enrollment Sept. 30th deadline)* Schools during the fall of 2013, 2014, and 2015 school years.

Instruments

Table 6

Instruments Used in Assessing Students for RIMP Purposes

APPROVED THIRD GRADE GUARANTEE DIAGNOSTICS			
	2013-14 school year	2014-15 school year	2015-16 school year
Canton City	KRA-L	i-Ready	i-Ready
Fairless Local	STAR	STAR	STAR
Jackson Local	ODE Reading Diagnostic	MAP	MAP
Massillon City	ODE Reading Diagnostic	MAP	MAP
Minerva Local	DIBELS	DIBELS	DIBELS
North Canton City	**aims**web	**aims**web	**aims**web
Northwest Local	STAR	STAR	MAP
Plain Local	i-Ready	i-Ready	i-Ready
Tuslaw Local	KRA-L	KRA	KRA

In the attempt to verify the validity of the diagnostic assessments used by the nine school districts in this study, a Public Records Request was submitted to Beth Hess, Third Grade Reading Guarantee Administrator at the Center for Curriculum and Assessment in the Ohio Department of Education for a review of the qualifications necessary for approval. The Ohio Department of Education approved the following vendors: aimsweb, DIBELS, i-Ready, MAP, and STAR. Each vendor submitted an overview of the assessment, use of the assessment, and how the organization supports implementation of the assessment. For the purpose of this study, documentation specifically on how it meets kindergarten ODE standards was extracted. Each assessment met the approval by

the Ohio Department of Education as it was demonstrated by each vendor in the

overviews. The Ohio Department of Education posed each vender two questions:

Table 7

Submissions of Comparable Assessments for Third Grade Reading Guarantee

Diagnostics	*Does the product provide an assessment of reading proficiency and identify deficiencies? If so, how?*	*What are the reading areas the proposed product covers?*
AIMSweb	Yes. It universally screens and progress monitors. It uses General Outcome Measures for reading performance	Letter Naming Fluency. Letter Sound Fluency, Phoneme Segmentation Fluency, and Nonsense Word Fluency
CLASS:DIBELS®	The assessor administer uses a mobile device to record student responses. The software analyzes the data. The teacher receives suggested instructional resources.	Phonological and Phonemic Awareness, Graphophonemic Knowledge, Word Reading, Oral Reading Accuracy, Oral Reading Fluency, Comprehension of Text, and Vocabulary
i-Ready	Yes. It is based on Common Core State Standards (CCSS) AND Ohio Learning Standards. It identifies skills possessed and next steps needed for instruction. Reading levels are adapted to the individual test taker.	Foundational skills (phonological awareness, phonics, and high frequency words); vocabulary; comprehension: informational text; and comprehension: literature
MAP for Reading Measures for Academic Progress®	It provides estimates of proficiency with a reading and goal score. The Rasch Unit (RIT) scaled score indicates measurement of academic growth. The information is used to identify the weaknesses or deficiencies of instruction areas.	Ohio Learning Standards Cluster -Matching Sounds, Rhyming Sounds, Manipulation Sounds -Visual Discrimination, Letter Identification, Matching Letters to Sounds - Concepts of Print
Star Reading	Yes. The Screening Report identifies proficient and non-proficient students through a variety of reports. The Student Diagnostic Report and the online Record Book feature identify students' strengths and weaknesses.	The Ohio Learning Standards domains of Reading: Literature, Reading: Informational Text, Reading Foundational Skills, and Language. Fluency, Vocabulary, and the following reading Comprehension areas: Key Ideas and details, Craft and Structure, Integration of Knowledge and Ideas, Range of Reading, and Complexity of Text.

AIMSweb - AIMSweb includes assessment tools with reporting functionality for: Universal (benchmarking) screening, Strategic Monitoring, and Progress Monitoring, with frequent assessments and instructional re-directs. The AIMSweb system will identify students' strengths and weaknesses and monitor progress following intervention activities. AIMSweb's problem-solving Response to Intervention (RTI) approach is rooted in best practices and provides scientifically-based progress monitoring that tracks students' educational needs, through benchmark data, and response to instruction. AIMSweb is currently the only system to include valid and reliable academic and behavior assessment tools in one seamless data management program, Ohio AIMSweb_Default_Cut_Score_Guide.

DIBELS® -The Dynamic Indicators of Basic Early Literacy Skills Next (DIBELS Next) test is a set of short-term, consistent, independently directed procedures of primary literacy intended to forecast the literacy development of students from Kindergarten through sixth grade. The six DIBELS Next measures reveal the critical primary literacy fields designated in the National Reading Panel (2000) and National Research Council (1998) reports. The procedures assess the main areas: phonological awareness, graph phonemic knowledge, word reading, oral reading accuracy, and comprehension of text. AMPLIFY Response to Comparable Assessments to Ohio's Assessment for the Third Grade Reading Guarantee Forms (1)

i-Ready - i-Ready is an effective, research-based computer-adaptive assessment that is proven to accurately identify those reading areas the student has mastered as well as each student's reading deficiencies. The system provides the resources and knowledge teachers need to address those skill gaps and help students master the CCSS and the Ohio

Learning Standards. Currently approved as a comparable assessment for Ohio's Third

Grade Reading Guarantee, i-Ready is also an ODE-approved instrument of student

growth that may be used as a measure of teacher and principal effectiveness. i-Ready

adapts to each student's responses, preventing frustration for the student by building on

what they already know to accurately measure and increase skill mastery. Using a

compatible computer with Internet access and a headset, students take an online

assessment that measures down to the sub-skill level in reading. Computer algorithms

ensure students are assessed efficiently across a number of knowledge domains. The

questioning format adapts as students respond to each question—getting more or less

challenging as needed—to complete the assessment and identify each student's

performance level. A scale score and grade-level placement score are defined for each

student overall as well as within each reading domain, including phonological awareness,

phonics, high-frequency words, vocabulary, comprehension of literary texts, and

comprehension of informational texts. i-Ready - Diagnostic Reading (2)

     MAP- The MAP for Reading assessment system, developed by NWEA, provides

educators with information that can be used to improve teaching and learning. The

assessment system includes multiple tests for students in grades K – 12. The assessment

system combines adaptive technology; high-quality item pools with sufficient depth and

width; a vertical measurement scale; and robust educator resources to provide a stable,

reliable growth measure for students. The test data give teachers, administrators, and

policy makers reliable and accurate verification of student growth. Because MAP for

Reading assessments are designed to measure both student growth and instructional level

on the RIT scales, a consistent record of student growth can begin in kindergarten and continue through high school. NWEA - MAP for Reading Assessments

STAR- STAR Reading is ideal for use as a comparable assessment to Ohio's Diagnostic Assessment for the Third Grade Reading Guarantee. It is a computer-adaptive assessment that can be used to help educators determine whether students are *on track* or *not on track* toward reading proficiently at grade level, identify reading deficiencies, monitor student progress, and deliver targeted instruction. STAR Reading has already been approved as a growth measure for educator evaluation as well as an instrument for screening gifted students in the state of Ohio. STAR Reading assesses development of key reading skills for readers in grades 1–12. With an item bank containing carefully calibrated, standards-based items, the test measures reading comprehension and vocabulary. It also provides an accurate estimate of oral reading fluency, reducing the need for teachers to administer time-intensive curriculum-based measures in addition to this assessment. Renaissance Learning - STAR Early Literacy

Table 8

Submissions of Comparable Assessments for Third Grade Reading Guarantee

Diagnostics	Grades K-8	Research based	Common Core	ODE Aproved	Ohio Learning Standards	Computer Assessment
AIMSweb	✓	✓	✓	✓	✓	X
mCLASS:DIBELS®	X	✓	✓	✓	✓	✓
i-Ready	✓	✓	✓	✓	✓	✓
MAP for Reading Measures for Academic Progress®	✓	X	X	✓	✓	✓
Star Reading	✓	X	X	✓	✓	✓

Note. From public records request -Hannah.Smith-Carr@education.ohio.gov

This study acknowledged that the nine Stark County Districts represented did not all use the same State approved assessments. In fact, only two districts used the same assessment all three years. Overall, eight different assessments were used in determining RIMP eligibility. Understandably, not all assessments are created and administered equally. Limited research indicates STARs and DIBELS may present apprehensions concerning their use for kindergarten RIMP identification. The STAR assessment for kindergarten, *Early Literacy*, may not accurately reflect student performance due to dependence on computer skills. Students lacking computer experience may not score as well. DIBELS was mentioned for cut scores indicating above average number of students with early reading problems as compared to other similar assessments and students are asked to sound out nonsense words which are not aligned with standards or curriculum (Pool & Johnson, 2016)

List of Variables

The following is a list of variables and how they were coded for the purposes of this study:

- Independent Variable
- Treatment: Age at kindergarten entry is coded for late entry [0] (students must be five by August 1st) and early entry [1] (students must be five years of age by September 30th).
- Dependent Variables
- RIMPs (no- not on RIMP = 0, yes- on RIMP = 1)
- Covariate
- Gender- Male = 0, Female = 1

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- Ethnicity- White = 0, Nonwhite = 1

- Socioeconomic Status –based on free and/or reduced lunch identification (0 = Not on, 1 = On)

- Diagnostic Test- DIBELS = 0; STAR = 1; i-Ready = 2; MAP = 3; aimsweb = 4; KRA-L = 5, KRA = 6., ODE Diagnostic =7

Data Analysis

Stark/Portage Area Computer Consortium (SPARCC) provides support to member districts enabling them to meet the reporting requirements as set by the Ohio Department of Education. Each district uses Data Analysis for Student Learning (DASL) to deliver student data to the Ohio State Department of Education. The Education Management Information System (EMIS) extracts the data from each school district's files. Ohio uses EMIS as an information collection organization for Ohio's LEAs, including data on gender, ethnicity, absences, subjects taught, economic information, and assessment outcomes. Data included RIMP placement (Yes or No), age, ethnicity, gender, and SES. The curriculum directors provided the name of the assessment used to determine RIMP placement.

Since an experimental design was not feasible, the causal-comparative research design was implemented. The outcome variable RIMPS is dichotomous categorical variable as are age [5 (late entry) versus 4 (early entry)], ethnicity (white, nonwhite), gender (male, female), and SES (on lunch program, not on lunch program), and the other covariate is a non-dichotomous variable (diagnostic test). In light of the categorical variables the appropriate statistical analysis to be used was logistic regression. Logistic

regression was used to determine whether there was a significant association between the two ages across gender, ethnicity, SES, and assessment.

Logistic regression is the logical method for practice when the conclusion factor is two way. The efficiency of the logistic model was exposed to be sustained by (a) meaningful tests of the procedure against the null procedure, (b) the meaningful test of each forecaster, (c) expressive and inferential goodness-of-fit keys, and (d) and foretold chances (Chao-Ying, Peng, Lee, & Ingersoll, 2002). The null hypothesis supports there is no relationship between the ages of kindergarten students on RIMPs.

Limitations

Although the data from this sample are relatively complete to the setting of the majority of districts in Stark County, there are a number of limitations that must be acknowledged. As mentioned previously, in causal comparative design, sampling is not random in the ex post facto design, making it difficult to suggest that the findings are representative of the larger population (all Ohio public school districts with the September 30th kindergarten entry age). This study was further limited by lack of controls for related factors. As the literature review suggests, these factors might include students with and without preschool experience, red-shirted students, students with learning disabilities, and students repeating kindergarten. While this study is limited and certainly does not allow us to establish cause and effect regarding the entry age for kindergarten students, it does provide an opportunity to explore the occurrences of the relationship between the entry ages and being placed on a RIMP providing a baseline for further study and ongoing evaluation.

Summary

This study sought to understand the relationship between the entry age for students in kindergarten and being placed on RIMPs as determined by the cutoff score on the Ohio Diagnostic assessment. It did not establish a cause and effect. The sample population included 2013. 2014, and 2015 kindergarten students in nine Stark County school districts each having an entry cutoff date of September 30th. The ex post facto design was used to compare the two groups' age at kindergarten entry. Early entry students must be five years of age by September 30th) and late entry (students must be five by August 1st. (independent variable).

The statistical analysis was the comparison of the entry age of students in kindergarten between those on Reading Improvement Monitoring Plan (RIMP) and those not on RIMPs. In determining the kindergarten entrance date, my research provided data for school districts to determine which kindergarten entrance date, the first day of August or the 30th day of September is the better predictor of kindergarteners on RIMP Plans.

CHAPTER IV

DATA ANALYSIS

What Is the Problem?

The purpose of this study was to provide the necessary information for Local

Education Agencies (LEAs) to reexamine the current policy on kindergarten entry ages

and facilitate data-based and informed decision-making processes. In Ohio, most school

districts have chosen September 30th as opposed to August 1 as the cutoff date for entry

into kindergarten. Empirical evidence, such as test data, provides the much needed

information for the LEAs to consider whether or not students are more academically

challenged at 4 years of age than older students. The following test data analysis

considered age as a predictor of academic success.

The four research questions for this study focused on the discernment of

stakeholders regarding the entry age for kindergarten students.

1. Does the proportion of kindergarten students on RIMPs (Reading Intervention

    Monitoring Plans) and children not on RIMPs (including and excluding

    Canton City Schools) differ as a function of student age?

2. Do ethnicity, gender, and socioeconomic status distinguish students with

    RIMP status from non-RIMP students (including and excluding Canton City

    Schools)?

3. Is there an association of the diagnostic test given and resultant RIMP status?

4. Does the selected student variable (Age in months) distinguish students with

    RIMP status from non-RIMP status?

The general hypothesis was age at entrance into kindergarten is predictive of school success. To be more specific, the proportion of students with RIMPs entering kindergarten at age 4 will be larger than the proportion of RIMPs for children entering kindergarten at age 5. It was hypothesized that there is a relationship between RIMP status and age with a slightly lesser relationship between RIMP status and other variables such as student gender (male and female), ethnicity (white and nonwhite), and social economic status (eligible for free and reduced lunch or not eligible). Finally, it was hypothesized a minimal relationship exists between RIMP status, school district, and diagnostic assessment.

For this study, the nine school districts that were selected all have the same kindergarten entry age cutoff of September 30th. Over 8,600 kindergarten students were sampled from 9 out of 17 Stark County school districts from the school years 2013, 2014, and 2015. The independent variables: age, ethnicity, gender, socioeconomic status, and diagnostic tests were tested against the dependent variable RIMP.

In 2014, of the nine Stark County school districts in this study, the Canton City school district had the largest (K-12) student population with the largest percentage of nonwhite students and students on free and reduced lunch status. The mean of the white students in the nine districts studied was 76.7%. Canton City had 48% population of white students. This represented a 39% difference from the mean. The mean of white students in the eight districts (excluding Canton City) studied was 90.0%. The furthest percentage from the mean was Plain Local at 75.0%. This represented a 15% difference from the mean. The mean of students on free or reduced lunch in the nine districts studied was 41.4%. Canton City had an 84.0% free or reduced lunch. This represented a

42.6% difference from the mean. The mean of students on free or reduced lunches in the eight districts (excluding Canton City) studied was 36.1%. The mean of students on free or reduced lunch increased 5.3% when Canton City was included (See Table 5.)

This study acknowledged differences in the proportion of nonwhite and low socioeconomic status students in the Canton City school district as compared to the other eight Stark County school districts sampled in this study. Ethnic distribution and socioeconomic status are covariates that were tested to determine their association with the proportion of students on RIMPs. The average ratio of white/nonwhite students and ratio of Not on Free or Reduced/On Free or Reduced students are 26.93 and 1.65, respectively. Canton City schools' ratio for white/nonwhite students and ratio of Not on Free or Reduced/On Free or Reduced students are 0.79 and 0.00, respectively. Therefore, it is understood the concluding findings may leverage disproportionally with the Canton City school district due to having the largest sample size with the lowest ratio of white/nonwhite students.

As this study sought to identify if ethnicity and socioeconomic status distinguish students with RIMP status from non-RIMP students, due to the distinctive ratio of both ethnicity and socioeconomic status in Canton City schools as compared to the other eight Stark County schools, both variables may be expected to separate themselves higher than gender and age for students with RIMP status from non-RIMP students. As may have been expected, in distinguishing students with RIMP status from non-RIMP students, the analysis which included Canton City schools indicated ethnicity status was the highest predictor followed by age and SES status. In distinguishing students with RIMP status from non-RIMP students, the analysis which excluded Canton City schools indicated SES

status was the highest predictor followed by age and ethnicity status. The influence of age ranked second in both scenarios.

Results

Research Question 1a: Does proportion of kindergarten students on RIMPS and children not on RIMPs differ as a function of student age identified by late entry and early entry into school?

Results from all nine districts (including Canton City) kindergarten diagnostic tests with a sample size of 8,602 students in 2013, 2014, and 2015 found that 24.4% of the students were placed on RIMPs. Of the 75.6% of students not on RIMPs, 68.5% were age 5 at entry and 7.0% were age 4 at entry. When compared to the 2,100 students on RIMPs, 20.6% were age 5 at entry, and 3.8% were age 4 at entry. The difference in percentages of students on RIMPs from that were age 5 vs. age 4 was 16.8%. However, the ratio of late entering students on RIMPs to late entering students not on RIMPs was disproportionate to the ratio of early entering students on RIMPs to early entering students not on RIMPs. The ratio of age 4 students to age 5 students on RIMPs was 0.24. See Table 9.

Table 9

Kindergarten Students From Nine Stark County School Districts According to Age

N = 8,602			Late Entry	Early Entry	Total
RIMPs	Not on RIMP	Count	5896[a]	606[b]	6502
		Expected Count	5795.3	706.7	6502.0
		% within RIMPs	90.7%	9.3%	100.0%
		% within Age	76.9%	64.8%	75.6%
		% of Total	68.5%	7.0%	75.6%
	On RIMP	Count	1771[a]	329[b]	2100
		Expected Count	1871.7	228.3	2100.0
		% within RIMPs	84.3%	15.7%	100.0%
		% within Age	23.1%	35.2%	24.4%
		% of Total	20.6%	3.8%	24.4%
Total		Count	7667	935	8602
		Expected Count	7667.0	935.0	8602.0
		% within RIMPs	89.1%	10.9%	100.0%
		% within Age	100.0%	100.0%	100.0%
		% of Total	89.1%	10.9%	100.0%

Research Question 1b: Does proportion of kindergarten students on RIMPS and children not on RIMPs differ as a function of student age identified by late entry and early entry into school?

Results from eight districts (excluding Canton City) kindergarten diagnostic tests with a sample size of 5,663 students in 2013, 2014, and 2015 found that all 82.9% of students passed and were not placed on RIMPs. Of the 966 students, 76.9% were age 5 and 6.1% age 4 at entry. When compared to the 17.1% of the students on RIMPs, 14.9% were age 5 and 2.2% were age 4 at entry. The difference in percentages of students on

RIMPs from age 5 to age 4 at entry was 12.7%. However, the ratio of age 5 students on RIMPs to age 5 at entry students not on RIMPs was disproportionate to the ratio of age 4 students on RIMPs to age 4 at entry students not on RIMPs. The ratio proportion of age 4 at entry students on RIMPs was 0.167 greater than the ratio proportion of age 5 at entry students on RIMPs. See Tables 10 and 13.

Table 10

Kindergarten Students From Eight Stark County School Districts by Age

			Age		
			Late entry	Early entry	Total
N=5,663			Late entry	Early entry	Total
RIMPS	not on RIMPs	Count	4353$_a$	344$_b$	4697
		Expected Count	4308.8	388.2	4697.0
		% within RIMPS	92.7%	7.3%	100.0%
		% within AGE	83.8%	73.5%	82.9%
		% of Total	76.9%	6.1%	82.9%
	On RIMPs	Count	842$_a$	124$_b$	966
		Expected Count	886.2	79.8	966.0
		% within RIMPS	87.2%	12.8%	100.0%
		% within AGE	16.2%	26.5%	17.1%
		% of Total	14.9%	2.2%	17.1%
Total		Count	5195	468	5663
		Expected Count	5195.0	468.0	5663.0
		% within RIMPS	91.7%	8.3%	100.0%
		% within AGE	100.0%	100.0%	100.0%
		% of Total	91.7%	8.3%	100.0%

Research Question 2: Do ethnicity (white or nonwhite), gender, and socioeconomic status distinguish students with RIMP status from non-RIMP students?

Results from all nine districts, including Canton City, kindergarten diagnostic tests with a sample size of 8,602 students in 2013, 2014, and 2015 found 2,100 or 24.4% were placed on RIMPs. Of the 72.7% of students not on RIMPs, 57% were white and 18.6% were nonwhite. When compared to the 24.4% of the students on RIMPs, 15.7% were white and 8.7% were nonwhite. The difference in percentages of white students on RIMPs from nonwhite students on RIMPs was 7%. However, the ratio of nonwhite students on RIMPs to nonwhite students not on RIMPs was disproportionate to the ratio of white students on RIMPs to white students not on RIMPs. The ratio proportion of nonwhite students on RIMPs is 0.192 greater than the ratio proportion of white students on RIMPs. See Tables 11 and 13.

Table 11

Kindergarten Students From Nine Stark County School Districts According to Ethnicity

N = 8,602			White	Nonwhite	Total
RIMPs	Not on RIMP	Count	4900_a	1602_b	6502
		Expected Count	4724.9	1777.1	6502.0
		% within RIMPs	75.4%	24.6%	100.0%
		% within Ethnicity	78.4%	68.1%	75.6%
		% of Total	57.0%	18.6%	75.6%
	On RIMP	Count	1351_a	749_b	2100
		Expected Count	1526.1	573.9	2100.0
		% within RIMPs	64.3%	35.7%	100.0%
		% within Ethnicity	21.6%	31.9%	24.4%
		% of Total	15.7%	8.7%	24.4%
Total		Count	6251	2351	8602
		Expected Count	6251.0	2351.0	8602.0
		% within RIMPs	72.7%	27.3%	100.0%
		% within Ethnicity	100.0%	100.0%	100.0%
		% of Total	72.7%	27.3%	100.0%

Ethnicity (White or Nonwhite)

Results from eight districts (excluding Canton City) kindergarten diagnostic tests with a sample size of 5,663 students in 2013, 2014, and 2015 found that 966 students or 17.7% were placed on RIMPs. Of the 82.9% of students not on RIMPs, 70.4% were white and 12.5% were nonwhite. When compared to the 17.1% of the students on RIMPs, 13.4% were white and 3.7% were nonwhite. The difference in percentages of white students on RIMPs from nonwhite students on RIMPs was 9.7%. However, ratio of nonwhite students on RIMPs to nonwhite students not on RIMPs was disproportionate to the ratio of white students on RIMPs to white students not on RIMPs. The ratio proportion of nonwhite students on RIMPs was 0.106 greater than the ratio proportion of white students on RIMPs. See Tables 12 and 13.

Table 12

Kindergarten Students From Eight Stark County School Districts According to Ethnicity

			Ethnicity		
N = 5,663			White	Non-white	Total
RIMPS	not on RIMPs	Count	3987$_a$	710$_b$	4697
		Expected Count	3936.4	760.6	4697.0
		% within RIMPS	84.9%	15.1%	100.0%
		% within ETHNICITY	84.0%	77.4%	82.9%
		% of Total	70.4%	12.5%	82.9%
	On RIMPs	Count	759$_a$	207$_b$	966
		Expected Count	809.6	156.4	966.0
		% within RIMPS	78.6%	21.4%	100.0%
		% within ETHNICITY	16.0%	22.6%	17.1%
		% of Total	13.4%	3.7%	17.1%
Total		Count	4746	917	5663
		Expected Count	4746.0	917.0	5663.0
		% within RIMPS	83.8%	16.2%	100.0%
		% within ETHNICITY	100.0%	100.0%	100.0%
		% of Total	83.8%	16.2%	100.0%

Table 13

Ratio Comparisons With and Without Canton City Schools

ALL NINE DISTRICTS (INCLUDING CANTON CITY)					EIGHT DISTRICTS (INCLUDING CANTON CITY)				
(ALL STUDENTS)	% ON RIMPS	% NOT ON RIMPS	RATIO (a) ON RIMPS/(b)NOT ON RIMPS	> RATIO	(ALL STUDENTS)	% ON RIMPS	% NOT ON RIMPS	RATIO (a) ON/(b)NOT ON RIMPS	> RATIO
(a)LATE ENTERING	20.6	68.5	0.301		(a)LATE ENTERING	14.9	76.9	0.194	
(b)EARLY ENTERING	3.8	7.0	0.542	(b)0.242	(b)EARLY ENTERING	2.2	6.1	0.361	(b)=0.167
				(b) > (a)					(b) > (a)
(a)WHITE	15.7	57.0	0.275		(a)WHITE	13.4	70.4	0.190	
(b)NONWHITE	8.7	18.6	0.468	(b)0.192	(b)NONWHITE	3.7	12.5	0.296	(b)=0.106
				(b) > (a)					(b) > (a)
GENDER					GENDER				
(a)MALE	11.8	37.8	0.312		(a)MALE	9.6	41.9	0.229	(a)=0.046
(b)FEMALE	12.6	37.8	0.333	(b).021	(b)FEMALE	7.5	41.0	0.183	
				(b) > (a)					(a) > (b)
(a)NOT ON FREE AND REDUCED	4.5	34.6	0.130		(a)NOT ON FREE AND REDUCED	6.8	52.5	0.130	
(b)ON FREE AND REDUCED	19.9	41.0	0.485	(b) 0.345	(b)ON FREE AND REDUCED	10.3	30.5	0.338	(b)=0.208
				(b)>(a)					(b)>(a)

Gender (Male or Female)

Results from all nine districts (including Canton City) kindergarten diagnostic tests with a sample size of 8,602 students in 2013, 2014, and 2015 found that all except 24.4% of students passed and were placed on RIMPs. Of the 75.6% of students not on RIMPs, 37.8% were male and 37.8% were female. When compared to the 24.4% of the students on RIMPs, 11.8% were male and 12.6% were female. The difference in percentages of students on RIMPs from male to female was 0.8%. However, the ratio of female students on RIMPs to female students not on RIMPs was disproportionate to the

ratio of male students on RIMPs. The ratio proportion of female students on RIMPs was

0.021 greater than the ratio proportion of male students on RIMPs. See Tables 13 and 14.

Table 14

Kindergarten Students From Nine Stark County School Districts by Gender

N = 8,602			Gender Male	Female	Total
RIMPs	Not on RIMP	Count	3251[a]	3251[a]	6502
		Expected Count	3224.5	3277.5	6502.0
		% within RIMPs	50.0%	50.0%	100.0%
		% within Gender	76.2%	75.0%	75.6%
		% of Total	37.8%	37.8%	75.6%
	On RIMP	Count	1015[a]	1085[a]	2100
		Expected Count	1041.5	1058.5	2100.0
		% within RIMPs	48.3%	51.7%	100.0%
		% within Gender	23.8%	25.0%	24.4%
		% of Total	11.8%	12.6%	24.4%
Total		Count	4266	4336	8602
		Expected Count	4266.0	4336.0	8602.0
		% within RIMPs	49.6%	50.4%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	49.6%	50.4%	100.0%

Results from eight districts (excluding Canton City) kindergarten diagnostic tests

with a sample size of 5,663 students in 2013, 2014, and 2015 found that all except 17.1%

of students passed and were not placed on RIMPs. Of the 82.9% of the students not on

RIMPs, 41.9% were male and 41% were female. When compared to the 17.1% of the

students on RIMPs, 9.6% were male and 7.5% were female. The difference in

percentages of students on RIMPs from male to female was 2.1%. However, the ratio of

female students on RIMPs to female students not on RIMPs was disproportionate to the

ratio of male students on RIMPs to male students not on RIMPs. The ratio proportion of

male students on RIMPs was 0.046 greater than the ratio proportion of female students on

RIMPs. See Tables 13 and 15.

Table 15

Kindergarten Students From Eight Stark County School Districts by Gender

			Gender		
N = 5,663			Male	Female	Total
RIMPS	not on RIMPs	Count	2374$_a$	2323$_b$	4697
		Expected Count	2418.6	2278.4	4697.0
		% within RIMPS	50.5%	49.5%	100.0%
		% within GENDER	81.4%	84.6%	82.9%
		% of Total	41.9%	41.0%	82.9%
	On RIMPs	Count	542$_a$	424$_b$	966
		Expected Count	497.4	468.6	966.0
		% within RIMPS	56.1%	43.9%	100.0%
		% within GENDER	18.6%	15.4%	17.1%
		% of Total	9.6%	7.5%	17.1%
Total		Count	2916	2747	5663
		Expected Count	2916.0	2747.0	5663.0
		% within RIMPS	51.5%	48.5%	100.0%
		% within GENDER	100.0%	100.0%	100.0%
		% of Total	51.5%	48.5%	100.0%

Socioeconomic Status (Not on Free or Reduced Lunches or On Free or Reduced Lunches)

Results from all nine districts (including Canton City) kindergarten diagnostic tests with a sample size of 8,602 students in 2013, 2014, and 2015 found that all except 24.4% of the students passed and were placed on RIMPs. Of the 75.6% of students not on RIMPs, 34.6% were not on free or reduced lunch status, and 41. 0% were on free or reduced lunch status. When compared to the 24.4% of the students on RIMPs, 4.5% were not on free or reduced lunch status, and 19.9% were on free or reduced lunch status. The difference in percentages of students on RIMPs from not on free or reduced lunch status to on free or reduced lunch status was 15.4%. However, the ratio of students on free or reduced lunches and on RIMPs to students not on free or reduced lunches and not on RIMPs was disproportionate to the ratio of students not on free or reduced lunches on RIMPs to students not on free or reduced lunches not on RIMPs. The ratio of students on free or reduced lunches on RIMPs is proportionately 0.345 larger than the ratio proportion of students not on free or reduced lunches on RIMPs. See Tables 13 and 16.

Table 16

Kindergarten Students From Nine Stark County School Districts According to Socioeconomic Status (SES)

N = 8,602			Not on Free or reduced	On Free or reduced	Total
RIMPs	Not on RIMP	Count	2972_a	3530_b	6502
		Expected Count	2536.7	3965.3	6502.0
		% within RIMPs	45.7%	54.3%	100.0%
		% within SES	88.6%	67.3%	75.6%

(continued)

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Table 16

Kindergarten Students From Nine Stark County School Districts According to
Socioeconomic Status (SES) (continued)

	% of Total	34.6%	41.0%	75.6%
On RIMP	Count	384$_a$	1716$_b$	2100
	Expected Count	819.3	1280.7	2100.0
	% within RIMPs	18.3%	81.7%	100.0%
	% within SES	11.4%	32.7%	24.4%
	% of Total	4.5%	19.9%	24.4%
Total	Count	3356	5246	8602
	Expected Count	3356.0	5246.0	8602.0
	% within RIMPs	39.0%	61.0%	100.0%
	% within SES	100.0%	100.0%	100.0%
	% of Total	39.0%	61.0%	100.0%

Results from eight districts (excluding Canton City) kindergarten diagnostic tests
with a sample size of 5,663 students in 2013, 2014, and 2015 found that all except 17.1%
students passed and were not placed on RIMPs. Of the 82.9% of students not on RIMPs,
52.5% were not on free or reduced lunch status, and 30.5% were on free or reduced lunch
status. When compared to the 17.1% of the students on RIMPs, 6.8% were not on free or
reduced lunch status, and 10.3% were on free or reduced lunch status. The difference in
percentages of students on RIMPs from not on free or reduced lunch status to on free or
reduced lunch status was 6.8%. However, ratio of students on free or reduced lunches
and on RIMPs to students not on free or reduced lunches and not on RIMPs was
disproportionate to the ratio of students not on free or reduced lunches on RIMPs to
students not on free or reduced lunches not on RIMPs. The ratio of students on free or

reduced lunches on RIMPs was proportionately 0.208 larger than the ratio proportion of

students not on free or reduced lunches on RIMPs. See Tables 13 and 17.

Table 17

Kindergarten Students From Eight Stark County School Districts According to

Socioeconomic Status

			SES		Total
			Not on Free or reduced	On free or reduced	
N = 5,663					
RIMPS	not on RIMPs	Count	2972ₐ	1725_b	4697
		Expected Count	2783.5	1913.5	4697.0
		% within RIMPS	63.3%	36.7%	100.0%
		% within SES	88.6%	74.8%	82.9%
		% of Total	52.5%	30.5%	82.9%
	On RIMPs	Count	384ₐ	582_b	966
		Expected Count	572.5	393.5	966.0
		% within RIMPS	39.8%	60.2%	100.0%
		% within SES	11.4%	25.2%	17.1%
		% of Total	6.8%	10.3%	17.1%
Total		Count	3356	2307	5663
		Expected Count	3356.0	2307.0	5663.0
		% within RIMPS	59.3%	40.7%	100.0%
		% within SES	100.0%	100.0%	100.0%
		% of Total	59.3%	40.7%	100.0%

Nine School Districts

A logistic regression model was used to determine the odds of being on an RIMP. Data collected from all nine districts (including Canton City) with a sample size of 8,602 students in 2013, 2014, and 2015 were analyzed. Nonwhite students, early entry students, and free and reduced lunch students exhibited the highest odds of being on RIMPs, respectively. First, nonwhite students are .823 times more likely of being on RIMPs than nonwhite students not being on RIMPs. Second, early entry students are 0.630 times more likely of being on RIMPs than early entry students not being on RIMPs. Third, students on free and reduced lunch status are 0.299 times more likely of being on RIMPs than students on free and reduced lunch status not being on RIMPs.

A breakdown on gender of students not on RIMPs revealed equivalent percentages between male and female, and there was only a .8% increase of female students on RIMPs as compared to male students. There was a 0.8% ratio disproportion of percentages of female students on RIMPs to female students not on RIMPs as compared to the ratio of male students on RIMPs. Gender was not statistically significant due to the $.82 > .05$ p value. Therefore, no association may be determined between males and females on RIMPs. See Table 18.

Table 18

Variables in the Equation Kindergarten Students From Nine Stark County School Districts

N = 8,602	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a] Age(1)	-.463	.076	36.832	1	.000	.630	.542	.731
Ethnicity(1)	-.194	.057	11.458	1	.001	.823	.736	.921
Gender(1)	-.012	.052	.050	1	.822	.988	.892	1.095
SES(1)	-1.207	.064	350.211	1	.000	.299	.264	.339
Constant	.069	.096	.518	1	.472	1.071		

Eight School Districts

      A logistic regression model was used to determine the odds of being on an RIMP. Data collected on over 5,663 kindergarten students from eight out of 17 Stark County school districts from the school years 2013, 2014, and 2015 were analyzed. Free and reduced lunch students, early entry students, and nonwhite students exhibited the highest odds of being on RIMPs, respectively. First, free and reduced lunch students are 2.521 times more likely of being on RIMPs than students on free and reduced lunch students not being on RIMPs. Second, early entry students are 1.816 times more likely of being on RIMPs than early entry students not being on RIMPs. Third, nonwhite students are 1.208 times more likely of being on RIMPs than nonwhite students not being on RIMPs.

      A breakdown on gender of students not on RIMPs revealed males held a meager .9% percentage point advantage over their female counterparts, but males held a 3.2% percentage point over female students on RIMPs. There was a mild ratio disproportion of percentages of female students on RIMPs to female students not on RIMPs as compared to the ratio of male students on RIMPs at 0.8%. See Table 19.

Table 19

Variables in the Equation Kindergarten Students From Eight Stark County School Districts

N = 5,663	B	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a] Age	.596	.114	27.243	1	.000	1.816	1.451	2.272
Ethnicity	.185	.092	4.058	1	.044	1.203	1.005	1.440
Gender	-.266	.073	13.355	1	.000	.767	.665	.884
SES	.925	.074	155.914	1	.000	2.521	2.181	2.915
Constant	-1.998	.064	960.870	1	.000	.136		

Comparison of Analysis With and Without Canton City

Besides the decrease in sample size, a few other areas exhibited decreases. Data collected on over 5,663 kindergarten students (without Canton City) from 8 out of 17 Stark County school districts from the school years 2013, 2014, and 2015 were analyzed alongside data collected on over 8,602 kindergarten students (including Canton City) from 9 out of 17 Stark County school districts from the school years 2013, 2014, and 2015.

When excluding Canton City, males not on RIMPs had increased by 4.1% and males on RIMPs decreased by 2.3%. Females not on RIMPs had increased by 3.2% and females on RIMPs decreased by 5.1%. Age 5 students not on RIMPs had increased by 8.4% and age 5entry students on RIMPs decreased 5.7%. Age 4 students not on RIMPs had decreased by 0.9% and age 4 entry students on RIMPs decreased by 1.6%.

When including Canton City, white students not on RIMPs had decreased by 13.4% and white students on RIMPs increased by 6.1%. Nonwhite students not on RIMPs had increased by 2.3% and nonwhite students on RIMPs increased by 5.0%. Students not on free and reduced lunch and not on RIMPs had decreased by 17.9%, and students not on free and reduced lunch on RIMPs had decreased by 2.3%. Students on free and reduced lunch not on RIMPs had increased by 10.5% and students on free and reduced lunch on RIMPs had increased by 9.6%. Finally, gender was not statistically significant due to the .76 > .05 p value. See Tables 19 and 20.

Table 20

Percentage (Ratio) Changes Without and With Canton City Schools

_____

	N = 5,663	N = 8,602
	Without Canton City Schools	With Canton City Schools
	changes in percentages	changes in percentages
On free or reduced (on RIMPs)	-9.6	+9.6
White (on RIMPs)	-6.1	+6.1
Late entry (on RIMPs)	-5.7	+5.7
Female (on RIMPs)	-5.1	+5.1
Nonwhite (on RIMPs)	-5	+5
Males (on RIMPs)	-2.3	+2.3
Nonwhite (not on RIMPs)	-2.3	+2.3
Early entry (on RIMPs)	-1.6	+1.6
Early entry (not on RIMPs)	-0.9	+0.9
Not on free or reduced (on RIMPs)	2.3	-2.3
Female (not on RIMPs)	3.2	-3.2
Males (not on RIMPs)	4.1	-4.1
Late entry (not on RIMPs)	8.4	-8.4
On free or reduced (not on RIMPs)	10.5	-10.5
White (not on RIMPs)	13.4	-13.4
Not on free or reduced (not on RIMPs)	17.9	-17.9

Research Question 3: Does the type of diagnostic test distinguish students with RIMP status from non-RIMP students? Is there an association of the diagnostic test given and resultant RIMP status?

Each district is required to designate an Ohio Department of Education (ODE) approved diagnostic screener to be given to all grade 1-3 students by September 30th and kindergarten students by November 1st of each school year. Students scoring below the

predetermined benchmark score are designated as not on track and are required to be placed on a reading improvement and monitoring plan (RIMP) (see Appendix A).

Chi square tests are performed to determine relationships among diagnostic tests and students on RIMPs. The test is significant because the *p* value was less than .05. There is a significant relationship between diagnostic tests and students on RIMPs. See Table 21.

Table 21

Diagnostic Tests Relationships With Students on RIMPs

Chi-Square Tests

N = 8	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	196.217[a]	7	P < .000
N of Valid Cases	8602		

Several diagnostic tests performed better that expected in terms of students being placed on RIMPs. See Table 22. The diagnostic test, iReady, was used the most (3,216) and had the highest on RIMP to Not on RIMP ratio (0.435). The diagnostic test, Aimsweb, had the lowest ratio on RIMPs to Not on RIMPs at 0.112. See Table 23.

A multinomial logistic regression was conducted on the diagnostic tests. This model was intended to look at the co-efficency (likely of being on RIMPs) by using the ODE Diagnostic as the reference category. When doing so, the model suggests students that took the i-Ready test were less likely to not be on RIMPS as compared to students taking the aimsweb test were more likely to not be on RIMPs. See Table 24.

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Table 22

Diagnostic Tests Used by Nine School Districts for 2013, 2014, and 2015

N = 8			DIBELS	STARS	i-READY	MAPS	AIMSWEB	KRA-L	KRA	ODE	
RIMPS	NOT ON RIMPS	Count	312	458	2240	1118	769	903	150	552	6502
		Expected Count	334.9	456.5	2430.9	1077.9	647.0	898.0	160.2	496.6	6502.0
	ON RIMPS	Count	131	146	976	308	87	285	62	105	2100
		Expected Count	108.1	147.5	785.1	348.1	209.0	290.0	51.8	160.4	2100.0
Total		Count	443	604	3216	1426	856	1188	212	657	8602
		Expected Count	443.0	604.0	3216.0	1426.0	856.0	1188.0	212.0	657.0	8602.0

Table 23

Diagnostic Tests Ratio on RIMPs/ Not on RIMPs

Diagnostic tests	# students	% On RIMPs	Ratio on RIMPs/ Not on RIMPs
DIBELS	443	2.5	0.417
STAR	604	1.7	0.321
i-READY	3216	11.3	0.435
MAP	1426	3.6	0.277
aimsweb	856	1.0	0.112
KRA-L	1188	3.3	0.314
KRA	212	0.7	0.412
ODE Diagnostic	657	1.2	0.188

Table 24

Multinomial Logistic Regression on Diagnostic Tests

Parameter Estimates

Diagnostic Tests N = 8		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
DIBELS	Intercept	.221	.131	2.853	1	.091			
	[RIMPs=0]	-.792	.149	28.273	1	.000	.453	.338	.607
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
STAR	Intercept	.330	.128	6.637	1	.010			
	[RIMPs=0]	-.516	.143	13.089	1	.000	.597	.451	.789
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
i-Ready	Intercept	2.230	.103	471.226	1	.000			
	[RIMPs=0]	-.829	.113	53.640	1	.000	.437	.350	.545
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
MAP	Intercept	1.076	.113	90.683	1	.000			
	[RIMPs=0]	-.370	.124	8.864	1	.003	.690	.541	.881
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
aimsweb	Intercept	-.188	.145	1.683	1	.195			
	[RIMPs=0]	.520	.155	11.189	1	.001	1.681	1.240	2.280
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
KRA-L	Intercept	.999	.114	76.505	1	.000			
	[RIMPs=0]	-.506	.126	16.073	1	.000	.603	.471	.772
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.
KRA	Intercept	-.527	.160	10.819	1	.001			
	[RIMPs=0]	-.776	.185	17.647	1	.000	.460	.320	.661
	[RIMPs=1]	0[b]	.	.	0	.	.	.	.

a. The reference category is: ODE Diagnostic.

b. This parameter is set to zero because it is redundant.

Research Question 4: Does the selected student variable (Age in months) distinguish students with RIMP status from non-RIMP status?

A logistic regression model was used to determine the odds of being on a RIMP. Data collected on over 8,600 kindergarten students from 9 out of 17 Stark County school districts from the school years 2013, 2014, and 2015 were analyzed. The p value for the variable AgeMonths is 0.00, which indicates that the variable AgeMonths has a statistically significant effect on the response (whether or not a student was on RIMPS). The odds of being on RIMPs are increased by 7% for every month decrease in the variable AgeMonths. See Table 25.

Table 25

Variables in the Equation for Age in Months

N = 8,602	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a] AgeMonths	-.072	.006	148.735	1	.000	.930
Constant	3.658	.391	87.407	1	.000	38.793

CHAPTER V

DISCUSSION OF FINDINGS

Introduction

Kindergarten entry age has fluctuated throughout the years and discussion has

been ongoing about the effects early age may have on early success for kindergarten

students. Parents, teachers, and administrators have arguments for and against early entry

or late entry into kindergarten. Despite ample research on kindergarten entry age, the

effects of early entry as it relates to kindergarten success is unknown. Previous research

has suggested that despite early entry causing students to fall behind academically in their

kindergarten years, students will make up the differences in later years of school (West et

al., 2000). In an attempt to bring this argument closer to home, this study set out to

identify relationships that may potentially exist between early entry age (5 years of age

by September 30) and late entry age (5 years of age by August 1) and subsequent passage

of State approved kindergarten diagnostic tests. Failing to pass the diagnostic tests

causes students to be placed on Reading Intervention Monitoring Plans (RIMPs).

Students in kindergarten from nine Stark County school districts for the 2015, 2016, and

2017 school years were matched with their RIMP statuses and their birthdays. The

researcher's general hypothesis is a student's age at entrance into kindergarten is

predictive of school success. To be more specific, the research hypothesis is the

proportion of students on RIMPs entering kindergarten at age 4 under the September 30th

date will be larger than the proportion of RIMPs for children age 5 under the August 1st

date. As previous research suggested older kindergarten entrants scored significantly

higher academically than younger kindergarten entrants (Wiechiel, 1988). It was

hypothesized that there is a relationship between RIMP status and age with a slightly lesser relationship between RIMP status and other variables such as student gender (male and female), ethnicity (white and nonwhite), and socioeconomic status (on free and reduced lunch or not eligible) since retention decisions are affected by age, gender, and ethnicity (Cosden & Zimmer, 1991). Finally, it was hypothesized a minimal relationship exists between RIMP status and the diagnostic assessment as prior research indicated that the older child has no real advantage over the younger child when examining reading test scores (Magliacano, 1994).

To identify the relationships hypothesized, four specific research questions were posed at the beginning of this study. Relative data were collected and revealed in chapter IV. The narrative in this chapter discusses the findings and conclusions for each of these questions.

Urban School Factor

Urban schools differ from non-urban schools between high poverty and low poverty schools, student background, school experiences, and other student characteristics. Urban children were more than twice as likely to be living in poverty, have difficulty speaking English, and be unhealthy risk takers. In urban homes, fewer parents graduate college, have high expectations for education, and converse with their children about the school day. Urban schools also demonstrate more student behavior problems as well as higher teacher and student absenteeism (Ohio Department of Education, 2017).

The large disproportions among the Canton City school district and the other eight Stark County school districts contributed to differences in this study. This study acknowledges large disparities among the Canton City school district and the other eight Stark County school districts sampled in this study in the following areas:

- Ethnic Distribution:

   The Canton City school district average nonwhite enrollment is 90%. The average nonwhite enrollment of the other eight districts is 53%.

- Socioeconomic Status:

   The Canton City school district average free and reduced lunch enrollment is 84%. The average free and reduced lunch enrollment of the other eight districts is 36%.

- Student Enrollment:

   The Canton City school district average enrollment is 11,000 students. The average enrollment of the other eight districts is 3,500 students.

- Preschool Experience

   The Canton City school district had the highest availability for preschool experience due to their large numbers of low income families entering kindergarten. Head Start / Early Head Starts opportunities are accessible at no expense. All students are qualified if their parents' income meets the poverty threshold. Children who are too young to start kindergarten may attend Head Start / Early Head Starts. The program is a holistic approach to meet all the needs of the child including nutritional snacks and lunch. Trained accredited staff work within a staff to child ratio of 1:10 (Stark County Community,

2017). Head Start has proven to be a positive influence for students who

come to kindergarten with better intellectual reasoning, positive feelings, and

higher linguistic skills than children who do not attend Head Start (Love et al.,

2002)

Data were collected on over 5,663 kindergarten students (without Canton City)

compared to 8,602 kindergarten students (including Canton City). The following

increases and decreases may be reflective of the share population size of Canton City as

compared to the other eight school districts all together.

When including Canton City, there were fewer white students, more nonwhite

students, fewer and more free or reduced lunch students not on RIMPs as compared to

when Canton City was excluded. Why the differences? When including Canton City, the

ratio of white to nonwhite students is 3:1 as compared to 5:1 without Canton City. By

including Canton City's students on free or reduced lunches, an additional 3,000 students

were added. Canton City includes their students who receive free lunches. The hefty

additional number of white students and students on free and lunches may sway findings

to reflect isolated results for Canton City.

When excluding Canton City, each variable including age demonstrates increases

and decreases, respectively. The results may resemble more of a balanced playing field

effect.

RIMP Factor

Diagnostic tests are used to discover early warning signs for readers who

demonstrate below reading grade level success. Younger students demonstrate a higher

likelihood of starting behind from the get go. When compared to older students starting

slowly, younger students face a steeper hill to climb as they attempt to overcome the age stigma along with the same lack of skills older students' experience. RIMPs are created to remediate all students not passing the diagnostic test. Students on RIMPS are required to receive services as prescribed on the RIMP. Specific curriculum and instructional elements are the focus for each grading period. Each student must receive reading intervention by an Ohio licensed Highly Qualified Teacher. Interventions include small group instruction, reduced student-teacher ratio, extended school day, and tutoring or mentoring. The plan includes documentation as to the impact of the success of Kindergarteners on RIMPS to those same Kindergarten students passing the Ohio State Test in third grade. However, as of 2013, the state added a measurement to the state report card called the K-3 Literacy Improvement Measure. One way to determine the effectiveness of RIMPS, the K-3 Literacy calculates the percentage of the students on RIMPS divided by the number of the same students not on RIMPS in third grade and scoring Proficient on the third grade ELA test. A look at 2015 and 2016 K-3 Literacy Improvement measures for the nine schools researched in the study found that Jackson Local scored the highest in 2016 with 57.9%, which indicated 57.9% of the students on RIMPS during the previous years were not on RIMPS in third grade and passed the third grade ELA Test. Second to Jackson was North Canton at 49.7% in 2016. Canton City scored the lowest (13.9%) and (22.4%) in years 2015 and 2016, respectively. For all nine districts, the 2015 average was 29.1% but increased to 36% in 2016.

However, the K-3 Literacy Improvement Measurement only measures students (off track) on RIMPS by students going (on track) not on RIMPS. The only common factor is the label RIMP itself. The plan and interventions used by the different school

districts may vary depending on factors such as cost, personnel, and curriculum (Ohio School Report Cards, 2016).

Gender Factor

Interestingly, when Canton City was included in the analysis, there was no statistical significance between boys and girls on RIMPs. However, after excluding Canton City and their 1,300 boys and 1,600 girls from the analysis, females registered a .76 odds ratio of being on RIMPs. This is contrary to many findings about gender gaps favoring females over males. Some research suggested that girls score higher than boys in reading achievement (Husain & Millimet, 2009). International reading studies from Progress in International Reading Literacy Study (PIRLS) (Thompson & Provasnik, 2012), PISA (OECD, 2015), and Patterns of Change in U.S. Gender Achievement Gaps during Elementary and Middle School (Fahle, 2016) also supported the findings of Husain and Millimet. Boys were able to catch up with girls by late high school and adulthood (Voyer & Voyer, 2014). However, this research noted similar findings for third graders over the same time period used in this study. In the State of Ohio Third Grade Proficiency Tests over the years 2013, 2014, and 2015, the female passing percentage was 60% as compared to the male passing percentage was 63.6% (Ohio's bireports, 2016). This was supported by my sample of nine Stark County Schools, including Canton City, as females and males had the same percentage on RIMPs at 37.8% not on RIMPs. Females did not score higher. When Canton City schools were excluded, female students were .767 times more likely of being on RIMPs than female students not being on RIMPs.

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Diagnostic Tests Factor

Reading diagnostic tests are characteristically short assessments of certain proficiencies. The results may be indicative of below grade level performance which is predictive of future disappointment if not remediated in due time. They are used as screeners to identify literacy holes or gaps in the pyramid of reading skills necessary to be a proficient reader at grade level. Often it concentrates on precise skills that are primarily linked to reading standards that have been set forth by the Ohio Department of Education. They identify the reading gaps and help to determine the necessary intervention (Ohio Department of Education, 2017).

Reading diagnostics are necessary for several reasons. First, they can be used as a sorting mechanism to separate students on target to pass the Third Grade Ohio Achievement Test from the students who are assessing below grade level. Intense remediation may be necessary for the students lagging behind and schedules and curriculum could be created for such groups (Ohio Revised Code 3313.608). Second, identifying the specific weaknesses and skills is necessary before time and energy is spent on remediation (Vaughn, Denton, & Fletcher 2010). The problem cannot be addressed adequately without it first being identified. Finally, diagnostic tests may be used to identify benchmark scores and the eventual progress or lack of progress achieved thereafter.

The value of reading diagnostic tests can only be measured by how the assessor uses the results. The intent of diagnostics tests is for future planning and instruction. It is similar to formative assessments (Formative & Summative Assessments, 2018). It should be used to drive the instruction. Students may be grouped by similar needs for

small group in or out of the classroom intervention (Torgesen, n.d.). Shortcomings arise when the assessors use diagnostic tests that are not designed to diagnose specific grade level reading skills as according to the correct grade level standards. Accurate interpretations of results are paramount to proper diagnosis and remediation. Diagnostic tests that are not teacher friendly may create more confusion for the teachers and the parents. Finally, any diagnostic test chosen must be student friendly (Stiggins, 2007). An accurate score is often determined by the lack of interruptions when the test is given and taken. When more precious time is spent on logging in or finding the right page than thinking about the question and responding accurately, the score on the test may be disingenuous (Lawrence, Kinney, O'Connell, & Delgado, 2017). Diagnostic tests may be viewed as the initial steps necessary to identify the illness before the medicine for the cure can be prescribed.

This study acknowledged that the nine Stark County Districts represented did not all use the same State approved assessments. In fact, only two districts used the same assessment all three years. Overall, eight different assessments were used in determining RIMP eligibility. Understandably, not all assessments are created and administered equally. Limited research indicates STARs and DIBELS may present apprehensions concerning their use for kindergarten RIMP identification. The STAR assessment for kindergarten, *Early Literacy*, may not accurately reflect student performance due to dependence on computer skills. Students lacking computer experience may not score as well. DIBELS was mentioned for cut scores indicating above average number of students with early reading problems as compared to other similar assessments and students are asked to sound out nonsense words which are not aligned with standards or

curriculum (Pool & Johnson, 2016). Canton City used two different tests over the three-year span, KRA-L, and i-Ready respectively. Several reasons may go into how a diagnostic test is selected by the district. The cost factor usually has the highest influence. However, there are other factors that help make the decision. Will it identify students' strengths and weaknesses and monitor progress following intervention activities? Does it provide the resources and knowledge teachers need to address those skill gaps? Does it adapt to each student's responses, preventing frustration for the student by building on what they already know to accurately measure and increase skill mastery? Are there added features such as math assessments and assessments for student behavioral analysis? The bottom line for any test chosen is it ODE approved and does it help educators determine whether students are on track or not on track toward reading proficiently at grade level.

Retention

In 2011, in the Ohio State Legislature, Ohio Revised Code 3313.608 Fourth Grade reading capability was passed into Ohio law. It is better known as Ohio's Third Grade Reading Guarantee. The heart of the law is "no school district shall promote to fourth grade any student who does not attain at least the equivalent level of achievement" (Ohio Revised Code 3313.608). However, research questions the validity and effectiveness of test-based retention. In fact, no empirical evidence has been found to its benefits in the short term and long term of student reaching the designated reading grade level.

Discussion

Research Question #1

Does the proportion of kindergarten students on RIMPS and children not on RIMPs differ as a function of student age? This first question directly compares kindergarten students on RIMPs with their entry age. As a result of the Third Grade Reading Guarantee signed into law in 2012, each year all Ohio public school kindergarten students are required to take reading diagnostic assessments by September 30 (ORC 3313.608). Third grade reading scores have been found to be a large predictor as to the success or failure for students graduating from high school (Lloyd, 1978). A major federal initiative designed to help ensure that all children can read at or above grade level by the end of third grade was called the No Child Left Behind (NCLB) Act of 2001. It targeted third grade reading scores to be used for remediation, retention, or promotion. In 2011, in the Ohio State Legislature, Ohio Revised Code 3313.608 Fourth Grade reading capability was passed into Ohio law. It is better known as Ohio's Third Grade Reading Guarantee. Its key component stated, "no school district shall promote to fourth grade any student who does not attain at least the equivalent level of achievement" (Ohio Revised Code 3313.608). Public schools are mandated by the Ohio Department of Education to evaluate all children to determine if they are reading at grade level. On June 25, 2012, Gov. John Kasich signed the Ohio's Third Grade Reading Guarantee into law. The legislation mandates all Ohio public school districts to retain students who cannot read at grade level before entering fourth grade. Students as young as kindergarten are required to take pre-third grade diagnostic testing. Beginning in the 2012-2013 school year district boards of education adopted board policies and procedures for annually

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assessing the reading skills of each student in grades K-3 by Sept. 30 each year to be in compliance with the Third Grade Reading Guarantee (Ohio Revised Code 3313.608).

In this study, the sample population was significant in size and it reflected results from nine school districts in Stark County over a three-year period. In Ohio, no current research has been found on the relationship between kindergarten students on RIMPs and their age of entrance into kindergarten.

The results of this comparison revealed the ratio of students in the early entrance group on RIMPs was 0.24 greater than the ratio proportion of late entry students on RIMPs. The disproportion between early entry and late entry students on RIMPs recognizes the potential for early entry students to be on RIMPs as compared to late entry students to be on RIMPs. A logistic regression analysis supported that potential. Early entry students were 0.630 times more likely of being on RIMPs than early entry students not being on RIMPs.

Research Question #2

Do gender, ethnicity, and socioeconomic status distinguish students with RIMP status from non-RIMP students? This second question directly compares kindergarten students on RIMPs with three independent variables, gender, ethnicity, and socioeconomic status. Sandra Crosser (1998) conducted a survey and found parents who delayed kindergarten entrance one year were most likely to have been male (64%), white (73%), and born between July and December (70%).

These three variables are not as noteworthy to the local school district as entry age in regard to RIMP placement due to only entry age as a determinant by the local school district.

The results revealed the ratio proportion of female students on RIMPs was 0.021 greater than the ratio proportion of male students on RIMPs. The logistic regression done including Canton City schools found gender as not a significant determining factor for being on RIMPs. It was not statistically significant due to the $.76 > .05$ p value. This statistically significant finding rated fourth behind socioeconomic status, entry age, and ethnicity, respectively.

The ratio proportion of nonwhite students on RIMPs is 0.192 greater than the ratio proportion of white students on RIMPs. The logistic regression done including Canton City schools found nonwhite students were .823 times more likely of being on RIMPs than nonwhite students not being on RIMPs. This finding was confirmed when the Canton City schools were excluded. Nonwhite students were 1.208 times more likely of being on RIMPs than nonwhite students not being on RIMPs. According to the 2016-2017 State Report Card released by the Ohio Department of Education, white students hold a 68.0% (third through eighth grade) English Language Arts Proficiency passage rate over black students (32.4%) (School & District Results, 2017). The 35.4% gap supports my findings of the huge gap between whites compared to nonwhites not on RIMPs and on RIMPs. An Ohio Department of Education 2014 report on the results of the Kindergarten Readiness Assessment (KRA), a subgroup that was most likely to not demonstrate readiness to engage with kindergarten-level instruction are nonwhite students. The report supported this researcher's findings in relationship to nonwhite students to be on RIMPs as compared to white students. The current findings suggest age is also a predictor of readiness to engage with kindergarten-level instruction. Therefore, a logical assumption that is proven statistically significant is young nonwhite students are

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further most likely to not demonstrate readiness to engage with kindergarten-level instruction. Why should school districts who are free to eliminate the age factor not do so when it can reduce the odds of a nonwhite students of being on RIMPs (Ohio Dept. of Education, 2016)?

Households with increased income due to effective welfare policies benefit their children's academic performances (Sherrod & Brooks-Gunn, 2002). The ratio of students on free or reduced lunches on RIMPs was proportionately 0.345 larger than the ratio proportion of students not on free or reduced lunches on RIMPs. A logistic regression analysis found students on free and reduced lunch status were 0.299 times more likely of being on RIMPs than students on free and reduced lunch status not being on RIMPs.

A logistic regression analysis found free and reduced lunch students were 2.521 times more likely of being on RIMPs than students on free and reduced lunch students not being on RIMPs. A reasonable assumption from the findings is the socioeconomic status (on free or reduced lunch) plays a statistically significant role in favor of students being on RIMPs.

The same Ohio Department of Education 2014 report on the results of the Kindergarten Readiness Assessment (KRA) for nonwhite students suggest a subgroup that was most likely to not demonstrate readiness to engage with kindergarten-level instruction are economically disadvantaged students. The report also supports the current findings in relationship to students on free or reduced lunches to be on RIMPs as compared to students not on free or reduced lunches (Ohio Department of Education, 2014).

This researcher's findings suggest age is also a predictor of readiness to engage with kindergarten-level instruction. Therefore, a logical assumption that is proven statically significant is young nonwhite students on free or reduced lunches are greatest likely to not demonstrate readiness to engage with kindergarten-level instruction. Why should school districts who are free to eliminate the age factor not do so when it can reduce the odds of nonwhite students on free and reduced lunches of being on RIMPs?

Research Question #3

Does the type diagnostic test distinguish students with RIMP status from non-RIMP students? Districts and schools may select a reading diagnostic from the approved list regardless of district- or school-level performance. Each district is required to designate an Ohio Department of Education (ODE) approved diagnostic screener to be given to all K-3 students by September 30th of each school year. Students scoring below the predetermined benchmark score are designated as not on track and are required to be placed on a reading improvement and monitoring plan (RIMP). Chi square tests are performed to determine relationships among diagnostic tests and students on RIMPs. The test was significant because the *p* value was less than .05. There was a significant relationship between diagnostic tests and students on RIMPs. As evidenced in this study, in a three-year span (2013, 2014, and 2015), eight different diagnostic assessments were used by nine different school districts. Only four school districts used the same diagnostic assessment each year. The other five school districts used two different assessments. With those inconsistencies being noted, the ratio proportion of students taking one particular diagnostic test and being on RIMPs as to students taking the same particular diagnostic test and not being on RIMPs may reveal vague results. Since i-

Ready was used by Plain Local Schools for all three years and by Canton City schools for two consecutive years, it demonstrated the largest amount of usage by students. It also demonstrated the highest ratio disproportion of students taking the i-Ready diagnostic test and being on RIMPs as to students not taking the i-Ready diagnostic test and not being on RIMPs at 0.435. The MAPs assessments had the second most users but only two from the bottom disproportion of students taking the MAPs diagnostic test and being on RIMPs as to students not taking the Maps diagnostic test and not being on RIMPs at 0.277.

Research Question #4

Does the selected student variable (Age in months) distinguish students with RIMP status from non-RIMP status? Ohio public school district boards are permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, and 6 years of age to be admitted to first grade (ORC 3321.01). Even though students must be at least 5 years old to attend kindergarten, the kindergarten entry age cutoff date varies throughout the United States. Throughout all the states, Ohio is one of 11 where the latest kindergarten entry age cutoff date is later than September 1st (National Center for Educational Statistics, 2014). Therefore, when schools begin before September 1st, students attending kindergarten may not have turned 5 years old. Are districts, with the later kindergarten entry cutoff date, observing more students lacking early literacy skills in kindergarten? For schools opening in early to mid-August, is there an increased risk for 4-year-olds, as compared to 5-year-olds to not have the early literacy skills resulting in

them being placed on Reading Intervention Monitoring Plans (RIMPs) as mandated by the state?

Results from recent research using kindergarten multilevel models demonstrate that the youngest students have consistently lower scores than the oldest students (Huang & Invernizzi, 2012). Elder and Lubotsky (2006) provided evidence that older kindergarteners perform better than younger kindergarteners on reading and math achievement tests. Students starting kindergarten at a younger age progress relatedly slower than older aged students (Allhusen et al., 2007). In a more recent study conducted by Francia Huang and Marcia Invernizzi, entitled *The Association of Kindergarten Entry Age with Early Literacy Outcome,* the youngest students scored lower than their oldest peers at the beginning of kindergarten on various early literacy measures. A logistic regression analysis was used to determine if age in months was a predictor for students being on RIMPs. The odds of being on RIMPs are increased by 7% for every month decrease in the variable AgeMonths. These data are statistically significant due to the nature of the present levels early entry students in the nine school districts sampled in this study. Stark County contains 17 school districts. Only nine districts were included in this study because the other eight districts only service late entry students due to their August 1 cutoff date. With this being noted, districts enrolling only late entry students are at a 7% advantage in terms of their kindergarten students not being on RIMPs

Delimitations

A delimitation in this study was the number of students with disabilities. It may be presumed that students with developmental delays or learning disabilities would experience difficulty with passage of the diagnostic tests. There were no identifiable data

for students with disabilities; therefore, no research was conducted to determine its effect on kindergarten students on RIMPs. Most research would suggest that students with learning disabilities would have the highest proportion on RIMPs and be most likely to be on RIMPs. However, research found preschool children receiving special education services scored lower in kindergarten (Sullivan & Field, 2013). This study did not consider preschool experience or number of siblings in the family.

Suggestions for Future Research

Before stakeholders consider making changes in entrance age for kindergarten, further research may be needed on variables not represented in this study. As to why boys are less likely to be on RIMPS, contrary to past research, may be found in several areas: the nature of the assessment, the ages of the boys as compared to the ages of the girls, and the SES of the boys as compared to the SES of the girls. Each factor should be further investigated in future studies.

Stakeholders may consider preschool experience as a prerequisite to kindergarten success (Furlong & Quirk, 2011). However, not all preschools are alike, and their effectiveness is difficult to measure. The learning climate may differ among them. Many preschools believe it is a time to learn social and emotional skills and the academic skills will come in kindergarten. Academic goals, formal instruction, and play in casual settings may vary. Some preschools are held all week and others are held only several days a week. Few preschools are all day and most preschools give the parents the option of morning or afternoon classes. Philosophies of preschools also differ. Some choose more free play over structured activities. Others have the teacher to direct the day, while others have the child to choose activities based on their interests. Certain preschools

promote language immersion and others focus on music and the arts. The cost of private preschools differs which often relates to the resources the preschools will have to offer. Preschools with higher tuition may include more technology-based curriculum in their classes. Class sizes may also be a byproduct of the tuition cost. Preschools with lower tuition may not have the extra support staff needed to assist the more needy students. Preschool calendars are often determined by the area school district. However, most preschools are free to create their own calendar of days they will be open for classes. Preschools that collaborate with their area districts are advantageous for preparation for smooth transitions into kindergarten. Unfortunately, not all preschools enjoy such a luxury. Further research on the effects of preschool experience may be a daunting task due the many variables within the variable of preschool.

The changing family structure may also be a necessary variable to examine as a predictor of kindergarten success. According to a U.S. Census Bureau report released in December 2011, eight out of 10 homes with one parent had the mother as the custodial parent, 30.4% of custodial single mothers and their children lived in poverty, and 41.3% of custodial mothers received some form of government assistance (Wolf, 2011). Since not all families are the same, not all children attend kindergarten with similar education backgrounds. The age of entry may not be as significant to children beginning kindergarten as compared to the home environment from which they come. Families above the poverty level that exhibit negative education climates may have a larger impact on students being on RIMPs than the age at entrance. Just as families below the poverty level who exhibit positive education climates may have a larger impact on students not being on RIMPs than the age at entrance.

A feasibility study on early entry versus late entry will be needed as to the effects of how a change with entry date will impact all stakeholders. Included in the study is the need to determine the number of families and children who would be affected. The first consideration may be fiscal savings or unplanned expenses. School districts would lose the income of early entry students and would need to budget accordingly. A decrease in kindergarten enrollment may affect staffing, supplies, and transportation needs. Family budgets also may need to be adjusted due to the extra expense of preschool and/or day care for working parents.

Stake holders would also benefit from future studies that link entry age and third grade reading guarantee. This research was from years 2013, 2014, and 2015. They were years closely following the implementation of the Third Grade Guarantee in 2012. Future studies done on later years may be used to compare and contrast findings when implementation is not new, and precedent is established for the logistics of test taking. Changes to keep the same diagnostic test consistent from year to year may allow for closer study as it pertains to the type of test and students on RIMPs. Another study of interest may be to analyze the proportions of early entry students on RIMPS to early entry students not on RIMPs with the KRA test results which categorize students as being demonstrating, approaching, or emerging. It would be advantageous to see how the KRA results compare to the diagnostic test results and the roles of age, ethnicity, and SES. Finally, research may be needed as to the effectiveness of students being on RIMPs and not being retained in third grade. In the last two years, an average of 6.35% of third graders were retained with the hopes of achieving third grade reading ability levels by repeating third grade.

Table 26

2016-2017 Breakdown of Third Grade Student Results With the Third Grade Guarantee

Name	# Third graders enrolled at end of school year	% Exempt from TGRG promotion threshold	# Subject to TGRG promotion threshold	% Met promotion threshold	% Did not meet promotion threshold
State	127,736	7.0%	118,808	93.9%	6.1%

Note. Adapted from Ohio School Report Card, 2017.

Table 27

2015-2016 Breakdown of Third Grade Student Results With the Third Grade Guarantee

Name	# Third graders enrolled at end of school year	% Exempt from TGRG promotion threshold	# Subject to TGRG promotion threshold	% Met promotion threshold	% Did not meet promotion threshold
State	127,486	5.5%	120,481	93.4%	6.6%

Note. Adapted from Ohio School Report Card, 2017.

Conclusion

This research study consisted of statistically significant findings that in kindergarten, younger students tend to be less successful on state mandated diagnostic tests and are more likely to be placed on RIMPs than older students. The findings in this study give statistical credence to the influence of socioeconomic status, entry age, and ethnicity for all stakeholders. Stakeholders include the state policy makers, school districts, parents, and students. Therefore, the findings of this study may be included with other data necessary for effective strategic planning for legislatures, school boards, pre-school parents, and pre-school children.

In 2006, state legislatures approved Ohio Revised Code - 3321.01. Ohio public school district boards are permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, and 6 years of age to be admitted to first grade (ORC 3321.01). In 2012, state legislatures approved Ohio Revised Code 3313.608 also known as the Third Grade Reading Guarantee requiring all Ohio public school kindergarten students to take reading diagnostic assessments by September 30 (ORC 3313.608). Both laws intruded on kindergarten students' age. However, neither law interfered on kindergarten students' SES or ethnicity. Ohio Revised Code 3321.01 permitted 4-year-olds to enter kindergarten and Ohio Revised Code 3313.608 mandated them to be tested. This study may be used to amend the 2006 law to limit the entry age of kindergarten to 5 years of age by eliminating the September 30th option due to the disproportionate number of young 5-year-olds on RIMPs.

The school district is legally responsible to create and provide support services for kindergarten students lacking readiness skills as deemed necessary by diagnostic tests. School districts are dependent on federal funds to provide the remediation serves. School districts have no control over federal funding. Teachers experience disproportionate time spent on younger students than older students (Smith, 2005). The 2006 law passed permitting 4-year-olds to attend kindergarten left the door open for school districts to not allow 4-year-olds to attend. Ohio public school district boards are permitted to adopt either the first day of August or the 30th day of September as the date by which a child must be 5 years of age to be admitted to kindergarten, and 6 years of age to be admitted to first grade (ORC 3321.01). This study would support a decision to move the entry date

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to August 1st. However, the decision for the change may be reinforced when they consider the cost factor involved with providing support services for students on RIMPs. School districts have the unfunded mandate to provide interventions for students not on track and the cost can be prohibitive when the number of students on RIMPs exceeds limited budgets. Additional curriculum and supplies needed for the regular school day may be necessary. Tutoring during and after school and in the summer is required to be taught by Ohio licensed teachers. These are all budget concerns that may vary significantly every year. Another reason why school boards may want to decrease students on RIMPs is the Ohio Local Report Card. The Ohio Local Report K-3 Literacy Improvement grades on the success of districts and schools and move students from being on RIMPs to students not on RIMPs. The minimum range of a "C" grade will be the statewide average value for this measure. If 4-year-olds are probable for RIMPs, then schools with higher numbers of 4-year-olds may be at greater risk of not attaining a minimum "C" grade. It would seem advantageous to limit the number of students on RIMPs if possible. Even though findings suggest free and reduced lunch students are 2.5 times more likely of being on RIMPs than students on free and reduced lunch students not being on RIMPs and nonwhite students are 1.2 times more likely of being on RIMPs than nonwhite students not being on RIMPs, the effort to decrease the number of kindergarten students on RIMPs, ethnicity, and socioeconomic status cannot be regulated or controlled. Findings in this study found early entry students are 0.630 times more likely of being on RIMPs than early entry students not being on RIMPs. School boards are permitted to limit early entry students into kindergarten by choosing the August 1st deadline.

Every beginning of the new school year, parents are called to make decisions concerning sending their children to kindergarten. In Ohio, the compulsory school age is 6. However, children may enter kindergarten younger than the age of 6. Depending on the school district, children may enter as early as 4 years of age. When a child enters kindergarten, he or she is considered to be of compulsory school age (Smith, 2005). Kindergarten readiness is necessary, and its determination may be complex; so complex that some parents decide to *red shirt* their children. Red shirt means to wait until the children are 6 years old before sending them to school (Lincove & Painter, 2006). Some parents hold children out of kindergarten even when they are age eligible assuming that the older student has advantages both academically and physically compared to their classmates (Graue & DiPerna, 2000). This study may help shed light for parents in determining the best entry age for their children. Parents are limited in determining their children's readiness for kindergarten. Determining kindergarten readiness within the framework of parent control is limited to their children's age and assessment of prekindergarten outside the school. Unlike gender, ethnicity, and socioeconomic status, age is one factor that parents can control when making the decision about school entry. Kindergarten students starting out behind other students often view themselves as not successful and can cause undue stress on them and their parents.

Finally, this study indicates that the probability for early entry students to be on RIMPs does exist in school districts with the kindergarten entry cutoff date of September 30. The results were consistent when the Canton City schools were included and not included in the research. However, the results of this study are not to downplay other variables that increase the probability of students to be on RIMPs. In particular, ethnicity

and socioeconomic status proved to be indicators of the likelihood for students to be on RIMPs in nine and eight (Canton City) school district study. The study seems to suggest that entry age plays a lesser role than ethnicity and socioeconomic status when the Canton City schools were included. When the Canton City schools were removed from the nine early entry schools, socioeconomic status remained ahead of age as being the top predictor for students to be on RIMPs. Ethnicity followed age, and gender completed the analysis at a distant fourth. As stated earlier, this study directly compares kindergarten students on RIMPs with three independent variables – gender, ethnicity, and socioeconomic status. These three variables may not be as noteworthy to the local school district as entry age in regards to RIMP placement due to only entry age as a determinant by the local school district. The results of the study serve a purpose in terms of policy decisions that affect cost, psychological impact on students and parents, and state of Ohio's assessment of the school on the Ohio District Report Card. If early entry students are probable for RIMPs, then schools with higher numbers of early entry students may be at greater risk of lower Ohio District Report Card scores due the nature of how the letter grade is calculated. The district may assume a larger cost factor because school districts have the unfunded mandate to provide interventions for students on RIMPs.

The results of the study serve to illuminate the possible effect of policy decisions that result in fewer kindergarten students requiring reading improvement and monitoring plans (RIMPS). All public schools are responsible to serve all students enrolled for the school year according to the Free Appropriate Public Education (FAPE) law. However, school districts may determine the kindergarten entry date which will reflect the age at entrance which is not covered under FAPE. Entry age is a controllable constant while

ethnicity, socioeconomic status, and gender are not under the influence of the school

district.

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APPENDICES

APPENDIX A

READING IMPROVEMENT AND MONITORING PLAN

School: School Year:
Date:

Student Name: Student ID:
Birth Date: Grade:
Teacher Name:

Grade Level(s) Retained: _____   *Exempt from Retention (provide reason):* _____

Grade Level(s) on a RIMP: _____   *Referred for Evaluation:* _____ *No*   *Yes*   *Date*

Based on the information below in Section A, your child has been identified as needing academic improvement in the area of READING.

Grade Level	Assessment (Type in the initials of assessment used)	Status of Diagnostic Assessment administered by September 30	Report independent reading levels for each grading period.				Comments
		On Track: OT Not on Track: NT	1	2	3	4	
K							
1							
2							
3							
4							

A1: Fill in the diagnostic and reading levels of the student.

A2: Fill in performance, diagnostic or other observation data used to identify and monitor

Measure	Date	District or School Level Assessment Data	Comments
(insert name of assessment here)			
(insert name of assessment here)			

progress in areas of academic need.

B: Complete one row for each focus addressed by this Reading Improvement and Monitoring Plan. This section should be reviewed and adapted as necessary throughout the school year.

Progress Monitoring   *(S) satisfactory●(P) progressing●(U)unsatisfactory*

Check one area for <u>curriculum and instructional</u> focus:	Specify one or more instructional strategies employed in response to instructional focus:	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th[h] 9 weeks
___Comprehension ___Text Reading Level ___Phonemic Awareness ___Phonics and Word Recognition ___Fluency ___Vocabulary ___Other:	Context ___Large group ___Small group ___Individual *Instructional Strategy:*				
Check one area for <u>curriculum and instructional</u> focus: ___Comprehension ___Text Reading Level ___Phonemic Awareness ___Phonics and Word Recognition ___Fluency ___Vocabulary ___Other:	Specify one or more instructional strategies employed in response to instructional focus: Context ___Large group ___Small group ___Individual *Instructional Strategy:*	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks
Check one area for <u>curriculum and instructional</u> focus: ___Comprehension ___Text Reading Level ___Phonemic Awareness ___Phonics and Word Recognition ___Fluency ___Vocabulary ___Other:	Specify one or more instructional strategies employed in response to instructional focus: Context ___Large group ___Small group ___Individual *Instructional Strategy:*	1st 9 weeks	2nd 9 weeks	3rd 9 weeks	4th 9 weeks

C: Enter Intervention Information

INTERVENTION	Starting Date	Description of intervention and how it was delivered	Ending Date
90 Minutes of Reading Instruction*			
Impact of Intervention: *Intervention Provided By:*			
Small Group Instruction			
Impact of Intervention: *Intervention Provided By:*			
Reduced Student/Teacher Ratios			
Impact of Intervention: *Intervention Provided By:*			
Extended School Day			
Impact of Intervention: *Intervention Provided By:*			
Tutoring or Mentoring			
Impact of Intervention: *Intervention Provided By:*			

**Required for retained 3rd Grade students only*

Note to Parents: Families are encouraged to discuss the student's progress with the school frequently. Progress will be reviewed every 9 weeks using classroom work, teacher observations, tests, grades, and other relevant information. The strategies may be revised based on progress monitoring.

Interventions may vary depending on the school. This specific plan may or may not need to be revised when a student transfers to another school.

D: Enter Information on the Teacher Providing Reading Guarantee Services

---

Teacher Qualifications for Third Grade Teachers

Check all that apply:

The teacher providing reading guarantee services:
A) Is the Teacher of Record: ____Yes   ____No: if no, the teacher is providing reading guarantee services as agreed by the building principal and the Teacher of Record.   ____Yes   ____No.
   a. Name the assigned teacher if not the teacher of record _____

B) Meets at least one of the following criteria to provide reading services:
____ a. Holds a reading endorsement that appears on the license as #059902
____ b. Obtained a master's degree with a major in reading or literacy
____ c. Completed one of the approved research-based reading instruction programs approved by the Department (expires after 2015-2016)
____ d. Passed the Praxis 5203
____ e. Rated "most effective" for reading instruction consecutively for the most recent two years based on assessment of student growth measures
____ f. Rated "above expected value-added" in reading instruction as determined by criteria established by the Department for the most recent consecutive two years
C) ____ Has less than one year of teaching experience and is mentored by a teacher with at least one year of experience who meets the qualifications to provide reading guarantee services. Name the qualification the teacher with less than one year of teaching experience meets from the above list:

_____
_

D) ____ Holds a TESOL Endorsement* (for providing instruction to English Language Learners only)

E) ____ Is a speech-language pathologist who holds a license issued by the Board of Speech-Language Pathology and Audiology

F) _____ The district has a staffing plan in place for the current school year, and the teacher providing services to the student does not meet any of the above qualifications.

The TESOL is an alternative credential that has been approved by the Department.

E: Comments/Results of Intervention(s):
_____

End of Year Status/Need for Intervention:
_____

Test-Out Date:
_____

Comments/Concerns from Parent/Guardian:
_____

_____	_____	_____
Teacher	*Start Date*	*End Date*

_____	_____	_____
Principal or Designee	*Start Date*	*End Date*

_____	_____	_____
*Parent/Guardian Signature/Notification**	*Start Date*	*End Date*

Indicates parent is fully aware of the interventions and has played a role in developing this plan.

APPENDIX B

REQUEST TO USE PUBLIC RECORDS

From public records request -Hannah.Smith-Carr@education.ohio.gov
Wed 1/18/2017 3:17 PM
To:
James Lariccia;
...
You replied on 1/18/2017 3:30 PM.
Jim:

I am writing to acknowledge receipt of your public records request in which you requested submissions from the following vendors, regarding the Third Grade Ready Guarantee: STAR, i-Ready, DIBELS, aimsweb, and MAP.

We will respond once the responsive documents are collected and reviewed.

Regards,

Hannah Smith-Carr
Assistant Legal Counsel
Ohio Department of Education
Phone: 614-466-4590
Hannah.Smith-Carr@education.ohio.gov

APPENDIX C

THIRD GRADE READING GUARANTEE GUIDANCE MANUAL

Third Grade Reading Guarantee
Guidance Manual

SEPTEMBER 2015

Ohio | Department of Education